



the ■ spice and herb bible

Second Edition

Ian Hemphill

with recipes by Kate Hemphill

the
spice
and herb
bible



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Robert
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For my wife, Elizabeth

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Foreword



Ian Hemphill has written a definitive work on culinary herbs and spices, a book that is both informative and entertaining. Ian's knowledge is wide-ranging, and he covers the history, sources and uses of a multitude of herbs and spices. He reveals the secrets of blending particular flavors for traditional dishes, and gives recipes for new blends required in evolving modern cuisine.

While growing up, Ian absorbed a tremendous variety of fragrances in the environment of Somerset Cottage at Dural, the business his father and I founded in the 1950s. He helped gather and dry wild roses and scented-leaved geraniums for making into gifts; picked bay leaves from our trees, prepared and packed them for sale; assisted his father in mixing dried herbs for different cooking needs; and blended spices for curry powders, barbecue sprinkles and seasoning salts, to mention only a few. He has also marketed our herb and spice range and has regularly given talks in the Dural garden and at other venues. In fact, herbs and spices are in Ian's blood. He was even known as Herbie in his latter years at school!

It was a great joy to John and me when Ian and his wife, Elizabeth, who worked at Dural as well, began their own specialized herb and spice business, Herbie's Spices, at Rozelle. They have taken further the experience gained in our family business. Ian and Elizabeth travel widely and often, import a huge collection of top-of-the-crop harvests, and select suitable Australian-grown herbs and spices where possible. They have built up a well-deserved reputation for excellence and integrity in their vocation.

This book is a mine of information for everyone interested in planet Earth's magic kingdom of incredibly diverse aromas and flavors.

Rosemary Hemphill

Acknowledgments

While *The Spice and Herb Bible* is the culmination of a lifetime's experiences in the spice industry, there are certain individuals who have been particularly generous in sharing their knowledge over the years and who have provided me with specific information and support during the course of writing the original book and this new edition. Foremost, my deep appreciation must go to my wife, Elizabeth, who has always supported my passion for spices and has been prepared to endure "holidays" in obscure hot, tropical and often far from comfortable destinations in the pursuit of another rare spice. Elizabeth's enthusiasm, common sense and natural editorial talents were invaluable while this book was being written. Our three daughters, Kate, Margaret and Sophie, have provided the love and moral support one needs when completely preoccupied with writing a book such as this. My parents, John and Rosemary, who imbued me with this passion and helped check and recheck the manuscript, provided the encouragement and guidance that only parents can give.

The spice industry is akin to a brotherhood, and while my friends and associates in the spice trade are too numerous to mention, no one could write a book on spices without the generosity of Dr. P.S.S. Thampi, Director of Publicity, Spices Board of India. Dr. Thampi has become a dear friend over many years and shares our enthusiasm for this ancient and intoxicating trade. He has helped us find organic spice growers in Mangalore, see cardamom auctions in Kerala and visit spice research facilities in Gujarat. Special thanks also go to Neil Stewart, who gave our family invaluable advice when we first began marketing packaged herbs and spices in the 1960s. We are indebted to Craig Semple, an Australian spice trader residing in Turkey, who arranged for us to visit farms in the southeast of Turkey; Pepe Sanchez of El Clarin in Spain, who smuggled us into the saffron festival in Conseugra; Mark Barnett from Hanoi, who helped us find the cassia forests in North Vietnam; the Aboriginal women and Janet and Roy Chisholm of Napperby Station in the Northern Territory of Australia; Yuden Dorji and Kadola from the Ministry of Agriculture in Bhutan; and numerous other farmers, spice traders and merchants who have shared their knowledge and treated us with warmth and hospitality. In Australia, Rolf

Hulscher of Hulscher Ingredients has always been a supporter of Herbie's Spices and our spice tours. Lawrence Lonergan and Hugh Talbot have always been prepared to share their knowledge and provide advice when we have been faced with a difficult sourcing or technical issue.

Finally, the original *Spice and Herb Bible* would never have happened had it not been for the persistence and support of my agent, Philippa Sandall, the patience and attention to detail of editors Elspeth Menzies and Catherine Proctor, and the enthusiasm and commitment of publisher Jane Curry. This new edition of *The Spice and Herb Bible*, in which I am able to include even more useful information, contains over 60 new practical, mouthwatering recipes thanks to the recipe-developing skills and creativity of my wife, Elizabeth, and our daughter Kate. And all this has been made possible by the support of publisher Bob Dees and editor Sue Sumeraj.



Introduction

When one grows up on an herb farm and then proceeds to spend the next 40 years working in the herb and spice industry, it is easy to assume that everyone feels comfortable with using herbs and spices. Of course this is far from the reality, and over the years I have been asked many questions, from the bizarre to the basic. What people want most is an insight into the world of spices from someone who works with these miracles of nature everyday.

In *The Spice and Herb Bible* I have set out to give the reader “the inside story,” based on the learning and experiences I have assimilated in this ancient and stimulating industry.

It seems appropriate to begin by explaining some of the basics and sharing interesting facts that apply to all herbs and spices. Because spices are so important in determining the signatures of foods from different countries, I have provided some background information and a list of the key spice flavors that are used in some of the world’s most popular cuisines. Part Two looks at individual herbs and spices, in alphabetical order by common English name (to assist in looking up a reference quickly). Part Three deals with the art of combining spices. Once you have an understanding of the individual herb and spice characteristics it is a logical next step to bring surprisingly diverse flavors together to create completely unimaginable results. I hope you will find this interesting and stimulating, and most importantly will feel that the art of using spices successfully in everyday cooking has been demystified and made more enjoyable.



The World of Spices



The Spices in Our Lives

CAN YOU IMAGINE a world without spices? What if there was no such thing as vanilla ice cream, cinnamon buns or the aromatic flavor of juniper in gin? Imagine life without Worcestershire sauce, mustard, pickles, chili sauce, seeded breads, tacos or the myriad of tasty, convenient, ready-made meals. Most of us eat spices every day and contrary to popular belief spicy food is not necessarily hot.

The expression “to spice food” is used loosely to describe the act of adding almost any kind of flavor-enhancing substance in a small proportion to give a particular taste sensation to the overall meal. The word “spice” carries connotations of power and efficacy, understandable when you think what a small quantity is required to have such an effect on a massive bulk of food. A tiny amount of vanilla gives flavor to a bucket of vanilla ice cream; a small amount of chili and cumin transforms pounds of beans and ground beef into chili con carne.

For thousands of years human beings have been adding spice to food to make it more appetizing and, in extreme cases, to mask the identity of the bulk of the food, which may have tasted downright awful on its own. The majority of known spices were a luxury only the wealthy could afford 2,000 years ago. As new spices such as cinnamon were discovered, their origins were surrounded in mystique and fantasy by traders keen to maintain their exclusivity and high prices. The spice trade was extremely lucrative, with single voyages yielding profits of 10 times the investment. The following history of the spice trade is brief, but it gives some indication of how much this ancient and traditional trade has affected the human race and what an important part it was — and still is — in our lives.

The first fragmented but authentic records of the use of herbs and spices date from the Pyramid Age in Egypt, around 2600 to 2100 BC. Onions and garlic were fed to 100,000 laborers who toiled in the construction of the Great Pyramid of Cheops, for their medicinal properties and to preserve health.

Page 14, clockwise from top left: whole allspice; amchur powder; ajowan seeds; alexanders; ground allspice; akudjura

2000 BC

Later, when they became essential ingredients in the embalming process, cassia and cinnamon were imported to Egypt from China and Southeast Asia. In ancient civilizations, unpleasant odors were associated with evil, and sweet, clean scents linked with purity and goodness. Thus a demand was created for pleasant-smelling fragrances. At this time no clear distinction was made between plants used for flavoring, as medicines or as sacrificial plants. If certain leaves, seeds, roots and gums had a pleasant, pungent taste and an agreeable odor, an interest and demand gradually developed for them, culminating in their use as condiments.

1700 BC

An archaeological dig in Syria (ancient Mesopotamia) discovered cloves in a domestic kitchen dating from this era. At that time, cloves were grown only on a handful of islands in the Indonesian archipelago.

1500 BC

In 1874 a German Egyptologist, Georg Ebers, discovered a document dated about 1550 BC, now known as the Ebers Papyrus. In it was extensive information about surgery and internal medicine, as well as a list of some 800 medicinal drugs.

The Egyptians employed these aromatic herbs and spices in medicine, cosmetic ointments, perfumes, cooking, fumigation and embalming. During the second and first millennia BC, Arabia's monopoly over the carrying of goods from the East to the West created great prosperity.

The Ebers Papyrus contains information on anise, caraway, cassia, coriander, fennel, cardamom, onions, garlic, thyme, mustard, sesame, fenugreek, saffron and poppy seed.

1000 BC

The Arabian traders who supplied cassia and cinnamon protected their business interests by deliberately shrouding the sources of their produce in mystery. Many unlikely tales still prevail about the obscure origins of some spices. For many centuries the Arab merchants maintained a strict monopoly on Oriental spices by pretending that cassia and cinnamon came from Africa, and they deliberately discouraged Mediterranean

Excavations in the Indus Valley reveal that herbs and spices had been used before 1000 BC.

importers from making contact with the lands that really produced these lucrative commodities. It was not until the first century AD that the great Roman scholar Pliny the Elder pointed out that the Arabian tall stories had been fabricated to inflate the prices of these exotic Eastern commodities.

600 BC

At a very early date, the Assyrians used sesame as a vegetable oil.

A scroll of cuneiform writing from the great library in Nineveh, established by King Ashurbanipal of Assyria (668–633 BC), records a long list of aromatic plants, among them thyme, sesame, cardamom, turmeric, saffron, poppy, garlic, cumin, anise, coriander and dill.

300 BC

Some of the spices grown in India today, such as long pepper, black pepper, cinnamon, turmeric and cardamom, have been known there for thousands of years.

The use of spices increased in Greece and Rome from 331 BC to AD 641. Alexander the Great extended Greek influence throughout the lands that had been the Persian Empire, including Egypt. Starting in 331 BC, his conquests resulted in the establishment of Greek settlements and commercial posts between the Mediterranean and India along the western section of the trade route that was to become known during the first century AD as the Silk Road. With his conquest of Egypt, Alexander founded the port of Alexandria, the most important trading center between the Mediterranean and the Indian Ocean. Alexandria became the gateway to the East, and a meeting place for commercial travelers of three continents.

Herbs and spices played an important role in ancient Greek medical science. Hippocrates (460–377 BC), known as the father of medicine and the framer of the Hippocratic Oath, wrote many treatises on medicinal plants, including saffron, cinnamon, thyme, coriander, mint and marjoram.

AD 100

The realization of the importance of monsoons to sailing ships allowed the establishment of the direct sea route from ports in Roman Egypt to the pepper markets of the Malabar Coast of India.

AD 641

The fall of the Roman Empire in AD 641 brought major changes. The well-organized trading in commodities between India and Rome was brought to an end by the onslaught of Islam. Traditional trade routes were interrupted as the Arab conquest shattered Mediterranean unity and brought confusion, despair and stagnation to commerce.

AD 800

By the middle of the eighth century, the great empire founded by Mohammed extended from Spain in the West to the borders of China in the East. Muslim influence was spread to Ceylon and Java, mostly by roving Arab traders. Having won religious victories in India by force, Mohammedan missionaries settled on the Malabar Coast and became spice traders.

Charlemagne (AD 742–814), king of the Franks and emperor of the West, was an important figure in the development of herbs. A patron of literature, art and science, he organized, for the first time, large orderly plantings of herbs in his realm. In 812 Charlemagne ordered a number of useful plants — among them anise, fennel and fenugreek — to be grown on the imperial farms in Germany.

AD 900

Information concerning spices in Europe during the Dark Ages (from 641, the fall of Alexandria, to 1096, the first Crusade) is rather scarce. The use of Asian spices was rare in the normal diet of Europeans north of the Italian Alps. Only small amounts could be obtained by religious groups and a few well-connected merchants. In England the Statutes of Ethelred, at the end of the 10th century, required Easterlings (East Germans from the Baltic and Hanseatic towns) to pay tribute that included 10 pounds (5 kg) of pepper for the privilege of trading with London merchants.

Throughout the Dark Ages the cultivation of herbs and spices in Europe was taken care of by the Church, mostly in Benedictine monastery gardens. During the Middle Ages the community was bombarded with dubious herbal remedies, peddled by witch-like hags whose pagan approach displeased the Church. The concoctions prepared by these self-styled apothecaries mixed fantasy with tidbits of common sense, the

Mohammed (AD 570–632) who established the principles of Islam in the Koran, was not only a great prophet, legislator and founder of the religion that bears his name, but was also an experienced spice merchant who married the daughter of his employer.

It has been suggested that the word “sterling” is derived from Easterlings, the early German spice traders in England who sold goods from the East.

results ranging from harmless folk remedies to dangerous abortives, nauseating love potions and absolute poisons.

AD 1096

The first Crusade took place in 1096. Before then the West had relied on reports from occasional travelers for information concerning the near East. Now thousands of pilgrims exposed many Westerners to the style of living in Syria and Palestine, and a taste for Eastern delights was rekindled.

AD 1180

In 1180, during the reign of Henry II, a guild of wholesale pepper merchants was established in London. Subsequently it became the Grocers' Company in 1429 and was granted a charter by Henry VI to sell wholesale, or *vendre en gros*, from which the word "grocer" derives.

AD 1200

In the 13th century in England, 2 pounds (1 kg) of pepper cost a pound sterling. Peppercorns, counted out one by one, were used as currency, and were accepted as payment for taxes and rent. Hence the term "peppercorn rent"; although these days it implies a cheap rental, in 1200 it meant something few could afford. Spices were relatively more expensive in those days than they are today. One can understand how essential they must have been to make either very bland foods or strongly flavored, gamey meats more palatable.

By the end of the 13th century, Marco Polo had recounted his astonishing tales and vivid descriptions of the fabulous wealth of China. He told with remarkable accuracy stories of vast plantations of pepper, nutmegs, cloves and other valuable spices he had seen growing in Java and other islands in the South China Sea.

AD 1453

Following the fall of Constantinople to the Turks, the need for a safe sea route to Asia became more urgent. The spread of the Ottoman Empire had made the old land routes unsafe and

Prince Henry of Portugal equipped expeditions to find a sea route to India. In 1486 Bartolomeu Dias rounded the Cape of Good Hope, confirming that the Indian Ocean could be reached by sea. Christopher Columbus acquired much of his seafaring knowledge in the service of the Portuguese. Following his “discovery” of the New World and return expeditions in search of gold and spices, Columbus identified chilies, of the capsicum family, vanilla beans and allspice.

AD 1498

Vasco da Gama arrived at Calicut, on the west coast of India, completing the first sea voyage from Western Europe around Africa to the East, the most significant feat in the history of the spice trade.

AD 1520

Ferdinand Magellan sailed through the straits of Patagonia and a year later, after a long and difficult voyage with many deaths from hunger and thirst, he reached the Philippines. Magellan himself was killed, but the survivors returned home with 29 tons of cloves, scores of sacks of nutmegs, and cinnamon. Despite enormous losses the expedition was a financial success.

AD 1600

The British founded their East India Company in 1600 and two years later the United Dutch East India Company was formed. This was to be the beginning of the establishment of a Dutch empire in Asia. Between 1605 and 1621 the Dutch managed to drive the Portuguese out of the Spice Islands, giving the Netherlands a monopoly over the cloves and nutmeg trade.

AD 1770

Pierre Poivre (the original Peter Piper) was the French administrator on Mauritius, known then as Ile de France. At the risk of being executed if discovered, he smuggled clove, nutmeg and cassia plants out of the Dutch-controlled Spice Islands and broke their monopoly.

AD 1800

Toward the end of the 18th century, the United States plunged into the world spice trade. The New England port of Salem had a virtual monopoly on the Sumatra pepper trade because of its aggressive shippers, swift vessels and experienced mariners. Except for three years when the British blockaded American ports during the War of 1812, the Salem pepper trade flourished until its demise following the outbreak of civil war in 1861.

AD 1900 to AD 2000

Although herbs and spices are still produced in many traditional areas, during the last century their cultivation has become far more decentralized with virtually no country holding a monopoly over any one commodity. India, Indonesia, Vietnam and Malaysia are all major pepper producers. Indonesia, one of the world's largest producers of cloves, is also a net importer due to the enormous quantities used in the manufacture of their unique kretek cigarettes.

Substantial spice and herb plantations have been established in the Americas and modern technology has created new and more convenient ways to process, store and use spices. We should not forget, though, that the vast majority of spices traded around the world are still grown by traditional methods that have prevailed for countless generations. Herbs and spices have played an important role in the discovery and evolution of the commercial world as we know it, and they will continue to give culinary pleasure to the human race for many centuries to come.



What Is the Difference Between Spices and Herbs?

ONE OF THE QUESTIONS I am asked most often is, “What is the difference between a herb and a spice?” Generally, we refer to the leaf of a plant used in cooking as a culinary herb and any other part of the plant, often dried, as a spice. Spices can be the buds (cloves), bark (cinnamon), roots (ginger), berries (peppercorns), aromatic seeds (cumin) or even the stigma of a flower in the case of saffron. Many of the aromatic seeds we call spices are actually gathered from herb plants when they have finished flowering. A familiar example would be coriander: we refer to the leaves as an herb; however, the dried seeds we always call a spice. So you may ask, “What about the stem and roots of coriander, which are used in cooking, and of onions, garlic and the delicious bulb of fennel?” These sections of vegetable material tend to be classified along with herbs, as they are often used fresh and applied in a similar way in cooking.

An important characteristic of the majority of spices is that they are used in their dried form. In fact, many spices gain their key flavor attributes only upon drying, when the naturally occurring enzymes within them are activated, creating the uniquely different flavors of spices such as vanilla, cloves, pepper and allspice.

Because the majority of spices come from the equatorial regions of the world (seed spices from temperate regions are only available after flowering), we are fortunate that the majority of them do not have to be used in their fresh form. Spices can be harvested at exactly the right time, dried to achieve optimum flavor and then shipped to all corners of the world. This attribute has had a powerful influence on the ability to ship, trade and store spices, prerequisites for the enduring success of any commodity. A gourmand can travel the world with a small stash of peppercorns and a lightweight pocket grinder and need never have a meal that fails to stimulate the taste buds!

Not all spices are hot. How often do we hear people say that they don't like spicy food? Yet what they are really saying is that they don't like food that is too hot. And where does that heat come from? Just a few of the many dozens of spices: pepper, chilies, horseradish, mustard and, to a lesser degree, some gingers and galangal. Keep in mind that many spices are not at all hot. How many people do you know who would reject vanilla ice cream, cinnamon muffins or sesame buns on the basis that they are too spicy? It might be more accurate to describe food to which spices are added as "spiced" rather than "spicy."

On the subject of use, it is quite amazing how easy it is to use spices in everyday cooking. Your first reaction may be, "That's all very well for you to say — you've been using them for most of your life." However, I am not a very good cook. It is my dear wife, Elizabeth, who does the cooking in our household. What I do possess is an appreciation and understanding of the variety of flavors in spices and herbs and how they complement various foods. The benefit of even a basic understanding of spices is that you can use them in the meals you make now, and no additional cooking skills are required.

There are also some myths about spices that have developed over the years, the two most common ones being that spices were used in the old days to mask the taste of rotten food and that spices are preservatives. It is hardly plausible that spices will make rotten food edible when you consider that rotten food makes most of us very ill. Indeed, unless the aging and curing of meats is performed in a precise manner, the bacteria that grow in meats can kill you. In addition, any of our forebears who were in such dire circumstances that all they could eat was rotten food would certainly not have been able to afford spices, which were expensive and generally reserved for the elite. The fanciful notion of rugged, loin-clothed barbarians or ragged 10th-century village dwellers spicing a rotting carcass to make it edible is not logical. This belief likely originated from the practice of using spices to make bland food more appetizing, or to make meats with strong flavors more palatable. Today we use spices to improve the taste of strong, oily fish, and there is nothing like a Moroccan tagine spice blend to improve the flavor of a mutton stew.

The notion that spices preserve food can be the topic of heated debate, as many spices do possess antimicrobial properties and can assist in the preservation process. However, spices are not preservatives on their own, and it would be unwise for a home cook to believe that food that has been spiced does not require the normal hygiene practices of careful storage and refrigeration. Until modern times, the most common methods of preservation were limited to dehydration and salting or pickling in acid, usually vinegar. As salt and vinegar leave very strong residual tastes in the food being preserved, spices would have made a welcome contribution to their palatability. The antibacterial qualities in some of these spices were identified as an added bonus, and today many manufactured products benefit from the addition of mustard and garlic. Modern preservation techniques encompass a much broader range of technologies, but the humble spice is just as relevant as it has ever been. After all, who could imagine a pickle without spice?



Essential Oils, Oleoresins, Essences and Extracts

PEOPLE OFTEN ASK for definitions of the terms “essential oils,” “oleoresins,” “essences” and “extracts” with respect to herbs and spices. The following explanations are by no means exhaustive or technical, but they will help you to understand their form and application when you come upon references to these terms in your reading.

Essential oils are the fragrant products obtained from natural raw materials by steam distillation or a mechanical process. They are the basic raw materials for perfumers and flavorists. These days, we most commonly hear about essential oils in reference to aromatherapy, and a large proportion of aromatherapy oils are obtained from herbs and spices. Cooks should be warned against the temptation to use aromatherapy oils in culinary applications because they have not been manufactured for human consumption. Some essential oils may contain levels of toxicity or may be in strong concentrations that could be harmful if ingested. My father used to buy a very expensive rose geranium essential oil to blend with orris root powder and ground cinnamon to add to potpourri, a fragrant blend of herbs and flowers enjoyed for its perfume but certainly never eaten.

Oleoresins are produced by an extraction process that uses a selected volatile solvent. After extraction, the solvent is removed by evaporation in a vacuum at low temperature. A more recent development has been the production of oleoresins by carbon dioxide extraction, a process that creates an end product entirely free of any solvent residues. Oleoresins contain all the flavoring that was in the original herb or spice, delivering a broader spectrum of the flavor profile than an

*Opposite (top to bottom):
fresh turmeric root;
Vietnamese mint;
vanilla beans (Mexican
gourmet); vanilla
extract; roasted ground
wattleseed; ground
Alleppey turmeric;
ground Madras turmeric;
fresh zedoary root; cut
dried zedoary root*



essential oil, which only gives the volatile notes. For this reason, oleoresins are popular with food manufacturers, as they enable the addition of spice flavor without any concerns about flavor strengths, which may vary from crop to crop. Oleoresins are not available for domestic use, as the correct dilution and application to food is not practical in the home kitchen. Some companies have produced diluted spice oils intended for convenient domestic use; however, in my opinion, nothing beats the real thing in most recipes, and it seems as though these oil products are already being relegated to the gimmick category.

“Essence” is the term used to describe the essential flavor of something, and an essence may be natural or artificial. Therefore, vanilla essence may be either a natural vanilla bean extract or something completely different that does not contain any true vanilla at all. Nonetheless, because it tastes something like vanilla (and this is a point that could be debated at length), it represents the essence of vanilla.

An extract, however, is by definition natural, as the only way to make an extract of something is to begin with the real thing. Vanilla extract is made by soaking the beans in alcohol; the alcohol extracts the flavor of vanilla, which is then held in suspension in the alcohol. This extract, which contains only vanilla, alcohol and water, is also an essence, as it represents the essence of the flavor of vanilla.

Totally confused? I hope not. Most food laws stipulate that artificial essences be labeled as such, so check the label.



Growing Your Own Spices and Herbs

IN *The Spice and Herb Bible*, I have endeavored to include nearly every culinary spice and herb you are likely to come across. Some of these may be difficult to source, but I hope you'll find that part of the enjoyment lies in hunting them down.

You may want to grow some herbs that are difficult to locate in their fresh form. A great deal of satisfaction can be achieved by growing your own, and they can occupy as much or as little space as you like. Herbs grow as well in tubs and pots as they do in the garden, and a basic understanding of their requirements is all you need to grow them successfully. Because the main objective when growing herbs is to have them fresh on hand for everyday use in the kitchen, it is advisable to grow them in a convenient spot. The ultimate “kitchen garden,” whether it is in the yard near the back door, in pots on a balcony or in a window box, is one that is accessible and enjoyed.

Herbs are generally robust and have simple needs; after all, they have been around for millennia and have shown their ability to survive and prosper without our intervention. There are a few basic guidelines you'll need to follow, though. First, herbs, like us, need sunshine and fresh air. I have rarely seen herbs grow well indoors, so put them in an appropriate position outside where they will get plenty of fresh air.

Many people say they have a “brown thumb” and lament, “I always kill my herbs — I don't know why I bother!” However, a number of herbs live for only one season, and then die as part of their natural life cycle. In *The Spice and Herb Bible*, the herbs are called either “annuals” or “perennials.” Annuals live for one season; a few that prosper for two years are called “biennials.” Herbs that do not die off after a season or two are called perennials; the majority of perennials are reasonably robust shrubs.

Some annuals, such as coriander and basil, grow very quickly in warm climates, blossom early, flower prolifically, go

to seed and then die. This seemingly inevitable fate can be arrested, although not indefinitely postponed. I suggest picking off the flower buds as soon as they appear (literally nipping them in the bud). This will prevent them from flowering, then going to seed and finishing their life cycle too early.

Perennials are much less work, but they also need some care. Herbs such as thyme, sage, oregano and rosemary may become straggly and woody if they are not regularly harvested or pruned. At the end of summer, up to half of the foliage can be pruned from a perennial herb — this is the time to shape the plant. Rather than throwing the prunings away, dry them to keep you going through the winter, when new growth will be slower to emerge or will cease altogether.

When it comes to soil and growing conditions, herbs are relatively undemanding, an endearing quality when you consider how much they give back to us in flavor, aroma and efficacy. Nearly all herbs like friable, well-drained soil that has been conditioned with good compost. It is not necessary to give herbs lots of fertilizers and expensive nutrients: they won't appreciate them. Many herbs grown in relatively poor soil have a stronger flavor than their lush, overfed and overwatered counterparts.

Herbs will grow equally well in pots, tubs and hanging baskets. There are just a few details you need to know for success. First, make sure the container is big enough for the root system of the herb you are planting. As a basic rule of thumb for shrubs, the depth of the pot should equal the height of the plant. So, if you are planting common garden thyme, which grows to about 8 inches (20 cm) high, make sure the container is at least 8 inches (20 cm) deep. For shrubs such as bay trees, the depth of the pot can be approximately one-third of the height of the mature tree.

Always use a good-quality potting mix; commercial potting mixes have been blended to deliver the optimum balance between water retention and suitable drainage. Put some flat rocks or pieces of broken pottery in the bottom of the pot to ensure that it drains effectively and the soil is not washed out through the holes in the base. Where you place the pot depends on the recommendations for a particular herb. Although nearly all herbs must be outdoors, their preferences range from semi-shade and well sheltered to full sun and exposure to the elements.

Most importantly, don't forget to water your pots. A herb in the garden can send its roots looking for moisture if you neglect it, and may just survive. A herb in a pot, however, is entirely dependent upon you to keep it watered. If the pot dries out completely, the roots have nowhere to go for moisture and the plant will die.

You can buy herbs and a limited range of spice plants from a variety of retailers. Nurseries and garden centers tend to stock the most complete ranges of herbs, but supermarkets and grocery stores often sell them as well. Ask the salesperson if they have been "hardened off," as some mass producers put plants on sale that have come straight from a greenhouse. These may suffer from shock when exposed to natural conditions and die off.

There are four main types of propagation that are suitable for herbs and spices: root division, cuttings, layering and sowing seeds.

Root division is most suitable for herbs such as mint and pennyroyal, which will spread and grow into sizeable clumps; one way to keep them healthy and to propagate more plants is to divide them. This is easily achieved by digging up the clump, carefully separating an 8-inch (20 cm) root system into five smaller clumps of 1½ to 2 inches (4 to 5 cm) and replanting.

Growing from cuttings is an ancient form of propagation that involves taking a piece of the plant and cultivating roots on it. The cuttings method is most appropriate for spice trees, such as cinnamon, allspice, clove and nutmeg, and firm-stemmed herbs such as rosemary. When taking cuttings (striking) from a parent plant, always keep them in water or wrapped in a damp cloth until you're ready to put them into sand. Be sure they do not wilt. Use coarse river sand firmly packed into a pot for striking cuttings; never use beach sand, as it is too fine and may contain salt residues.

Take tip cuttings of reasonably firm growth, about 4 inches (10 cm) long, cutting the stem just below a leaf node with a sharp knife or pruning shears. Remove the leaves from the lower 1½ inches (4 cm), which will be buried in the sand, leaving at least a third of the foliage on the top. When preparing cuttings, always pull off leaves with an upward pull, or use pruning shears, to avoid tearing the bark on the cutting.

Never push cuttings into the sand, as this will damage the end and hinder the chances of making a successful strike.



Always make a hole first with a skewer or pencil that is slightly thicker than the cutting. Moisten the ends of the cuttings and dip the bottom $\frac{1}{2}$ inch (1 cm) into a suitable rooting powder (available from nurseries). Shake off excess powder and insert the lower third of the cutting into the hole in the sand. Try to cover at least two leaf nodes (the part where you pulled off the leaf) and press the sand firmly around the cutting. Flood with water and be sure to keep moist at all times.

You may plant several cuttings in a single pot, as long as they are about 1 inch (2.5 cm) apart. Place the pot in a semi-shady spot so the sun's rays won't dry out the sand too quickly or burn the cuttings. After several weeks, depending upon the weather, the cuttings will have formed roots and can be separated and placed in potting mix in their own pots to become established before they are replanted into larger pots or in the garden.

Propagation by layering works on the same principle as taking cuttings, except that you don't cut the stem off the host plant until it has formed roots. Layering works best for plants that send out horizontal stems, or ones that can be easily bent down to ground level, such as French lavender (*Lavandula dentata*). Select a length of stem and bend it toward the ground. Carefully trim off the leaves from the lower 2 inches (5 cm) of the stem (starting from the part touching the ground) in exactly the same way as you would for a cutting. Moisten a couple of leaf nodes, dust them with rooting powder and then bury them up to 1 inch (2.5 cm) below the surface. It is a good idea to push a little hoop of wire over the stem and into the ground to stop the stem from springing back out of the ground when you turn your back. Keep the area well watered. After several weeks you can pull up the layered stem and cut it from the parent plant. It can then be grown from its own newly developed root system.

Sow seeds in a 50:50 mix of river sand and soil, in a pot about 8 inches (20 cm) in diameter or a shallow trough. Tamp the sand and soil mix down flat with a small piece of wood and make furrows in the surface about $\frac{1}{4}$ inch (0.5 cm) deep. Sprinkle the seeds into the furrow; ideally, there should be a slight space between each seed. Cover the seeds with more sand and soil mix, making sure there are no lumps. Tamp down the surface again and give the whole surface a good soaking, but do it gently so the seeds are not disturbed or washed away.

Keep the seed bed moist at all times; if it dries out for even a short period, germination may cease. Put the container on a level surface to prevent accidental overwatering or a heavy rain from washing all the seeds to one end. When the seedlings are about 2 inches (5 cm) high, carefully remove them from the seed bed and repot in individual pots to grow larger before you plant them in larger pots or in the garden.



Drying Your Own Spices and Herbs

WHEN YOU GROW your own herbs, it is practical and satisfying to dry them yourself, provided certain guidelines are followed. The following rules of thumb relate primarily to herbs, as most home gardeners tend not to grow many spices. Specific drying details for some of the spices (for example, chilies, pepper and vanilla) are contained in the chapters on those spices.

Herbs will always dry best when you pick your own. Fresh herbs bought from the store may have been kept in cold storage or transported for long distances after harvesting; these herbs will often develop spots of discoloration on the leaves, caused by oxidization or partial fermenting. Gather your herbs in the morning, just after the dew has dried and before the heat of the day has reduced their pungency. The traditional method of drying, still used in many of the countries that are the world's largest producers of herbs, is to tie the stems into bunches about the size of a small broom. Hang the bunches in a dark, warm, dry and well-aired place for up to a week. The time herbs need to dry is determined by the relative humidity. In climates where the humidity is low, drying may take only a few days. Greece, Turkey and Egypt are large producers of dried herbs, and their climate allows growers to dry herbs without expensive, energy-consuming dehydrators.

When the leaves feel perfectly crisp and dry, strip them off the stems and store them in an airtight container. Should the leaves feel at all soft or leathery, they are not dry enough and will go moldy.

For enthusiasts, it is not difficult to make drying frames about 1½ feet (0.5 m) square and 4 inches (10 cm) deep with insect screening stretched across the base. The herbs will dry more quickly if the leaves are removed and the stems discarded, because you are not trying to remove moisture from the thicker stems at the same time. In my experience, perfectly dry leaves left on the stem may soften a couple of days after drying. The moisture in the not-so-dry woody stems migrates back into the dry leaves, raising their moisture content again.

Spread out in the frames to an approximate depth of 1 inch (2.5 cm). Place the frames in a dark, well-aired place, making sure air can circulate freely around them.

What is particularly challenging for commercial growers is that every herb has its own structural characteristics, so each variety will dry a little differently. Leaf size, density, moisture content and a host of other physical attributes will cause each individual herb to yield up its water content in different ways, so when drying your own, you will always need to feel for the telltale crunchy texture of a properly dried herb.

Herbs may also be dried in conventional and microwave ovens. To dry herbs in a conventional oven, bring the temperature to about 250°F (120°C). Remove herb leaves from their stems and place in a single layer on parchment paper on a baking sheet. Slide into the oven, turn off the heat and leave the door cracked open. After half an hour, remove the herbs, heat the oven again and repeat the process. Repeat until the leaves are crisp and dry. When drying herbs in a microwave oven, you need to be careful not to damage the magnetron, which can happen when there is not enough moisture present to absorb the microwaves. Remove herb leaves from their stems and place on a sheet of paper towel in the microwave, then put a microwave-safe cup, filled halfway with water, in the microwave. Microwave for 20 seconds on High and inspect for any dry, crisp leaves. Keep microwaving in 10-second bursts, removing the dried leaves each time, until all leaves are dry. You won't damage your microwave because, even when all but a few leaves have been taken out, the water in the cup will still absorb the microwaves.



Buying and Storing Spices and Herbs

FRESH HERBS ARE now readily available in supermarkets, specialty produce shops and grocery stores. There are many ways to get the most from the bunches of fresh herbs you buy but never seem to use up before you discard what's left over. Most soft-leaf herbs, such as basil, chervil, coriander, dill, parsley and tarragon, may be kept for up to a week in a glass of water in the refrigerator. Wash them in clean, cold water first, immerse the bottom inch (2.5 cm) of the stems in water, then cover the foliage with a clean plastic bag. Herbs with harder stems and more robust foliage, such as thyme, sage, marjoram and rosemary, may be kept for up to a week in a glass of water at room temperature, exposed to the air. Whether storing herbs in the refrigerator or at room temperature, change the water every couple of days.

When a longer storage period is desired, many herbs may be frozen. Hard-stemmed herbs store well when sprigs are wrapped in foil, then placed in a freezer bag in the freezer. A convenient method for freezing softer herbs is in ice cube trays. Chop the herb finely (with a herb such as coriander, the entire plant can be used, so chop the leaves, stems and roots). Fill sections of an ice cube tray two-thirds full with chopped herb, just cover with water and freeze. When frozen, turn out the herb cubes and store them in an airtight freezer bag so they won't pick up unwanted aromas from foods stored alongside them.

On your shopping expeditions, you may have seen "freshly prepared" herbs and spices in jars and tubes, which require refrigeration after opening. These are a good substitute for fresh, but the flavor is sometimes sweet, salty and/or acidic, due to the amount of vinegar, sugars or food acids needed to achieve preservation. When using these products in cooking, taste them first and then adjust the amount of sweetness, saltiness or acidity in the dish you are making.

When buying dried herbs and spices, never buy cardboard, cellophane or low-barrier plastic packs, even though they're often cheaper than the alternatives. These packs allow the

Opposite (clockwise from top right): upland cress; watercress; fresh coriander (cilantro); whole Indian coriander seeds; dried coriander leaf; whole Australian coriander seeds; ground Australian coriander seed; whole cloves; ground cloves



volatile oils to escape and oxygen to get in, so the herb or spice is already deteriorating by the time you take it home — it's false economy. When you work out the cost of herbs and spices and the small amount used in a recipe, they are really very economical.

Spices scooped from bulk bins may have been exposed to insects, bacteria and a considerable amount of air. They may also have been cross-contaminated by other produce and will be inferior in flavor. Jars with secure lids are better, but are still not ideal unless the seal of the lid is properly airtight. As a jar empties, the surface area of the spice or herb is exposed to more air in the headspace (the space between the product and the top of the jar), and the effectiveness of the jar as a storage container diminishes. The latest packaging technology, which produces multi-laminate, high-barrier, resealable zip-seal packs, is the most effective. You can squeeze the air out of these packs before resealing, so the contents will last longer.

For those who like to have herbs and spices on display in a spice rack, place the rack out of direct sunlight and use it only for whole spices or for favorites that you use frequently. Any herb with a delicate cell structure, such as chives and parsley — and any herb or spice used infrequently — is better kept in the pantry, away from light, heat and humidity.

Storage in the refrigerator or freezer is not generally recommended at home. When a herb pack is taken out of the cold environment, condensation forms, introducing unwanted moisture. However, for those who live in a very hot climate or have a spice that will not be used again for many months, freezer storage may be best. Before opening the pack, let it warm to room temperature and make sure that all signs of condensation have disappeared.

Herbs and spices — even those that have been dried — achieve their aroma and flavor from the volatile oils and oleoresins held in their cell structure. All herbs and spices will deteriorate over time; as the oils gradually evaporate, the flavor and aroma will dissipate. Therefore, when stocking your pantry with dried herbs and spices, try not to buy quantities that are too large. Use up a herb or spice by the “use by” or “best before” date — don't keep it for much longer, even if there is a little left. When you spring-clean, don't hesitate to throw away any herbs and spices that have passed their use-by date. It's not worth it to add something with hardly any flavor left to a meal. And don't be tempted to simply use more of an

Avoid shaking or pouring herb packs over a steaming saucepan. The steam will condense around the inside of the pack, and the moisture will make the spice go hard or oxidize more rapidly — or worse still, mold will form.



old spice: it will have lost its fragrant, volatile top notes; however, the deeper base notes, contained in the oleoresins, will not have deteriorated as much. Using too much of an out-of-date spice will introduce sharp, potentially bitter flavor notes.

When you're wondering whether your ground spices are still good to use, simply smell them: if you can detect some aroma and pungency, they should be all right. To check the freshness of whole spices, you will need to either break the piece (for cinnamon sticks or cloves) or scrape it with a knife or grater (for a spice such as nutmeg). Have a little sniff of any spice you are adding (except chili flakes or powder) each time you cook with it. You will become familiar with the aroma, which will help you gain an understanding of good versus poor quality. In addition, you will start to get a feel for what flavors work best in your recipes.

To test dried herbs for freshness, put a few leaves in the palm of your hand and rub them back and forth with your thumb. As they turn to powder, smell the aroma that is generated by the rubbing action and the warmth of your hand. If the aroma is noticeable and pleasant, the herbs should be okay. If the smell is either musty or straw-like and seems like old grass clippings, you might as well throw the herbs away.

A word of caution about buying spices from unknown traders or those colorful markets when you are traveling around in exotic climes. Spices and herbs are agricultural commodities, and besides the variations that can occur from growing in various soils and under different climatic conditions, post-harvest handling and storage can have far-reaching effects. How these affect individual spices and herbs is discussed in their own chapters; however, there are some broad-brush factors it is worth being aware of.

Although the spice industry has achieved new heights of sophistication in terms of quality control, shipping, packing, storage, marketing and usage, at farm level the majority of spices and herbs are harvested and dried much as they have been for centuries. Nearly every peppercorn you buy has been hand-picked; every true cinnamon stick has been hand-stripped and -rolled by traditional cinnamon peelers in Sri Lanka; every vanilla orchid has been hand-pollinated, and every vanilla pod has been handled dozens of times during the arduous curing process. It is not surprising, therefore, that many spices carry abnormally high levels of bacteria, transmitted by soil, manure and human contact. When I attended a

There is a misconception that dry-roasting old spices will freshen them up. Heating or roasting an out-of-date spice drives off some of the remaining volatile notes and creates some new roasted notes, but the spice has not been rejuvenated.



World Spice Congress in India in 1986, the Indian delegates were at a loss to understand what they perceived as the West's obsession with cleanliness. From their perspective, there was no problem, as most of the bacteria on a spice would be sterilized by the heat of cooking. At that point, the issue became obvious: in the West we often use spices in ways that do not necessarily sterilize them. Take cracked pepper crusted onto cheese, paprika sprinkled over eggs being kept warm under a heat lamp, or a seasoning shaken over some chicken while it is being handed around at a barbecue — all high-risk, bacteria-growing situations.

The spice industry then took measures to sterilize spices to reduce the bacteria. A popular early method was fumigation with a gas called ethylene oxide (ETO). Subsequently, ETO was found to put workers handling it at risk, and the residue, ethylene chlorohydrin (ECH), had been identified as carcinogenic in high concentrations. The use of ETO is now banned in most countries. Aside from improving cleanliness standards at farm level, only two viable alternatives remain: irradiation and heat sterilization.

Irradiation involves exposing food to a low dose of ionizing radiation, which kills most bacteria and insect larvae. Irradiation is widely used to sterilize medical products and is permitted for food sterilization in many countries. Consumers, however, are not generally comfortable with the idea of eating irradiated food, and as any irradiated product has to be labeled as such, to date no major spice seller has adopted this practice. The debate about the safety of irradiation continues; to many people, the jury is still out. As alternative, less controversial technologies are developed, the spices and herbs you buy are less likely to be sterilized in this manner.

That leaves heat sterilization as the most popular method of reducing the bacteria in spices. Essentially, the whole spice is subjected to enough heat to kill most microorganisms without damaging the flavor. The spice is then ground in a very clean environment. Because achieving cleanliness is best done at farm level, government organizations such as the Spices Board in India have made a significant contribution to raising the standards of spice production, achieved by a practical, hands-on approach in which field officers educate farmers about the best practices.

What about buying organic spices? Some years ago, when Liz and I visited a cooperative of organic spice farms in Mangalore, India, we were interested to learn why the farmers had returned to organic farming. We were told that, some years earlier, a number of pepper shipments to developed countries had been rejected because of the presence of high levels of pesticide residues (pesticides, mind you, that had been sold to the Indians by those same developed countries). As a result, a group of farmers' decided to return to the farming methods that had served their fathers, grandfathers and earlier generations quite well for centuries.

Organic spices and herbs are becoming more readily available; however, they are worth their higher cost only if the flavor is as good as or better than non-certified-organic material. Often overlooked is that most developed countries have strict standards with respect to chemical residues in imported foods, a fact that narrows the gap between standard and organic. Spices are also consumed in relatively small amounts — $\frac{1}{3}$ ounces (10 g) or less in a meal — so their organic status is far less significant than that of whole vegetables, chicken or steak.





Using Fresh and Dried Spices and Herbs

FRESHNESS IS ALWAYS critical in the context of food being “ready to eat” or “not old and tasteless,” but “fresh” is a much abused and misquoted term these days when it comes to herbs and spices. When a spice trader says “fresh” herbs and spices, the term means products that have been freshly picked and have not been dried, frozen or processed in any way.

In some cases the fresh item is clearly best (for instance, coriander leaves), however, when deciding whether to use a fresh or dried herb or spice, you need to consider what is most appropriate for its application. For centuries people have been drying the different varieties of herbs and spices for varying reasons, the most common being that it preserves them in a storable form for later application when the crop either is not available or is not conveniently to hand when we want it.

The next main reason for drying, especially with spices, is that the drying or curing process creates particular enzymatic reactions within certain varieties of spices, and this actually creates the distinctive flavor we are looking for. For example, it is the drying of peppercorns in the sun that turns them black and forms the volatile oil piperine, which gives pepper its unique taste. Before curing, the vanilla bean is a green tasteless and odorless bean growing on a tropical, climbing orchid. One would be justified in being puzzled by a recipe for homemade ice cream that called for a “fresh” vanilla bean! Over many months, the kiln-drying and curing process creates the vanilla flavor we all know so well. This unique flavor comes from the substance formed by the enzymes in the vanilla bean during drying and curing. The recipe probably means a good-quality, flexible, aromatic vanilla bean rather than a fresh one. The enzyme reaction that results from drying in the case of pepper and vanilla also works to fully develop the flavors of spices such as cloves, allspice, nutmeg and cardamom, to mention just a few.

Opposite (clockwise from top left): piri piri; fresh Scotch bonnet chilies; pasilla chilies; chopped freeze-dried red chilies; whole dried long red chilies; fresh long red chilies; white chilies (curd)

The third main reason for drying, with herbs for instance, is to have them in a form that readily imparts the flavor effectively into the food being prepared. Think of trying to make a cup of peppermint tea with fresh peppermint leaves. The result would be an infusion with very little flavor and a low level of the therapeutic volatile oils in the tea. However, the dried peppermint leaf infuses readily with hot water to make an effective cup of herbal tea, with the characteristic flavor we know so well.

When a herb is dried, the water content is removed, leaving the dried, shriveled leaf, still containing the essential oils that give the herb its flavor. Because the dried herb is like a “concentrated” form of the fresh herb, a general rule of thumb when using dried herbs is to use one-quarter to one-third of what you would use of the fresh herb. However, most dried herbs do lose what we refer to as the fresh volatile top notes. These fresh notes are particularly noticeable in herbs like coriander leaves, basil, lemongrass, chives and parsley. Even fresh chilies taste quite different from dried chilies.

When it comes to choosing between fresh or dried herbs, it is a matter of utilizing the most appropriate form for the particular meal or dish. Sometimes compromises have to be made to allow for the season or availability.

There are some dishes in which the fruity caramelized notes of dried chilies would be preferred. There are also many dishes in which it is preferable to use the fresh herbs, if they are available, to get the true effect. For example, in Thai cooking, fresh coriander leaves, ginger, garlic, lemongrass, lime leaves and chili are essential to achieving the classic flavor. An Italian salad with fresh tomatoes tastes best with fresh basil; however, when making a Bolognese sauce or a stew or casserole, we would always include dried herbs such as basil, oregano, thyme and bay leaves. These dried herbs have more robust, concentrated flavors, which amalgamate and infuse more readily into the food because they are dried, allowing the essential oils to migrate easily out of the leaf structure and flavor the meal. Should you particularly want the flavor of some fresh herbs as well, then add them about 10–20 minutes before the end of the cooking time. This way the heat of cooking does not destroy the delicate fresh top notes.

When should you use whole spices, and when ground? It depends on the cooking method and the most effective way to impart flavor. For example, you might add a whole piece

of cinnamon stick to fruit during stewing to infuse the fruit with the flavor of cinnamon while leaving the liquid clear. Ground cinnamon would make the liquid muddy-looking. However, when you're making a curry, mixing spices with flour for cakes and biscuits or rubbing spices onto meats before cooking, ground spices are always used. Ground spices mix readily with other ingredients, imparting their flavor more rapidly than whole spices, because they have been crushed to a powder.

Some cooks say you should always buy spices whole and grind them yourself. This is not a bad idea if you're unsure of the quality and freshness of ground spices. And if you're an infrequent user, whole spices have a longer shelf life than ground ones. On average, whole spices, when stored as suggested on page 38, will last for three years, while ground spices will start losing flavor after 12 to 18 months. Good-quality purchased ground spices are as flavorful as those you have ground yourself, so if you use a lot of ground spice, go for the convenience of ready-ground.

Grinding spices yourself can be extremely rewarding, especially if you do so with a mortar and pestle so the aromas waft up as you crush the contents. Spices vary so much in size, hardness, texture and oil content that it is almost impossible to find a domestic grinder, other than a mortar and pestle, that will handle them all. Seed spices, such as pepper, can be ground in a normal pepper mill. You can also use a coffee grinder, but electric grinders can generate excessive heat that can destroy some of the lighter volatiles, so don't over-grind. When it comes to all other spices, use the trusty mortar and pestle that has been one of the cook's most useful implements for thousands of years.

Some cooks may incorrectly tell you that roasting spices brings out the flavor. Roasting spices *changes* the flavor. In the same way that a slice of toast tastes different from a slice of bread, a roasted spice tastes different from an unroasted one. Spices are roasted to create greater depth of flavor and robustness, often when used with red meats. The majority of Indian curries are enhanced when roasted spices are used; however, one would never roast cinnamon, allspice, nutmeg or ginger before adding them to a cake. I also prefer to use unroasted spices in fish and vegetable dishes, as the more delicate, fresh-tasting top notes are still recognizable and complement these foods better than robust, deep, roasted flavors.

If you don't want your coffee tasting of cumin and fenugreek, the easiest way to clean a grinder is to grind a spoonful of rice in it. Rice flour is gritty and cleans contact surfaces effectively while absorbing residual oils, leaving the mechanism quite clean.



Both whole and ground spices may be dry-roasted. Many cooks like to roast them whole for the same reason they buy whole spices. But good-quality, freshly ground spices will roast perfectly well. To roast either whole or ground spices, heat a heavy-bottomed pan on the stovetop until it is almost too hot to touch. (If it is too hot, the spices may burn, making them bitter.) Put your spices into the hot pan and shake the pan constantly so they don't stick or burn. When they become fragrant and start to darken, they are sufficiently roasted and should be tipped out of the pan, ready for use within a day or two. After roasting, the volatile oils oxidize more rapidly and flavor deteriorates quickly, so don't store roasted spices for more than a few days.



*Clockwise from top
right: dried basil; sweet
basil; Thai basil; sacred
basil; purple bush basil;
basil seeds*

Spices and Herbs Found in Popular Cuisines

THOUSANDS OF BOOKS have been written on the nuances of many cuisines and the extraordinary variety of ingredients that contribute to their character. So in some respects it is a gross oversimplification to identify a combination of herbs and spices that represents the flavors perceived as dominant in a cuisine. But the fact remains that, for the majority of popular foods from different cultures, there are certain herbs and spices that, when added to the readily available ingredients of those regions, contribute to a unique character.

When the herbs and spices in the cuisine-specific sections that follow are incorporated into even the most basic of meals (stir-fries, barbecues and curries, to name a few), a flavor will be imparted that is distinctly reminiscent of that cuisine. The spices are shown in descending order of quantity by weight, so the first item is the spice used in greatest proportion. The figure to the left of each spice broadly represents the ratio at which that spice is used in relation to the other spices. For example, a spice with a 10 beside it would be added at a ratio of 10 (ounces or grams) to 3 (ounces or grams) of the spice with a 3 beside it. These ratios apply to both whole and ground spices, as the measures are by weight. Three ounces (90 g) of whole star anise is the same amount by weight as 3 ounces (90 g) of ground star anise. (For details on the weights per teaspoon/5 mL of ground spices, see the margins for each spice listing.)

“The Art of Combining Spices” (pp. 531–589) provides more detailed guidelines on spice blends for various cuisines, and also includes blends that are tasty and useful though not necessarily part of a familiar cuisine.

Cuisines are dynamic and ever-changing, reflecting a kaleidoscope of influences. Among the most obvious is availability of ingredients. The meats, vegetables and grains native to a region, combined with local spices and herbs, formed the first cuisines, cooked by whatever method was popular in the

region. Cuisines developed over thousands of years as new ingredients were introduced by enterprising traders and inquisitive cooks — and they continue to change. Try to imagine for a moment what Indian and African food was like before Europeans found chilies in the New World in the 15th century. What would Northern European food have tasted like before the introduction of sweet paprika (a chili descendent)? Can you visualize a Thai dish without the tiny, fiery green chilies?

In the following details on the spices and herbs used in various cuisines, I am not attempting to give a history of that cuisine; there are many food historians and cuisine experts who have done that better than I can do. Rather, my notes will give you an idea of how these cuisines manifest themselves in the 21st century and how you can readily replicate the key elements of the cuisines in your cooking. Although European cuisines use spices and herbs, when it comes to distinct flavor characteristics, spice and herbs are not as defining as they are in the African, Australian, Chinese and Vietnamese, Indian, Indonesian, Japanese, Mexican, Middle Eastern, Malaysian and Singaporean, Moroccan, North American and Thai cuisines detailed below.

Below each cuisine is a list of the spices.


African

African cuisine south of the Sahara Desert is typified by the foods of Nigeria, Ethiopia and the Republic of South Africa. The traditional diet of Africa uses some form of starch as a major ingredient, accompanied by a stew of meat or vegetables or both. Groundnuts (peanuts) are widely used, as is their oil for cooking. Indian migration to Africa has made an impact on the spices used, as has the Malay influence in the Cape Malay styles of South Africa. One of the very few spices that is indigenous to Africa is grains of paradise, a hot, peppery member of the cardamom family. The recipe for West African Beef Stew (see p. 288) is typical of this style of cooking.

Like the rest of the world, Africans warmly embraced chilies after the 15th-century voyages to the Americas. For the first time in their history, people of any socioeconomic group could have their own spicy hit with a few easily grown, prolific chili plants. In Africa, chili is referred to as *piri piri*, which basically means “#%&★! hot!” Piri piri sauce is a very hot, tangy chili sauce. If you think of Asian chili sauces as hot, sweet

and garlicky with a bit of shrimp thrown in for good measure, think of piri piri sauce as hot with a lemon-like acidity.

The main spices in African (West African, East African and South African) cuisine are:

- 
- 10 coriander seed
 - 6 cumin
 - 2 allspice
 - 2 ginger
 - 1 chili
 - 1 pepper
 - 1 grains of paradise
 - 1 fenugreek seed

Australian

European migration, followed by Chinese, Southeast Asian, Indian and Middle Eastern cuisines, laid the groundwork for what is often referred to as “mod-oz.” Although these wonderful fusions have created a style of food found in numerous Australian cafés, restaurants and homes, I have focused here on the emerging use of native Australian spices and herbs.

Over the last 20 years there has been an emerging interest in the commercial opportunities provided by edible Australian plants (often referred to as “bush tucker”), including spices and herbs used to enhance the flavor of food. Australia is a vast continent, and most non-indigenous people would perish quickly in the rugged environment without adequate supplies of familiar life-sustaining produce. To many observers, it appears to be a miracle that the Australian Aborigines survived in such a harsh setting for countless generations. Yet their ecosystem is abundant when you know where to look. Restaurateurs around Australia have been bringing the wonders of native flavors to Australians and tourists alike; nevertheless, widespread use of Australia’s native flavors developed very slowly in the latter years of the 20th century.

There are some fundamental reasons for this. First, unlike conventional herbs and spices, which have been used to season and preserve food in many cultures for centuries, Australia’s native spices have a sketchy history of being used as seasonings. The indigenous people are known to have used them for sustenance and for their medicinal and spiritual properties, but there are few examples of Australian native

spices being used to flavor food. Native spices also bear the burden of “gimmick appeal.” Their novelty value has helped to generate worldwide awareness, but the image of “bush foods” is at odds with the way cooks see themselves preparing everyday meals. A third barrier to the success of these indigenous flavors relates to the cooking methods required for most Australian spices. Many have delicate fresh top notes that cannot sustain long cooking periods; others, when used in too large a quantity, leave an unpleasant camphor taste in the food. A basic understanding of how to use these spices overcomes this problem — not too difficult if you can imagine the result of using too much pepper, chili, cardamom or cloves in a meal. The skills we have acquired through generations of traditional spice use can be applied equally to Australian native flavors, so that using akudjura (bush tomato) or lemon myrtle leaves will eventually become no more mysterious than adding chili or lemongrass.

Because Australian cuisine uses nearly every culinary spice and herb in some way, the following list of spices and herbs is a selection of the flavors, both indigenous and introduced, that when combined help the cook replicate a quintessentially Australian food experience. These spices, used on red meats, white meats, vegetables and grains, evoke the stark, uncontrived openness of the Australian psyche.

The main spices and herbs in native Australian cuisine are:

- 10 coriander seed
- 5 ginger
- 4 bush tomato
- 3.5 lemon myrtle
- 3 olida (forest berry herb)
- 3 wattleseed
- 2.5 mountain pepperleaf
- 2 aniseed myrtle
- 1.5 mountain pepperberry

Chinese and Vietnamese

Chinese cuisine does not employ a wide range of spices, as a great deal of the flavor in Chinese food comes from the stocks created from the ingredients during cooking, much as in French cuisine. A curious fact is that, of all the cuisines in the world, Chinese is the only one I have experienced that is so



dominated by just one spice, star anise. This may be because star anise, along with Sichuan pepper, is one of the few spices native to China. Even when cloves, introduced to China over 20 centuries ago, are used alongside star anise, they complement rather than dominate. Chilies were not introduced until the 15th century, yet as is the case in many countries, they have become a staple seasoning.

There are some interesting similarities between Chinese and Vietnamese cuisine. North Vietnamese cuisine bears the strongest relationship to Chinese due to its proximity, while South Vietnam (which was known as Cochin China when the Chinese started trading with India) features curries and soups that reveal Indian and French influences in both the spices used and the methods of cooking. Vietnamese food seems to include more fresh herbs than Chinese, although Chinese cooking does feature a lot of fresh green leaf vegetables. In Vietnamese cuisine, the combination of fresh coriander leaves and green dill is a marriage made in heaven — imagine our surprise when we found this exact combination, albeit with very different spices, in a Kuwaiti fish stew.

The main spices and herbs in Chinese and Vietnamese cuisine are:

- 10 star anise
- 8 fennel seed
- 6 coriander leaf
- 5 dill leaves
- 4.5 cassia
- 4 ginger
- 2 Sichuan pepper
- 2 pepper (black)
- 1.5 chili
- 1 cloves
- 1 licorice

Indian

Indian cuisine arguably uses more spices than any other, a legacy of the number of spices grown in India and the long history of trading Indian spices for spices from other parts of the globe. Indian cuisine tends to be categorized as either North or South, each being influenced by the spices growing in the region and the cultural impacts of immigrants, invaders

and colonizers over the centuries. North Indian flavors — and for that matter, Pakistani and Bangladeshi flavors — are represented by curry spice mixtures (masalas), which include seed spices such as coriander, cumin, black cumin, fennel, fenugreek, chili, mustard, ajowan and nigella seeds. When combined with yogurt, dried fruits and nuts and the leaves of coriander and fenugreek (methi), the result is dishes that are generally rich, creamy and nutty. Although North Indian cuisine is often associated with rich, creamy meals such as rogan josh, korma curry and butter chicken, Manoj, our tour manager, who travels with us on our Spice Discovery Tours, hails from the North and finds South Indian food too bland. He is always borrowing my pocket pack of blended chili powders — a reminder that, while it may be easy to generalize about a cuisine, the variations of tastes can be as diverse as the number of families making the evening meal at any given time.

South Indian cuisine is strongly influenced by the ubiquitous coconut palm, which provides coconut oil for cooking, grated coconut as a key ingredient in many recipes and coconut milk. The spices used are also those that grow prolifically in the region, such as peppercorns, ginger, turmeric, curry leaves, tamarind and kokam. The result is a South Indian signature that is instantly recognizable: highly aromatic, heated more by pepper than by chilies, fragrant, fresh and citrus-like from curry leaves, and fruitily acidic from tamarind and kokam. Rice is the staple carbohydrate in the South, while wheat dominates in the North.

I incorporate Indian spices into the most basic of cooking forms, curries and broiled meats. For foolproof curries that will have your guests enthralled, my favorite curry recipe appears on page 555. For a heavenly butter chicken, look up the tandoori spice blend and recipe on page 158. In South India it is still very common when broiling meat and seafood to overcook it; however, one can still achieve the desired taste without having a crisp, dry piece of broiled fish. For a succulent fish recipe, see South Indian Sardines on page 302.

The main spices and herbs in Indian cuisine are:

- 10 coriander seed
- 7 turmeric
- 6 cinnamon
- 6 cumin
- 3 fenugreek



- 3 ginger
- 2 pepper
- 1.5 chili
- 1 nutmeg
- 0.75 mace
- 0.5 cloves
- 0.5 tamarind
- 0.5 cardamom
- 0.1 saffron

Indonesian

Indonesian cuisine does not retain a huge legacy from the spices that grew and could be sourced only from there up until the 17th century. Cloves, nutmeg, mace, cubeb and long pepper all feature in varying degrees, but they have been overtaken by the influences of Arab, Indian, Chinese and Dutch traders. Not only were different spices introduced to the Indonesian archipelago, but various cooking styles and cultural influences had an impact. Examples prevail, such as the similarity between East Sumatran and Malay curries and, in Balinese cuisine, the Hindu influence of using highly aromatic spices. From a spicer's point of view, I feel that, in addition to the characteristic spices used, the dryness of an Indonesian rendang curry says it all. The dryness is developed through long, slow cooking and the addition of dry-roasted desiccated coconut prior to serving. My other favorite is nasi goreng, high in chilies, with distinct shrimp flavors balancing the chili heat. A sambal — and there are many versions — is predominantly chilies, shallots, ginger, garlic and lime with shrimp paste.

The main spices and herbs in Indonesian cuisine are:

- 10 fennel seed
- 8 coriander seed
- 7 cumin seed
- 5 cassia
- 5 turmeric
- 5 lemongrass
- 4.5 ginger
- 4 galangal
- 2 nutmeg
- 2 pepper (black, cubeb and long)

- 2 tamarind
- 1.5 star anise
- 1 cloves
- 1 mace
- 1 chili

Japanese

Japanese cuisine is known for its simplicity and aesthetic appeal, the flavors dictated by the main ingredients and the way they are cooked. It is the broiling, simmering, steaming or deep-frying with predominantly fresh ingredients that typifies Japanese food. Spices and herbs tend to be used subtly, with the proteins and vegetables retaining their characteristic flavors. Monosodium glutamate (MSG) is added to a lot of Japanese food. MSG occurs naturally in many foods, and it contributes what the Japanese refer to as *umami*, that fifth, elusive flavor that helps bring all the other flavors (sweet, sour, salty and bitter) together, creating the balance in Asian food. Since the Japanese discovered how to manufacture this flavor enhancer, it has become widely used (and in my opinion abused) by many restaurants and food manufacturers. MSG has been so over-used that many people are believed to be allergic to it, and the majority of consumers prefer to buy foods that are free of added MSG. MSG's unfavorable image remains, even though in the late 20th century MSG information bureaus were set up in many countries to dispel community fears of its effects. I believe that good-quality ingredients, naturally flavored with spices and herbs, do not require added MSG. Some of the best flavors in Japanese food come from wasabi and the seed pod and the leaves of the prickly ash tree, called Sichuan pepper and sansho respectively.

The main spices and herbs in Japanese cuisine are:

- 10 sansho (Sichuan pepper leaves)
- 10 black sesame
- 7 mustard seed
- 5 salt
- 3 Sichuan pepper
- <3 various types of dried seaweed
- 2 pepper (white)
- 1 wasabi



Mexican

With the possible exception of the spice trade from India, Latin America has had the greatest impact on the world's cuisines. Until the Spanish traveled to the Americas, allspice, vanilla, chilies, chocolate, tomatoes, potatoes and beans were unknown to the rest of the world. Europe, and especially Spain, in turn influenced the foods of Argentina, Chile, Nicaragua, the West Indies and Mexico. There are many other countries and regional cuisines too detailed to mention here; however, rightly or wrongly, it is Mexican cuisine (and not just Tex-Mex) that is the best known.

Traditional Mexican cooking was based primarily on stews that could be made in their clay pots, and so it is the sauces (*mole* comes from an Aztec word that means a liquid containing chilies) that characterize Mexican cuisine. It is interesting to note that Sri Lanka exports so much cinnamon to Mexico for use in Mexican chocolate and cooking that the grade sent there is called "Mexican cinnamon." Details on how to use these spices, in particular epazote and annatto, are contained in the chapters on these spices.

The main spices and herbs in Mexican cuisine are:

- 10 paprika
- 5 cumin
- 5 coriander leaf
- 3 oregano
- 3 cinnamon
- 2 chili (pasilla, ancho, mulato, guajillo, pequin, New Mexico)
- 1 epazote
- 1 annatto

Middle Eastern

"Middle East" is a relatively loose term applied to the vast area that includes Israel, Palestine, Lebanon, Jordan, Syria, the Gulf States and Yemen. There are also some remarkable similarities to Greek and Turkish cuisines here, and at the risk of offending ethnic sensibilities and national pride, I would rather focus on the wonderful way food unites rather than be obsessive about the differences. These cuisines have been influenced by Arab, Iranian, Indian and European cultures, so the use of nuts, fruits, yogurt and sesame (oil and

Opposite (clockwise from top left): whole caraway seeds; ground caraway seed; candelnuts; fresh calamus leaf; calamus root; dried capers; pickled capers

tahini), along with spices, is represented in them all. The most popular spices native to the Middle East are sumac, mahlab, mastic, pomegranate and capers, while a particular fondness for the many derivatives of chili, including paprika and Aleppo pepper, is always apparent. Herbs such as oregano, marjoram, parsley and thyme are often combined with spices, the most pervasive mix being za'atar (see p. 589), a blend of thyme, sesame, sumac and salt. The distinct floral notes of rosewater and orange blossom water are found in many Middle Eastern sweet dishes, along with mahlab and mastic.

Because meats are often broiled and served with flatbread and greenery, seasoning roasts and kebabs with spices before cooking is a common practice. Baharat (see p. 541), sometimes called Lebanese seven-spice, is a balanced spice mixture that is similar to a Moroccan tagine spice mix for red meat, and is just as effective when used to flavor stews.

The main spices and herbs in Middle Eastern cuisine are:

- 10 paprika
- 7 coriander seed
- 6 sumac
- 6 parsley
- 4 thyme
- 4 cumin
- 2 cassia
- 2 pomegranate
- 1.5 pepper
- 1 cloves
- 1 cardamom
- 0.5 mahlab
- 0.2 mastic

Malaysian and Singaporean

Malaysian and Singaporean cuisines are arguably some of the greatest examples of fusion, in which many typically Southeast Asian characteristics are influenced by Chinese, Portuguese, Indian and Sri Lankan cooking. Rice is the staple carbohydrate, and the spice and herb flavor notes are complemented with lime, coconut and shrimp in its various forms (dried, as a paste and in sauces). Singapore is more Chinese than Malay; however, a Chinese dish prepared in Singapore

usually bears the unmistakable depth of flavor and greater use of spice one gets used to in Malaysia. The Strait of Malacca's tasty cooking style, known as *nonya*, has become increasingly popular with tourists, perhaps partly due to their adventurous disposition and the acceptance of this fusion between Chinese, Malay, Portuguese, Indian and Burmese traditions.

The main spices and herbs in Malaysian and Singaporean cuisine are:

- 10 coriander seed and leaf
- 8 fennel seed
- 5 cinnamon and cassia
- 4 turmeric
- 4 lemongrass
- 4 candlenut
- 4 cumin
- 2 ginger
- 2 Vietnamese mint
- 1.5 pepper
- 1.5 galangal
- 1.5 cardamom (green and white)
- 1 tamarind
- 1 chili
- 1 star anise

Moroccan (North African)

North African cuisine, which includes those of Ethiopia, Egypt, Morocco and Tunisia, is by and large consolidated into what is referred to as Moroccan in the West. Although some of these regions may be offended at being lumped together under one cuisine style, journalists, food writers, restaurants and spice companies have collectively opted to use Moroccan as the defining title. Much as I love Indian food and the way spices often totally dominate the other ingredients, I often refer to Moroccan food as “user-friendly Indian” because North African spicing uses high proportions of mild spices, leaving the hot stuff to be added by the diner. Harissa (see p. 561) is a fiery chili paste served as an accompaniment, like an Asian chili sauce, so you can have as much or as little as you like. The other spices do not dominate, so the true taste of the meats, vegetables and grains comes through. North African cooking is also often based around one- or two-pot preparation. Therefore,



we see a lot of stews — modern marketers like to call them casseroles, as they think it is a more appetizing word, but what better name for them than the traditional word: *tagine*? A tagine is actually the earthenware, conical-lidded cooking pot, which is placed over a flame or in an oven. Steam containing the aromatic cooking juices rises in the coned lid, condenses and runs back into the stew. A slow-cooked tagine of lamb with traditional Moroccan spices falls off the bone and is one the most fundamental of comfort foods. Tagines can be purchased from many specialty stores, but a cast-iron, lidded pot that can be put in the oven will do the job just as well. Recipes to look for are Berbere (see p. 546), Tagine Spice Mix (p. 585), Harissa (p. 561) and the esoteric, magical and thoroughly practical and enjoyable Ras el Hanout (p. 579).

The main spices and herbs in Moroccan (North African) cuisine are:

- 10 coriander seed
- 6 turmeric
- 6 paprika
- 4 cumin
- 4 cinnamon
- 2 ginger
- 1 cloves
- 0.5 pepper
- 0.5 chili

North American

The regional cuisines of North America feature few of the ingredients used by Native Americans before the arrival of the Spanish, French, English and Dutch explorers and merchants. This evolution is the result of the many ways indigenous spices such as chili, allspice, vanilla and sassafras are used in combination with a host of introduced spices.

Southern cuisine has its roots in a fusion of Native American and West African cooking, with influences from Spain and England. As many of the immigrants were either African slaves or peasants from Europe, the cooking styles were basic and relied on inexpensive ingredients, including plenty of fat for flavor and a handful of readily available spices such as chilies and black pepper. Spices really come into their own in the cuisine of Louisiana, which has given the world the delights of Cajun

Opposite (clockwise from top left): dried rosemary; freeze-dried rosemary; fresh rosemary; Kashmiri saffron stigmas; arugula; safflower petals; ground rosemary



and Creole cooking. The word “Cajun” comes from the Native Americans’ pronunciation of “Acadian,” the French settlers from Nova Scotia. The Acadians’ basic cooking style was heavily influenced by the Africans and Caribs, and evolved into hot, spicy dishes seasoned with herbs such as thyme and spices including chilies, pepper and allspice. Creole cuisine is described as more sophisticated than Cajun, with French, Italian and Spanish influences in the form of less spice and more cream, butter, garlic and tomato. Both Cajun and Creole recipes use sassafras leaf (filé powder), the essential ingredient in gumbo. Although filé does not contribute much flavor, it is the ingredient, along with okra, that makes gumbo gummy.

Tex-Mex is a fusion of Texan and Mexican cuisines — basic rural cooking supplemented with staples such as corn and beans and spiced predominantly with chili. The prevailing image of Mexican cuisine in many parts of the world — an array of packaged taco seasonings, salsas and corn chips — is actually Tex-Mex.

Aside from these regional specialties, the kitchens of North America epitomize the notion of fusion cooking, drawing on influences from all corners of the globe. Some critics revel in using the phrase “confusion rather than fusion,” but I believe that all cuisines are evolving, and only purists are offended by such diversity.

Most competent cooks have the ability to combine flavors in a highly complementary manner. “The Art of Combining Spices” (pp. 531–589) gives a reliable template upon which to create a vast array of taste sensations from spices and herbs. North America boasts perhaps the largest range of packaged spice blends and seasoning mixes, which are rubbed, sprinkled, coated or shaken on roasts, barbecues and fast foods, or used in marinades. Some are appallingly high in salt, MSG, starches, free-flow agents, flavor additives and colors. Others are brilliantly constructed and provide the home cook with a degree of convenience and variety that would otherwise require a spice collection of 50 to 80 different spices and herbs. It is a good idea to have a close look at the ingredients list before buying.

Because nearly every spice and herb can be found somewhere in the traditional or ethnic recipes that are regularly enjoyed by North Americans, the following spices relate mostly to the distinctive cuisines of the South.

The main spices and herbs in North American cuisine are:

- 10 paprika
- 8 basil
- 4 cumin
- 4 fennel seeds
- 3 cinnamon
- 3 thyme
- 2 ginger
- 2 allspice
- 2 bay leaves
- 2 pepper (black and white)
- 2 chili (all varieties)
- 1 filé powder

Thai

When we think of Thai food, the flavors that come to mind (which, by the way, are mostly influenced by our exposure to Thai restaurants in the Western world) are aromatic, fresh, yet hot and sour. These flavors are beautifully balanced with palm sugar and the taste of coconut. In broad, grossly oversimplified terms, Thai cuisine could be described as either predominantly light, sharp and fresh or full-bodied, rich, spicy and nutty. These richer curries, such as massaman, which bear a striking resemblance to the Penang curries of Malaysia, were influenced by the Indian Muslims and contain spices such as cloves, nutmeg and cinnamon. The herbs and spices listed below lean toward the light, fresh Thai styles, displaying sourness and sweetness. White pepper is preferred to black, as it delivers straight heat and sharpness without the complex piperine, typically aromatic black peppercorn notes.

The main spices and herbs in Thai cuisine are:

- 10 coriander leaf
- 7 kaffir lime leaf
- 7 lemongrass
- 5 green and red chili
- 5 turmeric
- 3 garlic
- 3 ginger
- 2.5 galangal
- 2 cloves
- 2 cardamom
- 2 pepper (white)

Matching Wines with Spices

MUCH HAS BEEN written on the principles of matching wine and food, and although the principles of matching are universally agreed upon, when it comes to spices there is often a misconception that wine does not go with spicy food and that the most appropriate beverage to accompany spicy meals is beer. This may be the case if one takes the narrow view that there are only a few hot spices in the world. However, we know this is not so. It is also worth noting that many of the descriptions of aromas and tastes that we use to describe spices are the same as or similar to the terms employed in the descriptions, sometimes overly fanciful, of the profiles of wines. When describing both wines and spices, people use such words as: fruity, vanilla-like, buttery, resinous, acidic, earthy, spicy, robust, anise-like or licorice-like, peppery, sulfurous, acrid, lemony, mineraly, turpentine-like, sweet, honey-like, pungent, moldy, floral, hay-like, herbaceous, savory, grassy, piney, smoky, woody, raisin-like, minty, astringent, tart, penetrating, metallic, dry, bitter, biting, clean, tangy, zesty, menthol-like, lingering, fresh, musky, gingery, camphor-like, medicinal, antiseptic, warming, numbing, insect-like, fetid, sharp, citric, nutty, caramelized, cherry-like, almondy, tobacco-like, roasted, toasted and burnt — to mention just a few!

It is not surprising, then, that the most practical way to approach matching wine with spiced food is either to identify the aspects of commonality — to literally match the profiles — or to focus on the elements that best balance the tastes in the wine and food. The result is a complementary embodiment of the most distinctive characters of each, the wine and the spice, to the satisfaction of one's palate. For example, a casserole seasoned with the combination of spices known as baharat (including sweet paprika, pepper, cumin, nutmeg and cloves) is perfectly matched with a shiraz that has warm, spicy, licorice and berry fruit notes. Neither overpowers the other, and that is why they match. The antiseptic characteristic of cloves makes them too strong to pair with light white wines; meals heavily spiced with cloves need a Cabernet Sauvignon or a shiraz.

Here are some useful guidelines to keep in mind:

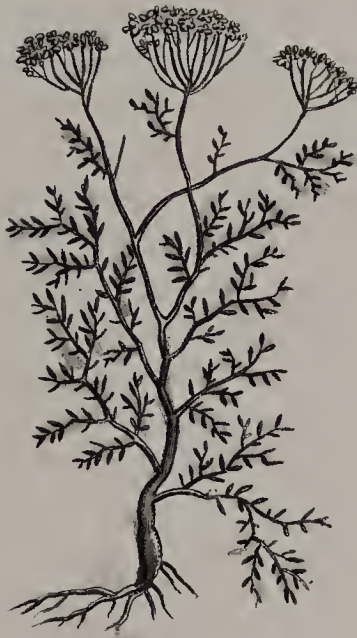
- Hot spices such as pepper, chili and horseradish increase your perception of alcohol content, making high-alcohol wines less pleasant to swallow and food flavors seem harsher. When you're eating hot, spicy food, a low-alcohol wine from New Zealand, Germany or Alsace would be a better choice.
- Some salty foods benefit from a sweeter wine that balances the flavors you experience; for instance, Sauternes with Roquefort cheese. Other salty foods match well with fresh, acidic wines, and salt in a meal can sometimes moderate the tannins in red wine.
- Soft fresh herbs such as basil, coriander and dill pair well with a broad range of wines, the exception, perhaps, being a heavy Cabernet Sauvignon. Firmer, more savory herbs such as rosemary, thyme, sage and oregano go well with Pinot, Merlot or Cabernet Sauvignon, due to these wines' depth of flavor.





II

Spice Notes



THE STRUCTURE of this part of *The Spice and Herb Bible* is designed to provide quick reference to the most commonly required details on each herb and spice, along with other useful and interesting facts and anecdotes. The spices and herbs are listed in alphabetical order with the following subheadings.

Herb or Spice Common Name

This is the single name most commonly used and recognized.

Other Common Names

These are names often used instead of the common name. For example, coriander leaf is often referred to as cilantro. The spelling of common names in English may vary considerably, although they should sound the same. This is because many English spellings are the best attempt at a phonetic rendition of a name that was not originally written in Roman lettering. Therefore, the English spelling of the Middle Eastern spice *sumac* may be seen as *sumak*, *sumach* or *summak*. In reality, it cannot be said that one version is more correct than another. However, to establish a consistent standard, I advise using the common spelling of the name whenever possible.

Botanical Name

Botanical names provide a system of plant classification that is universally accepted. The first attempt at classifying plants was made by Theophrastus in the fourth century BC. Theophrastus classified plants as either herbs, shrubs or trees. At this time the word “herb” was merely used as a reference to the plant size, rather than as an indication of any culinary or medicinal attributes. The next significant and enduring step was made by Carl Linnaeus in 1753. In his *Species Plantarum* he noted differences in the form of flowers. This method of classification groups plants according to one particular characteristic, which unfortunately does not necessarily indicate their true genetic commonality with other similar plants. Linnaeus gave a two-part name to each plant, one for its genus, or generic name, and the other for its species. The use of Latin makes this system universal, and the botanical name is often followed by the name or an

Page 66, clockwise from top: fresh cut fennel; whole lucknow fennel seeds; ground fennel seed; whole fennel seeds; filé powder; fenugreek leaves; ground fenugreek seed; whole fenugreek seeds

abbreviation of the name of the botanist who first described the species. So in the case of cardamom, the botanical name for green cardamom is *Elettaria cardamomum* Maton. *Elettaria* is the genus, *cardamomum* is the species and Maton is the name of the botanist who first described it.

Family

Many plants have sufficient similar characteristics to be placed in the same family, the next degree of commonality. Green cardamom has the family name Zingiberaceae because it is of the same family as ginger and galangal. They all grow similarly from a rhizome. Some family names have been changed to more accurately reflect this commonality. When a family name has been updated, such as Umbelliferae to Apiaceae, the former family name is in brackets following the current one.

Names in Different Languages

Whenever possible, the names of spices in languages other than English will be given. When a name is not given in a particular language it may indicate that it is seldom used in countries where that language is spoken.

In many countries, different dialects will have variations in the names. When writing any of these variations in English, we use a phonetic spelling. Therefore, names from non-Roman script, such as Arabic or Mandarin, will only be shown as a phonetic interpretation of the name. Thus “ajowan” may be spelled “ajwain,” and one spelling may not necessarily be more correct than the other. Chinese spice names are given in Cantonese (C) and Mandarin (M).

Flavor Group

Spices fall into five key flavor groups: sweet, pungent, tangy, hot and amalgamating. Herbs belong to the savory group and can be further classified as mild, medium, strong or pungent. The flavor grouping is a useful guide to the relative quantities of these spices that should be used when making spice blends.

In Part Three, I discuss the significance of the effects of combining these different flavor groups to achieve balanced mixes of herbs and spices.

Weight per Teaspoon (5 mL)

The weight per teaspoon (5 mL) is the relationship between volume and weight. For example, 1 teaspoon of a *whole* spice may weigh 3 grams but 1 teaspoon of the same spice in its *ground form* may weigh 5 grams. It is important to know this if you are converting a recipe from volumetric measures to weight, or vice versa. I supply these weights in grams only, as the equivalent weights in ounces are too small to measure accurately at home.

The weight per teaspoon is based on premium-grade herbs and spices that have not been adulterated with starches or fillers. Weight per teaspoon of herbs and spices can vary from season to season; however, one can use the amounts quoted as a reasonably accurate guide.

Suggested Quantity per Pound (500 g)

Because the flavor strength of herbs and spices varies I have provided a suggested quantity of herb or spice to use with a pound of red meats, white meats, vegetables or carbohydrates.

Complements

Refers to the types of foods and cooking applications this herb or spice is best used with.

Used In

Refers to the spice blends this herb or spice is most likely to be used in.

Combines With

Lists some of the other herbs and spices this herb or spice combines with in various applications.

With this information you may discover that paprika (an amalgamating spice) can be used on grilled chicken at the quantity of 1½ tsp. (7 mL) per pound (500 g) with lesser quantities of cinnamon, allspice, pepper and salt.

Description

A non-technical description of the plant using easily understood terms. Other relevant information about propagation and growing conditions is sometimes included; however, this is a book more about the culinary use of herbs and spices than about growing them. The flavor profiles are described to assist with identification and understanding each herb and spice.

Origin and History

Some of the most interesting aspects of the world of herbs and spices are their unusual origins and colorful histories.

Processing

In many cases the processing of a particular herb or spice is essential to achieving its unique flavor characteristics.

Buying and Storage

From shopping in your local supermarket to visiting a specialist spice merchant to haggling over saffron in the markets of Istanbul, a basic understanding of what to look for when buying your herbs and spices will help you get the best available at the time. After buying, effective storage is essential if you are to achieve the best results possible.

Use

This section expands on the margin notes so you can confidently cook with any of the herbs and spices without necessarily having specific recipes.

Recipe

The recipes are designed to give a representative idea of how the herbs and spices are used. Having made the recipe, you should then feel comfortable when including the item in other recipes.



Ajowan

OTHER COMMON NAMES

- ajwain
- bishop's weed
- carum

BOTANICAL NAMES

- *Trachyspermum ammi*, also known as *Carum ajowan*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Arabic: kamme muluki, talib-el koubs
- Chinese (C): yan douh johng wuih heung
- Chinese (M): yin du zang hui xiang
- Dutch: ajowan
- French: ajowan
- German: adiowan, Indischer kummel
- Indian: ajwain, omum, ajvini, javanee, yamani carom, lovage
- Italian: ajowan
- Russian: ajova, azhgon
- Spanish: ajowan
- Turkish: misir anason, emmus

FLAVOR GROUP

- pungent

AJOWAN IS a close relative to parsley and it looks similar when growing; however, the leaves are not used in cooking. The seeds are small, tear-shaped and light brown. They look like celery seeds and form in umbrella-shaped clusters. Ajowan seeds taste like the herb thyme, due to their high levels of the volatile oil thymol. This unusual herby flavor for a seed spice is well complemented by slightly sharp, peppery notes and a lingering, warm aftertaste. Bleached ajowan seeds, although rarely seen, are milder in flavor and are referred to as white carum seeds.

Origin and History

Ajowan is native to the Indian subcontinent and is grown in Afghanistan, Egypt, Iran and Pakistan. In the late 19th and early 20th century, ajowan was the world's main source of thymol — the volatile oil also found in the herb thyme — and used in the manufacture of mouthwashes, toothpaste, cough syrups, lozenges and other herbal medicines. Until the outbreak of the First World War, almost all of the exports of ajowan seeds from the producing countries was to Germany for the distillation of the oil and extraction of thymol. Ajowan seeds contain between 2.5% and 5% of volatile oil, over 35% of which is thymol.

Processing

The seeds are ready to harvest in mid-summer, when the flower heads turn brown. The plants are uprooted and dried in the sun on mats and then rubbed by hand to separate the seeds.

Buying and Storage

Ajowan seeds should be uniform in color and free from extraneous pieces of stem material. Always buy the whole seeds and, if grinding is required, do this yourself in a mortar and pestle or pepper grinder. Recently harvested seeds will have a distinct herbal aroma and, when tasted, a somewhat sharp, peppery taste. Should these attributes be missing, the seeds are



Ajowan seeds

too old to use in cooking. Store in an airtight container away from extremes of heat, light and moisture. Optimum storage time under these conditions is two to three years.

Use

As with many of the seed spices, ajowan complements the flavors of vegetables and carbohydrates. These tiny yet powerful, fragrant seeds add a deliciously aromatic taste to savory biscuits and a piquancy to the pastry used for making meat, seafood and vegetable pies. A teaspoon added to steamed cabbage during cooking makes this much-maligned vegetable a delicious accompaniment to grilled and barbecued meats. Remember to use small amounts when experimenting with ajowan, as the flavor is quite strong. When adding ajowan to pickles and chutneys, you can be a little more liberal, as long cooking times mellow the flavor. Because ajowan is so small and “chewable” when cooked, you will rarely need to grind it.

WEIGHT PER TEASPOON (5 ML)

- whole: 3.3 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats:
1 tbsp (15 mL)
- white meats:
2 tsp (10 mL)
- vegetables: 1 tsp (5 mL)
- carbohydrates:
1 tsp (5 mL)

COMPLEMENTS

- savory biscuits
- pakoras, parathas and samosas
- breads
- wholegrain mustard
- berbere
- curry blends

USED IN

- vegetable dishes
- vegetable and fish curries

COMBINES WITH

- chili
- coriander seed
- cumin seed
- mustard
- paprika
- most herbs

Spiced Cocktail Biscuits

These tasty, fragrant spiced biscuits are the perfect accompaniment to pre-dinner drinks.

- 1 ¼ cups (300 mL) all-purpose flour
- 2 tsp (10 mL) Ras el Hanout (see p. 579)
- ⅓ cup (75 mL) butter
- ¾ cup (175 mL) shredded sharp cheese
- 2 tsp (10 mL) ajowan seeds
- 1 tsp (5 mL) nigella seeds
- 1 large egg yolk or 2 small ones

Grease a baking sheet and preheat oven to 375°F (190°C). Sift the flour and ras el hanout into a bowl and rub in the butter until the mixture resembles bread crumbs. Stir in the cheese and the seeds. Lightly whisk the egg yolk and stir into the dry mixture to make a firm dough that will hold together. Add a small amount of cold water if necessary. Wrap the dough in plastic wrap and chill for about half an hour.

Roll out the dough on a floured surface to desired thickness (⅛ inch/3 mm). Cut into shapes, place on the prepared baking sheet and chill again for 15 minutes. Bake for about 20 minutes, until bubbling and golden. Cool for a few minutes on the tray, then remove to a wire rack until completely cooled. Store in an airtight container. Makes about 25 biscuits.

Mushroom and Apple Tarts

The thyme-like flavor of ajowan balances perfectly with the sweetness of apple, complements the pastry and adds a delicious savory note to this unusual dish.

Spice Mix

- 1 tsp (5 mL) salt
- ¾ tsp (4 mL) ground cumin
- ¾ tsp (4 mL) ground coriander
- ½ tsp (2 mL) whole black peppercorns
- ½ tsp (2 mL) ajowan seeds
- ½ tsp (2 mL) fenugreek seeds
- ¼ tsp (1 mL) ground allspice

¼ tsp (1 mL) ground ginger

Pinch ground cloves

Pinch ground nutmeg

4 tsp (20 mL) butter

2 cloves garlic, finely chopped

2 red apples, peeled, cored and cut into 1-inch (2.5 cm) pieces

6 oz (175 g) button mushrooms, cut into 1-inch (2.5 cm) pieces

6 oz (175 g) cremini mushrooms, cut into 1-inch (2.5 cm) pieces

2 tbsp (25 mL) olive oil

¾ cup (150 mL) chicken stock

2 sheets (12 inches/30 cm square) puff pastry

2 tbsp (25 mL) finely chopped fresh parsley

salt and freshly ground black pepper to taste

Preheat oven to 400°F (200°C). In a mortar and pestle, pound together spice mix ingredients, leaving some texture to the blend. Melt butter over medium heat, add garlic and cook for 3 minutes. Add apple and mushrooms to pan with olive oil and spice mix. Lower heat and continue to stir for 10 minutes, until soft. Add chicken stock and simmer until liquid has evaporated and the apple and mushrooms are very tender. Season with salt and pepper; remove from heat.

Cut out four 6-inch (15 cm) diameter circles from the puff pastry and make a shallow circular incision 1 inch (2.5 cm) from the edge of each. Place circles on a baking sheet and bake in preheated oven for 5 minutes, until pastry has risen at least 2 inches (5 cm). With a small, sharp knife, remove the center of the pastry, leaving a shallow shell with a 1-inch (2.5 cm) ring around the edge. Turn the oven down to 325°F (160°C). Carefully spoon mushroom mixture into the centre of pastry and bake for a further 15 minutes. Garnish each tart with parsley and serve immediately. Serves 4.



Akudjura

THE BUSH tomato shrub, a relative of the potato and tomato, is a hardy-looking perennial with woody stems bearing long, sharp spikes at 2–3¼-inch (5–8 cm) intervals. Soft, down-covered, grayish green leaves and young rust-colored leaves set off attractive violet flowers in the shape of a five-pointed star. The fruits are around ¾ inch (2 cm) in diameter, purplish green when young and pale yellow when ripe. As the sticky fruits dry, they shrink to ⅓–½ inch (1–1.5 cm), the color darkens to chocolate brown and a chewy, raisin-like consistency develops.

Bush tomatoes have a distinct, pleasant “caramel mingled with sun-dried tomato” aroma, with comforting “baked” background notes reminiscent of a whole-grain cookie, or what we refer to in Australia as an Anzac biscuit. The flavor is initially caramel-like, but after about 30 seconds it develops a somewhat bitter, lingering aftertaste that leaves the palate unexpectedly refreshed. Powdered and whole bush tomatoes are referred to nowadays as akudjura, their Aboriginal name. The color varies from light, sandy orange-brown to dark brown, depending upon the amount of rainfall the plants experienced while the fruits were developing.

When I was harvesting wild akudjura with a group of Aboriginal women in Central Australia, one of them, named Kitty, drew my attention to another variety of the bush tomato plant (*Solanum chippendalei*). The bush was almost identical to *Solanum centrale*, but it bore shiny round green fruits 1¼ inch (3 cm) in diameter suspended from a large, spiky, elves cap-shaped calyx. Kitty cut one in half and scraped out the mass of seeds (which looked like shiny black sesame seeds) and inner skin, then invited me to taste the flesh (which looked like honeydew melon). The taste was bland and vaguely reminiscent of cantaloupe.

Origin and History

Akudjura may be among the oldest spices known to the human race, as the Australian Aborigines have reportedly been using it for thousands of years. Native to Central and Western Australia, akudjura has a strong connection with the mythology of the

OTHER COMMON NAMES

- akatyerre
- akudjera
- bush tomato
- desert raisin

BOTANICAL NAME

- *Solanum centrale*

FAMILY

- Solanaceae

NAMES IN OTHER LANGUAGES

- Italian: pomodorina selvatico australiano macinato

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole average dry berry: 0.8 g
- ground: 2.7 g



Akudjura

Warlpiri tribes and Anmatyerr people of Central Australia. Like many native Australian plants, akudjura thrives after bushfires, the initial prolific fruiting steadily declining over a few years until rejuvenated by the next bushfire.

Regarded as a staple, akudjura that had dried on the shrub in low-humidity desert conditions were gathered and ground with water to produce a thick paste that was formed into large balls and left to dry in the blazing sun. The high acidity characterized in the tangy flavor and rich vitamin C content acted as a preservative, making storage over long periods of time possible, and these balls were often wedged into the forks of trees for later use. Although the Australian Aborigines used akudjura primarily for sustenance, our current inquisitiveness and desire for diversified taste experiences has led us to appreciate akudjura as a spice, used in small quantities to enhance the flavor of a wide range of foods in everyday meals.

Processing

Akudjura ripens in the wild in the Central Desert and the fruits are allowed to dry naturally on the plant before gathering. This process is essential if they are to be eaten with no harmful side-effects because the drying process drives down the level of alkaloids. Dehydration also concentrates the flavors in akudjura and creates more full-bodied and complex flavor notes in the same way as drying in the sun modifies the flavors of many familiar spices from around the world.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL)
- white meats: ½ tsp (2 mL)
- vegetables: ½ tsp (2 mL)
- carbohydrates: ½ tsp (2 mL)

COMPLEMENTS

- slow-cooked soups and casseroles
- red and white grilled meats

USED IN

- native Australian spice blends
- seafood and game seasonings

COMBINES WITH

- coriander seed
- lemon myrtle
- mustard
- pepper
- thyme
- wattleseed



Buying and Storage

Gathering your own akudjura is not recommended unless you have an experienced gatherer to help identify the edible varieties. Some related species, such as *Solanum quadriloculatum*, have seemingly identical flowers, large sage-like leaves and green fruits with a spongy texture; however, they are not edible and contain toxic amounts of the alkaloid solanine. When buying whole akudjura, you will notice the color can vary considerably. This is generally not an indication of quality, but simply an effect of the amount of rain during the growing season. Most importantly, the consistency should be similar to a raisin; any softer than this is a sign they have not been sufficiently dried. The powder will sometimes form clumps as a result of the high levels of oils present. Once again, as long as the powder does not feel moist to the touch, some lumps do not affect the quality for culinary applications. Both whole and powdered akudjura are best stored in an airtight container and protected from extremes of heat, light and humidity.

Use

The unique flavor of akudjura is best appreciated in small quantities for, like many pungent spices, too much will cause the bitter sharp notes to dominate and leave the fruity, sweet, caramel flavors masked to the palate. Whole akudjura can be added to long, slow-cooked dishes such as soups and casseroles. The powder gives a nostalgic, country-baked taste to cookies and apple crumble. I have found it combines particularly well with a mixture of ground coriander seed, wattleseed, lemon myrtle and a little salt, delicious when rubbed onto white and red meats before grilling, barbecuing or stir-frying. A tangy pepper steak spice can be made by pounding black and white peppercorns, mustard seeds, salt and akudjura in a mortar and pestle. Sprinkle over steak and barbecue.

Akudjura Risotto

Akudjura

When Kate developed this recipe, we were pleasantly surprised to discover how well a relatively large quantity of akudjura balanced with the other ingredients.

- 2 tbsp (25 mL) akudjura (ground bush tomato)
- 1 tbsp (15 mL) boiling water
- 1 tbsp (15 mL) tomato paste
- 1 tsp (5 mL) wattleseed
- 1 tbsp (15 mL) olive oil
- 1 small onion, chopped
- 2 cloves garlic, crushed
- 1 $\frac{3}{4}$ cups (425 mL) Arborio rice
- $\frac{1}{2}$ cup (125 mL) dry white wine
- 5 to 6 cups (1.25 to 1.5 L) vegetable or chicken stock
- 2–4 tbsp (25 to 50 mL) whipping (35%) cream
(or double cream)
- salt and freshly ground black pepper to taste
- shredded fresh basil leaves
- grated Parmesan cheese

Soak akudjura in boiling water for 10–15 minutes. Drain and combine with tomato paste and wattleseed. Set aside.

In a frying pan, heat olive oil over medium heat. Add onion and cook until soft, then add garlic and cook, stirring, for 2 minutes. Add rice, stirring to coat grains in oil, then add wine and stir until evaporated. Reduce heat and start adding stock 1 cup (250 mL) at a time, stirring until absorbed. When half of the stock has been added, add the akudjura mix to the risotto. Continue adding stock and stirring until rice is just about cooked through (there should still be a slight bite in the middle of the grain). Ensure enough liquid remains to give the risotto a creamy consistency. Remove from heat, add whipping cream to taste and season with salt and pepper.

Serve garnished with basil and Parmesan. Serves 4.

Alexanders

ALEXANDERS IS a robust-looking biennial herb reaching up to 60 inches (1.5 m) high on thick, furrowed stalks that bear roundish, glossy dark green leaves in groups of three. The old family name was Umbelliferae because the yellow-green flowers are borne in numerous umbels. The fruits are the small black seeds believed to be responsible for the derivation of the name “black lovage.” The young leaves and stems have a flavor similar to a cross between celery and parsley, hence the other common names, “horse parsley” and “wild celery.”

Alexanders

OTHER COMMON NAMES

- black lovage
- potherb
- horse parsley
- wild celery

BOTANICAL NAME

- *Smyrnium olusatrum*

FAMILY

- Apiaceae (formerly Umbelliferae)

FLAVOR GROUP

- mild

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: ½ cup (125 mL)
- white meats: ½ cup (125 mL)
- vegetables: 1 cup (250 mL)
- carbohydrates: 1 cup (250 mL)

COMPLEMENTS

- salads
- carrots
- beans and peas
- potatoes



Origin and History

Alexanders is native to the Mediterranean region and was introduced to England around 2,000 years ago by the Romans. It has thrived there ever since in sunny positions with moist, rich soils and on rock cliffs close to the sea. Prior to the widespread use of onions, carrots and turnips to add bulk and flavor to soups and stews, alexanders was cultivated as a potherb and the young shoots and leafstalks were cooked as a vegetable.

Alexanders is said to be named after Alexander the Great and it also bears a close resemblance to the rock parsley of Alexandria. Despite its early popularity, by the mid-18th century its use had been largely replaced by celery.

Processing

Alexanders is mainly used fresh and only occasionally in its dried form. To dry the leaves for later use, apply the same techniques you would use to dry parsley and other delicate herbs.

Buying and Storage

Alexanders is not available commercially as a dried herb. Should you dry this herb yourself, store in an airtight container in a cool, dark place.

Use

The young leaves and stems can be finely chopped and added to salads, mild-flavored stir-fries, soups and stews, and as a garnish on cooked vegetables such as carrots, peas, beans and potatoes when tossed in a little olive oil. The large stems are delicious when steamed as a vegetable and served with olive oil and a little salt and freshly ground black pepper. A salad can be made from the flower buds by steaming them for about five minutes to remove the bitterness. Allow them to cool and serve with an oil and vinegar dressing or mix into lettuce salads for an interesting contrast.

USED IN

- not commonly used in spice blends

COMBINES WITH

most herbs and has a special affinity with:

- lovage
- parsley
- salad burnet
- basil
- oregano
- savory



An attractive salad enhanced by the addition of a selection of ragged leaves. As fresh alexanders is often difficult to obtain, you could substitute $\frac{3}{4}$ cup (175 mL) fresh parsley and $\frac{1}{4}$ cup (50 mL) young, tender celery leaves.

- 1 bulb fennel
- 1 cup (250 mL) torn fresh alexanders (leaf and stem)
- 1 cup (250 mL) torn soft lettuce
- 1 tbsp (15 mL) roughly chopped fresh oregano leaves
- 1 $\frac{1}{2}$ tsp (7 mL) capers, rinsed
- 1 tbsp (15 mL) extra-virgin olive oil
- 2 tsp (10 mL) freshly squeezed lemon juice
- freshly ground black pepper

Peel the outer layers off the fennel and cut in half. Either cut very fine slices of fennel or, using a box grater's largest holes, shave the fennel. You want almost transparent pieces of fennel for the salad. Mix shaved fennel, alexanders, lettuce, oregano and capers. Mix olive oil and lemon juice through salad with a good grind of black pepper (no salt is needed, as the capers are very salty). Serves 2–4.

Allspice

OTHER COMMON NAMES

- bay rum berry
- clove pepper
- Jamaica pepper
- pimenta
- pimento

BOTANICAL NAME

- *Pimenta dioica*

FAMILY

- Myrtaceae

NAMES IN OTHER LANGUAGES

- Arabic: bahar halu, tawabil halua
- Chinese (C): do heung gwo
- Chinese (M): duo xiang guo
- Danish: allehande
- Dutch: piment
- French: piment de Jamaïque, poivre-giroflee
- German: piment-pfeffer
- Greek: bahari, aromatoپرperi
- Indian: kabab cheene, seetful
- Italian: pepe de Giamaica
- Japanese: hyakumikoshō
- Portuguese: pimenta-da-Jamaica
- Russian: yamayski pyerets
- Spanish: pimenta gorda
- Swedish: kryddpeppar
- Turkish: yenibahar, Jamaika biberi

ALLSPICE (PIMENTO) is the dried and cured, unripe berry from a tropical evergreen tree that is native to Jamaica, Cuba, Guatemala, Honduras and southern Mexico. Pimento trees are 23–33 feet (7–10 m) tall, with some reaching a height of 49 feet (15 m). The bark is aromatic and silvery gray, containing a hard, durable, close-grained wood that was used for making walking sticks in the 19th century, a practice stopped by legislation for fear of the destruction of economically valuable trees. The leaves are dark green, glossy, leathery and fragrant, grouped in clusters at the end of the slender secondary branches. Seeing the allspice trees on the hillsides above St. Anne's Bay in Jamaica is a truly memorable experience.

There are no allspice plantations as such, as the trees grow where the seeds have been dropped by birds, coming up along fences and thickets, where they are protected from livestock. It was once believed that in order to germinate, the seeds had to pass through the intestines of birds; however, it is now known that they will germinate if sown immediately after

Whole allspice



ALLSPICE

FLAVOR GROUP

- sweet

WEIGHT PER TEASPOON (5ML)

- approximately 30 whole berries: 2 g
- ground: 2.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: $\frac{1}{2}$ tsp (2 mL)
- white meats: $\frac{1}{2}$ tsp (2 mL)
- vegetables: $\frac{1}{8}$ tsp (0.5 mL)
- carbohydrates: $\frac{1}{4}$ tsp (1 mL)

COMPLEMENTS

- cooked root vegetables
- cooked spinach
- tomato-based sauces
- pâtés and terrines
- meat and vegetable soups
- roast meats
- gravies
- marinades and sauces
- seafood, especially shellfish
- pickles, relishes and preserves (as a whole spice)
- cakes, pies and biscuits

being removed from fresh ripe fruits. Pimento farmers clear the unwanted trees to gain ready access for harvesting, creating what the locals call a “walk” rather than a plantation. When the trees are in bloom with their clusters of tiny white flowers, the warm, clove-like perfume in the air is one of the most beautiful aromas you can imagine. Another species, Carolina allspice (*Calycanthus floridus*), is a deciduous shrub with scented leaves that are sometimes used in potpourri.

Jamaica takes its production of allspice very seriously, and its Ministry of Agriculture has written the “proper procedures for the reaping and curing of pimento” into the Agricultural Practices Act. To quote them: “Any breach of these regulations constitutes an offence against the law which is punishable by fines or imprisonment.” Allspice is cultivated in a number of tropical countries; however, it is said that it never thrives as well elsewhere as it does in its native home, so one can understand why the Jamaicans are so protective of their pimento industry. Protective measures include actively discouraging the traditional practice of breaking the tree’s limbs to harvest unripe berries. Pickers are paid by weight and it is much quicker for them to break the fruit-laden branches than to cut them properly. To quote from the Jamaica Ministry of Agriculture booklet: “This indiscriminate practice is injurious to the tree, and is one of the main causes

Ground allspice



of dieback disease and inconsistent bearing. It is still not uncommon to see a recently harvested tree from which 80%–90% of the foliage has been removed. The defoliation can be so severe that trees may take three to four years to recover sufficiently to produce another crop. Furthermore, the large open, jagged wounds inflicted on the tree by this method provide easy entrance for rot organisms. Repeated reaping in this manner frequently produces ‘shock’ to the tree, and this results in severe fluctuations in production. Farmers should desist from using this method.”

The allspice berry, when correctly cured and dried, is a dark reddish brown in color, spherical and $\frac{1}{8}$ – $\frac{1}{4}$ inch (3–6 mm) in diameter. A small handful, when shaken vigorously next to one’s ear, will rattle distinctly because of the tiny seeds gyrating inside. While the whole allspice berry emits only a small amount of odor, ground allspice releases distinctly aromatic notes reminiscent of cloves, cinnamon and nutmeg.

Origin and History

The first record of what was probably allspice occurs in the journal of Columbus’s first voyage in 1492. He showed the Natives of Cuba some peppercorns from the *Piper nigrum* vine, they recognized them and using sign language indicated there was an abundance of these in the neighborhood. Thus the confusion with naming began, with allspice being given the botanical name of *Pimenta*, the Spanish word for pepper that is also used to describe members of the capsicum family. The Aztecs added allspice, along with vanilla, in a chocolate drink and the Mayan Indians included it in the embalming process.

In 1532, Felipe IV of Spain was advised that pepper grew wild on trees in Jamaica. Thinking an abundant supply of this would boost the royal coffers, he sent instructions to his minions to investigate *la pimenta de Jamaica*. There must have been some long faces when it was discovered that a ship loaded with allspice had nothing like the commercial value of true pepper (*Piper nigrum*) and one can imagine the amount of effort that went into finding culinary and other uses for this “new” spice. However, it was not until 1601 that allspice found its way to London, where it is believed it was first used as a substitute for cardamom. To add to the confusion that surrounds allspice, although the French name for it is *tout épice*, there are some who insist on calling it *quatre épices*, despite the fact that this term actually refers to two spice blends, one heavily spiced with allspice. During the 17th century allspice

USED IN


- mixed spice and apple pie spice
- curry powders
- meat seasonings
- jerk seasoning
- tsire powder
- pickling spices
- mulling spices
- peppermill blends
- sweet quatre épices
- tagine blends
- master stock spices

COMBINES WITH

- bay leaves
- cardamom
- cinnamon
- cloves
- coriander seed
- cumin seed
- fennel seed
- ginger
- juniper
- mustard seed
- nutmeg
- paprika
- turmeric

was valued as an aid to preservation, particularly for meat and fish on long sea voyages. It is interesting to note that even after modern food processing and refrigeration practices became widespread, allspice continued to be used in many manufactured products, such as preserved meats and Scandinavian canned fish.

Processing



Allspice is another fine example of how the enzymes in spices react when dried to produce pungent, characteristic flavors. The berries are harvested using clippers to remove the twigs bearing small clusters of unripe pimento. This is then dried and cured, taking the moisture content down from about 60% to 10–12%. Most spices are dried to this moisture level, because above that, mold will grow. It is interesting to note that even in its native land, there is no culinary application for the fresh berries, they are only ever used when cured and full of flavor.

The curing process begins by spreading the berries out on a large concrete area that looks like a tennis court and is called a barbecue. The barbecue is painted black to absorb the heat of the sun's rays and the berries are spread out evenly on the surface to about 2 inches (5 cm) deep. Raking a few times during the day helps create even drying. At night the berries were once raked into piles and covered with tarpaulins, but this practice was changed due to problems with robbers, so now they're raked up and locked in a shed overnight.

Either way, the sun-warmed berries are covered with a tarpaulin to keep the heat in. This “sweating” encourages the enzyme reaction and protects the pimentos from getting wet while drying outside. The traditional way to determine when the berries are dry is to use the “hand-shake” method. This simply involves taking a handful of berries and shaking them to see if they rattle. If they do, the moisture level should be around 12%. It isn't very scientific, but it works, with some farmers claiming to be able to estimate the moisture content to within 0.5%!

The name “Jamaica pepper” still comes up in some recipes, as does its other lesser-known name, “bay rum berry.” Strictly speaking, bay rum is made from the leaves of an allied species, *Pimenta racemosa*, or bayberry tree, which are distilled to yield bay oil, used in perfumery and in the making of the fragrant toiletry known as bay rum.

Buying and Storage

Whole allspice berries should be a consistent dark reddish brown color and spherical, with a rough surface caused by the presence of the volatile oil glands. The aroma should be pleasant, mildly clove-like and void of any mustiness. Variations in size of berries do not affect quality; however, when using them whole in foods it is advisable to select the larger ones for better visual appeal. Whole allspice, when stored away from extremes of heat, light and humidity, will retain its flavor for up to three years. Ground allspice should be rich and dark brown, have a distinct warm aroma of cloves mildly tempered with cinnamon notes and be somewhat oily, never dry and dusty, when rubbed between thumb and forefinger. Because a ground spice gives off its volatile elements more readily than a whole spice, ground allspice when stored in the same manner as whole allspice has a useful storage life of 12–18 months.

Use

Allspice is found in many sweet recipes for cakes and biscuits, and it is one of the ingredients in mixed spice. Some cooks use allspice as a substitute for cloves in sweet dishes, as the clove flavor is imparted with less risk of being too heavy-handed. Allspice contains the same volatile oil, eugenol, that is found in cloves and, surprisingly, in the herb basil. No wonder, then, that allspice also complements the flavor of tomatoes and is widely used in the manufacture of tomato-based barbecue and pasta sauces. The Scandinavians include it in their famous marinated raw herrings, and it often features in pickles, pâtés and smoked meats.

Use whole allspice berries when you want the flavor without the dark brown powder coloring the recipe. For example, one can add a few allspice berries to stewed fruits along with a cinnamon stick, a whole star anise and a vanilla bean to make a deliciously sweet-spiced dessert. While it is no relation to pepper, a common practice is to put about a teaspoon of small allspice berries into the pepper mill. When ground, the aromatic sweet spiciness complements traditional freshly ground pepper very well.

Allspice is found in many curry blends and commercial spice blends designed for seasoning seafood and red meats. A small amount of allspice can be used to flavor root vegetables and spinach during cooking. It also complements vegetable soups, especially tomato.



The Maroons, Jamaican slaves who had escaped from the British in the 17th century, hunted wild boar, which they preserved by marinating and slow cooking. The technique became known as “jerking” and is a Jamaican tradition still used for seasoning meat. This dish has some of the heat and spiciness associated with Cajun blackened fish or chicken; but the flavor of allspice gives it a unique, mouth-watering character. In many countries the term “spatchcock” is used to describe a small chicken. Strictly speaking, spatchcock refers to a small flattened chicken with the backbone removed.

2 poussins (baby chicken, each 10–20 oz/300–600 g)

Jerk

- 1 onion, finely chopped
- 1 clove garlic, crushed
- olive oil
- 2 tbsp (25 mL) dark rum
- 2 tsp (10 mL) ground allspice
- 1 tsp (5 mL) medium-heat chili flakes
- 1 tsp (5 mL) ground ginger
- $\frac{1}{2}$ tsp (2 mL) freshly ground black pepper
- $\frac{1}{4}$ tsp (1 mL) dried thyme
- salt to taste

To spatchcock the poussins, remove the backbone using culinary scissors, then flatten the bird with the heel of your hand. To keep it in position, thread 2 skewers diagonally (from thigh to shoulder on both sides).

For the jerk, fry onion and garlic in oil, then add rum, spices and salt. Marinate chicken for up to 1 hour, then broil or barbecue until cooked through and juices run clear, approximately 8 minutes each side. Serve with rice made up of two-thirds long-grain and one-third wild rice. Serves 2.

Amchur

OTHER COMMON NAMES

- aamchur
- amchoor
- green mango powder

BOTANICAL NAME

- *Mangifera indica*

FAMILY

- Anacardiaceae

NAMES IN OTHER LANGUAGES

- French: mangue
- German: mango
- Indian: aamchoor, amchur
- Italian: mango
- Spanish: manguely

FLAVOR GROUP

- tangy

WEIGHT PER TEASPOON (5 ML)

- ground: 2.6 g

AMCHUR IS made from the dried unripe fruit of the mango tree, a tropical evergreen that can reach up to 130 feet (40 m) high and has a life span of 100 years. The name “amchur” comes from the Hindi for “mango,” *am*, and *choor*, meaning “powder.” Mango trees grow in tropical and subtropical regions of the world, the dense canopy of large shiny leaves providing shade beside the massive gray trunk. In the shade of a mango tree one can smell the sweet fragrance from the luscious golden ripe fruits, conjuring up the classic romantic images of fertile and sensuous tropical climes. For many of us

Amchur powder



SUGGESTED QUANTITY

PER POUND (500 G)

- red meats: 1 tsp (5 mL)
- white meats: ½ tsp (2 mL)
- vegetables: ½ tsp (2 mL)
- carbohydrates: ¼ tsp (1 mL)

COMPLEMENTS

- curries
- pickles and chutneys
- meat and seafood
- vegetables

USED IN

- curry blends
- chaat masala
- seasoning blends

COMBINES WITH

- coriander seeds and leaves
- cumin
- ginger
- paprika
- pepper
- star anise

who have seen the abundance of mangoes in northern Australia or been addicts to the delicious fruit when it is in season and readily available, the notion of this tree providing a useful and effective souring agent comes as somewhat of a surprise.

Dried green mango slices, amchur, are light brown in color and the texture is rough. When ground, the powder is fine and varies in color from a pale gray to yellowish beige, often a result of having a small amount of turmeric powder blended with it. The aroma is warm, fruity and slightly resinous, giving a tingling sherbet sensation to the back of the nose. The flavor is fruit-like and pleasantly acidic from the high proportion of naturally occurring citric acid (around 15%).

Origin and History

Mango trees are native to India, Burma and the Malaysian peninsula, and have been grown in India for over 4,000 years. The Mogul emperor Akbar initiated the planting of 100,000 mango trees during his rule. At around the same time, the 16th- and 17th-century Europeans spread the cultivation of mango trees to most tropical and subtropical regions of the world; however, it is only in Indian and Asian food that green mango is predominantly included in cooking. All parts of the mango tree are used, but the bark, leaves, flowers and seeds are mostly used for medicinal purposes. At times of famine it has been known for the seeds to be ground into flour.

Processing

The green unripe mangoes, about 6–8 cm long, are picked, peeled, sliced and sun-dried. After drying, the slices are ground to a fine powder and sometimes blended with up to 10% of turmeric powder to create a more attractive color than the more standard gray appearance resulting from grinding. The earthy notes of turmeric will also pleasantly balance some of the acidity and resinous characters in the amchur powder.

Buying and Storage

Should you require amchur powder, it is advisable to buy it already ground, as the slices are not easily powdered at home. Buy fairly small amounts because the subtle flavor characteristics will diminish within 12 months, even when correctly stored. Store in an airtight pack and, as for other spices, avoid extremes of heat, light and humidity.

Use

Amchur slices will be found whole in some curries, pickles and chutneys. Amchur powder is used for its souring abilities, being a good substitute for lemon juice, when 1 tsp (5 mL) of amchur powder can replace 3 tbsps (45 mL) of lemon juice. The pleasing acid taste also makes it a convenient alternative to tamarind in curries, vegetable dishes and with chickpeas. In spice blends, it adds a more agreeable tang than the often overused citric acid, which is somewhat harsh by comparison. Amchur is often an ingredient in marinades because of its tenderizing effect on meat, and its compatibility with other marinating spices such as ginger, pepper, coriander, cumin and star anise.

Spiced Baked Salmon

Amchur

Just as lemon goes so well with seafood, this baked salmon dish is enhanced by the fruity acidity of amchur.

- 1 green chili, seeded and coarsely chopped
- 1 cup (250 mL) fresh coriander leaves
- ½ cup (125 mL) fresh mint leaves
- 2 tbsp (25 mL) olive oil
- 1 tsp (5 mL) amchur
- 1 tsp (5 mL) Garam Masala (see p. 560)
- 1 tsp (5 mL) ground turmeric
- 3 tbsp (45 mL) extra-thick or Balkan-style yogurt
- 6 salmon fillets (each about 4 oz/125 g)
- 1 lb (500 g) baby spinach

Preheat oven to 350°F (180°C). In a food processor, combine chili, coriander, mint, olive oil, amchur, garam masala and turmeric. Mix with yogurt and season to taste with salt and pepper. Thoroughly coat salmon fillets, place in a roasting dish and cook for 10–15 minutes. The salmon flesh should flake easily and can be served quite rare (if you prefer it well done, cook for a further 5–10 minutes). Wilt the spinach in a large pan with ¼ cup (50 mL) water — this will take only a few minutes. Place a portion of spinach in the center of each plate and top with a salmon fillet. Serves 6.

Angelica

ANGELICA IS one of the most flamboyant-looking herbs. Its long, thick, hollow, celery-like stems groggily support huge umbels of greenish white flower heads above a foliage of bright green, serrated flat leaves. Angelica plants will grow around 5–8 feet (1.5–2.5 m) tall, only bearing their delicately fragrant flowers in the second year of growth. As a biennial, one may prevent it from flowering by cutting the stems frequently, encouraging the plant to flourish for five or six years as opposed to its natural two years. All parts of angelica are used. The roots, stems, leaves and seeds have tannins and acids, all conveying various nuances of an earthy, bittersweet and warm flavor reminiscent of juniper.

OTHER COMMON NAMES

- garden angelica
- great angelica
- holy ghost
- masterwort

BOTANICAL NAMES

- *Angelica archangelica*, also known as *Archangelica officinalis*

FAMILY

- Apiaceae (formerly Umbelliferae)

SUGGESTED QUANTITY PER POUND (500 G)

- vegetables: ½ cup (125 mL) leaf
- carbohydrates: 1 tbsp (15 mL) chopped crystallized stems

COMPLEMENTS

- leaves with rhubarb and spinach
- extract from seeds in liqueurs
- crystallized stems in cakes and biscuits
- dried leaves in green tea

Origin and History

The folklore supporting angelica's naming as a “guardian angel” is undisputed, to my knowledge, it being said that an angel appeared in a monk's dream, revealing the efficacy of angelica as a cure for the plague. Angelica was widely used in pagan and Christian festivals, and is believed to have originated in northern Europe, particularly Lapland, Iceland and Russia, although some botanical historians believe it may have its origins in Syria.

While some of us are familiar with angelica as a preserved, sugary confection for flavoring and decorating cakes, biscuits and ice cream, in Lapland the stalks are gathered before flowering, the leaves are stripped off the stem, which is peeled, and the remaining succulent pieces are regarded as a delicacy.

Angelica



In researching the history of food, we sometimes find evidence that a herb or spice was used to imitate otherwise naturally occurring flavors. In one such example, some Rhine-region winemakers added a distilled oil from angelica seeds to boost the characteristic muscatel flavor of their wines. These days the most popular commercial use of angelica is in liqueurs such as vermouth and chartreuse, as well as being a “secret” ingredient in some brands of gin.

Processing

The most popular form of processing angelica is to crystallize the thick, grooved stems in sugar, making an attractive bright green decoration and flavoring for sweets.

To dry angelica leaves for making tea, simply pick the more mature, darker leaves and spread out on a sheet of clean paper in a dark, well-aired place for a few days. When the leaves feel quite crisp to the touch, crumble and store in an airtight container.

USED IN

- not commonly used in herb and spice blends

COMBINES WITH

- juniper
- lavender
- lemon balm
- nutmeg
- pepper

Buying and Storage

The availability of fresh angelica is limited, so if you want to use the fresh leaves or stems you will probably need to grow it yourself. Angelica seeds or seedlings are best planted in spring in moist, well-drained, rich soil, with filtered sunlight. When buying crystallized or candied angelica, seek some assurance from the merchant that it is actually angelica, as many imitations are passed off as the real thing, the most common being pieces of stiff green jelly. Storage should always be away from humidity, preferably in an airtight container, and under these conditions angelica will keep its color and flavor for up to three years.

Use

A few tender young angelica leaves can be added to salads. The stems and stalks impart a complementary sweet flavor to stewed fruits, jams and jellies, especially those made with highly acid ingredients such as rhubarb and plums. The roots can be cooked and eaten as a vegetable in much the same way as the bulbous root of fennel. A tea, not unlike Chinese green tea, can be made by infusing the dried leaves of angelica in hot water and drinking it without milk or sugar. Crystallized angelica makes an attractive decoration when cut into small pieces and blended into a mixture for cakes, muffins and shortbread biscuits, or placed on top after cooking.

It requires patience to make your own crystallized angelica, but the process is time-consuming rather than complicated. Select young stems and stalks, cut into 4-inch (10 cm) lengths and place in a heat-resistant glass or crockery vessel. Make a solution of 2 cups (500 mL) water and $\frac{1}{2}$ cup (125 mL) salt. Bring to a boil and pour over the angelica so that it is completely immersed. Cover and let stand for 24 hours. Remove, allow to drain, peel off the outer celery-like fibers and wash in cold water.

Make a syrup by dissolving $3\frac{1}{2}$ cups (875 mL) sugar in $2\frac{3}{4}$ cups (675 mL) water while bringing to the boil. Place the angelica in the boiling syrup for 20 minutes, remove and drain on a wire rack for 4 days. Reboil the angelica in the remaining syrup, allow it to cool in the syrup, lift it out and drain again for 4 days. Dust thoroughly with granulated sugar and store in an airtight container. This process is best undertaken when the weather is dry and not humid.

Scottish Trifle

Trifle is a traditional family dessert made with leftover sponge cake. It is always best to garnish with natural angelica, as artificially colored substitutes will leach their green coloring into the cream.

- 1 stale sponge cake (about 12 inches/30 cm)
- raspberry jam
- $\frac{1}{2}$ cup (125 mL) whisky
- $1\frac{1}{4}$ cups (300 mL) custard (preferably homemade)
- $\frac{3}{4}$ cup (175 mL) whipped cream
- 10 macaroons, crumbled
- 2 lengths crystallized angelica, chopped

Cut sponge cake in half horizontally and make a sandwich with jam in the middle, then cut into squares and place in a serving bowl. Pour in whisky and chill for a few hours or overnight. Top with custard and chill again. Decorate with whipped cream, macaroons and angelica before serving. Serves 4–6.

Aniseed

OTHER COMMON NAMES

- anise
- sweet cumin

BOTANICAL NAME

- *Pimpinella anisum*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Arabic: yanisun, habbet hilwa
- Chinese (C): daai wuih heong
- Chinese (M): da hui xiang, yang hui xiang
- Dutch: anijs
- French: anis vert, boucage
- German: anis
- Greek: glikaniso, anison
- Indian: saunf, sompf, sonf, souf, suara
- Indonesian: jintan manis
- Italian: anice
- Japanese: anisu
- Portuguese: erva-doce
- Russian: anis
- Spanish: anis
- Swedish: anis
- Turkish: anason, mesir out, nanahan

ONE OF the most delicate of herb plants, anise grows to a spindly 20 inches (50 cm) tall, has feathery, flat, serrated leaves reminiscent of Italian parsley and bears creamy white flowers on wispy, fine stems in late summer. The aniseed spice (gathered after flowering) consists of two tiny seeds, oval and crescent-shaped, about $\frac{1}{8}$ inch (3 mm) long, many of which when split retain the fine stalk that passes through the center of the fruit, giving it the appearance upon close inspection of a tiny mouse. The pale brown seeds with their fine, lighter-colored ribs have a distinct licorice flavor that is not too pungent or lingering.

Origin and History

Anise is native to the Middle East and is widely cultivated in temperate climates, notably North Africa, Greece, southern Russia, Malta, Spain, Italy, Mexico and Central America. It is claimed that anise was found in Egypt as early as 1500 BC, and anise was highly regarded in the first century in Rome for its digestive properties, attributed to the volatile oil compound

Whole aniseed



ANISEED

FLAVOR GROUP

- sweet

WEIGHT PER TEASPOON (5 ML)

- whole: 2.1 g
- ground: 2.7 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp (10 mL)
- white meats: 1 tsp (5 mL)
- vegetables: 1 tsp (5 mL)
- carbohydrates: 1 tsp (5 mL)

COMPLEMENTS

- vegetable and seafood dishes
- pasta sauces with cheese
- cakes and biscuits
- chicken and shellfish pies
- extract from seeds in liqueurs

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- cinnamon
- cloves
- coriander seed
- cumin
- dill seed
- fennel seed
- nutmeg
- pepper
- star anise

anethole, a substance also found in fennel seeds and star anise. At the conclusion of indulgent feasts and banquets, the Romans, lacking modern antacid and digestive preparations, would consume cakes made with aniseeds and other aromatic spices to aid digestion and freshen the breath.

During the Middle Ages the cultivation of anise spread to Europe, though it only flowers and produces seeds in warmer climatic conditions. Aniseed was often used to flavor horse and cattle feed. Dogs also like it and it is included in pet food. It is said that a little aniseed will attract mice to mousetraps!

Anise is now widely used in the manufacture of confectionery (anise oil often provides the licorice flavoring in sweets), cough drops, a French cordial called anisette and a number of anise-flavored alcoholic drinks such as ouzo, Pernod, pastis and aguardiente, a Latin American favorite. Aniseed should not be confused with star anise, the predominantly Chinese spice, although the essential oil of star anise is often used as a substitute for aniseed.

Processing

Anise will only flower and fruit after a long hot summer, climatic conditions that are also excellent for drying the seeds. The seed heads are harvested and hung or laid out to dry in a warm, well-ventilated area with some direct sunlight. When dry and crisp the flower heads are rubbed to separate the seeds from the flowers and pieces of stem, then sieved ready for storage. This process will often remove the fine stalk that is attached to some of the seeds, making them look cleaner and more uniform.

Buying and Storage

Confusion often arises when markets incorrectly label fresh fennel bulb as aniseed. Aniseed is best purchased in its whole form as, when correctly stored, it will retain its flavor for up to three years. Because of its small size, aniseed is most often used whole in cooking rather than in its ground form. Seeds of anise should be greenish brown to light brown in color and contain a minimum amount of husks and fine, hair-like stalks. Store in an airtight pack and keep away from extremes of heat, light and humidity as this will accelerate the deterioration and loss of fresh anise notes.

Use

The fresh, distinctly licorice and fennel flavor notes in aniseed makes it an ideal spice for Indian vegetable and seafood dishes; however, Indians more often use its close cousin fennel. Its mild licorice flavor complements biscuits and cakes, and it is used in traditional baking in both Germany and Italy. Scandinavian rye bread contains aniseed, as do a wide range of processed meats. A small amount of whole or ground aniseed can be added to vegetable soups, white sauces and chicken and shellfish pies. The fresh flavor of aniseed has a balancing effect on rich cheese dishes and is employed to cut the greasy effect of some ingredients in Moroccan cuisine. The leaves can be included in green salads and added to egg dishes for a subtle tarragon-like taste.

Ground aniseed



Pearl Barley, Pumpkin and Aniseed Dolmades

Dolmades always remind me of the time Liz and I visited the Basilica Cistern in Istanbul and sat in an airy café for lunch, naturally enough of dolmades. The Cistern is basically an enormous underground water storage tank, 225 feet (70 m) wide and 450 feet (140 m) long, built in AD 532 by the emperor Justinian the Great. What makes it so unusual, besides its grandeur, is that the 336 columns used in its construction were the leftovers of columns brought in from other sites to build the Hagia Sofia. There is only a small amount of water in it now, but walking among the huge columns supporting the roof and hearing echoing, dripping water all around us felt quite eerie. Paths meander among the columns and are constantly squeegeed by workers, because the ceiling is always dripping wet from condensation. The atmosphere was cool and comfortable in comparison to the mid-90°F (35°C) heat outside. These cool, tasty morsels are perfect finger food for outdoor summer occasions. Serve with minted yogurt.

1 ¼ lbs (625 g) pie pumpkin, peeled, cut into ½-inch (1 cm) cubes and roasted
2 cups (250 mL) cooked pearl barley
¼ cup (50 mL) chopped fresh flat-leaf parsley
2 tbsp (25 mL) chopped fresh mint
2 tbsp (25 mL) pine nuts, toasted
1 tsp (5 mL) ground aniseed
grated zest and juice of 1 lemon
salt and freshly ground black pepper to taste
25 vine leaves* in brine, rinsed and patted dry

In a bowl, combine pumpkin, barley, parsley, mint, pine nuts, aniseed and lemon zest and juice. Mix well and season with salt and pepper. Place a vine leaf vein side up on a board and put 1–2 tbsp (15–25 mL) pumpkin mixture (depending on size of vine leaf) in the middle. Fold each leaf in from the sides, then fold up bottom of leaf and roll upwards. Place on a plate, seal side down. Repeat until all leaves are filled and rolled. Refrigerate dolmades for at least 1 hour before serving. Makes 25.

*Vine leaves are readily available in delis and supermarkets, but this recipe also works well with Vietnamese rice paper.

Annatto Seed

OTHER COMMON NAMES

- achiote
- achuete
- bija
- latkhan
- lipstick tree
- natural color E1606
- roucou
- urucu

BOTANICAL NAME

- *Bixa orellana*

FAMILY

- Bixaceae

NAMES IN OTHER LANGUAGES

- Chinese (C): yin ju syuh
- Chinese (M): yan zhi shu
- Dutch: achiote, roucou
- Filipino: achuete, atsute
- French: rocou, roucou
- German: annatto
- Indian: latkhan, sendri
- Indonesian: kesumba
- Italian: anotto
- Russian: biksa, pomadnoe derevo
- Spanish: achiote, achote
- Turkish: arnatto
- Vietnamese: hot dieu mau

ANNATTO SEEDS are collected from a relatively small tropical evergreen tree that grows 16–33 feet (5–10 m) high. The leaves are heart-shaped and glossy and provide an attractive background to the large, bright pink flowers, which have the appearance of wild roses. Prickly, heart-shaped scarlet seed-bearing pods form after flowering and, when ripe, split open to reveal a reddish yellow pulp surrounding about 50 triangular, pyramid-shaped, indented seeds. Dried annatto seeds are about $\frac{1}{4}$ inch (5 mm) long, look like little stones, and are a dark red oxide, rusty color. When cut in half they reveal a white center coated with the dusty, finger-staining red skin. The aroma is pleasant, sweetish and peppery and has faint overtones of old, dry peppermint. The flavor is dry, mild and earthy.

Origin and History

Annatto is native to the Caribbean, Mexico, Central and South America and is now cultivated in many tropical countries. The Spanish colonials from Central America and the

Annatto seed



FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 4.3 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL)
- white meats: 1 tsp (5 mL)
- vegetables: ½ tsp (2 mL)
- carbohydrates: ½ tsp (2 mL)

COMPLEMENTS

- many foods as a natural yellow color
- pastes to season chicken and pork
- Asian roasts and preserved meats

USED IN

- achiote paste

COMBINES WITH

- allspice
- chili
- coriander
- cumin
- garlic
- oregano
- paprika
- pepper

West Indies took annatto to the Philippines in the 17th century. The shiny foliage and dramatically beautiful, rose-like flowers made annatto a popular hedge shrub in colonial gardens. Annatto's history has been most strongly connected to its use as a coloring for foods and as "oxblood" color, which is a dye made from the pulp surrounding annatto seeds, used in textile manufacturing. Annatto was applied as a war paint and sun protection by the Carib Indians. It is believed that the early European settlers in the Americas, seeing this annatto coloring, coined the term "redskins" to describe the native Americans. Annatto was also valued by the ancient Maya of Guatemala. It's easy to see why annatto is called the lipstick tree, as just a smear of the bright red pulp surrounding the seeds is as effective as many commercial lipsticks. Annatto has been used as a substitute for saffron, replicating the color to some degree, but not the flavor. A natural color, E1606, is made from annatto, and as it has no known adverse effects, annatto has become a popular alternative to the potentially allergenic artificial colors Tartrazine E102 and Sunset Yellow E110 in food manufacturing.

Processing

The prickly, predator-detering fruits are harvested when ripe and macerated in water to allow the dye to settle. This sediment is collected, dried and pressed into cakes for further processing into dyes, cosmetics and food colors. The seeds are dried and packed for shipment.

Buying and Storage

Annatto seeds should be a uniform dark red-brick color and be free from flaky pieces of the dried pulp matter. Always purchase whole seeds and store in an airtight container away from light and extreme heat. Good-quality annatto seeds will last up to three years when stored correctly.

Use

Annatto is used primarily as a coloring in fish, rice and vegetable dishes. In Jamaica it goes into a traditional sauce for salt cod and ackee, while in the Philippines annatto is a key element in pipian, a dish made with cubes of chicken and pork. Possibly its most famous traditional application is in the making of achiote paste, an important ingredient in Mexican cooking.

The Mexicans use annatto to color their stews, sauces and tacos. When you see fresh chicken on sale in supermarkets in Mexico, you will notice how yellow the flesh looks. This is a desirable indication of quality to consumers, and although sometimes artificial yellow colors are resorted to, more often than not the coloring has come from annatto. In the Yucatan, annatto is an ingredient in pastes such as *recado colorado* and *adobo*. In Asian cooking, the Chinese take advantage of annatto to color roast and preserved meats such as roast pork and boiled pigs' snouts, ears and tails. In the West, annatto color is effective in many cheeses, such as the Red Cheshire and Leicester varieties. Edam cheese has its rind colored by annatto and annatto also colors smoked fish.

There are two ways to effectively extract the color from annatto seeds. To color rice, seafood and vegetable dishes in a similar manner to saffron, make an infusion of $\frac{1}{2}$ tsp (2 mL) of annatto seeds to 2 tbsp (25 mL) of water by simmering lightly for a few minutes. Allow the liquid to cool. This amount will color 1 cup (250 mL) of rice or vegetables. To color curries and brush onto meats, an oil (*aceite*) is made by simply putting $\frac{1}{2}$ tsp (2 mL) of annatto seeds in 2 tbsp (25 mL) of olive oil in a saucepan. (When lard is used, it is called *manteca de achiote*.) Heat for a few minutes, being careful not to burn the seeds, and allow to cool. Drain the golden oil from the seeds and store in an airtight jar, where it will keep for up to 12 months.

Achiote Chicken Tostadas with Mango Sauce

Achiote paste is arguably the most traditional way to use annatto seeds. Their distinctive flavor and deep yellow color add a distinct signature to this popular chicken dish.

Achiote Paste

- ½ tsp (2 mL) annatto seeds
- ½ tsp (2 mL) dried oregano
- ½ tsp (2 mL) cumin seeds
- ½ tsp (2 mL) whole black peppercorns
- ½ tsp (2 mL) whole allspice
- 2 large garlic cloves, crushed (about 1 tsp/5 mL)
- 1 tbsp (15 mL) water
- ½ tsp (2 mL) vinegar
- ¼ tsp (1 mL) salt

- 2 skinless boneless chicken breasts
- 2 cups (500 mL) shredded white cabbage, sautéed in butter
- 1 package round wonton wrappers (40–50)
- ¼ cup (50 mL) vegetable oil

Mango Sauce

- 1 ¼ cup (300 mL) mango purée
- juice of 3 limes
- 2 tbsp (25 mL) roughly chopped fresh coriander leaves
- salt and freshly ground black pepper to taste

For the achiote paste, finely crush annatto seeds, oregano, cumin seeds, peppercorns and allspice in a spice grinder or mortar and pestle. Transfer to a small bowl and mix in garlic, water, vinegar and salt.

Place chicken breasts in a food processor and pulse until broken up, but do not blend into a paste. Stir in achiote paste and cabbage. Lay out 6 wonton wrappers at a time and place 1 heaping tsp (5 mL) of mixture in the center of each. Dip your finger in water and run it around the edge of the wrapper, then fold in half and seal edges with fingertips to make a tostada. Repeat with remaining wonton wrappers and filling. Place on a lightly oiled baking sheet and cover with plastic wrap until ready to cook.

In a deep frying pan, heat oil over medium heat. Carefully add tostadas to the pan and cook for 2–3 minutes on each side. Remove with a slotted spoon and drain on a paper towel.

For the mango sauce, combine mango purée, lime juice and coriander; season with salt and pepper. Serve with warm tostadas. Makes 40–50.

Arugula

OTHER COMMON NAMES

- salad arugula: gentle rocket, roka, Roman rocket, rocquette, ruchetta, salad rocket, tira
- sweet arugula: damask violet, dame's rocket, dame's violet, sweet rocket, vesper flower

BOTANICAL NAMES

- salad arugula: *Eruca sativa*
- sweet arugula: *Hesperis matronalis*
- wild arugula: *E. vesicaria*

FAMILY

- Brassicaceae (formerly Cruciferae)

NAMES IN OTHER LANGUAGES

- Arabic: jarjeer
- Chinese (M): huang hua nan jie cai
- Czech: roketa, roketa seta
- Danish: sennepsalat, arugula, rucola
- Dutch: raket, rucola
- Finnish: sinappikaali
- French: roquette
- German: salatrauke, rauke, rucola
- Greek: roka
- Hungarian: borsmustar
- Italian: rucola, ruchetta
- Japanese: roketto, rukkoru, kinabasuzushiro
- Polish: rokieta siewna, rukola

SALAD ARUGULA, or rocket, as it is known outside North America, is the variety of main culinary use. It is easily confused with sweet arugula, a type grown primarily for its scented flowers. Salad arugula is a branched plant of the same family as mustard and watercress, and it grows to about 35 inches (90 cm) high. Salad arugula's leaves are pale green, spear-shaped, lobed, ragged and torn-looking. The flavor is appetizingly mustard-like and has musky undertones. Culpepper referred to it as rocket cress or garden cress, probably because of its cress-like taste. The small propeller-like, four-petaled flowers are creamy yellow or whitish with purple streaks and open in mid- to late summer.

Sweet arugula is too acrid to be useful in cooking. It is a biennial with white, purple or variegated, scented single or double flowers. There are a number of other plants in the Brassicaceae family with the common suffix of "rocket" that are not really suitable to eat. They go by the common names of eastern rocket, London rocket, yellow rocket, wall rocket and sea rocket. In addition, there is an unrelated South American ornamental plant called South American rocket, also known as cruel plant.

Arugula



Origin and History

Arugula is native to southern Europe and western Asia and has “taken off like a rocket” in North America, where it runs wild. The Romans used the leaves and seeds of arugula and it was a popular herb in Elizabethan England. Arugula is used in the south of France, Italy and Egypt and has become a popular salad herb in Australia and North America, where a collection of edible flowers, arugula and other salad greens is called “mesclun mix.” Mesclun does not appear to be a real word, but a strange bastardization of the Spanish word for mix (*mesclar*) and the Italian *mescolare* (which means to mix, mingle and blend or, appropriately, to confuse or confound!)

Many mentions of arugula in the past probably referred to wild arugula (*E. vesicaria*) or the numerous other kinds of so-called rockets mentioned earlier. Sweet arugula is renowned for its scent, which is almost non-existent during the day. In times gone by, the expression “the language of flowers” referred to a kind of secret code used by lovers to communicate their passions without fear of being overheard by eavesdropping chaperones. Thus every flower in a posy had a meaning, and sweet arugula meant deceit, since it gives out a beautiful perfume in the evening but hides its true scent during the day.

Processing

The leaves of salad arugula should be picked from around the outside of the plant once they have reached a reasonable size (at least 4 inches/10 cm long) and gathered repeatedly until it begins to flower. Young, tender leaves and more robust mature ones may be harvested at the same time. To collect the seeds for planting in the next season, allow them to ripen when the petals have fallen.

Buying and Storage

Arugula can often be purchased where fresh vegetables are sold. As with other salad greens, avoid arugula that looks wilted. After washing, store in the refrigerator as you would store lettuce.

Use

Arugula is essentially a salad herb. Its subtle cress-like bite complements all other greens, edible flowers, sprouts and julienne vegetables. It goes well in herb sandwiches with cream

NAMES IN OTHER LANGUAGES

- Portuguese: rucula, eruca
- Russian: indau
- Spanish: rucula, oruga, jaramago, arrugula
- Swedish: rucolasallat, eruka
- Turkish: roka, cecer, circir, kekes
- Vietnamese: cai long

FLAVOR GROUP

- medium

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: ½ cup (125 mL)
- white meats: ½ cup (125 mL)
- vegetables: up to equal amounts
- carbohydrates: ½ cup (125 mL)

COMPLEMENTS

- salads
- herb sandwiches with cottage cheese

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- chicory
- chives
- coriander leaf
- cress
- dill
- garlic
- lovage
- parsley
- sorrel
- tarragon
- thyme

or cottage cheese. A piquant salad to accompany meats in rich, creamy sauces is made by shaving Parmesan cheese over torn salad arugula leaves, then lightly sprinkling them with balsamic vinegar. A different style of pesto may be made by substituting the traditional basil leaves with those of arugula. The result has a spicy mustard flavor that complements cold meats well and, as an extra benefit, arugula does not oxidize and darken as basil does.

Arugula

Wild Arugula Mash

This mash is an ideal bed for stews and casseroles or can be served on its own as a side dish, sprinkled with chopped arugula and grated Parmesan cheese.

- 2 lbs (1 kg) potatoes, peeled and cut into large cubes
- 3 cups (750 mL) wild arugula leaves, washed, divided
- 1 tbsp (15 mL) chopped fresh basil leaves
- 1 tbsp (15 mL) chopped fresh flat-leaf parsley
- 1 small clove garlic, chopped
- 3 tbsp (45 mL) extra-virgin olive oil, divided
- 4 tsp (20 mL) butter
- $\frac{1}{4}$ cup (50 mL) grated Parmesan cheese
- $\frac{3}{4}$ cup (175 mL) table (18%) cream
- salt and freshly ground black pepper to taste

Put potatoes in a large pot of cold water and bring to a boil. Reduce heat and simmer until very tender.

Meanwhile, blend 2 cups (500 mL) of the arugula leaves, basil, parsley and garlic in a food processor. With the motor running, through the feed tube, add 1 tbsp (15 mL) of the olive oil to bind. Set aside.

Drain potatoes and return to the pot to steam dry. This next step is not crucial; however, it will guarantee the lightest, fluffiest mash. Push the cooked potatoes through a sieve or potato ricer into a bowl. When all of the potatoes are sieved, heat butter in the pan and return the potatoes to the melted butter. Stirring constantly with a wooden spoon, add the arugula mixture and Parmesan, then pour in the remaining olive oil and cream until the consistency is smooth and spoonable. Add the remaining arugula leaves (torn if they are very large) and season with salt and pepper. Serves 4–6.

Asafetida

OTHER COMMON NAMES

- devil's dung
- food of the gods
- hing
- hingra
- laser

BOTANICAL NAME

- *Ferula asafoetida*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Arabic: tyib, haltheeth, abu kabeer
- Burmese: sheingho
- Chinese (C): a ngaih
- Chinese (M): a wei
- Danish: dyvelsdraek
- French: ferule asafoetida
- German: stinkendes, steckenkraut
- Greek: aza
- Indian: heeng, hing powder, perunkaya
- Italian: assafetida
- Japanese: agi, asahueteida
- Russian: asafetida
- Spanish: assa foetida
- Swedish: dyvelstrack
- Turkish: seytantersi, setan

FLAVOR GROUP

- pungent

THIS IS one of the world's most maligned spices, particularly by Western writers. It has been described as an "evil, penetrating spice smelling of faeces and rotting garlic!" Asafetida is the resinous gum (oleoresin gum) extracted from one of a few species of giant fennel, of which there are about 50 varieties, some of them poisonous. The plant from which most commercial asafetida comes grows to about 10 feet (3 m) high, has thick stems and a coarse appearance similar to fennel, the bright yellow flowers only appearing after about five years of growth.

The spice asafetida is found in four main forms: tears, blocks, pieces and powder. The aroma is fetid to some noses, hence the name. However, when one considers how many ingredients used to flavor food have strong aromas on first acquaintance, asafetida can certainly be regarded in more benign terms. The bouquet is slightly sulphurous, acrid and like fermented garlic, yet has a lingering sweetness reminiscent of pineapple. There are two major varieties: *hing*, a water-soluble type from *Ferula asafoetida*, and *hingra* (from *F. scorodisma*), which is oil-soluble and considered inferior. Tears, blocks and pieces of asafetida are the strongest in flavor. They are dark red to brown in color and have the characteristic pervasive aroma. Asafetida is often powdered and mixed with edible starch to make it more manageable.

Yellow and brown asafetida powder



**WEIGHT PER
TEASPOON (5 ML)**

- ground: 4.1 g

**SUGGESTED
QUANTITY PER
POUND (500 G)**

- red meats: 1 tsp (5 mL)
- white meats: 1 tsp (5 mL)
- vegetables: 1 tsp (5 mL)
- carbohydrates: ½ tsp (2 mL)

COMPLEMENTS

- Indian curries, especially seafood and vegetable
- cooked vegetables and bean dishes
- pappadums and naan bread
- pickles and chutneys
- Worcestershire sauce

USED IN

- chaat masala
- curry blends
- as a general substitute for garlic

COMBINES WITH

- cardamom
- chili
- cinnamon
- coriander seed
- fennel seed
- ginger
- mustard
- pepper
- tamarind
- turmeric

There are two readily available forms of powder: one is “brown,” actually a pale tan color, and the other is yellow (it has a slightly milder flavor and amalgamates into food easily due to the starch and turmeric added to it).

Origin and History

The name “asafetida” is derived from the Persian for “mastic” or “resin,” *aza*, and the Latin for “stinking,” *foetidus*. It was greatly appreciated by the early Persians, who called it “food of the Gods.” While asafetida is known to be descended from the giant perennial fennels that grow wild in Afghanistan, Iran and northern India at altitudes above 3,300 feet (1000 m), there is some conjecture and much uncertainty about its relationship to laser root, *Ferula tingitana*. This spice was treasured for its flavor and health-giving properties in Roman times and was referred to as *silphium*, *laserpitium* and *laser*, and shared many of the attributes of asafetida. This plant grew mainly in Cyrene (North Africa) and is believed to have become extinct by the middle of the first century AD as a result of overgrazing for cattle feed, use as a vegetable (the strong flavor disappearing on cooking) and lack of ordered propagation. One can imagine this being quite possible in the days when many herbs and spices were simply gathered from their wild state and not purposefully cultivated. Alexander the Great was said to have carried it west in 4 BC; at that time it was called “stink finger,” the name also used in Afghanistan. The Romans, when deprived of their beloved laser root, imported the resin of Persian asafetida, thought to be similar to the asafetida we know today, from Persia and Armenia and brought it to England around 2,000 years ago. Not surprisingly, one finds scant reference to it in the cooking of the British Isles.

Processing

Asafetida sap is collected from plants that are at least four years old. The process commences by exposing the roots, slashing them and keeping them shaded from the sun for around four to six weeks while the resin seeps out and hardens. In some parts of India the plant is tapped at the base of the stem in much the same way as a rubber tree is tapped for its latex. The drying resin is then scraped off in pale creamy lumps that turn reddish and finally dark reddish brown as they age. The oleo-resin gum is then subjected to further processing to make it manageable. Brown asafetida powder is simply made by

grinding the hard gum with some form of starch (usually wheat flour), resulting in a free-flowing, coarse powder. Yellow asafetida is made by mixing the powdered gum with wheat starch, gum arabic, turmeric and sometimes additional color such as carotene. Yellow asafetida is not as strong in flavor as brown asafetida; however, the texture is finer and the appearance less threatening and more processed.

Buying and Storage

Always try to buy asafetida in a well-sealed, airtight container for two reasons: first, as with other spices, the volatile oil will escape and the flavor will diminish; and second, the strong aroma will pervade your whole house. The dark reddish brown lumps of resin are the strongest, but unless you are familiar with the substance, buying either the brown or yellow powder will be much more convenient.

Store in an airtight container; I sometimes place one container inside another to create a double barrier.

Use

Asafetida is reputed to reduce flatulence and is used regularly in Indian diets high in lentils and beans, and other meals high in vegetable content that are conducive to gas production. Although asafetida does have a strong aroma, much of it is toned down during the cooking process, resulting in a wonderfully complementary flavor to whatever dishes you choose to use it in. Those of the Brahmin and Jain faiths are prohibited from eating garlic because of its reputed aphrodisiac properties, so asafetida is their substitute.

Asafetida is particularly good in lentil dishes such as sambar, and it enhances fish and vegetable curries to the extent that I would not have these dishes without adding it. Some Indian cooks stick a small piece under the lid of the cooking pot and allow it to permeate that way. Apicius, the Roman gourmand of the early first-century AD from whom the epithet “epicure” derives, was known to keep a chunk of resin in his storage container for pine nuts. During storage the vapor seeped into them sufficiently well to provide the desired flavor when these pine nuts were used as an ingredient. Adding the powder during cooking is probably the simplest method of application, and just think of it as another version of garlic. This way it can be enjoyed with pleasure in dishes other than Indian.



This dish is one of my favorites when traveling in Southern India. Asafetida powder is used in a spice mix called sambar powder (see p. 582) from which this recipe derives its name. The wonderful flavor of this dish is attributed to asafetida, the other spices used and, of course, curry leaves. Consumption of such a predominantly lentil-based dish will rarely cause embarrassing windy moments when asafetida is used.

- 2 tbsp (25 mL) mustard oil
- 2 tbsp (25 mL) Sambar Powder (see p. 582)
- 2 cups (500 mL) vegetables, such as eggplant, potato, okra and carrot, chopped into ½-inch (1 cm) pieces*
- 2 cups (500 mL) water
- ½ tsp (2 mL) salt
- 1 cup (250 mL) lentils or yellow split peas, soaked and cooked in 4 cups (1 L) water until soft
- chopped fresh coriander, for garnish

Heat the oil in a large saucepan and stir in the sambar powder. Stir for 1 minute and then add the vegetables and stir-fry for a further 2 minutes. Pour in the water and salt; cover and simmer until vegetables are cooked. Add the mushy lentils or peas and simmer for another 5 minutes.

Garnish with coriander and serve hot over rice. Serves 4 as a meal.

* When two or three vegetables are used, there is a subtle blending of flavors. For a more distinctive flavor, make the sambar with only one type of vegetable.

Balm

OTHER COMMON NAMES

- bee balm
- common balm
- lemon balm
- melissa
- sweet balm

BOTANICAL NAME

- *Melissa officinalis*

FAMILY

- Lamiaceae (formerly Labiatae)

NAMES IN OTHER LANGUAGES

- Arabic: turijan, hashisha al-namal
- Bulgarian: matochina
- Chinese (C): heung fung chou
- Chinese (M): xiang feng cao
- Czech: medunka
- Danish: citronmelisse
- Dutch: citroenmelisse
- French: baume, melisse
- German: zitronmelisse
- Greek: melissa
- Italian: melissa, erba limona
- Japanese: seiyo-yama-hakka
- Korean: remon bam
- Portuguese: erva cidreira
- Russian: melissa limonnaya
- Spanish: balsamita maior
- Turkish: ogul out, melisa otu

BALM IS related to mint. It has a similar appearance to common garden mint, with rough, oval, dark green leaves that are serrated around the edges. The plant is compact and leafy, growing to around 32 inches (80 cm) high. Balm has a less rampant root system than mint, so it is easier to control in the garden. Although a perennial, balm should be cut back in autumn as its root system then remains dormant until spring. Clusters of small white flowers that attract bees are borne on tall stalks in spring. The leaves of lemon balm, as it is regularly called, have a distinct, penetrating and lingering lemon scent that is tantalizingly refreshing and aromatic.

Origin and History

A native to southern Europe and introduced to England by the Romans, balm has subsequently been cultivated in North America and Asia. The Latin botanical name *Melissa* derives from the Greek name for honey. The association with bees goes back over 2,000 years, when balm was rubbed onto bee hives to prevent them from swarming and to encourage them to return home. The name “balm” is an abbreviation of balsam, and was attributed to it because of its sweet aroma. The Emperor Charles V was fond of taking a daily tonic called

Balm



FLAVOR GROUP

- medium

SUGGESTED
QUANTITY
PER POUND (500 G)

- red meats: 4 tsp (20 mL)
- white meats: 4 tsp (20 mL)
- vegetables: 4 tsp (20 mL)
- carbohydrates: 1 tbsp (15 mL) chopped crystallized leaves

COMPLEMENTS

- pickled herrings and eels
- liqueurs such as benedictine
- fruit salads
- green salads with dressing
- sauce for lamb and pork
- poultry and fish

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- bay leaves
- mint
- pepper
- rosemary
- thyme

carmelite water, an ancient recipe made from balm, lemon peel, nutmeg and angelica root. These days balm is an under-utilized culinary herb, grown mainly for decorative purposes and for its fragrance as an addition to potpourri.

Processing

Balm is best used fresh, as the lemony, volatile top notes are easily lost on drying. Should you wish to dry your own for use in pickles or tisanes, be particularly careful about minimizing exposure to light or extreme heat during drying. The best methods for removing moisture and retaining flavor are to spread out the leaves (never overlapping) on newspaper or hang them in loose bunches in a dark, well-aired place. Try to dry any herbs when the relative humidity is below 50% so when the leaves feel quite crisp and crumbly the moisture content will be down to about 12%, the ideal level for extended storage.

Buying and Storage

Store dried balm in airtight containers in a cool, dark place.

Use

Because balm has a lemony mint flavor, the range of culinary applications is almost endless. Balm has been used traditionally in pickled herrings and eels in Belgium and Holland. It also forms the basis of the cordial eau-de-melisse des carnes, as well as being an ingredient in several other liqueurs, such as benedictine and chartreuse. The palate-pleasing lemon flavor is a refreshing addition to fruit salads and adds tang to green salads when only a small amount of vinegar is used in the dressing. Balm is excellent in stuffings for poultry and it complements fish, especially when cooked with a little butter and wrapped in foil. An unusual mint and balm sauce to accompany lamb and pork is made by chopping 1 tbsp (15 mL) each of fresh balm and mint, adding 1 tsp (5 mL) of sugar, a pinch of salt, 1 tbsp (15 mL) of white wine vinegar and half a cup (125 mL) of hot water.

Balm and Mascarpone Sorbet

Balm

In some cases balm and mint are interchangeable, so if you are unable to get balm, mint or applemint may be used as a substitute.

- $\frac{3}{4}$ cup (175 mL) superfine (caster) sugar
- $1\frac{1}{3}$ cups (325 mL) water
- 8 oz (250 g) mascarpone cheese
- 1 cup (250 mL) finely chopped fresh balm
- $1\frac{1}{2}$ tsp (7 mL) freshly squeezed lemon juice

Dissolve sugar in water over low heat, stirring gently.

Remove from heat and let cool completely. Mix mascarpone, balm and lemon juice until well combined, then add sugar syrup. Stir until smooth, then pour into a container and freeze. Once frozen (3–4 hours), break up and blend in a food processor, then refreeze. Serves 6–8.

Barberry

OTHER COMMON NAMES

- berbery
- European barberry
- holy thorn
- pipperridge bush
- sowberry
- zareshk

BOTANICAL NAME

- *Berberis vulgaris*

FAMILY

- Berberidaceae

FLAVOR GROUP

- tangy

WEIGHT PER TEASPOON (5 ML)

- whole: 1.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp (10 mL)
- white meats: 1 ½ tsp (7 mL)
- vegetables: 1 tsp (5 mL)
- carbohydrates: 1 tsp (5 mL)

BARBERRIES ARE the dried bright red berries from a species of berberis, many of whose members are poisonous. The ripe berries of *Berberis vulgaris* are used in cooking for their pleasantly acidic taste and fruity aroma, which is not unlike tamarind. The fruits of Japanese barberry (*B. thunbergii*), mountain grape (*B. aquifolium*) and *B. thunbergii atropurpurea* (the berberis common in Australian gardens as a decorative shrub) should not be eaten.

The barberry bush is deciduous, grows to about 8 feet (2.5 m) tall and bears clusters of small, bright yellow flowers, followed by the purple-scarlet fruit, which becomes red upon ripening. Dried ripe barberries are around ½ inch (1 cm) long, oblong in shape, moist to touch and look a bit like a miniature currant. The red color darkens with age as they oxidize.

Origin and History

The barberry is believed to have originated in Europe, North Africa and temperate Asia. Decorative members of the berberis family are now grown extensively throughout North America and Australia. The bark and roots have been used medicinally, and the close-grained wood is made into

Barberry



toothpicks. A yellow dye made from the bark was used as a coloring for wool, linen and leather. The name “holy thorn” derives from the Italians’ belief that it was used in the crown of thorns placed on Christ at his crucifixion.

Unfortunately for the barberry shrub, it is host to a strain of rust that affects wheat. As its popularity as a spice led to wider cultivation, its subsequent association with the spread of disease in wheat made it extremely unpopular with farmers. The famines in the early 10th century in Spain were largely a result of the damage done to the wheat crops by rust. This may go some way to explain why barberry is so rarely heard of these days. We are most likely to become aware of it as an ingredient in Afghan cooking, where it is used to flavor rice dishes.

Buying and Storage

One should only buy dried barberry from a reputable merchant. Due to the toxicity of some species, the purchase of fresh barberries, which may be from an uncertain source, is not recommended. The dried barberry is quite moist to touch, typical of dried fruits, and should be red to dark red in color. Store in an airtight pack in the freezer to retain maximum color and flavor.

Use

Traditionally, barberry was used for its high citric acid content and was considered a good accompaniment to mutton when made into a jelly, similar to the red currant jelly that so often accompanies game. It has been pickled for serving with curries and the Afghans put barberry in their rice dishes. Barberries are great with ras el hanout spices and in couscous and rice. We like to use barberries with fruit, especially apples. They make a particularly attractive addition to an apple pie, with the extra benefit of delivering the occasional fruity burst of tangy flavor, something that can also be enjoyed in almost any type of fruit muffin.

COMPLEMENTS

- rice pilafs
- stewed fruits, especially apples
- jellies to accompany red meats

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- cardamom
- chili
- coriander seed
- ginger
- pepper
- turmeric



A version of the classic Persian rice and chicken dish.

- 3 cups (750 mL) basmati rice
- 4 tsp (20 mL) salt
- 6 tbsp (90 mL) olive or vegetable oil, divided
- 1 medium onion, halved and thinly sliced
- 4–6 chicken thighs, skinned and trimmed of fat
- 1 tsp (15 mL) salt
- 1 tsp (15 mL) freshly ground black pepper
- $\frac{1}{2}$ tsp (2 mL) ground turmeric
- $\frac{3}{4}$ cup + 2 tbsp (200 mL) plain natural yogurt
- $\frac{1}{2}$ tsp (2 mL) saffron filaments, soaked in 1 tbsp (15 mL) milk for 15 minutes
- 1 egg
- $\frac{1}{4}$ cup (50 mL) barberries (zereshk)
- 2 tbsp (25 mL) almond slivers
- 1 tbsp (15 mL) granulated sugar

Cover rice with cold water and add the 4 tsp (20 mL) salt. Cover and soak for 2 hours.

Heat 2 tbsp (25 mL) of the oil in a pan, over medium heat, and fry onion until light golden. Add chicken, salt, pepper and turmeric. Brown chicken on both sides, then add 1 cup (250 mL) water and simmer gently, uncovered, for 10–15 minutes, until chicken is cooked and liquid has reduced. Remove from heat and transfer chicken to a plate. Let cool, reserving onion and stock in the pan for later.

In a bowl, using a fork, combine yogurt, saffron in milk, and egg. Add cooled chicken, cover and refrigerate for 1 hour.

Thoroughly wash barberries in cold water and drain. Mix with 2 tbsp (25 mL) oil, almond slivers and sugar; cook in a pan over medium heat for about 2 minutes, stirring frequently. Remove from heat and set aside.

Drain rice and rinse in cold water. In a separate saucepan, bring 8 cups (2 L) water and 1 tsp (5 mL) salt to a boil; add rice and cook for 5 minutes. Strain rice and rinse with cold water. Spread the remaining 2 tbsp (25 mL) oil in the base of a large pot and add half the rice. Lift chicken from marinade and place on rice. Add the barberry mixture to the remaining rice and spread over chicken. Spoon onion slices over the rice and pour in stock. Cover tightly and steam over low heat for 30 minutes.

Basil

OTHER COMMON NAMES

- bush basil
- camphor basil
- holy basil
- sweet basil
- Thai basil

BOTANICAL NAMES

- sweet basil: *Ocimum basilicum*
- bush basil: *O. basilicum minimum*
- Thai basil: *O. cannum Sims*
- holy basil: *O. sanctum*
- camphor basil: *O. kilimanscharicum*

FAMILY

- Lamiaceae (formerly Labiatae)

THERE ARE many different types of basil, but the succulent, large-leaved sweet basil is by far the most popular variety for culinary use. Basil's refreshing clove and anise-like aroma conjures up memories of summer, hardly surprising when one considers how this warmth-loving annual thrives in the heat and expires with the first chills of winter. Sweet basil plants grow to around 20 inches (50 cm) high and even more in ideal conditions. The stems are tough, grooved and square with dark green, oval, crinkly leaves 1–4 inches (30–100 mm) long. The tiny white long-stamened flowers should be nipped off to prevent the plant from going to seed and finishing its life cycle. This will also encourage thicker foliage and hence more abundant harvests for the basil-loving cook.

The taste of sweet basil is far less pungent than the permeating, heady aroma of the freshly picked leaves would suggest, thus large quantities can be used with safety. Dried sweet basil leaves are quite different from the fresh, and although the fragrant, fresh-smelling top notes disappear upon drying, a concentration of volatile oils in the cells of the dehydrated leaves

Clockwise from top left: purple bush basil; sweet basil; Thai basil; sacred basil



NAMES IN OTHER LANGUAGES

- Arabic: railhan
- Chinese (C): lohlahk, fan jyun, gau chahng taap
- Chinese (M): jiu ceng ta, lou le, xun sun
- Czech: bazalka
- Dutch: basilicum
- Filipino: belanoi, sulasi
- French: basilic
- German: basilienkraut
- Greek: vasilikos
- Indian: barbar, sabzah, tulsi, gulal tulsi
- Indonesian: selasih, kemangi
- Italian: basilico
- Japanese: bajiru, meboki
- Malay: daun selaseh, kemangi
- Portuguese: manjericao
- Russian: bazilik
- Spanish: albahaca
- Sri Lankan: suwenda-tala, maduru-tala
- Swedish: basilkort
- Thai: horapa, manglak, krapow, bai horapa
- Turkish: feslegen, reyhan, peslen
- Vietnamese: rau que, cay hung que

FLAVOR GROUP

- strong

give a pungent clove and allspice bouquet. This is matched by a faint minty, peppery flavor that is ideal for long, slow cooking.

Bush basil has small leaves $\frac{1}{3}$ – $\frac{1}{2}$ inch (8–10 mm) long. It grows to about 6 inches (15 cm) high, and the foliage has a less pungent aroma and less flavor than sweet basil. The two types of purple basil — serrated-leaved Purple Ruffle and the smoother Dark Opal basil, mainly grown for decorative purposes — have a mild, pleasing flavor and look attractive in salads and as a garnish. Hairy basil, or Thai basil, has slender oval leaves with deep serrations on the edges and a more camphorous aroma than sweet basil, with distinct licorice and anise notes. Although the seeds of this variety (referred to as *subja* in India) have no distinct flavor, they swell and become gelatinous in water and are used in Indian and Asian sweets and drinks and as an appetite suppressant.

Holy basil, or *tulsi* as it is called in India, has mauve-pink flowers, is perennial and is lightly lemon-scented. Cinnamon basil has a distinct cinnamon aroma and long, erect flower heads. An attractive plant, its leaves complement Asian dishes. The tender perennial camphor basil (*O. kilimanscharicum*) is not recommended for use in cooking, but its distinctive camphorous aroma makes it a pleasant decorative herb to have in the garden.

Origin and History

The origin of basil goes back to India, where it was considered a sacred herb. It is also native to Iran and Africa and was known in ancient Egypt, Greece and Rome, one theory on its name being that it is derived from *basilikon phyton*, which is Greek for “kingly herb.” The belief was that basil’s fragrance was so pleasing it was fit for a king’s house. Another belief is that it was named after the basilisk, a mythical serpent that could kill with a look. Basil certainly seems to be an herb that no one felt indifferent about. Pliny, the celebrated first-century AD Roman scholar, considered it an aphrodisiac, and it was given to horses during the mating season. In Italy basil symbolized love; when a lady left a pot of it in her window it was a signal that her lover was welcome. In Romania a young man was considered to be engaged if he accepted a sprig of basil from a young lady. However, those less enamored with basil, such as the ancient Greeks, considered it to be a symbol of hatred. Hilarius (yes, that was his name), an early French physician, claimed that by merely smelling basil a scorpion could be born in one’s brain.

Fortunately, though, the positive side of basil must have prevailed to encourage its introduction to Europe in the 16th century, after which it was cultivated by monks and farmers. It is interesting to note that basil features most in Italian and Mediterranean cooking, possibly because the warmer climates there make it readily available, whereas in the cooler parts of Europe, where it would certainly not thrive, it has by no means the culinary popularity it enjoys in the Mediterranean, North America, Asia or Australia.

Processing

Basil is possibly one of the most difficult herbs to process. Its full, moist, crinkly, dark green leaves turn black when attempts are made to refrigerate, freeze, or dehydrate them. To dry basil, harvest the long, leafy stems just before the flower buds start to appear, and spread out either on paper or wire gauze in a dark, warm, well-aired place. Do not hang in bunches, as touching leaves will tend to turn black on the edges. When the leaves have shriveled to about one-fifth of their size and are quite crisp to touch, rub them off the stems and store in an airtight container.

WEIGHT PER TEASPOON (5 ML)

- whole dry leaves: 0.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp
(10 mL) dried leaves,
8 tsp (40 mL) fresh
torn leaves
- white meats: 2 tsp
(10 mL) dried leaves,
8 tsp (40 mL) fresh
torn leaves
- vegetables: 1 ½ tsp
(7 mL) dried leaves,
6 tsp (30 mL) fresh
torn leaves
- carbohydrates: 1 ½ tsp
(7 mL) dried leaves,
6 tsp (30 mL) fresh
torn leaves

Dried basil



COMPLEMENTS

- tomatoes, fresh or cooked
- pasta sauces
- cooked eggplant
- squash and zucchini
- salads
- herb sandwiches
- poultry stuffing
- sauces and gravies
- herb vinegars

USED IN

- Italian herb blends
- Cajun spices
- meat seasonings
- seasoned stuffing mixes

COMBINES WITH

- garlic
- juniper
- marjoram
- mustard
- oregano
- paprika
- parsley
- pepper
- rosemary
- sage

Buying and Storage

Avoid buying fresh basil that is wilted or has black marks on the leaves. Bunches of fresh basil may be frozen and stored successfully for a few weeks. The best method is to place a small bunch in a clean plastic supermarket bag, blow some air in to inflate it, and place in the freezer where it will not be squashed. You will find it quite convenient to then nip off just a few of these frozen leaves when they are required for making pasta sauces and for cooking, although once frozen they are not so suitable for salads. Another effective way to preserve basil is to pick the larger leaves, wash and dry them and then place each leaf in a wide-mouthed shallow jar, sprinkling a little salt on each leaf as you stack them up in the container. Fill the jar with olive oil so all leaves are covered, screw the lid on firmly and keep in the refrigerator. Depending upon the quality of the fresh leaves, basil stored this way should last up to three months before any blackening occurs.

Dried basil is dark green in color and is readily available from food stores; however, as for all other dried herbs, only buy dried basil in good-quality packaging and store in a cool, dark place. Jars of so-called fresh basil are generally made from a combination of fresh and dried material, and while they are a good substitute for fresh, it should be noted that the amount of food acid used to achieve preservation will impart a more tangy taste. When using these jars of herbs, always reduce the amount of lemon juice or vinegar in the recipe to compensate for the higher acid levels.

Use

Basil's pervading, clove-like aroma, which comes from the oil eugenol (also found in cloves), makes it such an ideal complement to tomatoes that it is often referred to as the tomato herb. It is interesting to note how flavors across the herb and spice spectrum can have similar attributes, and it is often these degrees of commonality that give us an indication of the breadth of uses they can encompass. Cloves also happen to go well with tomatoes, and there are many commercially made tomato sauces and canned foods, such as Scandinavian herrings with tomato, that contain either cloves or the very clove-tasting allspice.

Basil also complements vegetables such as eggplant, zucchini, squash and spinach. When added within the last half an hour of cooking, basil enhances the flavor of vegetable and legume (split peas, lentil) soups. My mother often made herb

sandwiches with cream cheese and shredded basil leaves; these have a clean, refreshing taste. Most salads, especially those with tomato, benefit greatly from the addition of fresh basil. The simplicity of fresh basil is best appreciated when it is not cooked at all, such as in salads and pesto-style sauces.

However, dried basil goes well with poultry when used in stuffing, is included in soups and stews and is added to sauces and gravies. Fish brushed with olive oil, dusted with freshly ground black pepper, wrapped in foil with a few basil leaves and barbecued is a simple and effective way to enjoy this versatile herb. Basil is used in pâtés and terrines, where its volatile notes will help counteract the richness of liver and game. A tasty vinegar to have on hand for making salad dressings is made by placing a dozen or more fresh, washed basil leaves in a bottle of white wine vinegar and leaving it for a few weeks.

Pesto, the ultimate basil experience, is made from basil, Parmesan cheese, pine nuts, garlic, salt and oil and is one of the most effective ways to store and use basil. Pesto can be the basis of a quick meal when tossed through freshly cooked pasta and is an excellent spread on fresh crusty bread, topped with slices of fresh tomato and washed down with a glass of good shiraz.

Basil leaves are best used whole or torn; most cooks advise against cutting the leaves with a knife, as this tends to dissipate the aroma. To make dried basil taste a little closer to fresh when topping tomatoes, zucchini or eggplant for grilling, mix 1 tsp (5 mL) of basil with $\frac{1}{2}$ tsp (2 mL) each of lemon juice, water and oil and $\frac{1}{8}$ tsp (0.5 mL) of ground cloves. Let stand for a few minutes, then spread onto halved tomatoes or slices of eggplant before grilling.

Basil seeds



Grilled Figs with Basil Olive Oil

For an appetizing canapé, cut each fig into 4 pieces and place on a triangle of toasted focaccia with a small piece of Parma ham or prosciutto. These figs can also be served with mascarpone for dessert. Basil oil will keep for 2 weeks in the fridge.

Basil Oil

½ cup (125 mL) firmly packed fresh basil leaves

½ cup (125 mL) olive oil

¼ tsp (1 mL) freshly squeezed lemon juice

pinch salt

12 fresh ripe figs

balsamic vinegar (aged if possible)

12 very small fresh basil leaves

For the basil oil, place basil leaves, oil, lemon juice and salt in a food processor, or pound in a mortar and pestle. Transfer to a small saucepan and heat gently for 5 minutes to kill any bacteria in the basil and release the flavor. Allow oil to rest overnight, then strain through a fine sieve.

Heat a grill to medium. Cut crossways into the top of each fig, and pull down “petals” into a star shape. Place on the grill for 5 minutes, until just beginning to brown. Serve figs with a drizzle of basil oil and a few drops of balsamic vinegar and top with a basil leaf. Serves 6 as a starter.

Pesto

- 1 cup (250 mL) fresh basil leaves, washed and removed from the stem
- 1 cup (250 mL) grated Parmesan cheese
- $\frac{3}{4}$ cup (175 mL) pine nuts
- 1 tsp (5 mL) grated lemon zest
- 4 cloves garlic
- salt and freshly ground black pepper
- olive oil

Place all ingredients in a blender with a little olive oil. Blend on high, adding more oil if required, until the mixture achieves the consistency of thick cream. Season to taste with salt and pepper.

Silken Tofu with Chili and Thai Basil

The anise and licorice fragrance of Thai basil is quite different from the more clove-like notes of sweet basil, making it an ideal fresh herb to use in Asian dishes.

- 1 tsp (5 mL) sesame oil
- 6 small red shallots, very finely sliced
- 2 cloves garlic, very finely sliced
- 1 long red chili pepper, sliced
- $3\frac{1}{2}$ oz (100 g) silken tofu (or regular tofu)
- 1 cup (250 mL) packed fresh Thai basil leaves
- 3 tbsp (45 mL) light soy sauce
- 2 tbsp (25 mL) Shaohsing wine (Chinese rice wine)
- 1 tbsp (15 mL) Chinese black vinegar

In a frying pan, heat sesame oil over low heat. Add shallots, garlic and chili; stir-fry for 5 minutes, then carefully add tofu. Allow it to break into 2 or 3 pieces, but do not let it crumble. Add basil, soy sauce, Shaohsing and vinegar; swirl around the pan. Do not turn tofu; it only needs to heat through. When basil has just wilted, carefully remove tofu from pan and pour sauce over it. Serve hot. Serves 2–4 as part of a meal.

Bay Leaves

OTHER COMMON NAMES

- bay laurel
- noble laurel
- poet's laurel
- Roman laurel
- sweet bay
- true laurel
- wreath laurel

BOTANICAL NAME

- *Laurus nobilis*

FAMILY

- Lauraceae

NAMES IN OTHER LANGUAGES

- Arabic: ghar, waraq ghaar, rand
- Chinese (C): yuht gwai
- Chinese (M): yue gui, Yue gui ye
- Czech: vavrin uslechtily
- Danish: laurbaer
- Dutch: laurier
- French: laurier
- German: lorbeer
- Greek: dafni
- Italian: alloro, lauro
- Japanese: gekkeiju, roreru
- Portuguese: loureiro
- Russian: lavr
- Spanish: laurel
- Swedish: lager
- Turkish: defne agaci
- Vietnamese: la nguyet que

THE BAY tree is a densely foliaged, medium-height evergreen that can grow to over 33 feet (10 m) tall in favorable climates. The leaves are dark green and shiny on top and slightly paler with more of a matte finish underneath. Leaves are oblong and tapered, 2–4 inches (5–10 cm) long and $\frac{3}{4}$ –1½ inches (2–4 cm) wide. Young leaves are a lighter green, are soft and have less aroma and flavor than the mature, somewhat leathery, darker green leaves.

Fresh bay leaves, when broken to release the volatile oils, have a pungent, warm aroma with fresh camphor notes and a sharp, lingering astringency. The flavor is similarly pungent, sharp, bitter and persistent. Dry bay leaves are a lighter green, have a matte appearance on both sides and when crumbled release an even more distinct aroma with mineral oil-type notes and less bitterness than fresh bay leaves.

Bay trees bear small, waxy, cream-colored flowers with distinct yellow stamens, followed by purple berries that dry to become black and hard. These berries have no culinary use and should never be used in cooking as they are poisonous, containing laurostearine and lauric acid.

While some gardeners grow bay trees as specimens, having one or two strategically placed in tubs or in the garden, in Australia my parents had a row of about a dozen trees that over 20 years developed into a majestic hedge. Bay trees can

Bay leaves, dried, ground and fresh



be trimmed into a neat ball shape atop a single erect trunk, but if left to grow naturally, many shoots will come up around the main stem, making for more dense low growth that will be more effective as a hedge. The bay tree of culinary use should not be confused with the bay rum berry tree or other varieties of laurel tree, which are poisonous.

Origin and History

The bay tree is native to Asia Minor. It was cultivated widely in the Mediterranean, reaching Britain by medieval times, probably through Roman influences. The Romans treasured and revered bay leaves. The herbalist John Parkinson wrote in 1629 that Augustus Caesar wore a garland of bryony and bays to protect himself from lightning. In Greek mythology the gods played a mischievous game with Apollo, destined to pursue Daphne, and the beautiful Daphne, destined to repel the feelings of love. The story ends with the gods turning Daphne into a bay tree to give her respite from the persistent Apollo and he, devastated, declaring he would wear her leaves forever as a crown.

The Latin name for the bay tree comes from *Laurus*, meaning “laurel,” and *nobilis*, meaning “famous.” Thus we find in Greek and Roman times that winners of death-defying sports, such as chariot races, were crowned in the same way as victorious soldiers, with a wreath of bay leaves. The term “laurel” is used today to recognize leading poets. “Poet laureate” and the term “baccalaureate” come from distinguished scholars and physicians being given laurel berries (*bacca lauri*) in recognition of their achievements.

Processing

Bay leaves are best used in their dried form, as drying dissipates the bitter notes in the fresh leaf and allows the flavor-giving volatile oils to infuse more effectively into cooking. To harvest bay leaves, trim the branches in keeping with how you want the tree to look. Avoid doing this when the tree is in flower, as I discovered in my youth when picking bay leaves to earn pocket money; the abundance of bees attracted to the flowers can be disconcerting if one does not like being stung. Next, cut each leaf off the branch with pruning shears within a few hours of pruning, only keeping the clean, mature leaves that are free from signs of white wax scale, a pest that deposits a black, sooty substance on the leaves.

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole average dry leaf: 0.3 g
- ground: 2.5 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 dry leaves, 3 fresh leaves
- white meats: 1 dry leaf, 2 fresh leaves
- vegetables: 1 dry leaf, 2 fresh leaves
- carbohydrates: 1 dry leaf, 2 fresh leaves

COMPLEMENTS

- slow-cooked dishes
- soups, casseroles and roasts
- terrines
- steamed fish
- vegetable dishes
- pasta sauces based on tomato

USED IN

- bouquet garni
- ras el hanout
- steak and white meat seasoning blends
- herbes de Provence
- pickling spices

COMBINES WITH

- basil
- garlic
- oregano
- paprika
- pepper
- rosemary
- sage
- thyme

Like other herbs, bay leaves are best dried in a dark, well-aired place, allowing the water content to evaporate and leaving them crisp and dry in about five days, by which time they will have a moisture content of less than 12%. To avoid curling on drying and to achieve attractive, flat leaves, arrange one layer on gauze (insect screen), making sure it is well ventilated, and place another piece of gauze on top, weighted down with some small pieces of wood. When crisp and dry, store in an airtight container in a cool, dark place.

Buying and Storage

The majority of dried bay leaves available in stores around the world are produced in Turkey and come in two main grades. The lowest grade is exported in 110-pound (50 kg) bales and usually contains a considerable amount of extraneous matter, from branches to wire and pieces of rock (presumably to make up the weight). I have even seen a packet of Tally Ho cigarette papers from Australia in the middle of a bale! The best grade from Turkey is referred to as hand-selected, and these leaves are considerably cleaner and more uniform in size and color. A premium-grade dried bay leaf is sometimes available, and is a similar quality to home-dried. Indian bay leaves are quite different and come from a variety of cinnamon tree (*Cinnamomum tamala*).

In some cultures, the term “bay leaf” is used liberally to describe a number of different leaves, probably because bay leaves are so popular in the West. You may come across Indonesian bay leaves (*Eugenia polyantha*), Californian bay leaves (*Umbellularia californica*), Mexican bay leaves (*Litsea glaucescens*) and even West Indian bay leaves, meaning the leaves of the bay rum berry tree (*Pimenta acris*). Another strongly flavored camphoraceous leaf used in South American cuisine is boldo (*Peumus boldus*). None of these are true bay leaves.

When buying dry bay leaves, look for clean green ones, the darker the green, the better. Yellow leaves are indicative of poor quality and have probably been stored exposed to light for too long. When stored correctly, whole bay leaves will keep their quality for up to three years. Powdered bay leaves are convenient to use and should only be purchased in small quantities, as the flavor is lost within 12 months of grinding, even when stored in ideal conditions.

Use

Bay leaves are mostly associated with long, slow-cooking recipes and are considered to be indispensable in many different soups, stews, casseroles, terrines, pâtés and roast fowl dishes. Bay leaves are the mandatory ingredient in a bouquet garni, a traditional French bunch of herbs comprising thyme, marjoram, parsley and bay leaves that is placed in a dish during cooking and removed when ready to serve. Bay leaves are often used in stock while it is cooking and they complement most vegetable and pasta dishes containing tomato.

Always use bay leaves sparingly as the flavor is strong and amalgamates readily during cooking. For an average-size dish to serve four people, use two to three dried bay leaves, either whole for later removal or crumbled into the dish to soften during cooking. I like to barbecue fish wrapped in foil with a few green dill tips, a bay leaf and a dusting of amchur powder.



Bay Leaves **Tangy Bay and Dill Fish**

While bay leaves tend to be associated with slow cooking and strong flavors, this combination of bay leaves with green dill works particularly well with firm-fleshed fish.

olive oil
4 dried bay leaves (or 6 fresh)
2 swordfish fillets (each 5 to 6 oz/150 to 175 g)
1 tbsp (15 mL) chopped fresh dill, or to taste
1 tsp (5 mL) amchur
salt and freshly ground black pepper to taste
roasted garlic potatoes

Preheat oven to 350°F (180°C). Cut 2 pieces of aluminum foil large enough for each to hold a piece of fish (or use banana leaves). Rub olive oil on the dull side of the foil and place a bay leaf in the center. Sprinkle fish on both sides with dill, amchur, salt and pepper; place on top of bay leaf, then place another bay leaf (or 2 if using fresh) on top of the fish. Fold foil loosely and roll edges to make a roomy, airtight parcel.

Place foil parcels in the oven and cook for 25–30 minutes, or until fish is cooked (this depends on the thickness of the swordfish). The steam trapped in the parcels can easily burn you, so be careful when opening them. Serve with roasted garlic potatoes. Serves 2.

Bergamot

OTHER COMMON NAMES

- bee balm
- fragrant balm
- Indian's plume
- Oswego tea
- red balm

BOTANICAL NAME

- *Monarda didyma*

FAMILY

- Lamiaceae (formerly Labiatae)

NAMES IN OTHER LANGUAGES

- Arabic: munardah
- French: bergamote, thé d'Oswego
- German: monarde, goldmelisse
- Italian: bergamotto
- Japanese: taimatubana
- Korean: perugamotu
- Spanish: bergamota

FLAVOR GROUP

- medium

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 6 tsp (30 mL) fresh leaves
- vegetables: 6 tsp (30 mL) fresh leaves
- carbohydrates: 4 tsp (20 mL) fresh leaves

BERGAMOT DEFIES the aura of humility generally associated with herbs, which are more often than not appreciated for their flavor and medicinal efficacy rather than their looks. Bergamot bears a dozen or more tubular-shaped flowers clustered in pom-pom-shaped whorls atop strong, square stems with pairs of oval, hairy leaves $3\frac{1}{4}$ inches (8 cm) long and $\frac{3}{4}$ inch (2 cm) wide. The resplendent flowers range from pink and mauve to a rich, vibrant red in the case of the most popular 'Cambridge Scarlet' variety. The flowers are loaded with honey and attract bees, hence the common name "bee balm" (not to be confused with the culinary herb balm, which also attracts bees). Wherever bergamot is growing, the air will be filled with a fragrant orange scent that emanates from the flowers and leaves. Another variety, wild, or purple, bergamot (*M. fistulosa*), has a slightly lemony aroma but has less culinary use.

Bergamot



COMPLEMENTS

- salads
- sauce for pork and duck

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- mint
- rosemary
- sage
- thyme

Origin and History

Bergamot is native to North America and was used to make an infusion by the Oswego Indians, hence the name “Oswego tea.” Oswego tea was embraced as a beverage by the early American settlers, who, after the Boston tea party in 1773, boycotted the Indian tea traded by the English. Bergamot was identified in the 16th century by the Spanish medical botanist Nicolas de Monardes, whose name is used to identify this genus of plants. Bergamot gets its name from its similarity in aroma to the bergamot orange (*Citrus bergamia*). Oil of bergamot comes from the bergamot orange and is used to flavor Earl Grey tea.

Processing

To dry the leaves of bergamot for making tea, hang bunches in a dark, well-aired and dry place until the leaves have become quite crisp and dry and crumble off the stems readily.

Buying and Storage

Dried bergamot, or Oswego, tea may contain some dried flowers as well as leaves and should be stored in an airtight container in a cool, dark place.

Use

The fresh leaves and flowers are most commonly used in culinary applications. The brightly colored flowers give a delicate yet pungent taste and are an attractive addition to salads. The leaves contain the volatile oil thymol, and deliver a flavor reminiscent of thyme, sage and rosemary, making them an ideal complementary herb to use with pork and duck.



Tomato and Bergamot Loaf

Bergamot

During our early married years Liz and I dabbled in vegetarianism, an exercise that challenged Liz to research nutritious alternatives to meat and then make them tasty. A favorite was her Tomato and Bergamot Loaf, which appeared in my parents' book *Hemphill's Herbs: Their Cultivation and Usage*.

- 2 eggs, beaten
- 1 can (14 oz/398 mL) chopped tomatoes
- 1 ½ cups (375 mL) fresh white bread crumbs
- 1 ¼ cups (300 mL) shredded Cheddar cheese, divided
- 1 cup (250 mL) finely chopped celery
- 2 tbsp (25 mL) chopped bergamot leaves
- 2 tbsp (25 mL) finely grated onion
- 2 tbsp (25 mL) olive oil
- ½ tsp (2 mL) salt

Preheat oven to 350°F (180°C). Mix eggs, tomatoes, bread crumbs, 1 cup (250 mL) of the cheese, celery, bergamot, onion, oil and salt. Spoon into an oiled ovenproof dish, top with the remaining cheese and bake for 20 minutes. Serve hot. Serves 2.

Black Limes

OTHER COMMON NAMES

- amani
- dried lemons
- dried limes
- loomi
- Oman lemons

BOTANICAL NAME

- *Citrus aurantifolia*

FAMILY

- Rutaceae

NAMES IN OTHER LANGUAGES

- Danish: sort lime
- Dutch: zwarte limoen
- French: limone noir
- German: schwarzer limette
- Hungarian: feketé lime
- Italian: limetta nero
- Spanish: lima nero

FLAVOR GROUP

- tangy

WEIGHT PER TEASPOON (5 ML)

- whole average lime: 6.0 g

BLACK LIMES are actually whole sun-dried limes that are 1–1½ inches (2.5–4 cm) diameter. They vary in color from pale tan to very dark brown, almost black, with up to 10 darker tan longitudinal stripes running from “pole to pole.” When broken open, remnants of black, sticky pith are revealed on the inside, and a pungent fermented citrus aroma is released. My first encounter with black limes transported me back to my early childhood, when my parents owned a citrus orchard before they ventured into growing herbs. The grading shed, where the fruits were sorted and crated for market, always had some stray oranges or lemons that had rolled onto the floor under a bench or grading chute. These dried out, no doubt going moldy and fermenting in the process, and they gave the shed a sweet, pungent aroma, one that the smell of black limes so hauntingly evokes.

Origin and History

Citrus trees are indigenous to Southeast Asia, and the introduction of limes, which withstand hot conditions better than

Black limes



lemons, to the Middle East was probably by Moorish and Turkish invaders. Citron, the citrus that was familiar before oranges, was known to the Chinese in the fourth millennium and mentioned by the ancient Egyptians. Citron was cultivated in southern Italy, Sicily and Corsica in the fourth century BC, and most citron for crystallized peel and perfumes still comes from Corsica.

The lemon was widely used from the Middle Ages on; however, limes are often confused with lemons, and the history of lime trees is somewhat obscure. There are several types of lime, all of which are borne by trees that are somewhat smaller and bushier than lemons and have a varying profusion of prickly spikes. The common lime of India and Asia is thin-skinned, sour and mouth-wateringly juicy, while the lime trees grown in Europe and America have a different flavor and are believed to be a hybrid that is referred to as Tahitian lime. Persian limes taste distinctive again, and it is these that were originally dried while still on the tree, possibly another accidental discovery made when a neglected crop that had dried in the parched summer sun was found to have such a beautiful taste.

Processing

Although originally dried while remaining on the tree, the more common practice is to harvest the fruit when ripe and boil it in salt water before drying it in the sun. Weather conditions must be at a very low level of humidity; otherwise, the fruits will dry too slowly, turn quite black and often develop signs of mold. I have been told that a traditional practice was to bury the freshly picked limes in the hot desert sands until they had been leached of nearly all moisture.

Buying and Storage

Black limes can be bought from Middle Eastern food stores and specialty spice retailers. Dark tan to light brown ones are generally best, but some of the very dark black limes have a greater pungency and depth of flavor, something that is desirable as long as they do not have signs of mold on them. Always store in an airtight container and avoid humidity.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 whole limes, pierced
- white meats: 2 whole limes, pierced
- vegetables: 1 whole lime, pierced
- carbohydrates: 1 whole lime, pierced

COMPLEMENTS

- fish stews
- osso bucco
- grilled meats
- roast fowl when placed whole in cavity during cooking

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- cardamom
- cloves
- coriander seed
- paprika
- pepper
- turmeric

Use

The highly aromatic, somewhat fermented flavor notes in black limes complement chicken and fish particularly well. Surprisingly, the addition of one or two pierced black limes to an oxtail stew gives it a welcome degree of piquancy. When adding whole black limes to a dish, or putting one in the cavity of poultry before cooking, make a few holes in each lime with a skewer or the tines of a fork to allow the cooking juices to infuse the tasty treat inside. Before discarding the limes, squeeze out the rich liquid inside for a particularly satisfying taste sensation.

Black limes may also be pulverized and mixed with pepper to sprinkle on chicken and fish before broiling, as a substitute for lemon and pepper spice blends. An unexpected use for black limes evolved when a wine educator asked us to find a spice flavor to complement a botrytis (sometimes called “noble rot”) dessert wine. Liz made a sugary sorbet flavored with infused black limes, and although the gray color was not all that exciting, the resulting flavor was referred to by all as a marriage made in heaven!

Kuwaiti Fish Stew with Black Limes

Black Limes

During one of our many visits to South India, our friend Dr. Thampi from the Spices Board introduced us to a couple from Kuwait who were visiting India to photograph and learn more about spices. Bader and Sue were the first people to tell us about black limes, and they kindly shared their family recipe with us.

- 2 tsp (10 mL) ground cumin
- 2 tsp (10 mL) freshly ground black pepper
- 2 tsp (10 mL) ground cardamom
- 2 tsp (10 mL) ground turmeric
- 2 tsp (10 mL) salt
- 3 tbsp (45 mL) vegetable oil, divided
- 2 onions, quartered
- 3 tomatoes, quartered
- 2 whole black limes, each pierced 4–5 times with a skewer
- 1 large green chili pepper, finely chopped
- 2–3 tbsp (25–45 mL) tomato paste
- 1 tbsp (15 mL) crushed garlic, divided
- 2 cups (500 mL) water
- 4 fish fillets (each about 6 oz/175 g), such as ling cod or perch
- 2 tbsp (25 mL) all-purpose flour
- 1 cup (250 mL) chopped fresh dill
- 1 cup (250 mL) chopped fresh coriander
- 1½ cups (375 mL) steamed white rice
- ½ onion, fried

Mix ground spices and salt. In a large pot, heat 2 tbsp (25 mL) of the oil and sauté onions. Mix in tomatoes, black limes, chili, tomato paste, 2 tsp (10 mL) of the garlic and 2 tsp (10 mL) of the ground spice mixture. Add water and stir. Cover and keep warm while preparing the fish.

Wash fish fillets and pat dry. Combine the remaining spice mixture with flour and coat fish. In a frying pan, heat the remaining 1 tbsp (15 mL) oil over high heat. Fry fish for 1 minute on each side. Add to stew and, if needed, add more water so that fish is completely covered. Add dill, coriander and remaining garlic. Simmer gently for 15–20 minutes, or until fish flakes easily when tested with a fork.

Serve stew over rice garnished with fried onions. Serves 4, as a main course.

Borage

OTHER COMMON NAMES

- bee bread

BOTANICAL NAME

- *Borago officinalis*

FAMILY

- Boraginaceae

NAMES IN OTHER LANGUAGES

- Arabic: lisaan athaur, hamham
- Bulgarian: porech
- Chinese (C): lauh leih geuih
- Chinese (M): liu li ju, bo li ju
- Czech: brotnak
- Danish: hjulkron
- Dutch: bernagie
- French: bourrache officinale
- German: borretsch, gurkenkraut
- Greek: borantsa, vorago
- Italian: borragine
- Japanese: borji, ruridisa
- Korean: poriji
- Portuguese: borragem
- Russian: ogurechnaya trava
- Spanish: borraja, rabo de alacran
- Turkish: hodan, ispit, sigirdili

BORAGE IS one of the most photographed and often represented culinary herbs in tapestries, needlepoint work and ceramic painting. These countless renditions are inspired by borage's quintessential "herby" look. Thick, soft, hollow and succulent stems up to 3 feet (1 m) high are covered with wrinkled, deep green leaves up to 6 inches (15 cm) long and decorated with an abundance of star-shaped, Wedgewood blue flowers with distinguishing black anthers in their centers. The whole plant is covered with fine, bristly hairs, conjuring up a thistle-like "don't touch me" demeanor. There are quite often some soft-pink flowers among the traditional blue borage flowers, which are full of nectar and attract bees (hence the colloquial name "bee bread"). There is also a rare white-flowered variety. While borage attempts to hide its charms with fine bristles, the leaves when chopped have a refreshing cucumber-like flavor and delicate aroma. The flavor of the flowers is similarly "cool" and makes them an ideal addition to salads, and they float perfectly on the surface of summer drinks.

Borage



Origin and History

Borage is believed to have originated in Aleppo in the Middle East (the southeastern area of what is now Turkey), and was brought to England by the Romans. Large expanses of borage grow on the chalk downs of southern England and it is widely cultivated in the Mediterranean, North America and many other temperate areas. Borage has traditionally been associated with good spirits and well-being. Pliny has been quoted as saying, “A borage brew would eliminate a person’s sadness and make the person glad to be alive.” Such was the belief in the spirit-rousing powers of borage that it was given to crusaders before going on long journeys and to gladiators prior to blood-curdling skirmishes. In Wales borage is known as *llanwenlys*, which means “herb of gladness.”

These days borage is a popular culinary herb, self-sowing so easily that although an annual, it will continue to germinate from its own seeds, except in the harshest of winters. Few garden-scapes are more pleasing to the eye than drifts of self-sown borage, a show of massed, azure blue flowers among a sea of hazy green leaves and downy buds.

Processing

Borage leaves are generally used fresh. As they wilt soon after picking, they can be quite tricky to dry effectively. The best method is to harvest the leaves in the early morning, place them in a single layer on paper or on a frame covered with gauze, such as insect screening, in a dark, dry, well-aired position where the air can circulate freely and allow the moisture content to evaporate. When quite crisp, crumble and store in an airtight container away from extremes of heat, light and humidity. Borage flowers may also be dried using the same method.

Buying and Storage

As borage wilts so soon after picking, it will always be difficult to buy good-quality fresh leaves. Borage flowers are more robust post-harvesting, and for this reason will often be found in prepared salads along with other exotic leaves and flowers.

FLAVOR GROUP

- mild

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: $\frac{1}{2}$ cup (125 mL) fresh chopped leaves
- vegetables: $\frac{1}{2}$ cup (125 mL) fresh chopped leaves
- carbohydrates: $\frac{1}{2}$ cup (125 mL) fresh chopped leaves

COMPLEMENTS

- green salads
- herb sandwiches

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- chives
- cress
- lovage
- parsley
- salad burnet

Use

Borage’s cucumber flavor makes it a logical addition to any green salad, but be sure to cut the leaves up small enough to negate the hairiness. Add the cut-up leaves to cream and cottage cheese and put into herb sandwiches with a little salt and pepper. One quirky phenomenon my mother discovered in the 1950s, when putting borage into herb sandwiches with those typically Australian spreads Vegemite and Promite, was a taste sensation that closely resembled freshly shucked oysters. In the early 19th century the young tops of borage were used as a potherb. Whole tender leaves dipped in batter and fried make a different vegetable to serve. Borage flowers floated on refreshing drinks, such as fruit punch or a Pimm’s, look attractive and the flavor is complementary. A popular dessert and cake decoration is made by dipping borage flowers into beaten egg whites, dusting with sugar and allowing to dry.



Calamus

OTHER COMMON NAMES

- flag root
- muskrat root
- myrtle grass
- rat root
- sweet calomel
- sweet cane
- sweet flag
- sweet grass
- sweet rush
- sweet sedge
- wild iris

BOTANICAL NAME

- *Acorus calamus*
americanus

FAMILY

- Araceae

FLAVOR GROUP

- pungent

SUGGESTED QUANTITY

PER POUND (500 G)
(SEE CAUTIONARY NOTES UNDER "USE")

- red meats: $\frac{1}{2}$ tsp
(2 mL)
- white meats: $\frac{1}{2}$ tsp
(2 mL)
- vegetables: $\frac{1}{2}$ tsp
(2 mL)
- carbohydrates: $\frac{1}{2}$ tsp
(2 mL)

MARSH PLANTS, reeds and bulrushes come to mind at the sight of this hardy perennial growing in the shallow, still recesses of streams and watery ditches in the northern hemisphere. The long, sword-shaped, slightly crinkled, sweet-scented leaves grow to around 4 feet (1.2 m) high and tiny yellow flowers are borne on a solid, cylindrical spike resembling a bulrush. Although the plant sometimes fruits, propagation is mainly achieved by vigorous growth of the rhizome.

While all parts of the plant are sweet and aromatic — the inner section of the stalk has an orange-like taste — most culinary and medicinal use is made of the root system, or rhizome. This is about $\frac{3}{4}$ inch (2 cm) in diameter and when dry is pale gray-brown in color and scarred from the removal of scores of worm-like rootlets on harvesting. In cross-section the rhizome is pale, almost white, porous and woody. Calamus root has a pungent aroma, the flavor being initially sweet, similar to a mixture of cinnamon, nutmeg and ginger, with a bitter aftertaste.

Calamus root and fresh calamus leaf



COMPLEMENTS

- custards and rice puddings
- salads
- Arab and Indian sweet dishes

USED IN

- not commonly used in spice blends

COMBINES WITH

- cardamom
- cinnamon
- ginger
- nutmeg

Origin and History

There seems to be little argument that calamus, or sweet flag as it is often called, is a native to the mountain marshes of India. Use of the rhizomes there stretches back to antiquity, and there is evidence of the plant being found in Tutankhaman's tomb in Egypt. Even after its introduction to Europe and widespread distribution by the Viennese botanist Clausius in the 16th century, the Indian rhizome was reputed to have the strongest and most pleasant flavor. The first record of cultivation was in Poland, where it was said to have been introduced by the Tartars.

The name "calamus" is derived from the Greek *calamos*, meaning "reed." It was as a strewing reed for festivals in churches and in some homes that it experienced considerable popularity in Norfolk, England, where much of it was grown. Calamus now grows extensively in the marshes of England, though it is uncommon in Scotland. It is not found in Spain but grows abundantly throughout Europe and east to southern Russia, China and Japan. In the northern United States it is so prolific it is considered indigenous.

Calamus roots were candied in the same way as angelica and used as a sweet addition to cakes and desserts in England and North America. The old name, "galingale," was used to describe both calamus roots and the Asian spice galangal. In parts of Europe, the young, tender flowers would sometimes be eaten for their sweetness, and children in Holland would chew the calamus root. The oil extracted from calamus was used in the production of gin and the brewing of some beers.

These days, candied calamus is used by the Turks to ward off disease, but it is rarely used in cooking. Besides a lack of general availability, the discovery in recent times of the presence of beta-asarone — a carcinogen — in *Acorus calamus* has led to the label "Not recommended for culinary use." The American variety, *Acorus calamus americanus*, is said to lack beta-asarone; nevertheless, some countries have placed calamus oil from all sources on their prohibited plants and fungi lists. It is still used as an ingredient in the medicinal, cosmetic and perfume industries.

Processing

Harvesting is a pretty messy business as the matted roots, partially immersed in the mud and about 12 inches (30 cm) below the surface of the water, are cut and raked out of the mire. The leaves are stripped off and separated from the rhizomes, which have to be thoroughly cleaned and stripped of the less aromatic rootlets before slicing and drying. Calamus root should not be peeled as the cells containing the aromatic volatile oil are located in the outer section near the surface. Because appearances have often been considered as important, white, peeled German calamus was popular; however, it was not considered to be as good as the unpeeled version, especially for medicinal applications.

Buying and Storage

The majority of commercial calamus production these days seems to be in India and North America, and even when buying for culinary purposes, one will be more likely to find it with the medicinal or ayurvedic spices. Calamus loses its volatile oil easily and is therefore best if not stored for too long. Keep in the whole sliced form and in an airtight container away from extremes of heat, light and humidity. Calamus can be kept for three years.

Use

Caution is recommended when using calamus in cooking because of the presence of beta-asarone (as mentioned above). Also, because of its emmenagogic properties (it promotes menstruation), calamus should not be consumed during pregnancy. The leaves can be harvested and used fresh in an infusion with milk for custards, rice puddings and other desserts in much the same way a vanilla bean or cinnamon stick is made to impart its flavor. Young leaf buds can be added to salads, and the powdered root is sometimes used in Indian and Arab sweet dishes for its delicate cinnamon, nutmeg and ginger notes.

Candlenut

OTHER COMMON NAMES

- buah keras
- candleberry
- kemiri kernels
- varnish tree

BOTANICAL NAME

- *Aleurites moluccana*

FAMILY

- Euphorbiaceae

NAMES IN OTHER LANGUAGES

- Burmese: kyainthee
- Danish: candlenut
- Dutch: bankoelnoot
- Filipino: lumbang bato
- French: noix de bancoul
- Indonesian: kemiri
- German: candlenuss
- Malay: buah keras, kemiri
- Sri Lankan: kekuna

FLAVOR GROUP

- amalgamating

WEIGHT PER TEASPOON (5 ML)

- whole average nut: 3.2 g

CANDLENUTS ARE cream-colored, soft, oily seeds within a hard-shelled nut that comes from a tropical tree related to the castor-oil plant. Like many members of the Euphorbia family, the fresh nut is toxic, losing its toxicity on roasting or cooking. Uncooked candlenuts have little discernible fragrance and a soapy, bland flavor. Roasted slivers or shavings of candlenut have a pleasing, nutty, almond-like flavor without the background bitterness characteristic of almonds. The surrounding fruit is not eaten by humans, but it is said to be an important food of the cassowary, a large flightless bird native to Queensland, Australia.

Origin and History

Candlenut trees are native to the tropical northern rainforests of Australia, the Molucca Islands and Malaysia, and are found on many islands in the South Pacific. The botanical name *Aleurites* is derived from the Greek word for “floury,” in reference to the silvery, powdered appearance of its young leaves. The common name is derived from the tradition of making a

Candlenuts



crude candle by threading the midrib of a palm leaf through the raw nut, like a wick, and lighting it. Because of the high oil content in the nut, this device will burn like a candle. Candlenuts have been used in the manufacture of paints, varnish and soap, and the oil extracted for lamp oil. Roasted candlenuts have been a source of food for the Australian Aborigines and other Pacific peoples.

Processing

After harvesting, the nuts are generally roasted and shelled prior to being sold in the markets of Malaysia and Indonesia.

Buying and Storage

Due to their high oil content, candlenuts are prone to rancidity, so it is best to buy small quantities and store them in a cool, dry place. As you may not be sure as to whether the nuts have been roasted prior to shelling, be sure to cook them to remove any toxicity before eating.

Use

Candlenuts are used in many Asian dishes as a thickening agent, and are most commonly found in Malaysian recipes, especially for satay. Candlenuts are best ground up finely before adding to other ingredients. An interesting alternative way to use them is to shave off slivers, dry-roast them in a pan and then add the tasty, roasted pieces to curries and satay sauces or sprinkle on rice dishes.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 4 nuts
- white meats: 3 nuts
- vegetables: 3 nuts
- carbohydrates: 3 nuts

COMPLEMENTS

- Asian dishes as a thickening agent
- rice dishes when cut into slivers and roasted

USED IN

- satay sauces
- Malay curries

COMBINES WITH

- cardamom
- chili
- cinnamon
- cloves
- coriander seed
- fennel seed
- galangal
- ginger
- mustard
- pepper
- turmeric

Curry Spices

1 tbsp (15 mL) ground coriander
2 tsp (10 mL) ground cumin
 $\frac{1}{2}$ tsp (2 mL) ground fennel seed
 $\frac{1}{2}$ tsp (2 mL) medium-heat chili powder
 $\frac{1}{2}$ tsp (2 mL) ground turmeric
 $\frac{1}{2}$ tsp (2 mL) ground ginger
 $\frac{1}{4}$ tsp (1 mL) ground cinnamon
 $\frac{1}{4}$ tsp (1 mL) ground cloves
 $\frac{1}{4}$ tsp (1 mL) freshly ground black pepper
 $\frac{1}{4}$ tsp (1 mL) ground green cardamom seeds

3 tbsp (45 mL) vegetable oil
1 large onion, chopped
2 cloves garlic, chopped
2 lbs (1 kg) beef, cubed
5 candlenuts, slivered and toasted, divided
2 kaffir lime leaves
1 can (14 oz/398 mL) whole peeled tomatoes
 $1\frac{2}{3}$ cups (400 mL) water
2 tsp (10 mL) palm sugar (jaggery) or soft brown sugar
 $\frac{1}{2}$ tsp (2 mL) salt
 $\frac{1}{4}$ tsp (1 mL) kenchur powder
juice of 1 lime
1 cup (250 mL) coconut milk
steamed rice

Preheat oven to 200°F (100°C). Mix together curry spices and lightly toast in a dry heavy-based ovenproof pot on the stovetop. Add oil and stir into a paste. Fry onion until transparent, then add garlic. Sear cubes of beef, adding 6 to 8 at a time and making sure each piece is evenly coated with curry. Stir in four-fifths of the candlenuts, then add kaffir lime leaves, tomatoes, water, palm sugar, salt, kenchur powder and lime juice. Simmer gently, stirring, for a few minutes, then cover and place in the oven for 2 hours. Stir in coconut milk until well combined. Serve over rice and garnish with the remaining candlenut slivers. Serves 6.

Capers

OTHER COMMON NAMES

- caperberry
- caper bud
- caper bush

BOTANICAL NAME

- *Capparis spinosa*

FAMILY

- Capparidaceae

NAMES IN OTHER LANGUAGES

- Arabic: azaf, kabar
- Chinese (C): chi saan gam
- Chinese (M): ci shan gan, suan dou
- Czech: kapara
- Danish: kapers
- Dutch: kappertjes
- French: capre, tapeno, fabagelle
- German: kaper
- Greek: kaparis, kappari
- Indian: kiari, kobra
- Italian: capperi
- Japanese: keipa
- Portuguese: alcaparras
- Spanish: alcaparra, tapana
- Turkish: gebre, kapari, kebere
- Vietnamese: cap

FLAVOR GROUP

- tangy

WEIGHT PER TEASPOON (5 ML)

- whole drained weight: 5.3 g

ONE NEVER ceases to be amazed by members of the plant kingdom that appear to have no culinary use, yet after some form of simple processing become a much sought-after and relatively expensive condiment. The caper bush is 'no' exception, a small (5 feet/1.5 m high at best) creeping, bramble-like bush with tough, oval leaves and attractive, four-petaled white or pink flowers sporting an exuberant spray of long, purple stamens. The short-lived flowers — those that bloom in the morning are finished by the afternoon — are about the size of a dandelion. The wild variety (*C. spinosa*) bears uncomfortable-looking spines; however, the type grown commercially in France (*C. inermis*) has no spines. Capers, as we know them preserved in brine, are the small, unopened flower buds. If the flowers are left to mature, they form round, oval-shaped fruits that are referred to as caper berries. The taste of fresh caper buds is not pleasing, yet when pickled a distinct, acidic, salty, sweaty, lingering, metallic flavor and “goat-like” urea aroma develops that is surprisingly appealing and refreshing.

Pickled capers



SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp (10 mL)
- white meats: 2 tsp (10 mL)
- vegetables: 1 tsp (5 mL)
- carbohydrates: 1 tsp (5 mL)

COMPLEMENTS

- strongly flavored and oily fish
- tartar sauce
- liptauer cheese
- tomatoes, fresh and cooked

USED IN

- not commonly used in spice blends

Origin and History

Capers have been used for thousands of years. Growing wild throughout the Mediterranean basin, North Africa, Spain, Italy and Algeria, this hardy perennial can be grown in any Mediterranean climate and is often seen in rocky soil, rambling through the cracks of old stone walls and the ruins of buildings. As it grows so readily in these situations, it is difficult to pinpoint exactly where it originated. The name “caper” is derived from the Greek word for “he-goat,” indicating that those of us in the spice trade who use the “goaty” description of its flavor are not being merely fanciful and lost for words when it comes to describing this unique flavor profile.

Processing

Harvesting caper buds at the optimum time is as much an art as a science. Buds that are just the right size (overly mature, large ones will have a sour, astringent flavor) are gathered in the early morning, before they open with the rising sun, and then put aside to wilt for a day. These wilted buds, generally with a few millimeters of stem retained, are placed into barrels of heavily salted wine vinegar and left to pickle. During this process, capric acid develops, and it is the subtle amount of capric acid that gives pickled capers their characteristic flavor. An alternative process is

Dried capers



dry-salting, which gives a less sharp and somewhat sweeter taste than the pickling method. Caper berries (and sometimes even the leaves and spikes) are also pickled, especially in Cyprus, where capers grow in alarming abundance.

Buying and Storage

The best pickled capers produced in France — the smallest (around $\frac{1}{8}$ inch/3 mm in diameter) and most delicate — are called *nonpareilles*. These are followed by the four grades *surfines*, *fines*, *mi-fines* and *capucines*. The lowest grade is five times larger than *nonpareilles*. Dry-salted capers are sold as *nonpareilles* and are up to $\frac{1}{4}$ inch (0.5 cm) in diameter. Capers purchased in salted wine vinegar should always be stored in the refrigerator after opening, covered with the pickling liquid; Never allow them to dry out; just remove the number you need to use from the jar and keep the remainder immersed. Once capers are exposed to air, the flavor rapidly deteriorates. One benefit of dry-salted capers is that they do not require refrigeration after opening.

Pickled green nasturtium seeds and buds can be used as a substitute for capers; however, they have a sharper, more mustardy taste. Nasturtium flowers are also used fresh in salads.

Use

While capers in vinegar are removed from the liquid and often not rinsed prior to application, I prefer to give them a quick wash to dilute the brine acidity. Salted capers should be thoroughly rinsed and lightly dried on a paper towel before using. The brackish, tangy flavor of capers enhances the appetite and serves as an excellent foil for strong-flavored or oily fish. Capers are an essential ingredient in tartar sauce, complement tomatoes (as most things tangy do, see Sumac, p. 482), enhance salads along with black olives, and go well with poultry. In Spain, caper berries appear on most tapas menus. “Montpellier butter” and the Hungarian “Liptauer cheese” use capers as a key ingredient. Another tasty way to prepare capers is to rinse them, dry thoroughly on a paper towel and then deep-fry. These crunchy, tasty morsels are delicious with cheese and biscuits. And for many of us, no serving of thinly sliced smoked salmon would be complete without capers.

COMBINES WITH

- aniseed
- bay leaves
- chervil
- dill
- garlic
- parsley
- tarragon

Puttanesca Pasta

Puttana is Italian for “prostitute,” and these ladies of the night needed a quick, nutritious meal to provide sustenance between customers. The sauce is tasty, rich and memorable.

Sauce

- 6 anchovy fillets
- 4 cloves garlic
- $\frac{1}{2}$ tsp (2 mL) lightly packed brown sugar
- 18 black olives, seeded and chopped
- 4 whole dried bird's eye chilies
- 1 can (14 oz/398 mL) chopped tomatoes
- $\frac{1}{3}$ cup (75 mL) red wine
- $\frac{1}{4}$ cup (50 mL) olive oil
- 1 tbsp (15 mL) capers, rinsed (either brined or salt-cured capers may be used)
- 1 tbsp (15 mL) dried Italian Herbs (see p. 564)
- $\frac{1}{2}$ tsp (2 mL) ground aniseed

- 1 lb (500 g) penne, cooked and drained
- freshly grated Parmesan cheese

For the sauce, crush the anchovies, garlic and brown sugar in a mortar and pestle. Transfer to a saucepan, and add the remaining sauce ingredients. Simmer gently, uncovered, for 30 minutes, until liquid has reduced and become thick and flavors have blended.

Stir sauce through penne and top with Parmesan. Serves 4.

Caraway

OTHER COMMON NAMES

- caraway fruit
- Persian caraway
- Roman cumin
- wild cumin

BOTANICAL NAME

- *Carum carvi*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Arabic: karawiya
- Chinese (C): yuan-sui, goht leuih ji
- Chinese (M): ge lü zi
- Czech: kmin, kmin lucni
- Danish: kommen
- Dutch: karwij, kummel
- French: carvi, cumin des près
- German: kummel
- Greek: karo, karvi
- Indian: shia jeera, gunyan, vilayati jeera
- Italian: comino, cumino tedesco
- Japanese: karuwai
- Malay: jemuju
- Portuguese: alcaravia
- Russian: tmin
- Spanish: alcaravea
- Swedish: kummin
- Thai: hom pom, tian takap
- Turkish: frenk kimyonu

THE CARAWAY plant is a delicate biennial that grows to 24 inches (60 cm) high and has pale green, finely defined leaves on hollow, slight stems bearing white umbrella-shaped flowers. The fruits (as they are most correctly called) split into two crescent-shaped, dark brown “seeds” ($\frac{1}{4}$ inch/0.5 cm long) with five strongly defined pale ribs running from end to end. For the sake of convenience, we’ll call them seeds. The root is thick, long and tapering like a small carrot, is pale in color and has a flavor similar to the seeds. The feathery leaf fronds have a mild flavor like dill tips. Caraway seeds have a warm, earthy, robust aroma with hints of fennel and anise and a faint orange peel quality. The taste is similar, with an initial fresh mintiness, combined with anise and eucalyptus flavors, followed by a lingering nuttiness.

Origin and History

Caraway is acknowledged as one of the world’s oldest comestibles, with evidence of the seeds having been found in the remains of foods dating back to 3000 BC, in the Mesolithic

Whole caraway seeds



CARAWAY

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 3.4 g
- ground: 2.4 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1½ tsp (7 mL) ground seeds
- white meats: 1½ tsp (7 mL) ground seeds
- vegetables: ¾ tsp (4 mL) whole seeds
- carbohydrates: ¾ tsp (4 mL) whole seeds

COMPLEMENTS

- European cheeses
- pork dishes
- breads
- vegetables, especially cabbage and potato

USED IN

- garam masala
- sausage seasonings
- harissa paste spices
- satay spices
- tandoori spice blends
- ras el hanout

COMBINES WITH

- allspice
- cardamom
- cinnamon
- coriander seed
- cumin
- fennel seed
- ginger
- paprika
- turmeric

era. The ancient Egyptians buried their dead with it, and caraway was valued by the early Greeks and Romans for both medicinal and culinary purposes. The Arabs, to whom it has been known since the 12th century, called it *karawiya*, from which the name is reputedly derived; however, Pliny wrote that its name comes from a former province in Asia Minor called Caria. While on the subject of names, the Swedish name for caraway is *kummin*, causing considerable confusion with the ubiquitous cumin, which has a very different flavor.

Caraway was widely known in the Middle Ages, as it was used for centuries as an aid to digestion in breads, cakes and baked fruit. Shakespeare even mentions it in *Henry IV* when caraway is referred to as being taken with apple, and until more recent times this seed often featured in English cuisine. Caraway, when included in home cooking, was even considered to prevent lovers from straying and, as evidence of its “staying” power, is fed in baked dough to homing pigeons, encouraging them to return to their cotes.

Caraway is indigenous to all of Europe and is claimed to be native to parts of Asia, India and North Africa. Caraway grows so readily in temperate climates it is now cultivated in Bhutan, Bulgaria, Canada, Germany, Great Britain, India, Morocco, Poland, Russia, Syria and the United States. Holland is the world’s largest producer, and Dutch caraway seed is unquestionably the world’s best.

Processing

Caraway needs to be harvested in the very early morning while the dew is still condensed on the fragile umbels, for if the sun is shining on them when gathered, the dry heads will shatter, scattering the seeds most inconveniently. Complete seed stalks are then stored for about 10 days to dry out and complete ripening before being threshed to remove the seeds. The remaining straw is used as cattle feed, although I don’t know whether this makes the “cows come home.” An essential oil, high in the active constituent carvone, is extracted by steam distillation from caraway seeds. This oil is an ingredient in liqueurs such as aquavit, kummel, gin and schnapps and, in addition, it flavors mouthwashes, toothpaste and chewing gums.

Buying and Storage

Dutch caraway is generally the best; however, high grades from Bhutan, Canada, India and Syria are also very good. Whole seeds will last the longest under normal storage conditions; only purchase ground caraway if you expect to use it fairly quickly, as the volatile top notes will dissipate quite rapidly after grinding. Store in the same manner as other spices, in an airtight pack and away from extremes of heat, light and humidity.

Use

Caraway is used in many European cheeses, the fresh anise and fennel notes helping to balance the fatty richness and robust flavors. It has a special affinity with fruits with cores, such as apples, pears and quinces, is used in pork and sausages and complements cabbage surprisingly well. The most famous use for caraway seed is in rye bread, which is somewhat of an acquired taste, most suited to a mature palate; young people who try it are often put off caraway for years. Another carbohydrate that benefits from the addition of caraway is potato, especially in potato soup. Caraway is an important addition to that fiery Tunisian paste harissa, where it provides a refreshing backdrop to the heat of chili, the power of garlic and the earthiness of cumin. The best blends of the popular Indian spice mix garam masala will always contain a reasonable proportion of ground caraway seed.

Ground caraway seed



Lime Leaf and Caraway Pork Burger

These tasty morsels can be made into bite-sized patties and dipped in sweet chili sauce as a snack. The spice mix[†] can also be used to coat any meat or seafood before cooking and makes a colorful crust on potato wedges.

Spice Mix

- 1 tsp (5 mL) finely chopped kaffir lime leaf
- 1 tsp (5 mL) salt
- $\frac{3}{4}$ tsp (4 mL) ground lemon myrtle
- $\frac{3}{4}$ tsp (4 mL) ground turmeric
- $\frac{1}{2}$ tsp (2 mL) ground cumin
- $\frac{1}{4}$ tsp (1 mL) chili flakes
- $\frac{1}{4}$ tsp (1 mL) caraway seeds

- 1 lb (500 g) minced pork
- 1 small onion, finely chopped
- 1 tbsp (15 mL) chopped fresh coriander
- 1 tsp (5 mL) grated gingerroot
- 1 tsp (5 mL) crushed garlic
- 1 egg, beaten
- 3 tbsp (45 mL) dry bread crumbs
- 4 pitas or flour tortillas
- $\frac{1}{4}$ cup (50 mL) mayonnaise
- 1 head Bibb or Boston lettuce, shredded

For the spice mix, pound all ingredients in a mortar and pestle until fine.

In a large bowl, mix pork, onion, coriander, ginger, garlic and spice mix, then add egg and bread crumbs to bind together. Divide mixture into 4 pieces and, with lightly floured hands, shape into patties about 1½ inches (4 cm) thick. Chill for at least 30 minutes.

Cook burgers on a barbecue for 7–8 minutes per side. Meanwhile, lightly toast the pitas. Spread mayonnaise on pitas and top with lettuce and grilled burger patty. Serves 4.

Spiced Baked Apples

Caraway

When Liz and I have not planned a dessert and feel that our evening meal needs something not too sweet to complete the experience, we sometimes whip up spiced baked apples, easily made from ingredients we always have on hand.

- 1 tsp (5 mL) ground coriander
- 1 tsp (5 mL) ground caraway
- ¼ cup (50 mL) clear apple juice
- 2 tsp (10 mL) liquid honey
- 2 tsp (10 mL) pomegranate molasses*
- 2 Granny Smith apples, halved and cored
- 12 raisins
- ice cream or whipped cream

Preheat oven to 350°F (180°C).

In a small microwave-safe bowl, combine coriander, caraway, apple juice, honey and pomegranate molasses. Warm in the microwave to assist in mixing together. Stir to combine thoroughly.

Take a small slice from the rounded side of each apple half to make a stable base for them to sit on. Place in a greased ovenproof dish and place 3 raisins in each core cavity. Spoon in sauce and bake for 1 hour. Turn off the oven, cover apples with foil and let stand in the oven for 1 hour, until soft and fluffy. Serve warm with ice cream or whipped cream. Serves 4.

*Look for pomegranate molasses at Middle Eastern markets.

Cardamom – Brown

OTHER COMMON NAMES

- bastard cardamom
- Bengal cardamom
- black cardamom
- Chinese black cardamom
- false cardamom
- large cardamom
- Nepal cardamom
- winged cardamom

BOTANICAL NAMES

- Indian cardamom:
Cardamomum amomum or
Amomum subulatum
- Chinese cardamom:
A. tsao-ko or *A. globosum*

FAMILY

- Zingiberaceae

WHEN SPICES such as brown cardamom are ridiculed with such names as “bastard cardamom,” one cannot help but feel this is an offhand putdown of a spice too often compared to its popular cousin, green cardamom. When brown cardamom is evaluated for its own true qualities, the value it has as a cooking condiment can be fully appreciated.

Like green cardamom, brown cardamom has long, lance-shaped leaves that grow to 6 feet (2 m) high with 25–30 plain yellow flowers emerging in a dense cluster close to the ground. The oval pods are about 1 inch (2.5 cm) long and ½ inch (1 cm) wide, deep red to purple in color when ripe and contain around 40 round, dark brown, hard seeds encased in a soft, sweet-smelling pulp. When we visited a cardamom farm in the remote village of Damphu, in Bhutan, we were amazed at the fruity sweetness of the translucent, soft pulp surrounding the seeds. Dried brown cardamom pods are dark brown, rough and ribbed on the surface, the furry ribbing sometimes referred to as “wings.” Peeling back the leathery skin reveals a

Dried brown cardamom pods (Chinese)



mass of black, sticky, tar-colored seeds and releases a woody, smoky, camphorous aroma. When chewed, the seeds have an astringent, antiseptic and eucalyptus flavor that is lingering and refreshing. The first time I smelt these they reminded me of a derelict house I discovered in the bush, one wet winter's day when I was 12 years old and out riding my little buckskin mare. The smells of old timber and acrid smoke still clinging to the walls, mixed with the perfume of densely foliated surrounding gum trees, hung in the air. Smelling a freshly opened brown cardamom pod still brings that image vividly back into my mind.

“Chinese” brown cardamom (*Amomum globosum*) is much larger, 1½ inches (3.5 cm) long and 1 inch (2.5 cm) wide. The outer skin of its pod is similar in appearance, though harder and a little smoother. When cut open, segments resembling the layout inside a walnut reveal up to 20 pyramid-shaped seeds covered by a papery membrane. The aroma is more medicinal and less smoky than the Indian variety. The flavor is pine-like, sharply astringent, numbing, peppery and eucalyptus-like, reminding one that the rare and ancient grains of paradise, or Melegueta pepper, are a close relative.

Origin and History

The chapter on green cardamom (p. 160) provides an account of the general history of the spice. It is interesting to note how brown cardamom has always been considered at best a poor substitute for green cardamom, and generally relegated to the ranks of “false” by spice writers. Brown cardamom is a native of the Himalayan region, usually appearing in light forest shade areas alongside cool streams. This wild variety has often been traded as a substitute for green cardamom, such as in Scandinavia in the 1970s, when the price of “green” was too high for the market to bear. A spice garden of brown cardamom will last for over 25 years and there are accounts of plantations in its native Nepal and Bhutan regions that are over 100 years old.

Processing

Harvesting brown cardamom is a fascinating process to observe for the first time, as to the uninitiated there are no signs of pods on the plant. My first experience of this harvest in Bhutan involved clambering down a steep slope and disappearing into a jungle of plants with two farm workers brandishing long,

NAMES IN OTHER LANGUAGES

- Arabic: hal aswad
- Bhutanese: elanchi ngab
- Burmese: phalazee
- Chinese (C): chou gwo, cangus
- Chinese (M): cao guo, tsao kuo
- Danish: sort kardemomme
- Dutch: zwarte kardemom
- French: cardamome noir
- German: schwarzer kardamom
- Indian: elchi, elaichi, illaichi, badi
- Indonesian: kapulaga
- Italian: cardamomo nero
- Japanese: soka
- Malay: buah pelaga
- Spanish: cardamomo negro
- Thai: luk kravan

FLAVOR GROUP

- pungent

CARDAMOM – BROWN

WEIGHT PER TEASPOON (5 ML)

- whole average pod: 1.5 g
- ground: 3.0 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 pods
- white meats: 1 pod
- vegetables: 1 pod
- carbohydrates: 1 pod

COMPLEMENTS

- marinades for roast meats
- butter chicken
- Chinese master stocks
- Asian soups

sharp, narrow steel blades. The workers then started prodding and hacking at the base of a plant until they extracted a bizarre-looking, hoary clump the size of two fists. When we emerged from the undergrowth with our spoils, Kadola (the Ministry of Agriculture officer accompanying us) broke the clump apart to reveal about 20 rough purple pods.

The method used to dry brown cardamom pods is crucial to achieving their unique flavor profile. Freshly harvested deep red capsules are spread out on platforms in the shade for about a week. Hot air from a wood fire hastens the drying process, turning the pods dark brown and imparting the characteristic smoky note. The lack of smoke aroma in Chinese brown cardamom is mainly due to the alternative sun-drying process. The majority of Chinese brown cardamom is supplied from Thailand and may sometimes come from several Indo-Chinese species of *Amomum*.

Buying and Storage

Don't be put off by the dirty appearance of brown cardamom pods in a pack, as some of the "wings" will flake off the capsules, giving them a dusty appearance. Most importantly they should be whole, not broken, and have the classic aroma profile

Dried brown cardamom pods (Indian)



described above. Brown cardamom seeds removed from the pod are sticky and messy to handle and will tend to dry out and lose their best attributes. As for all spices, store in an airtight container away from extremes of heat, light and humidity.

Use

Cast out any notion that brown cardamom is an inferior version of green cardamom. Consider its flavor strengths and you will discover just how useful it can be. One of my favorite dishes is butter chicken and its many derivations, such as chicken maharani and chicken tikka masala. When making it at home, though, you won't be able to achieve the same flavor profile unless you have your own charcoal-burning tandoor oven. Indian brown cardamom is an invaluable spice in any tandoori-style recipe, as its unique woody, smoky notes help to convey the complex array of sensual flavors so readily associated with the tandoor.

When blending brown cardamom with other spices, remove the seeds, crush in a mortar and pestle with a drier spice, such as coriander seeds, to absorb the stickiness, and then add to the spice mix. In wet marinades, for example those with yogurt, thump the cardamom pod to split it and then add it whole. The flavor will penetrate the dish and the pod can be removed before serving. Chinese brown cardamom pods can be added to clear soups; the seeds, removed and crushed with star anise, make an exotic addition to roasted pork tenderloin and stir-fry dishes of Asian vegetables with strips of beef.

USED IN

- tandoori spice blends
- Indian curry mixes

COMBINES WITH

- allspice
- chili
- cinnamon
- coriander seed
- cumin
- ginger
- green cardamom
- mustard
- paprika
- pepper
- star anise
- turmeric

Although this recipe may appear challenging based on the number of ingredients, it is not at all difficult and remains the best version of this universal favorite we have tasted. A satisfying vegetarian version may be made by substituting squash and root vegetables for the chicken.

Tandoori Spice Blend

2 brown cardamom pods, roughly ground in mortar and pestle

2½ tsp (12 mL) sweet paprika

1 tsp (5 mL) ground cumin

1 tsp (5 mL) ground coriander

½ tsp (2 mL) ground ginger

½ tsp (2 mL) ground cinnamon

½ tsp (2 mL) ground fenugreek seeds

½ tsp (2 mL) freshly ground black pepper

¼ tsp (1 mL) medium-heat chili powder

¼ tsp (1 mL) ground green cardamom seeds

¼ tsp (1 mL) ground caraway

1½ cups (375 mL) plain yogurt

6–7 chicken breasts (about 2 lbs/1 kg)

2 tbsp (25 mL) tomato sauce

1 tbsp (15 mL) palm sugar (jaggery) or brown sugar

1 tbsp (15 mL) medium-heat curry powder (Madras-style, see p. 553)

1 tbsp (15 mL) ground almonds

1 tbsp (15 mL) tomato paste

1 tbsp (15 mL) tomato or mango chutney or pickle

2 tsp (10 mL) Garam Masala (see p. 560)

1 tbsp (15 mL) butter or ghee

1 tbsp (15 mL) ground cumin

6 tbsp (90 mL) puréed or finely grated onions

1 tbsp (15 mL) freshly crushed garlic

1 small can (about 3 oz/90 mL) coconut milk

¾ cup + 2 tbsp (200 mL) table (18%) cream

1 tbsp (15 mL) fresh coriander leaves, plus extra to garnish
salt to taste

For the tandoori spice blend, combine all the spices. Mix half of the spice blend with yogurt, coat chicken and marinate overnight.

Preheat broiler and broil chicken until no longer pink inside.

Meanwhile, combine the remaining spice blend, tomato sauce, palm sugar, curry powder, almonds, tomato paste, chutney and garam masala. In a large saucepan, melt butter. Add cumin and stir-fry for 30 seconds. Add onions and garlic; stir-fry for 2–3 minutes. Stir in tomato sauce mixture. Simmer for a few minutes, then add cooked chicken, along with any remaining marinade and pan drippings. Add coconut milk, cream, coriander and salt. Simmer gently, uncovered, until slightly reduced. Garnish with coriander and serve with rice. Serves 6.

Cardamom— Green

OTHER COMMON NAMES

- small cardamom
- Thai cardamom

BOTANICAL NAMES

- green cardamom:
Elettaria
cardamomum Maton
- Thai cardamom:
Amomum *krervanh*

FAMILY

- Zingiberaceae

THE CARDAMOM plant is a tropical, shade-loving perennial with long, light green, lance-shaped leaves growing 3–6 feet (1–2 m) high, similar in appearance to a ginger plant or lily. The leaves are slightly shiny on top, dull underneath and when bruised or cut release a delicate, camphorous aroma reminiscent of a lime-scented fragrance. An unusual feature of cardamom is that it grows from a rhizome. The flowers are borne on stems that emerge at the base of the plant and tend to spread out, close to the base, almost on the ground. The small ($\frac{1}{3}$ – $\frac{1}{2}$ inch/8–10 mm) delicate white flowers have about 10 fine purple streaks radiating from the center, almost like a miniature orchid. The pods or capsules form after pollination of the flowers.

Green cardamom, seeds and pods



Dried cardamom pods are pale green, oval, knobbly in shape and about $\frac{1}{2}$ – $\frac{3}{4}$ inch (1–2 cm) long. When the papery husk is broken open, three seed segments, each containing three to four brown-black, oily, pungent seeds, are revealed. The taste of the seeds is warm, camphorous and eucalypt, pleasantly astringent and refreshing on the palate. Green cardamom should not be confused with brown cardamom (see p. 154), which, although related, has a completely different appearance and flavor.

Another variety of cardamom is Thai cardamom. Its dried pods have a similar papery husk to the green variety; however, its shape is more spherical, and it is usually pale cream in color. Thai cardamom has a more delicate flavor and aroma than green and is less camphorous.

Origin and History

Green cardamom is native to the western ghats in the south of India, where it is referred to as the “Queen of Spices.” It thrives in the shady monsoon forests one sees enveloped in soft morning mists at altitudes over 3,300 feet (1,000 m) above sea level. Cardamom is also native to Sri Lanka and up until the 19th century was harvested in India and Sri Lanka from wild plants in the rainforests, orderly cultivation only really taking place in the 20th century.

There is a degree of confusion about the history of cardamom, as some historical records give sketchy and conflicting descriptions of cardamom when compared to the spice we know and love as cardamom today. There is a view that “cardamom” was a term loosely used to describe a number of spices, borne out by the fact that it is often quoted as having grown in the hanging gardens of Babylon, a place where the climatic conditions would not have been ideal for green cardamom to thrive and bear fruit, in 720 BC.

There are descriptions from the fourth century AD that describe cardamom as coming from a vine. Probably the most likely confusion was its similarity botanically to Melegueta pepper, or grains of paradise (see p. 285), another member of the Zingiberaceae family. Nonetheless, if the spice referred to was cardamom, or something similar, it was mentioned in the fourth century BC as an article of Greek trade. The Greek word *kardamomum* was used to describe the so-called superior grade, and the ancient Semetic word *amomum*, meaning “very spicy,” was used to describe the inferior grade. It is interesting

NAMES IN OTHER LANGUAGES

- Arabic: hal
- Burmese: phalazee
- Chinese (C): baahk dau kau, siu dau kau (A. *krervanh*)
- Chinese (M): bai dou kou, xiao dou kou, dou kou (A. *krervanh*)
- Czech: kardamom
- Danish: kardemomme
- Dutch: kardemom
- French: cardamome vert
- German: kardamom
- Greek: kakoules
- Indian: elaichi, illaichi, elaychi
- Indonesian: kapulaga
- Italian: cardamomo verde
- Japanese: karudamon, shozuku
- Malay: buah pelaga, ka tepus (A. *krervanh*)
- Portuguese: cardamomo
- Russian: kardamon
- Spanish: cardamomo
- Sri Lankan: enasal
- Swedish: kardemumma
- Thai: kravan
- Turkish: kakule tohomu
- Vietnamese: truc sa, sa nhan (A. *krervanh*)

CARDAMOM – GREEN

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole seeds: 4.4 g
- ground seeds: 3.5 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp
(10 mL) seeds
- white meats: 2 tsp
(10 mL) seeds
- vegetables: 1 ½ tsp
(7 mL) seeds
- carbohydrates: 1 ½ tsp
(7 mL) seeds

COMPLEMENTS

- Danish pastries
- cakes and biscuits
- sweets and milk
puddings
- stewed fruits
- rice dishes
- curries

USED IN

- curry powders
- ras el hanout
- baharat
- garam masala
- satay spice blends
- tagine spice blends

to note that the botanical name for brown cardamom is *Cardamomum amomum*, a variety commonly held up as being inferior; however, I prefer to classify it as being simply different. In the first century AD, Rome was importing large amounts of cardamom, and it was included as one of the most popular Oriental spices in Roman cuisine. In addition to its use in cooking, cardamom was valued for its ability to clean the teeth and sweeten one's breath after meals, especially those heavily laden with garlic.

Processing

Cardamom capsules have to be harvested just before maturity; otherwise, the pods will split on drying and not retain their desirable green color as effectively. Because the pods don't all develop at the same time, harvesting occurs over a period of a few months, the pickers being careful to gather only those ready for drying. A basketful of freshly picked, pea green, plump, smooth cardamom pods is a wonderful sight to behold. Contrary to what one would assume, these fresh green pods do not have a strong aroma; however, it develops dramatically upon drying.

The traditional drying process takes place in a large shed that has timber slat flooring with wire gauze stretched over it to allow the air to circulate freely. There is a wood-fired furnace at one end and ducting to take the smoke away so as not to contaminate the cardamom. Large 12-inch (30 cm) diameter ducting pipes below the floor provide the source of warm, dry air that brings the cardamom pods' moisture content down to below 12%. But progress has caught up with the cardamom industry. The quaint old aromatic timber drying sheds sit sadly abandoned, replaced by efficient computer-controlled drying machines covered in dials, knobs and lights.

Whether dried for three days using the traditional method or for several hours in the dryer, once dried, the bright green and highly aromatic cardamom pods are rubbed over a screen to remove any remaining stalk. Final winnowing and grading by size is performed before shipment. Pale cream-colored cardamom pods are ones that have been either picked too late or dried in the sun. White cardamom, which achieved fashionable status in Victorian times, was created by bleaching the pods with hydrogen peroxide or exposing them to the fumes of burning sulphur. Bleached, or white, cardamom is still

found occasionally, as at some Indian ceremonies it is desirable to have things white or pale. However, with the increase in use and awareness of the superior flavor of good-quality green cardamom, white cardamom is not readily available.

Buying and Storage

The best-quality green cardamom pods are an even lime green color and should not look pale or bleached. Avoid pods that are splitting open at the end, as this is an indication that they were harvested too late, resulting in a lower volatile oil content after drying. Green cardamom seeds are dark brown in color but they are called “green” after the green pod they come from. Look for a distinct, almost eucalyptus aroma and slight oiliness to the touch. The seeds do lose their flavor more rapidly after being removed from the pods, so unless you are a heavy user, buying the whole pods is recommended.

Powdered cardamom seed should be avoided unless you know it has been recently ground and is packed in a high-barrier material that keeps the flavor in. The color should be dark gray; if too light in color and slightly fibrous in appearance, it is an indication that the whole pods, and not the seeds alone, have been ground. As the outer husk of the pod has little flavor, this is not desirable. Once pulverized, the volatile flavor notes in cardamom will dissipate rapidly, so it is doubly important that the basic rules of spice storage are observed. Always keep in airtight packs and avoid extremes of heat, light and humidity.

Use

Green cardamom is a versatile and useful spice, being equally complementary to sweet and savory foods. Although it is a pungent spice and should be added to dishes sparingly, the fresh top flavor notes in green cardamom make a zestful addition to a wide range of meals. Traditionally, cardamom has been used to flavor Danish pastries, cakes, biscuits and fruit dishes. The Indians include it in many curries, and in the Middle East it is an enhancement to coffee. This is achieved by pushing a split cardamom pod into the narrow coffee pot spout. When the coffee is poured, it filters past the bruised cardamom, creating a refreshing taste. Next time you make plunger coffee, try putting a few bruised cardamom pods in the pot with the grounds for a delicious taste.

COMBINES WITH

- allspice
- caraway
- chili
- cinnamon
- coriander seed
- cumin
- fennel seed
- ginger
- paprika
- pepper
- star anise
- turmeric



CARDAMOM –
GREEN

Cardamom pods are usually included in biryani rice dishes, and a wonderful flavor dimension can be added to boiled rice by putting one or two bruised cardamom pods in the water during cooking. Cardamom complements milk puddings and custards and marries well with citrus fruits and mangoes. Halved grapefruits, sprinkled with a little sugar and ground cardamom seeds, make a tasty breakfast.

Many recipes require a bruised cardamom pod. A gentle thump with a rolling pin or pressing down firmly on the pod with the flat of a knife will burst some of the volatile oil-containing cells and allow the flavor to amalgamate more readily with the other ingredients. Even when using seeds removed from the pod, slight bruising is recommended for the best effect. For those of you who want to grind cardamom seeds at home, this can be done in a pepper mill or coffee grinder. When finished, simply grind about a tablespoonful of rice to clean the contact surfaces of the mill and carry any residual flavor away.

Ground green cardamom



Cardamom Mangoes

Green Cardamom

This recipe may not be a hit with the health-conscious, but we love it when it's time for a little indulgence. Serve with whipped cream, ice cream or plain yogurt.

- 4 mangoes (alternatively you could use apples, bananas, pears or fruit in season)
- 4 tbsp (50 mL) butter,
- 4 tbsp (50 mL) soft brown sugar
- 1 tbsp (15 mL) ground green cardamom seeds

Peel and core fruit and cut into ½-inch (1 cm) slices. In a frying pan, heat the butter and sugar, stirring until the sugar is melted, then stir in the ground cardamom seeds. Make a single layer of the fruit, spooning the liquid over the top, and cook until just warmed through. Lift out of the pan into serving dishes, and do a second batch in the pan if necessary.

Cardamom and Lime Tart

If you don't have time to make pastry, use prepared short-crust pastry. Sprinkle some lime zest over it, fold and roll out with a rolling pin to the required size.

Tart Filling

- 1 tbsp (15 mL) grated lime zest
- $\frac{1}{2}$ cup (125 mL) freshly squeezed lime juice
- 2 tsp (10 mL) ground green cardamom seeds
- 5 medium eggs (or 4 large)
- $1\frac{1}{4}$ cups (300 mL) table (18%) cream
- $\frac{3}{4}$ cup (175 mL) superfine (caster) sugar

Lime Pastry

- $1\frac{1}{4}$ cups (300 mL) all-purpose flour
- 1 tbsp (15 mL) granulated sugar
- 6 tbsp + 2 tsp (100 mL) cold butter, cut into cubes
- 1 egg yolk, beaten
- 2 tbsp (25 mL) ice water (approx.)
- 1 tsp (5 mL) grated lime zest
- few drops vanilla

Confectioner's (icing) sugar

For the filling, heat lime zest, lime juice and cardamom in a small saucepan for 3 minutes. Transfer to a bowl and let cool. Whisk in eggs, cream and sugar. Cover and refrigerate for 2 hours or overnight.

For the pastry, pulse flour, sugar and butter in a food processor until mixture resembles bread crumbs (or rub in the butter with the tips of your fingers). Transfer to a bowl. Whisk together egg yolk, ice water, lime zest and vanilla; stir into flour to make a firm, pliable dough, adding more water if necessary. Knead gently for 20 seconds, until smooth. Wrap in plastic wrap and chill for at least 30 minutes.

Preheat oven to 375°F (190°C). Line an 8- or 9-inch (20 or 23 cm) tart pan with pastry and chill again until firm. Bake blind (cover with parchment paper, fill with rice and cook for 10–15 minutes), then remove paper and rice and bake for 5 minutes. Remove from oven and let cool. Turn oven down to 325°F (160°C).

Pour filling into pastry shell and bake for 35–40 minutes, or until set but with a very slight wobble. Let cool, remove tart pan and dust with confectioner's sugar. Serves 6–8.

Celery Seed

OTHER COMMON NAMES

- garden celery
- smallage
- wild celery

BOTANICAL NAME

- *Apium graveolens*

FAMILY

- Apiaceae (formerly Umbelliferae)

CELERY SEEDS are gathered from an ancient, hardy biennial marsh plant known as smallage or wild celery that bears little similarity to the edible vegetable celery stalks we know so well. The smallage plant tends to be poisonous when raw, and the stalks and jagged leaves have an unpleasant smell. Umbrella-shaped white flowers develop pairs of minute seeds ($\frac{1}{16}$ inch/1 mm long) that split when harvested. The seeds are so small that there are over a million of them in 2 pounds (1 kg)!

Dried celery seeds are light brown to khaki in color and have a penetrating, hay-like aroma reminiscent of celery stalks. The flavor is strong, bitter, warm, astringent, exceedingly “green” and lingering on the palate. Like caraway, celery seed appears to be a “love it or hate it” spice, with very few people feeling indifferent to it.

Origin and History

Native to Southern Europe, the near East and the United States, smallage was known to the ancients. Around 2200 BC, the Egyptians used it primarily for its medicinal value and for making into garlands. Smallage was often associated with death by the Greeks and Romans, a possible theory for this

Whole celery seed



CELERY SEED

NAMES IN OTHER LANGUAGES

- Arabic: karafs, karfas
- Chinese (C): kahn choi tsai
- Chinese (M): qin cai zi
- Czech: celer, mirik celer
- Danish: selleri, bladselleri
- Dutch: selderij, bladselderij
- Filipino: kintsay
- French: celeri
- German: sellerie, eppich
- Indian: ajmoda, bariajmod
- Indonesian: selderi
- Italian: apio, sedano
- Japanese: serori
- Malay: daun seladri (leaf), duan sop (seed)
- Portuguese: aipo
- Russian: syel' derey
- Spanish: apio
- Sri Lankan: salderi
- Swedish: selleri
- Thai: kin chai, ceun chai farang
- Turkish: kereviz, yabani kerevizi
- Vietnamese: can tay

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 2.9 g
- ground: 3.0 g

connection being its rank odor. The earliest recorded application of celery as a condiment was in 1623 in France, where the plant was referred to as “ache.” In the early 18th century the Italians, determined to breed out the extreme bitterness of smallage, developed milder strains for culinary use as a vegetable. This led to the cultivated variety (*A. graveolens dulce*) that we know today as vegetable celery, with its thicker, juicy, stringless stalks.

Many varieties of celery are now grown, all without the bitterness of smallage; some are even naturally white and are called “self-blanching.” Celery can also be grown as an annual, the earth being mounded up around the base to create a blanched bulb that may be used as a vegetable. Another variety, the increasingly popular vegetable known as celeriac (*A. graveolens rapaceum*), grows with an edible, pale, bulb-shaped root.

Processing

Being a biennial, celery seeds are harvested in the second year after planting by cutting the seed-bearing stems, allowing them to dry and then threshing to remove the tiny seeds from the husks. On steam distillation the seeds yield about 2% of volatile oil. Celery seed oil is used in the manufacture of processed meats, non-alcoholic drinks, confectionery, ice creams and baked products.

Buying and Storage

Celery seeds are generally best purchased in their whole form. Being so small, they are most often used in cooking without grinding. Ground celery seed should be used quickly, as the fresh volatile notes will evaporate readily, leaving a less balanced, more bitter flavor. Celery salt is often easier to buy than celery seeds, possibly to make it more appealing to a wider number of people, and is usually made by mixing some herbs like parsley and dill with 60% salt and 40% ground celery seeds. Celery seeds and celery salt should be stored like other spices, in an airtight pack away from extremes of heat, light and humidity.

Use

The strong flavor of celery seed is a perfect marriage with tomatoes, hence its use in tomato and vegetable juices and the drink Bloody Mary, which inspired the chutney recipe that follows. Celery seeds are found in recipes for soups, stews, pickles and chutneys. They are excellent with fish and eggs, are sometimes found in cheeses, and go well with salad dressings and mayonnaise for coleslaw. In savory pastries, celery seeds add much the same refreshing, carbohydrate-complementing astringency as do ajowan seeds. Many popular commercial spice blends made for chicken, seafood and red meat contain celery seed along with spices such as paprika, cinnamon, ginger, pepper and salt.

Ground celery seed



SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp (10 mL)
- white meats: 1½ tsp (7 mL)
- vegetables: 1 tsp (5 mL)
- carbohydrates: 1 tsp (5 mL)

COMPLEMENTS

- vegetable juices
- seafood and egg dishes
- cheeses
- salad dressings and mayonnaise
- roast chicken
- breads and biscuits
- crab boil

USED IN

- commercial seasoning blends for roasting and microwaving meats

COMBINES WITH

- allspice
- bay leaves
- caraway
- chervil
- chili
- cinnamon
- coriander seed
- fennel seed
- ginger
- paprika
- pepper

Chutney Bloody Mary

Serve with fried eggs for the perfect hangover cure.

- 2 tsp (10 mL) vegetable oil
- 1 small red onion, chopped
- 1 clove garlic, crushed
- 3 tomatoes, chopped
- 2 red bell peppers, roasted, peeled and chopped
- $\frac{1}{2}$ long red chili pepper, chopped
- $\frac{1}{2}$ cup (125 mL) cider vinegar
- 3 tbsp (45 mL) packed brown sugar
- 1 tbsp (15 mL) tomato paste
- 1 tsp (5 mL) celery seed
- 1 tsp (5 mL) salt
- 1 tsp (5 mL) Worcestershire sauce
- $\frac{1}{2}$ tsp (2 mL) ground allspice
- $\frac{1}{2}$ tsp (2 mL) freshly ground black pepper
- $\frac{1}{2}$ tsp (2 mL) minced prepared horseradish

In a medium saucepan, heat oil over low heat. Add onion and cook for 5 minutes; add garlic and cook for 2 minutes. Add all other ingredients and cook, stirring, for 30–40 minutes, or until mixture is jammy. Taste for seasoning and spoon into sterilized jars. Let cool and refrigerate for up to 3 months. Makes about 2 cups (500 mL).

Chervil

OTHER COMMON NAMES

- French parsley
- garden chervil
- gourmet's parsley

BOTANICAL NAME

- *Anthriscus cerefolium*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Arabic: maqdunis afranji
- Chinese (C): saan loh baahk
- Chinese (M): shan luo bo, hui qin
- Czech: kerblik trebule
- Danish: korvel
- Dutch: kervel
- French: cerfeuil
- German: kerbel, gartenkerbel
- Greek: anthriskos, skantziki
- Italian: cerfoglio
- Japanese: chabiru, shiyaku
- Portuguese: cerefolho
- Russian: kervel
- Spanish: cerafolio
- Swedish: korvel
- Turkish: frenk maydanoz

FLAVOR GROUP

- mild

CHERVIL IS a shade-loving biennial that cannot tolerate hot, dry conditions. The small plant grows to around 12 inches (30 cm) high and has bright green, frond-like leaves resembling a miniature parsley. Flowers are minute and white, producing long, thin seeds that are not used in cooking. The aroma of freshly bruised chervil leaves is grassy and delicately anise-scented; the flavor is similar to French tarragon. Dried chervil leaves have the “hay-like” aroma and flavor of parsley, having lost most of their lighter anise notes during dehydration.

Origin and History

Chervil is native to Eastern Europe, the colonizing Romans spreading it farther afield. It was once called “myrrhis” because the volatile oil extracted from chervil leaves bears a similar aroma to the biblical resinous substance myrrh. Folklore has it that chervil makes one merry, sharpens the wit, bestows youth upon the aged and symbolizes sincerity.

Chervil has tended to be most popular in French cuisine. It is seen occasionally in recipes from other parts of Europe and only occasionally in North American dishes. It was introduced to Brazil by the Spanish in 1647 and is now grown commercially in California.

Fresh chervil



**WEIGHT PER
TEASPOON (5 ML)**

- whole dry leaves: 0.8 g

**SUGGESTED
QUANTITY PER
POUND (500 G)**

- red meats: ½ cup
(125 mL) fresh, 4 tsp
(20 mL) dried leaves
- white meats: ½ cup
(125 mL) fresh, 4 tsp
(20 mL) dried leaves
- vegetables: ¼ cup
(50 mL) fresh, 2 tsp
(10 mL) dried leaves
- carbohydrates: ¼ cup
(50 mL) fresh, 2 tsp
(10 mL) dried leaves

COMPLEMENTS

- scrambled eggs and omelets
- cream cheese and herb sandwiches
- green salads
- mashed potatoes

USED IN

- fines herbes
- vegetable salts

COMBINES WITH

- basil
- celery seed
- coriander leaf
- lovage
- onion and garlic
- parsley
- salad burnet

Processing

When harvesting chervil, the outer, more robust growth should be picked first, allowing the inner, more delicate fronds to develop. Frequent gathering will encourage abundant new growth and help prevent seeding and dying off. Drying chervil effectively is quite a challenge, due to the fragile makeup of its leaves; they shrivel to almost nothing during dehydration, in the process losing the volatile top notes. The best way to dry chervil leaves is to spread them out on a wire rack in a dark place where warm air can circulate freely. After a few days the leaves will be quite crisp and ready to store in an airtight container. Alternatively, fresh chervil leaves may be chopped finely, put into ice-cube trays, covered with a little water and frozen for later use.

Buying and Storage

Fresh chervil is sometimes available from greengrocers. Dried chervil should be dark green and show no signs of the yellowing that results from exposure to light. Store in airtight packs and keep in a cool, dark place.

Use

Subtlety is the keyword when using chervil in cooking. Although chervil will never dominate a dish, many cooks use it to enhance the flavors of other herbs accompanying it in recipes. Chervil is an important inclusion in the traditional French fines herbes blend of tarragon, parsley, chives and chervil. Chervil complements scrambled eggs and omelets, cream cheese and herb sandwiches, salads and even mashed potatoes. Because of its extremely delicate nature, chervil should never be cooked for extended periods or at excessively high temperatures. For this reason, add chervil only in the last 10–15 minutes of cooking.

Rubbed chervil leaves



One of my mother's particular talents has always been the ability to create dishes that are disarmingly simple, yet subtly flavored with fresh herbs gathered from our family's stone-walled herb garden.

This recipe reminds me of balmy summer lunches, often attended by some of our country's pioneering food, wine, theatrical and literary characters. This callow youth no doubt benefited from the input of conversation, fine foods and aromatic garden fragrances in his formative years.

Herb sandwiches made with seeded bread make an excellent accompaniment to this soup.

- 1 lb (500 g) potatoes, peeled and diced
- 1 onion, chopped
- 4 cups (1 L) chicken stock
- salt and freshly ground black pepper to taste
- $\frac{1}{3}$ cup (75 mL) chopped fresh chervil
- $\frac{1}{3}$ cup (75 mL) reduced-fat sour cream or plain yogurt
- additional chopped fresh chervil, for garnish

In a saucepan, over medium-low heat, combine potatoes, onion and chicken stock. Cover and simmer for 1 hour. Transfer to a blender and purée until smooth; return to the saucepan. Add salt and pepper. Fold in chervil, reduce heat to low and simmer gently for 10 minutes.

Pour hot soup into 4 bowls. Into each bowl, swirl 4 tsp (20 mL) sour cream, making a yin-yang shape. Sprinkle with chervil. Serves 4.

Seared Tuna Salad with Chervil Vinaigrette

During warm weather, when one wants a flavorful meal that is not too heavy, this fresh and very tasty salad is just right.

Vinaigrette

- 1 tbsp (15 mL) chopped fresh chervil
- 1 tbsp (15 mL) cider vinegar
- 1 tbsp (15 mL) freshly squeezed lemon juice
- 1½ tsp (7 mL) Dijon mustard
- ½ tsp (2 mL) crushed garlic
- 2 tbsp (25 mL) olive oil

- 1 tuna steak (about 12 oz/375 g)
- 3 tbsp (45 mL) olive oil
- salt and freshly ground black pepper to taste
- 2 eggs, hard-cooked and quartered
- 12 oz (375 g) new potatoes, cooked, drained and halved
- 3½ oz (100 g) green beans, cooked and drained
- ⅓ cup (75 mL) black olives
- 4 tbsp (60 mL) fresh chervil leaves
- 3 tbsp (45 mL) sesame seeds, lightly toasted

For the vinaigrette, combine chervil, vinegar, lemon juice, mustard and garlic, then whisk in olive oil to create an emulsion. Set aside.

Coat tuna with olive oil and season with salt and pepper. Arrange eggs, potatoes, beans and olives on 4 serving plates.

Sear tuna for 3 minutes each side (this will leave it nice and rare inside). Flake warm tuna over salads, then pour on vinaigrette and top with chervil and sesame seeds. Serves 4 as a starter.

Chicory

OTHER COMMON NAMES

- barbe de capucin
- Belgian endive
- blue-sailors
- hendibeh
- succory
- witloof

BOTANICAL NAME

- *Cichorium intybus*

FAMILY

- Asteraceae (formerly Compositae)

NAMES IN OTHER LANGUAGES

- French: chicorée
- German: zichorie, indivia, hindlauf
- Italian: cicoria, radicchio
- Spanish: achicoria

FLAVOR GROUP

- medium

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 2 heads
- vegetables: 3 heads
- carbohydrates: 2 heads

CHICORY LOOKS almost like two plants in one, having broad, light green, lance-shaped lower leaves resembling spinach and small, sparse upper leaves clasped to a tangle of branching stalks that grow to 6 feet (1.8 m) high. Attractive, pale blue flowers the shape of daisies bloom in clusters of two or three on the tough higher stems. These flowers will close by the time the bright midday sun has bathed them, yet remain open on cloudy days, providing one of nature's many compensations to dull weather. While the more mature, dark green, lower large leaves are extremely bitter, young, pale leaves are milder and can be used readily. Chicory is a perennial with a long taproot similar to a dandelion and it is this taproot that is roasted and used as an additive to coffee. Belgian endive is the name often given to the blanched, white vegetable form you will see in many greengrocer's shops, the flavor being succulently refreshing and appetizingly bitter with a crisp mouth-feel.

Ground chicory and fresh chicory leaves



COMPLEMENTS

- green salads
- caviar
- cottage cheese
- fresh salsas

USED IN

- not commonly used in spice blends

COMBINES WITH

- chervil
- coriander leaf
- cress
- lovage
- oregano
- parsley
- Vietnamese mint

Origin and History

Chicory is native to Europe and is found growing wild in many parts of this region. Chicory was known to the ancient world; Pliny refers to it in Roman times, and it was valued by the Egyptians and Arabians, who used the blanched leaves as a salad vegetable. In its wild state, the taproot is thick and woody; however, the cultivated roots that are harvested for roasting are large and fleshy. There appears to be little evidence of the roasted root being used until around 1800, when the Italians and the English used it as an additive to coffee, presumably to enhance its bitterness and possibly to adulterate it with a lower-cost commodity. Roasted chicory root contains no caffeine and, according to some, roasted chicory root counters the stimulating effects caused by coffee, justifying its inclusion. Due to the excessive use of roasted chicory as an adulterant, the English passed a law in 1832 forbidding it as an addition in coffee. After considerable pressure from consumers who had developed a liking for it, the law was repealed in 1840, with the proviso that chicory would be declared as an ingredient on the label.

Processing

Blanched chicory, called *barbe de capucin* by the French, and also known as *witloof* in Belgium, is made by depriving the plants of light, thus making them creamy white and virtually devoid of bitterness. This is achieved by cutting the tops off the plants about six months after planting. The roots are then placed upright in a box and covered by 6 inches (15 cm) of light, sandy soil and kept in a moist, dark place that is warm. As the new leaves grow, they develop as pale foliage and look like an elongated lettuce heart of creamy-colored leaves about 6 inches (15 cm) long. Exposure to light during this process will bring yellow to green color to the leaves and increase the level of bitterness. Roasted chicory root is made by digging up the taproots, after which they are washed, cut, dried and broken into small pieces prior to roasting. This process creates a caramelization of the sugars and gives chicory, as used with coffee, its characteristic taste.

Buying and Storage

When buying fresh Belgian endive, look for the palest heads, as the greener they are, the more bitter they will be. Taste a piece prior to using, and if there is some undesirable lingering bitterness, blanch the chicory by pouring boiling water over the leaves in a colander and allow to drain. Roasted chicory root is usually sold in granular or powder form, both of which will attract moisture so are best purchased and stored in airtight packs and kept in a cupboard away from extremes of heat and humidity.

Use

The young, fresh leaves gathered from chicory plants growing in the garden make an excellent addition to a green salad. Blanched chicory, bought as a vegetable and crisped in icy water, may also be added raw to salads, imparting an appetizing bitterness and cool crispness. These scoop-shaped leaves are an ideal receptacle for hors d'oeuvres such as caviar, cottage cheese and herbs and fresh salsa.

Belgian endive



Crisped Belgian Endive with Tomato and Coriander Salsa

The refreshing coolness and appetite-stimulating bitterness make this an ideal accompaniment to pre-lunch drinks on a balmy summer day.

- 5 leaves Vietnamese mint, finely chopped
- 2 ripe tomatoes, finely chopped
- ½ small onion, finely chopped
- ½ cup (125 mL) chopped fresh coriander
- 1 tsp (5 mL) olive oil
- ½ tsp (2 mL) sea salt
- Belgian endive leaves, soaked in iced water until crisp

In a bowl, combine Vietnamese mint, tomatoes, onion, coriander, oil and salt. Spoon salsa into the bowl of crisped endive leaves and serve as an appetizer or salad.

Belgian Endive and Roquefort Salad

Chicory

This is a beautiful salad to serve as a starter, and it's extra tasty when topped with crisp pancetta.

Dressing

- 6 tsp (30 mL) Dijon mustard
- 4 tsp (20 mL) superfine (caster) sugar
- 2 tsp (10 mL) white wine vinegar
- $\frac{1}{4}$ cup (50 mL) vegetable oil
- whole-grain mustard

- 4 heads Belgian endive, leaves soaked in ice water until crisp
- $\frac{3}{4}$ cup (175 mL) walnuts, lightly toasted and broken into pieces
- $3\frac{1}{2}$ oz (100 g) Roquefort cheese (or other blue cheese), crumbled

For the dressing, combine Dijon mustard, sugar and vinegar in a small glass bowl. Whisk in vegetable oil to create an emulsion. Add whole-grain mustard to taste.

Drain Belgian endive and cut each leaf on the diagonal into 2 or 3 pieces. Toss with walnuts and cheese and gently stir in dressing. Serves 4.

Chili

THERE ARE five main species of chili and hundreds of varieties. If anyone tries to get you into a wager about the correct spelling of chili, don't lay any bets! North Americans spell it "chili" or "chile." Indians use one or two "l's" and the "y," and I still always spell it "chilli." The reality is, it does not really matter how it's spelled, just so long as we all know what we mean.

Whole books have been written on this vast family of plants, with the majority of authors humbly begging the reader's tolerance for any information that is lacking. I have therefore attempted to give you condensed information that helps to demystify some of the chili kingdom and provides details relevant to everyday use.

Chili plants vary considerably in size and appearance. The most common (*Capsicum annum*) is described as a herb or small, early maturing, erect shrub with oval leaves and firm, non-woody stems growing to around 3 feet (1 m) high. This is generally grown as an annual, as its fruiting capacity diminishes after the first year. The short-lived perennial (*C. frutescens*), which will last for only two to three years, is the

Powdered Aleppo and Anaheim chilies

OTHER COMMON NAMES

- aji
- cayenne pepper
- chile
- chilli
- chilly
- ginnie pepper
- piri piri
- red pepper

BOTANICAL NAMES

- the most common mild to hot chilies:
Capsicum annum
- hot varieties including Tabasco: *C. frutescens*
- fruity-flavored and known as aji:
C. baccatum
- some very hot types such as habanero:
C. chinense
- hairy-leaved and quite hot: *C. pubescens*

FAMILY

- Solanaceae





Whole ancho chilies (top); whole cascabel chilies

next most common species. The distinguishing difference from *C. annum* is the fruits tend to be smaller and hotter, and include varieties such as bird’s eye and Tabasco. Milder versions of *C. annum*, generally referred to as paprika, are dealt with in the chapter on paprika (see p. 374).

The chili pod is a many-seeded berry that, depending upon variety, is sometimes pendulous, hiding among soft foliage resembling potato and tobacco leaves, and sometimes grows erect on cheerful display, waiting to be picked by birds who carry the seeds in their digestive tracts, causing widespread propagation. Chili pods come in an assortment of shapes, colors and heat levels, have shiny skins covering varying thicknesses of flesh and two to four almost hollow chambers containing numerous disk-shaped, pale yellow to white seeds. Shapes range from small, round fruits only ½ inch (1 cm) in diameter, to large pods over 8 inches (20 cm) long. In between there are elongated mini chilies less than ½ inch (1 cm) wide and around 1½ inches (4 cm) long, round tomato shapes 1 inch (2.5 cm) in diameter, medium sizes about 4 inches (10 cm) in length and the unusual Scotch bonnet, shaped like a cross between a tam-o-shanter and a vegetable squash.

Fresh chilies are green until they ripen, after which the color may be red, yellow, brown, purple or almost black. The aroma and flavor of fresh chilies is distinctly capsicum-like, fresh green chilies having the same “green” succulent flavor as a green pepper. Ripe

NAMES IN OTHER LANGUAGES

- Arabic: filfil ahmar, shatta
- Burmese: nga yut thee
- Chinese (C): laht jiu
- Chinese (M): la jiao
- Czech: pepr cayensky
- Dutch: spaanse peper
- Filipino: sili, siling haba (long)
- French: poivre de cayenne, piment enragé
- German: roter pfeffer
- Greek: piperi kagien, tsili
- Hungarian: csilipaprika, igen eros apro
- Indian: hari mirich (green), lal mirich (red)
- Indonesian: cabe, cabai, cabai hijau (green), cabai merah (red), cabai rawit (bird’s eye), lombok
- Italian: peperoncino, pepe rosso picante
- Japanese: togarashi
- Korean: gochu
- Laotian: mak phet kungsi
- Malay: cili, lombok, cili padi
- Portuguese: pimento
- Russian: struchkovy pyeret
- Spanish: aji, pimenton, pimienta picante, chili, guindilla,
- Sri Lankan: rathu miris
- Thai: prik chee faa, prik haeng pallek
- Turkish: aci kirmizi biber, toz biber
- Vietnamese: ot

FLAVOR GROUP

- hot

CHILI

WEIGHT PER TEASPOON (5 ML)

- whole chilies vary considerably in size
- ground: 2.7 g

SUGGESTED QUANTITY PER POUND (500 G)

Based on whole chilies around 1½–2½ inches (4–6 cm) long and with a heat level of about 6 out of 10:

- red meats: 3
- white meats: 2
- vegetables: 2
- carbohydrates: 1

chilies have a more full-bodied and fruity flavor, in the same way as a red pepper tastes different from the green. Heat levels range from deliciously tingling to threateningly scorching, and are determined by the amount of capsaicin present. Capsaicin is a crystalline substance contained in the highest concentration in the seeds and the fleshy placenta material that is joined to the seeds. Capsaicin causes the brain to release endorphins, which create a sense of well-being and stimulation, as experienced by athletes and those of us crazy enough to jump in the surf in the middle of winter.

An indication of the heat in chilies can be estimated on the basis of size. Generally, but not always, the smaller the chili, the hotter it will be, as the ratio of seeds and capsaicin-bearing placenta to flesh is high. With chili powders, the hotter varieties are usually more orange in color due to the higher ratio of seeds. It is interesting to note that in the hotter varieties, levels of capsaicin can range dramatically from 0.2% to 1%. Much attention has been given to finding a way to measure the heat levels of different chilies. After all, there needs to be a



Bird's eye chilies, fresh, powdered and dried



Cayenne pepper; medium-heat chili flakes; chipotle chilies; sun-dried habanero chilies

COMPLEMENTS

- Mexican sauces
- Asian stir-fries
- curries of all cultures
- practically every cuisine in the world

USED IN

- curry spices
- taco seasonings
- berbere
- pickling spices
- harissa paste mixes
- tagine blends
- chaat masala
- many general-purpose seasoning blends

COMBINES WITH

- allspice
- amchur
- bay leaves
- cardamom
- cloves
- coriander leaf and seed
- cumin
- fenugreek leaf and seed
- ginger
- kaffir lime leaves
- mustard
- paprika
- pepper
- star anise
- turmeric
- Vietnamese mint

way to differentiate between the searing bird's eye chilies and the milder, almost paprika-tasting members of the capsicum family. In 1912 the Scoville method was developed to provide food technologists with a quantifiable method of determining the heat levels in chilies. Although subjective, this method of measuring the pungency of chilies and allocating Scoville units of heat remains the most widely used in the food industry. To determine the Scoville units, panels of tasters sample greatly diluted quantities of chili, noting at what percentage level the presence of heat is detected on the palate. Capsaicin (the heat component) is so strong that the palate can detect as little as one part in 1,000. Numeric values are then given in thousands of Scoville units, for example 1% of capsaicin detected is equivalent to 150,000 Scoville units, and the results can range from zero to 300,000 for the very hottest of palate-searing chilies. With modern technology, the more common scientific method these days is to use high-performance liquid chromatography (HPLC) measures that require expensive equipment but are much more reliable. A user-friendly system for the non-professional food lover is to simply quote the heat level on a scale of one to 10, with 10 being the hottest.

Although there always seems to be an inordinate preoccupation with the heat in chilies, the tremendous flavor contribution made by dried chilies should not be overlooked. The

Guajillo chilies





Mulato chilies; fresh jalapeño chilies; ground jalapeño chilies

flavor of dry chili is quite different from fresh, in the same way as a sun-dried tomato has a different taste from a fresh one. Upon drying, usually in the sun, caramelization of sugars and other chemical changes create more complex flavors. While fresh chilies have a distinct heat, fresh bell pepper top notes and sweetness, dried chilies deliver an initial full-bodied, fruity, raisin sweetness with varying degrees of tobacco and smokiness depending upon the variety of chili.

Many of the Mexican chilies have different names depending upon whether they are fresh or dry. For instance, a poblano chili is called ancho when it is dried, and a large jalapeño is called a chipotle when dried and smoked. While the following list of dried chilies is by no means exhaustive, some of the more common varieties are briefly described and heat levels on a scale of 1 to 10 are provided.

ALEPPO PEPPER: a dark red, coarsely ground medium-heat chili powder from Turkey. Aleppo pepper has rich, roasted tobacco-like notes and a lingering mild bitterness. A reasonable substitute is made by blending 3 parts medium-heat chili powder with 1 part chipotle chili powder. Chili flakes, dry-roasted in a pan and then ground, will also give a similar flavor. Heat level: 6.

CHILI

ANAHEIM: a very mild large chili that is popular fresh in both green and red. It is traditionally stuffed (relenos) and adds a fresh green taste to sauces and salads served with Mexican food. When ripe and red, it is often referred to as chile Colorado. Heat level: 4.

ANCHO: a large dried poblano chili about $3\frac{1}{4}$ inches (8 cm) long and $1\frac{1}{2}$ inches (4 cm) wide. Deep purple to black in color, it has a mild fruity flavor with notes of coffee, tobacco, wood and raisin. Arguably the most-used dry chili in Mexican cooking. Heat level: 4.

BIRD'S EYE: a small, extremely hot chili that is highly pungent. Use to add "pure heat" to a meal without very much chili flavor coming through. Heat level: 9.

CASCABEL: a round, plum-colored chili with light fruity and smoky notes, used in Mexican foods. The seeds rattle in the dried fruit, hence the name "cascabel," Spanish for "rattle." Heat level: 4.

CAYENNE PEPPER: generally a blend of chili powders made to achieve a uniform orange to red color and consistent heat. Some say it gets its name from Cayenne, the capital of French Guiana; however, there appears to be no evidence to support this. Heat level: 8.

*Ground Kashmiri chilies; whole Kashmiri chilies;
whole New Mexico chilies*





Piri piri powder

CHILI FLAKES: usually finely chopped dried sannam-type chilies from India. They are bright red with lots of seeds and are delicious sprinkled over pasta sauces and pizza. Heat level: 7.

CHILI POWDER: the name given to almost any variety or collection of varieties of chilies. Chili powders are orange to red in color and usually come in mild, medium and hot, the hot often being pure ground bird's eye chilies. Heat levels respectively: 3, 7, 9.

CHIPOTLE: a large, smoked, dried jalapeño with a smoky, deep, well-balanced heat. Used in Mexican dishes and by vegetarians as a substitute for ham bones in stews, soups and casseroles. Heat level: 5.

GUAJILLO: very similar in appearance and taste to the New Mexico chili. Because of the large amount of flesh relative to seeds, guajillo chilies add a pleasing rich red color to food. They are about 6 inches (15 cm) long and have an earthy, cherry-like flavor and distinct yet mild heat. Heat level: 4.

HABANERO: these have the most wonderful fragrant, sweet, warm fruitiness with a piquant background. Don't be taken in by the heavenly smell, it's devilishly hot! Delicious in salsas. Heat level: 10+.



Fresh Scotch bonnet chilies

KASHMIRI CHILI: an Indian chili, available both whole and powdered. Whole Kashmiri chilies have a rough, crinkly skin and are deep red. When ground, the powder is bright red, an attribute appreciated in tandoori-style dishes, as is its pleasing, sweet, definite chili bite. Heat level: 7.

LONG CHILI: a term loosely used to describe various varieties of sannam and Chinese chilies (*tien tsin*) about 2½ inches (6 cm) long and bright to dark red in color. These are good to use in Sichuan dishes where you eat the whole stir-fried chilies. Heat level: 7.

MEXICAN CHILI POWDER: generally a blend of chili, paprika and ground cumin seed with oregano and salt sometimes included. This is what you would sprinkle on your tacos and use as a condiment whenever you are looking for that characteristic “Mexican” taste. Heat level varies considerably, between 2 and 8, depending upon brand.

MULATO: very similar to ancho, being another type of dried poblano chili, dark brown in color and with a similar taste that is somewhat smoky. Heat level: 3.

NEW MEXICO CHILI: also referred to as “colorado” and “dried California chili.” Very large, about 6 inches (15 cm) long, with an earthy, cherry-like flavor and distinct yet mild heat. Heat level: 4.

PASILLA: a dried chilaca chili sometimes called “chile negro.” Flavor is similar to ancho and mulato with fruity, herb-like notes and faint licorice tones. Traditionally used in making the famous mole sauce. Heat level: 4.

PEQUIN: a small, very hot, shiny chili with a bead-like appearance. Pequins are similar to bird’s eye chilies, but are almost spherical in shape. Heat level: 9.

PIRI PIRI (OR PERI PERI): the name often used loosely to describe chilies in South Africa and some parts of India. Therefore, piri piri sauces are essentially chili sauces, with a consistent taste profile. Piri piri powder is generally a blend of chilies with a specific flavor that appeals to the South African consumer, an analogy being the European fondness for cayenne pepper. I have also purchased pickled sannam chilies in India that went by the name of piri piri. Heat level: 9.

POBLANO: *see* ancho.

Whole pasilla chilies



SERRANO: a similar appearance to a bird's eye, but larger (up to 2 inches/5 cm long). Pleasant-tasting and fruity, serrano chilies are a good option when a reasonable amount of heat is required. Heat level: 8.

TABASCO: small yellow, orange and bright red chilies, thin-fleshed and very hot. Rarely seen dried, Tabasco chilies are used to make the searingly hot pepper sauce that goes by the same name. Heat level: 9.

TEPIN: a wild form of pequin chili. These small, quite hot chilies are often collectively referred to as chiltepin. They have thin flesh and are spherical in shape, much like pequins. Heat level: 8.

Origin and History

When Columbus came to the New World in 1492, he was looking for, among other things, new sources of black pepper. This helps to explain why, when he was introduced to the capsicum family — and his first experience of another spice that was hot like pepper — he referred to them as pepper. To this day, both true pepper from the *Piper nigrum* vine and chilies are referred to as peppers in North America and many parts of Europe, which often leads to confusion.

Unknown to the rest of the world at the time, there is evidence that *aji* or *axi*, as chilies were called, were eaten by the Mexican Indians as early as 7000 BC and possibly cultivated sometime between 5200 and 3400 BC, making them among the oldest plants cultivated in the Americas. Upon their discovery, the world then warmly embraced chili as a “poor man's pepper” as, for the first time, even the poorest of people could have a ready supply of this easily propagated, appetite-enhancing, prolific condiment.

By 1650 the cultivation of capsicums had spread through Europe, Asia and Africa. In Europe hybridization, along with soil and climatic conditions, led to a bias toward the milder varieties within *C. annum*, while in the tropics various hotter types of *C. annum* and *C. frutescens* were popular. One explanation for the desire for hot chilies in the tropics is that they raise the body temperature, and the resulting perspiration creates a cooling effect as it evaporates.

Much confusion remains about the exact naming and identification of many chilies, partly due to their easy cross-pollination

and hybridization and compounded by the different regional names attributed to them in dozens of languages and dialects. The history of chili has been relatively short in many parts of the world, including India, Africa and China. Given the enormous tonnages of chili consumed in those countries, it almost defies logic to try to imagine how they ever survived without them.

Processing

While the drying and processing of chilies is practiced in varying degrees of sophistication around the world, the majority of chilies are handled in a fairly basic way. When chilies are fresh, their moisture content can range from 65% to 80%, depending on how much they have already started to dry on the plant prior to harvesting. Proper drying must bring the moisture down to around 10% to inhibit any development of mold.

In many parts of India (now reputed to be the world's largest producer of chilies), the process usually begins when the fresh fruits are purchased by the trader. These are heaped together indoors for two to three days at 68–77°F (20–25°C) to allow any partially ripe pods to fully ripen and the whole batch to attain a uniform red color. Direct sunlight should be avoided at this stage as it may cause the development of white patches. The chilies are then put out in the sun, preferably on concrete floors, the flat roofs of houses or woven mats, to protect them from dirt, insects and rodents. At night the drying fruits are heaped into piles and covered with tarpaulins, and are spread out in the sun again the next day. Over

White chilies (curd)



about three days the chilies become dry and the larger ones are flattened by trampling or rolling to make them easier to pack into bags for transport. On average, 220 pounds (100 kg) of fresh chilies will yield 55–77 pounds (25–35 kg) of dried.

Another popular drying method in countries such as Mexico and Spain is to tie bunches of chilies together into garlands, or *ristras*, and hang them on the walls of houses and even on clotheslines to dry. Artificial drying in sheds and kilns is becoming more widespread to overcome the vagaries of weather and produce a more consistent final product.

When drying chilies at home, remember that the glossy outer skin of the fruit does not yield moisture easily, so if the process takes too long there is a high risk of mold developing inside the pods. To overcome this, slit the chilies in half, to allow the moisture to escape more easily, before laying them out on a ventilated screen in a warm, dark place for a couple of days. Then transfer them into the sun for six to eight hours during the warmest time of the day for another two to three days or until they feel quite firm and dry.

Clockwise from left: fresh long red chilies; chopped freeze-dried red chilies; whole dried long red chilies





Whole serrano chilies

Buying and Storage

When buying fresh green chilies, look for ones that are firm and not wilted. Ripe fresh chilies, whether red, yellow, brown, purple or almost black, should be quite smooth in appearance. Wrinkling of the skin indicates they have started to dry or may not have been ripened on the bush, which is desirable. Fresh chilies can be stored in the refrigerator for a week or two, and in warm, dry, but definitely not humid weather, they may be kept in a fruit bowl for a few days until needed.

Dry chilies will vary greatly in appearance depending upon the variety. The best advice is to buy only from a reputable source, where the stock turns over regularly and advice can be given about the type and heat level of the chili you are purchasing. Store in airtight packaging away from extremes of heat, light and humidity.

Use

Containing more vitamin C by weight than citrus fruits, chilies have become a “must use” condiment in the daily diets of millions of people around the globe. These days, we enjoy chili in so many dishes, it is almost harder to think of one that chili is *not* used in. The flavor and heat of chilies are most often associated with Indian, African, Asian and Mexican cooking, where its exclusion would almost be deemed sacrilegious. An Indian curry or pickle would be incomplete without chili, as would Tunisian harissa paste, Asian sambal or Mexican mole sauce. Chili is also used throughout the Mediterranean, more often than not in its dried form. Dried chilies, with their complex depth of flavor notes, complement the robust flavors of garlic, oregano, tomatoes and olives found in Greek and Italian recipes. For those with a low tolerance to heat, I suggest substituting green or red bell peppers for green or red fresh chilies, and sweet paprika for dried chilies and chili powders. That way, you’ll get an element of the characteristic chili flavor without the bite.

When you’re using chili in cooking, the intensity of the heat and the timing of when it hits you is often affected by the amount of fat and oil in the dish. Oils and fats tend to coat the heat molecules in chili, either flattening them or making them come later. Therefore, a stir-fry with chili and Thai spices will be fairly sharp and hot. Add high-fat coconut milk

Dried pequin chilies; dried tepin chilies



and the heat will be tamed and will hit your palate a little later. Sweetness will also tone down heat, thus a sweet chili sauce is more likely to have one reaching for more than a non-sweet one. If you are unsure of the heat in the chili you are cooking with, always start with a little less . . . you can always add more later.

Perchance you have added too much! Try adding a little sugar (remembering to maintain the balance of the dish) or cream or coconut cream if appropriate. Adding some chopped potato and removing it after about 30 minutes cooking is an old remedy, as is putting in chopped bell peppers. Leaving the dish in the fridge overnight sometimes helps, as the flavors mature and round out over time; however, the chili heat does not significantly diminish.

When confronted by a volcanic chili experience, don't drink water to put out the fire in your mouth, as it will actually make it worse. A spoonful of sugar gives the most instant relief, while beer is a good accompaniment to hot food, as is the traditional Indian yogurt drink lassi. Cucumber and yogurt raita is also a good cooling aid to have on hand when indulging in hot curries.

When handling fresh chilies, be careful not to touch any sensitive skin areas until you have thoroughly washed your hands. Warm soapy water is usually effective or, if some heat remains, a gentle wipe with some acetone (nail polish remover) will do the trick. Some very hot chilies can even cause blistering of the fingers, although this is uncommon. Wearing disposable gloves is a wise precaution for those who are unsure of just how hot the chilies are. When cooks want to reduce the heat of fresh chilies, a common practice is to remove the seeds and fleshy capsaicin-bearing placenta from the inside. Fresh julienne strips of chili are often used in stir-fries, salads with an Asian influence and to garnish pâtés and terrines.

A friend of my parents who had lived in India for many years always kept a small decanter of sherry on hand with three or four fresh chilies soaking in it. When added to soups, it gave a surprisingly powerful kick. Apparently this was a common practice in English clubs frequented by ex-India residents who found the soups at home insipid.

Dried chilies may be used whole in curries and almost any other kind of long, slow-cooked liquid, as the flavor and heat will seep out and amalgamate into the dish. Often sauces will call for a whole chili to be pierced and soaked in hot water for

CHILI

20 minutes, then cut open to remove seeds and stem, prior to pounding in a mortar and pestle or blending with other ingredients in a food processor. Ground chilies of varying heats are used in a wide range of curries, sauces, pickles, chutneys and pastes. Almost any meal you can think of will be enhanced by the heat and taste of chili. From exotic crustaceans to humble scrambled egg, the level of extra taste to be derived from a discreet sprinkling of chili is limited only by one's imagination.



Pickled Tabasco chilies; pickled serrano chilies

This recipe is found, with regional differences, throughout the Middle East. The marriage of slow-cooked bell peppers with the bite of chili in harissa paste is a perfect showcase for the capsicum family.

- 2 tbsp (25 mL) olive oil
- 2 small red bell peppers, seeded and thinly sliced
- 2 small green bell peppers, seeded and thinly sliced
- 2 cloves garlic, finely chopped
- 1–2 small chilies, seeded and finely chopped
- 1 can (14 oz/398 mL) peeled chopped tomatoes
- 1 tsp (5 mL) Harissa (see p. 561)
- 1 tsp (5 mL) ground caraway
- $\frac{1}{2}$ tsp (2 mL) sweet paprika
- $\frac{1}{2}$ tsp (2 mL) ground cumin
- $\frac{1}{4}$ tsp (1 mL) salt
- 4 large eggs

Heat the oil in a large frying pan and fry the red and green peppers until soft. Add the garlic and chilies and cook for 1–2 minutes, stirring to combine. Add the tomatoes, harissa, spices and salt. Leave to simmer gently for 10–15 minutes, or until reasonably thick.

Make 4 indentations in the mixture using the back of a spoon and break 1 egg into each. Cover and leave to simmer for about 5 minutes or until whites are cooked and yolks soft. Serve immediately with (or on) toasted pita bread. Serves 4.

Roasted Almonds with Chili and Sea Salt

Once you taste these, you'll never buy beer nuts again.

- 8 oz (250 g) blanched almonds
- 2 tsp (10 mL) chili flakes
- 1 tsp (5 mL) sea salt
- 1 tsp (5 mL) olive oil

Preheat oven to 325°F (160°C). Scatter almonds on a baking sheet and place in the oven. Cook for 20 minutes, until golden. Give them a shake every few minutes to ensure they color evenly. When you bite into them, the chewy raw nut should be replaced by a brittle crunchiness. While hot, toss nuts with chili flakes, sea salt and olive oil. Serve warm, or cool completely and store in an airtight container for up to 1 month.

Thai Chili Dressing

Use this dressing with cherry tomatoes, cucumber, red onion and bean sprouts and top with seared sirloin for a quick, tasty and healthy Thai beef salad.

- 2 long red chili peppers, seeded and coarsely chopped
- 1 clove garlic, coarsely chopped
- juice of 3 limes
- 1 tbsp (15 mL) fish sauce
- 2½ tsp (12 mL) palm sugar (jaggery)*

Pound chilies and garlic in a mortar and pestle, then add a little of the lime juice, fish sauce and palm sugar. Pound again and taste. You want to find a balance between sweet, salty, sour and hot. Continue to add lime juice, fish sauce and palm sugar until most of the ingredients are used and the flavor is to your liking. Makes about ½ cup (125 mL).

*Palm sugar can be purchased in East Indian markets. If you can't find it, you can substitute light brown sugar.

Chili Chocolate Black Beans

Chili

Serve these unusual yet delicious beans with rice, or simply spoon into a warm flour tortilla and eat immediately. For a hearty soup, blend beans with enough stock to achieve desired consistency.

- 2 pasilla chilies
- 2 cascabel chilies
- 1 chipotle chili
- 2 cups (500 mL) boiling water
- 1 tsp (5 mL) ground allspice
- 1 tsp (5 mL) ground cinnamon
- ¼ tsp (1 mL) ground cloves
- 1 red onion, chopped
- 3½ oz (100 g) ground almonds
- 1 tbsp (15 mL) dried oregano
- 1 tsp (5 mL) crushed garlic
- 1 lb (500 g) black beans, cooked and drained
- 2 oz (60 g) bittersweet chocolate, preferably 70% cocoa, broken into pieces
- 1 tsp (5 mL) salt

Roast chilies in a 350°F (180°C) oven for 5 minutes, then soak in boiling water for 10–15 minutes.

In a large saucepan, over medium heat, toast allspice, cinnamon and cloves for 1 minute, or until fragrant. Add onion, almonds, oregano and garlic; stir until combined. Strain chili soaking water into the saucepan. Seed and finely chop chilies and add to pan. Add beans, chocolate and salt; reduce heat and simmer gently, adding more liquid if necessary, for 45 minutes or until beans are very soft. Serves 4–6.

Chives

OTHER COMMON NAMES

- onion chives or rush leek
- garlic chives or Chinese chives

BOTANICAL NAMES

- onion chives: *Allium schoenoprasum*
- garlic chives: *A. tuberosum*

FAMILY

- Alliaceae (formerly Liliaceae)

WHEN NOT in flower, this humble herb more closely resembles a clump of grass than one of the world's most popular culinary herbs. Chives are the smallest member of the onion family, which also includes garlic, leek and shallot. There are two varieties of chives — onion chives and garlic chives — and each is named for its characteristic onion and garlic flavors respectively, a result of containing considerably less sulphur than their larger cousins. Only the leaves are eaten, as the small, elongated bulb is virtually non-existent. Onion chives grow 6–12 inches (15–30 cm) high, have slender, bright green, grass-like leaves tapering at the top and becoming more tubular in cross-section as they develop. Masses of mauve-pink, pom-pom-shaped flowers constructed of cylindrical petals adorn the plant in summer, making it a favorite for botanical artists to represent in kitchen posters. Garlic chives grow a little taller than onion chives and the mature, light green leaves are distinctly flat by comparison.

Garlic chives; onion chives



The flowers of garlic chives are white and form on tough stems that are unsuitable for eating. Both varieties of chives are particularly valuable for their subtle onion and garlic flavors, delivered in a green, fresh-tasting medium that lacks the pungency and, for some, the “many happy returns” experienced after an onion or garlic binge.

Origin and History

Although the history of the cousins of chives goes back over 5,000 years, this delicately flavored culinary herb engendered little interest with cooks until the 19th century. Native to the cooler parts of Europe and Asia, chives now grow wild in Canada and the northern areas of the U.S. The name “chives” is derived from *cepa*, the Latin word for onion, which evolved into the French *cive*.

Processing

The invention of freeze-drying had a more profound effect upon the popularity of chives in the 20th century than on any other herb or spice. Freeze-drying is a sophisticated, capital-intensive method of dehydration that removes moisture from plant material without damaging delicate cell structures. Basically, after harvesting and grading by hand, the chives are frozen. Then, in a vacuum chamber, moisture as ice is taken to the gaseous state in the form of vapor, without turning into water in the process. The result is that cell- and flavor-destroying latent heat is not produced during dehydration, thus yielding a finished product that has all the color, shape and flavor of fresh chives and only lacks the moisture. Because the moisture in many foods is sufficient to rehydrate freeze-dried chives, they do not need to be reconstituted before using and can be added direct to cream cheeses, sauces, dressings, mashed potatoes and scrambled eggs, to mention just a few applications.

Buying and Storage

Fresh chives are usually sold in small bunches 1 inch (2.5 cm) in diameter and should never look wilted. Many greengrocers do not label them correctly, but a quick inspection of the cut ends will reveal whether they are tubular (onion) or flat (garlic) if a gentle sniff does not give their nomenclature away. While it is not practical to attempt drying your own chives, fresh chives can be chopped and frozen in an ice-cube tray for

NAMES IN OTHER LANGUAGES

- Arabic: thoum muammar
- Chinese (C): gau choi, sai heung chung
- Chinese (M): jiu cai, xi xiang cong
- Czech: patzika, snytlik
- Danish: purlog
- Dutch: bieslook
- Filipino: kutsay
- French: ciboulette, civette
- German: schnittlauch
- Greek: praso, schinopraso
- Indonesian: kucai
- Italian: aglio selvatico, erba cipollina
- Japanese: nira, asatuki
- Malay: ku cai
- Portuguese: cebolinha
- Russian: luk rezanets, shnit-luk
- Spanish: cebolleta
- Thai: kui chaai
- Turkish: frenk sogani, sirmik
- Vietnamese: la he

FLAVOR GROUP

- medium

WEIGHT PER TEASPOON (5 ML)

- whole chopped freeze-dried leaves: 0.3 g

CHIVES

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 4 tsp (20 mL) dry, 8 tsp (40 mL) fresh
- vegetables: 1 tbsp (15 mL) dry, 6 tsp (30 mL) fresh
- carbohydrates: 1 tbsp (15 mL) dry, 6 tsp (30 mL) fresh

COMPLEMENTS

- scrambled eggs and omelets
- sour cream
- salad dressings and mayonnaise
- white sauces
- mashed potatoes
- vichyssoise
- seafood and chicken dishes as a garnish

USED IN

- fines herbes
- salad herbs

COMBINES WITH

- basil
- chervil
- cress
- lovage
- onion and garlic
- parsley
- salad burnet
- sorrel

later use or else mixed with butter and kept in the refrigerator until used to spread on sandwiches. Most of the dried chives available are onion chives, possibly because the tiny, bright green rings are more attractive and a lesser weight fills a container more effectively. Freeze-dried chives are vastly superior in quality to air-dried ones and are usually labeled as such. Chives are inordinately light-sensitive and are best purchased from retailers who keep their stock “under the counter” to prevent deterioration. Always keep your dried chives in an air-tight pack, in a cool, dry place and away from any source of light.

Use

It is almost impossible to overuse chives when they are added to a savory dish, such is their agreeable taste and fresh appearance. They are an essential ingredient in the traditional French herb blend of chives, chervil, parsley and tarragon known as fines herbes, and chives also find their way into many commercially produced packet soups and sauces. Add chives to dishes that are being cooked for a short time, such as omelets, scrambled eggs and white sauces. For other applications, only include in the last 5–10 minutes of cooking as any prolonged heat will destroy much of the flavor. Fresh chives are excellent as a garnish on fish and chicken, and chopped chives are both attractive and tasty in salad dressings and mayonnaise.

Carrot Soup with Chive Muffins

Chives

We usually make this carrot soup without the cream, but when we entertain, the addition of cream adds a feeling of lushness.

- ¼ cup (50 mL) butter
- 1 small onion, chopped
- 4 cups (1 L) chicken or vegetable stock
- 1 lb (500 g) young carrots (unpeeled), sliced into ½-inch (1 cm) rounds
- 1 tsp (5 mL) smoked paprika
- ½ tsp (2 mL) freshly ground black pepper
- salt (optional)
- 1 cup (250 mL) table (18%) cream (optional)
- 4 tsp (20 mL) chopped fresh chives, for garnish
- 4 chive muffins (see recipe, p. 204)

Melt butter in a heavy-based saucepan over medium heat. Add chopped onion and cook until soft and translucent, about 5 minutes. Add stock and bring to a boil. Add carrots, paprika and pepper; bring back to a boil, then reduce heat to a simmer and cook for 15–20 minutes, or until carrots are tender. Remove from heat and let cool a little before puréeing in a blender. Taste and add salt, if desired (some commercial stocks are saltier than others). Stir in cream, if desired. Ladle into 4 bowls and sprinkle with chives. Serve with muffins. Serves 4.

Chive Muffins

For Muffin Cups

- 2 tbsp (25 mL) melted butter
- $\frac{1}{2}$ cup (125 mL) cornmeal
- 2 cups (500 mL) self-rising flour*
- 2 tsp (10 mL) salt
- 1 tsp (5 mL) baking powder
- 1 tsp (5 mL) sweet paprika
- 2 eggs, lightly whisked
- 1 cup (250 mL) buttermilk
- $\frac{3}{4}$ cup (175 mL) milk
- $\frac{1}{2}$ cup (125 mL) shredded Cheddar cheese
- $\frac{1}{2}$ cup (125 mL) freshly grated Parmesan cheese
- $\frac{1}{2}$ cup (125 mL) vegetable oil
- 1 bunch chives, chopped into $\frac{1}{2}$ -inch (1 cm) pieces (about $\frac{1}{4}$ cup/50 mL)

Preheat oven to 350°F (180°C). Grease a 12-cup muffin pan with melted butter. Sprinkle cornmeal into muffin cups and shake around to coat the butter, then turn pan upside down to remove excess cornmeal.

Sift flour, salt, baking powder and paprika into a large bowl. In a separate bowl, mix eggs, buttermilk, milk, Cheddar, Parmesan and oil. Slowly pour wet mixture into dry, stirring with a wooden spoon until incorporated and smooth. Stir in chives. Pour into prepared pan and bake for 15–20 minutes, or until muffins are risen and golden. Let cool in tin for 5 minutes before turning out onto a wire rack to cool completely. Makes 12.

*If you can't find self-rising flour, substitute an equal amount of all-purpose flour and increase the baking powder to 4 tsp (20 mL).

Cinnamon and Cassia

OTHER COMMON NAMES

- cinnamon: cinnamon bark, cinnamon quills
- cassia: baker's cinnamon, bastard cinnamon, false cinnamon, Dutch cinnamon, Indonesian cinnamon, Saigon cinnamon
- cassia leaves: Indian bay leaves, Indonesian bay leaves, tejpat

BOTANICAL NAMES

- Cinnamon: *Cinnamomum zeylanicum*
- Chinese cassia: *C. cassia*
- Batavia cassia: *C. burmannii*
- Saigon cassia: *C. loureirii*
- cassia leaves: *C. tamala*

FAMILY

- Lauraceae

CINNAMON AND CASSIA both come from tropical evergreen trees related to the bay laurel, avocado and sassafras. The selected sections of bark that are stripped from cinnamon and cassia are often confused, even though they are distinctly different in appearance and flavor profile. Cinnamon trees, when allowed to grow in their wild state, can grow 26–56 feet (8–17 m) tall and develop girths of 12–24 inches (30–60 cm) across. Cassia trees are larger, reaching 59 feet (18 m) and producing stout trunks up to 5 feet (1.5 m) wide. The young leaves of cinnamon trees are an intense red, turning pale green and maturing to a dark, glossy green on the top. The flowers are pale yellow, small (around $\frac{1}{8}$ inch/3 mm in diameter) and have a somewhat fetid smell. While there are different grades of both cinnamon and cassia, both are recognizable in their whole and ground forms.

Cinnamon quills are most often seen in $3\frac{1}{4}$ -inch (8 cm) lengths of many concentric layers of paper-thin bark, rolled into cylinders about $\frac{1}{2}$ inch (1 cm) in diameter. Sometimes quills up to 3 feet (1 m) in length will be found, especially in

Clockwise from top: whole cinnamon quills; ground cinnamon quills; whole cinnamon bark; ground cinnamon bark



CINNAMON AND CASSIA

NAMES IN OTHER LANGUAGES

CINNAMON

- Arabic: qurfa
- Burmese: thit-ja-boh-gauk
- Chinese (C): yuhk gwai, sek laahn yuhk gwai
- Chinese (M): jou kuei, rou gui, xi lan rou gui
- Czech: skorice, skorice cejlonska
- Danish: kanel
- Dutch: kaneel
- French: cannelle, cannelle type Ceylan
- German: zimt, echter zimt
- Greek: kanela
- Hungarian: fahej
- Indian: darchini, dalchini
- Indonesian: kayu manis
- Italian: cannella
- Japanese: seiron-nikkei
- Malay: kayu manis
- Portuguese: canela
- Russian: koritsa
- Spanish: canela
- Sri Lankan: kurundu
- Swedish: kanel
- Thai: ob chuey
- Turkish: Seylan tarcini, darcin
- Vietnamese: cay que, nhuc que

cinnamon's native Sri Lanka. The color of cinnamon is a uniform light brown to pale tan. Cinnamon quills are ground to an aromatic powder that is a similar color and has a very fine dusty texture. The fragrance is sweet, perfumed, warm and pleasantly woody with no trace of bitterness or dominating pungency, which helps one appreciate why it has been regarded for centuries as having aphrodisiac properties.

Cassia bark, by contrast, is generally found in two whole forms. One is flat pieces of dark brown slivers 4–8 inches (10–20 cm) long and 1 inch (2.5 cm) wide, smooth on one surface and rough and corky on the other. The other form is as quills. Cassia quills are smooth and similar in appearance to 3¼-inch (8 cm) cinnamon quills, except for the thickness of the curl of bark (about ⅛ inch/3 mm as opposed to paper thin) and the reddish brown color. The aroma of ground cassia (grinding releases the volatile oils and makes the smell more obvious) is highly perfumed, penetrating, sweet and lingering. The flavor has an agreeable bitterness that conveys an impression to many people of superiority over cinnamon. Cassia powder will usually appear darker and redder than cinnamon and because the texture is so fine its flowing characteristics are similar to the finest of talcum powders.

Origin and History

Cinnamon is said to be among the oldest of spices. References to it date back 2,500 years to the land of the pharaohs, where cinnamon was used in the embalming process. The problem with tracing cinnamon through antiquity is the confusion between cinnamon and cassia. For instance, cinnamon referred to in the Bible may have been any combination of members of the *Cinnamomum* genus. Even the experts differ on the magnitude of this family, naming 50–250 different types of cinnamon and cassia. What is known is that cinnamon and cassia were widely traded as they never grew in the Holy Land.

In 1500 BC the Egyptians voyaged to “the land of Punt” (present-day Somalia) to find precious metals, ivory, exotic animals, spices and cinnamon, which no doubt had reached there via the geographic proximity of Arab traders. Any search for the true origins of cinnamon and cassia traded in these times is further shrouded in mystery by the improbable stories promulgated by these traders to keep their sources of supply a

secret. One such fable claimed that cinnamon sticks were used by giant birds in the land of Dionysus (Greece, India or lands to the east) to build their nests atop precipitous mountains. To collect cinnamon, courageous Arabian traders would leave the cut-up carcasses of oxen and donkeys near these nests, hide at a safe distance to let the birds swoop down, pick up the heavy joints and take them back up to their eyries. The nests, not being strong enough to accommodate such weight, would break and fall to the ground, from where the Arabs would collect the valuable sticks and trade them back to the West.

The ancient Greeks and Romans probably had both cinnamon and cassia available to them. In AD 66 the Roman statesman Pliny the Elder, already concerned about Rome's balance of payments problem, was horrified when Emperor Nero burned a whole year's supply of cinnamon at his wife's funeral. By the 13th century travelers were writing about the cinnamon from Ceylon (Sri Lanka), and it was around this time that the caste that exclusively engaged in the harvesting and peeling of cinnamon (the Chalais) emigrated from India.

Records of cassia in China stretch back to 4000 BC and, as it was never known to grow wild there, it must have entered China from Assam, the region in the northeast of India bordering on China. Batavia, or Java, cassia grew wild on the Indonesian islands of Sumatra, Java and Borneo. In the first millennium AD the Indonesians colonized Madagascar, bringing their native cassia with them, there being little doubt that they would have traded with the Arabs. One can imagine the network of cinnamon and cassia routes spreading across the known world; from Indonesia to Madagascar, thence by Arab, Phoenician and Roman traders to the Mediterranean, and overland through Africa to find its way to Egypt. At the same time it traveled from Sri Lanka to Rome and Greece, and from Assam into China via the famous Silk Road. Cinnamon was one of the spices sought by most 15th- and 16th-century explorers, the Portuguese having a virtual monopoly on its supply after arriving in Ceylon in 1505. They were in turn usurped by the Dutch, who had control of Ceylon from 1636 until they lost it to the British in 1796. Today, the world's best cinnamon still comes from Sri Lanka and various grades of cassia come predominantly from China, Indonesia and Vietnam.

NAMES IN OTHER LANGUAGES

CASSIA

- Arabic: darasini, kerfee
- Chinese (C): gun gwai, gwai sam, mauh gwai
- Chinese (M): guan gui, gui xin, keui tsin
- Czech: skorice cinska
- Danish: kinesisk kanel
- Dutch: kassia, bastaardkaneel
- French: canelle de Cochinchine, casse
- German: Chinesischer zimt, kassie
- Greek: kasia
- Hungarian: kasszia, fahejkasszia
- Indian: tej pattar (leaf), kulmie dalchini
- Italian: cassia
- Japanese: kashia, keihi, Shinamonkassia
- Polish: kasja, cynamon chinski
- Portuguese: canela-da-china
- Russian: korichnoje derevo
- Spanish: casia, canela de la China
- Swedish: kassia
- Thai: bai kravan (leaf), ob choey (bark)
- Turkish: cin tarcini
- Vietnamese: que don, que quang, que thanh

FLAVOR GROUP

- sweet

**WEIGHT PER
TEASPOON (5 ML)**

- whole average 3¼-inch (8 cm) quill: 4.0 g
- ground: 2.7 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: one 3¼-inch (8 cm) quill
- white meats: half 3¼-inch (8 cm) quill
- vegetables: half 3¼-inch (8 cm) quill
- carbohydrates: 1 tbsp (15 mL) ground cinnamon; 2 tsp (10 mL) ground cassia

COMPLEMENTS

- cakes
- sweet pastries and biscuits
- stewed fruits
- curries
- beverages such as chai tea
- Moroccan tagines
- preserved lemons

USED IN

- curry powders
- sweet mixed spice
- ras el hanout
- tagine spice blends
- garam masala
- quatre épices
- barbecue spice blends
- Asian master stocks
- pickling spices
- Cajun spice blends

Processing

The processing of cinnamon in Sri Lanka is possibly one of the most dexterous skills still demonstrated by traditional workers in the spice trade today and it is fascinating to watch. Cinnamon peelers work in groups comprising two or three families who supply their labor to farmers under contract. Cinnamon trees are cut down to approximately 6 inches (15 cm) above the ground about two to three years after planting and soil is mounded up around the stumps to encourage the formation of shoots. Four to six shoots are allowed to develop for up to two years before being harvested when they are about 5 feet (1.5 m) long and ½–1 inch (1–2.5 cm) in diameter. After cutting, unwanted shoots are pruned, the earth is piled up again and more canes in the “stand” of cinnamon will grow for the next harvest. Harvesting takes place after the first flush of red leaves starts to turn pale green and the sap is flowing freely. The cutter will test these stems to determine when the bark is most easily peeled and after cutting transport them to the farmer’s house or sheds where the peeling takes place.

To watch a cinnamon peeler at work is akin to witnessing a magic show where the hand appears to be quicker than the eye. With extraordinary dexterity the peeler first takes a cut stem, and using a crude instrument, scrapes off the outer layer of corky-looking bark and discards it. Next he rubs the stem with a brass rod, bruising and loosening the remaining paper-thin layer of cinnamon, called *agissa* (an inner bark), and preparing it for peeling. Sitting on the ground with one end of the cinnamon stem gripped between big toe and second toe and, using a dangerous-looking, sharp, pointed knife, he makes two cuts around the stem about 12 inches (30 cm) apart. A longitudinal slit is also made along the entire length before he deftly removes these gutters of fine, underneath bark, which are put out in the sun for a short time (less than an hour) to firm up and partially dry. The peeler then begins telescoping one paper-thin 12-inch (30 cm) length of *agissa* into the other until a 3-foot (1 m) quill is formed. Smaller pieces of bark that break or split and come from uneven knots on the timber are placed inside the scroll until it is full of slivers of cinnamon. The still somewhat moist, fragrant, surprisingly lemon-scented quill is rolled until tight and then put aside to dry. Drying has to take place in the shade, as sunshine will warp and crack the quills, making them less desirable. Racks are often created by running strings at ceiling height in the farmer’s house from wall to wall so the drying cinnamon quills

are suspended like a fragrant false ceiling until dry and ready to take to the trader.

Cinnamon from Sri Lanka is traded in four forms, the highest quality being whole *quills* roped together in burlap-covered, cylindrical bales just over 3 feet (1 m) long and weighing 100 pounds (45 kg). The most perfectly made, tightly rolled and evenly joined quills are considered to be the best. In the course of transporting and handling, some quills are damaged, so when they are put into bales these broken pieces are called *quillings*. Another grade is referred to as *featherings*, and this consists of the inner bark of twigs and small shoots that were not sufficiently large to use as the basis for full-sized quills. They are still “real” cinnamon; they simply lack the visual appeal of good-quality quills. Most ground cinnamon is made from cinnamon featherings. Cinnamon *chips* are the lowest grade of true cinnamon, made from shavings

COMBINES WITH

- allspice
- caraway
- cardamom
- chili
- cloves
- coriander seed
- cumin
- ginger
- licorice
- nutmeg
- star anise
- tamarind
- turmeric

Cassia quills, whole and ground



and trimmings, including pieces of outer bark and the occasional twig or stone. A poor-quality, dark brown, coarse cinnamon powder is made from either cinnamon chips or outer and inner bark cut from mature, semi-wild trees in the Seychelles or Madagascar, which accounts for much of the world's supply of "unscraped" cinnamon bark.

Chinese cassia, Batavia (or Indonesian) cassia and Saigon (or Vietnamese) cassia are harvested in a different manner from cinnamon. With cassia, the trees are stripped of bark at the beginning of the rainy season, when it is easiest to remove. These trees are grown in cassia forest plantations, and each tree is usually harvested when it is less than 10 years old. This means that a well-stocked nursery of seedlings is essential to maintain production. Cassia trees are grown from seeds gathered beneath the trees, and the best seeds for germination are said to be the ones that have passed through the intestines of birds that ate the small green fruits. The harvesting process begins by scraping the lower trunk with a small knife to remove moss and the outer cork. The bark is then cut off in sections, the tree felled and the remaining bark removed in the same way. In southern China, the bitter outer material is scraped off after removing the bark from the tree, after which it is dried in the sun, where it curls into thick-scrolled quills that are often confused with cinnamon. In some parts of Vietnam, a complicated process of curing, washing, drying and fermenting slabs of cassia produces a more valuable grade. Cassia buds, which are sometimes used in sweet pickles, are the dried immature fruits, usually from Chinese cassia. They have a cinnamon-like fragrance and a warm, pungent aroma. As the demand for cassia buds has never been very high, generally only a few trees in a plantation are left undisturbed to produce them.

Buying and Storage

In some countries, such as Australia and England, it has been illegal to sell cassia as cinnamon (even though many merchants do), whereas in France one word, *cannelle*, refers to both cinnamon and cassia. In the United States there are no restrictions on the naming of cinnamon and cassia; "cinnamon" is the name used most often to describe both. While the quality may vary within the types of powdered cinnamon and cassia sold, they are generally available in three main grades. Cinnamon bark is the lowest grade; it is a dark brown, coarse,

slightly bitter powder and most often the cheapest. Ground cinnamon quills are the best grade of true cinnamon, even though they are made from quillings or featherings. Ground cassia, often euphemistically called “baker’s cinnamon” or “Dutch cinnamon” in Australia, is usually lower-priced than ground cinnamon quills but more expensive than ground cinnamon bark. Many pastry cooks and people familiar with the aromatic pungency of cassia prefer it to cinnamon. Cinnamon and cassia are not easy to grind yourself, so if a recipe calls for ground cinnamon or cassia, buying a good-quality powder is recommended. As the most pleasing, fragrant, volatile top notes will evaporate easily, it is most important to store ground cinnamon or cassia in an airtight container protected from extremes of heat and humidity. Whole cinnamon quills and cassia bark are relatively stable and will keep for two to three years as long as they are not exposed to extreme heat.

Use

Whole cinnamon quills (a 3¼-inch/8 cm piece is often referred to in recipes as a “cinnamon stick”) and pieces of cassia bark are used in dishes when the flavor is intended to infuse into the liquid medium. Therefore, when stewing a compote of fruit, preparing a curry, a spiced rice dish such as biryani or even making glühwein, use the cinnamon or cassia whole. The Mexicans are fond of cinnamon tea — *té de canela* — made with broken cinnamon quills in the same way as a pot of Indian or herbal tea and left for a few minutes to infuse. The tea is then strained into a cup or glass and drunk hot with sugar to taste.

The powder form is most popular in Western countries when cinnamon is mixed with other ingredients to flavor cakes, pastries, fruit pies, milk puddings, curry powders, garam masala, mixed spice and other spice blends. The greater pungency of cassia has become popular in commercial baked goods such as cinnamon doughnuts, apple strudel, fruit muffins and sweet, spiced biscuits. A large proportion of bakers in North America use cassia instead of cinnamon, possibly because the customer-enticing aroma of baked cassia wafts into the surrounding atmosphere more effectively than that of cinnamon.

Which one you use should simply be a matter of personal preference; just keep in mind that cassia is more strongly perfumed and pungent than cinnamon, so it is best used with

other distinctly flavored ingredients such as dried fruits. Cinnamon, on the other hand, complements fresh ingredients such as apples, pears and bananas. I often mix cinnamon and cassia half and half to get the benefits of both.

The leaves of cinnamon and cassia have a distinctly clove-like aroma and taste and may be used, either fresh or dried, in Indian and Asian cooking. When we were visiting the cassia forests in Khe Dhu in North Vietnam, our hosts picked up some large, dry cassia leaves and slipped them into their shoes as an aromatic odor-fighting inner sole. In India the variety *C. tamala* is used to produce a low-grade cinnamon bark, and the leaves are added to recipes as an ingredient commonly called *tejpat*. In Indonesia the leaves of *C. burmannii* are used in cooking and are often referred to by Westerners as “Indonesian bay leaves.” However, strictly speaking, the Indonesian bay leaf, or *daun salam*, is the leaf of *Syzygium polyanthum*, which has a mild flavor. I would not recommend using European bay leaves (*Laurus nobilis*) as a substitute; a better alternative would be to add either a whole clove or a small pinch of ground cloves to the recipe.

Cinnamon and Pumpkin Whole Wheat Bread

Cinnamon

This recipe should only be made with true cinnamon for its delicate flavor and mild sweetness. The bread is delicious eaten straight from the oven with butter, or it can be cooled and stored in an airtight container for up to 3* days.

12 oz (375 g) pie pumpkin, peeled and grated

1 egg, beaten

3 cups (750 mL) whole wheat self-rising flour*

$\frac{3}{4}$ cup (175 mL) raw sugar

$\frac{3}{4}$ cup (175 mL) butter, melted

$\frac{1}{2}$ cup (125 mL) liquid honey

1 tbsp (15 mL) ground cinnamon

Preheat oven to 350°F (180°C) and line a 10- by 6-inch (2.5 L) loaf pan with parchment paper. In a large bowl, mix pumpkin, egg, flour, sugar, butter, honey and cinnamon until a thick dough forms. Pour into prepared pan and bake for 50 minutes, until a skewer inserted in the center comes out clean. Let cool in pan on a wire rack for 5 minutes before carefully turning out. Makes 1 loaf.

*If you can't find whole wheat self-rising flour, substitute 3 cups (750 mL) whole wheat flour and add $4\frac{1}{2}$ tsp (22 mL) baking powder.

Spiced Duck Breast with Cassia Glaze

In this recipe, cassia combines beautifully with duck and Chinese five-spice.

- 4 boneless duck breasts, skin on
- 1 tbsp (15 mL) Chinese Five-Spice (see p. 551)
- 2 bunches choy sum (Chinese flowering cabbage), trimmed and washed
- 1 tbsp (15 mL) light soy sauce

Glaze

- $\frac{1}{3}$ cup (75 mL) lightly packed soft brown sugar
- 1 tbsp (15 mL) Cabernet Sauvignon or red wine vinegar
- 1 tbsp (15 mL) sultana raisins
- 1 tbsp (15 mL) orange juice
- $\frac{3}{4}$ tsp (4 mL) ground cassia

Coat duck breasts in Chinese five-spice, cover and refrigerate for at least 1 hour.

Heat a frying pan to medium-high heat and add duck breasts, skin side down (no oil is needed because of the fat in the skin). Reduce heat to low and cook for 10 minutes, until the skin has rendered down, then turn over, cover and cook for 10 minutes for medium-rare or 15 minutes for well-done. Remove duck to a cutting board, reserving 1 tbsp (15 mL) pan fat. Cover duck with foil and let rest for 5 minutes.

For the glaze, combine all ingredients in a saucepan over low heat and stir until sugar dissolves and mixture thickens. Remove from heat.

Sauté choy sum in the reserved pan fat until wilted. Add soy sauce.

Brush glaze over the skin side of duck breasts and cut on the diagonal into 4 or 5 pieces (depending on size). Serve on a bed of choy sum. Serves 4.

Cloves

BOTANICAL NAMES

- *Eugenia caryophyllata*, also known as *Syzygium aromaticum*

FAMILY

- Myrtaceae

NAMES IN OTHER LANGUAGES

- Arabic: kabsh qaranful
- Burmese: ley-nyin-bwint
- Chinese (C): ding heung
- Chinese (M): ding xiang
- Czech: hřebicek
- Danish: kryddernellike
- Dutch: kruidnagel
- French: clou de girofle
- German: gewürznelke
- Greek: garifalo, karyofylla
- Hungarian: szegfuszeg
- Indian: laung, lavang
- Indonesian: cingkeh
- Italian: garofano
- Japanese: choji
- Malay: bunga cengkeh
- Portuguese: cravo, cravinho
- Russian: gvozdika
- Spanish: clavo
- Sri Lankan: karabu nati
- Swedish: kryddnejlika
- Thai: kaan ploo
- Turkish: karanfil
- Vietnamese: dinh huong

WHOLE CLOVES as we know them are the dried, unopened flower buds of an attractive tropical evergreen tree that reaches about 33 feet (10 m) in height and has dense, dark green foliage. The trunk of a clove tree is around 12 inches (30 cm) in diameter, and usually forks near the base into two or three main branches of very hard wood with gray, rough bark. The lower branches often die back, and when they are closely planted, these conical-shaped trees form a magical aromatic canopy. New leaves are bright pink, and mature with a glossy, dark green upper surface, the underneath being paler green and dull. Clove buds are borne in clusters of 10–15, and are picked when they have reached full size, though still green and just starting to turn pink, reminding one of the unopened eyes of baby marsupials. If the buds are not gathered, they will flower and turn into oblong, drooping fruits known as “mother of cloves,” which have no use in the spice trade.

When dried, cloves are reddish brown to dark brown in color, approximately $\frac{1}{3}$ – $\frac{1}{2}$ inch (8–10 mm) long, nail-shaped and tapered at one end. Interestingly, the name “clove” derives from the Latin *clavus*, meaning “nail.” In German *nelke* means “little nails” and the Chinese *ding xiang* means “nail spice.”

Cloves, powdered and whole



CLOVES

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 2.1 g
- ground: 3.1 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 5 cloves
- white meats: 3 cloves
- vegetables: 3 cloves
- carbohydrates: ¼ tsp (1 mL) powder

COMPLEMENTS

- cakes
- sweet pastries and biscuits
- stewed fruits
- curries
- beverages such as glüwein
- Moroccan tagines
- preserved lemons
- pickles

The “bud” end has a friable, paler ball appearing to sit atop four engagement-ring-style clasps. The aroma of cloves is pungent, warm, aromatic, camphor-like and faintly peppery. The flavor is intensely pungent, and words like medicinal, warming, sweet, lingering and numbing come to mind. When used in moderation, cloves bring a pleasing, palate-cleansing freshness and sweet spicy flavor to food.

Origin and History

Cloves are native to the eastern Indonesian islands referred to as the Moluccas (including Ternate, Tidore, Motir, Makian and Batjan). In an extraordinary archaeological discovery in Syria (ancient Mesopotamia), the remains of cloves were found in a domestic kitchen site dating back to around 1700 BC. One can scarcely imagine the journey those cloves made from the Moluccas, by sea and land, and the number of hands they passed through on their way to their final destination. Cloves are believed to have been introduced to China during the Han dynasty (206 BC–AD 220). They were probably the first form of breath freshener, as it was recorded that courtiers held cloves in their mouths to sweeten the breath when addressing the emperor. Cloves were a caravan import known to the Romans and were brought into Alexandria in the second century AD. By the fourth century AD this spice was well known around the Mediterranean and by the eighth century throughout Europe. The Arabs, who traded cloves from centers in India and Ceylon, kept the origins of their precious cargo a closely guarded secret.

Following the Crusades in Europe, disease and plagues were commonplace and there was a constant search for spices that could sweeten the air, which must often have been full of the stench of death. Cloves were found to have a natural anti-septic effect, and the pungent oil gave quick relief from toothache. By the 13th century, people were making pomanders (apples or oranges studded with cloves) to carry on them to ward off the plague.

On his return from the Orient in 1297, Marco Polo recalled having seen plantations of cloves on East Indian islands in the China Sea. Columbus sailed west in search of these spice islands but instead found the West Indies. Five years later, Vasco da Gama sailed around the Cape of Good Hope to India on the same search, and obtained cloves in Calicut (Calcutta), a trading center that had probably brought the cloves from the East Indies.

As of 1514, the Portuguese controlled the clove trade, and the search for spices in general was on in earnest. In 1522 the only surviving ship of Magellan's circumnavigation fleet returned to Spain with 29 tons of cloves, more than enough to pay for the entire cost of the expedition. The captain, Sebastian del Cano, was rewarded with a pension and a coat of arms comprising three nutmegs, two sticks of cinnamon and twelve cloves. The Portuguese monopoly in the Moluccas was broken by the Dutch, who expelled them in 1605 and ruthlessly maintained control for another 200 years using cruel and gruesome measures. Part of the Dutch strategy to maintain high prices for cloves was to restrict by law the cultivation of cloves to the island of Amboina, uprooting and burning trees growing on other islands. The death penalty was imposed on anyone cultivating or selling the spice anywhere except Amboina. Nonetheless, numerous attempts were made from 1750 to the early 1800s to break this stranglehold on the clove trade. Most successful was the superintendent of Ile de France (Mauritius), an intrepid Frenchman named Pierre Poivre (the original Peter Piper of the nursery rhyme), who smuggled some "mother of cloves" out of Amboina and propagated a small number of trees. With varying degrees of success, clove plantations were established on Réunion, Martinique and Haiti and in the Seychelles.

Meanwhile, with the abolition of slavery gaining momentum in the West, Zanzibar had a surplus of slaves until an Arab by the name of Saleh bin Haramil al Abray established clove plantations to put the slaves to work on. Pierre Poivre's successful breaking of the Dutch monopoly on the clove trade had not gone unnoticed by Saleh bin Haramil al Abray. Sultan Said of Oman ruled his kingdom from Muscat; however, in 1827 he sailed to Zanzibar and made a commercial treaty with America, mostly involving the trade in ivory. He soon realized, though, that to grow Zanzibar's wealth he would have to increase trade with America and Europe. He identified the clove trade as a means to achieve his objectives. The ill-fated Saleh bin Haramil al Abray had all his plantations confiscated because Sultan Said saw him as a political threat. Sultan Said then decreed that three clove trees would be planted for every coconut palm on Zanzibar and Pemba, making Zanzibar one of the world's largest producers by the time he died in 1856. Despite a major setback with "sudden-death disease," which attacked mature trees, Zanzibar became, along with Madagascar, one of the world's major clove producers.

USED IN

- curry powders
- sweet mixed spice
- ras el hanout
- tagine spice blends
- baharat
- berbère
- garam masala
- Chinese five-spice
- mulling spices
- pickling spices
- quatre épices (sweet and savory)

COMBINES WITH

- allspice
- amchur
- cardamom
- chili
- coriander seed
- cumin
- ginger
- kokam
- licorice
- nutmeg
- star anise
- tamarind
- turmeric

Processing

The first harvesting of cloves takes place when the trees are six to eight years of age and continues for up to 50 years, with some trees reportedly living for up to 150 years. The trees are surprisingly sensitive and will usually only deliver one bumper crop in four years, the success of following crops being largely dependent on the degree of sympathy employed in the previous harvest. Rough handling and breaking of branches will generate debilitating shock in clove trees, diminishing subsequent yields. In Sir James Frazer's famous work, *The Golden Bough*, he described the attitude of the native people to their crops: "When the clove trees are in blossom, they are treated like pregnant women. No noise may be made near them; no light or fire may be carried past them at night; no one may approach them with his hat on, all must uncover in their presence. These precautions are observed lest the tree should be alarmed and bear no fruit, or should drop its fruit too soon like the untimely delivery of a woman who has been frightened in her pregnancy." Although modern attitudes have changed, the planting and harvesting of cloves still has religious significance in some villages.

Clove clusters are picked by hand when the buds are at full size, but before any petals have fallen to expose the stamens. As they do not all reach harvesting stage at the same time, a picker must be skilled enough to know the best clusters to pick and put in baskets. The filled baskets are returned to a central area, where the flower buds are removed from the flower stems by twisting the cluster against the palm of the hand. The snapped-off buds are spread out to dry on woven mats, where the tropical sun dries them in a few days to their characteristic reddish brown color. During drying, enzymes create the volatile oil eugenol, which is also present in lesser concentration in dried clove stems. A traditional way to gauge correct dryness of cloves is to hold them tightly in one's hand, and if they hurt, the spiky sections are hard, an indication of being properly dried. Having lost about two-thirds of their weight, 2 pounds (1 kg) of cloves may consist of up to 15,000 buds.

Clove leaves are also harvested to produce clove leaf oil by steam distillation. This volatile oil is used in perfumery and food and beverage manufacturing. Because the harvesting of leafy branches for this oil seriously diminishes yields of cloves and makes the trees susceptible to fungal infection, it is not a common practice among the major producing countries.

Buying and Storage

When buying whole cloves, look for clean, well-presented buds, as this is one of the best indications of how much care has been taken in the harvesting process. Each bud should be intact, still retaining the little soft, friable ball on the top. Look out for short clove-sized sticks, which are in fact clove stems. Clove stems contain about 30% of the volatile oil in a clove, and are one of the most popular ways for unscrupulous spice traders to adulterate their goods. Another “trick of the trade” has been to boil cloves in water to extract some of the oil, after which the depleted cloves are dried and sold. Only buy ground cloves from a reputable establishment that can assure you they have been recently milled, as ground cloves lose their volatile oil fairly quickly. Ground cloves should be dark brown, because light brown powder that is somewhat fibrous and gritty is probably heavily cut with ground clove stem. Store whole and ground cloves in airtight packaging and keep away from extremes of heat, light and humidity.

Use

In Indonesia ground cloves are mixed with tobacco to make kretek cigarettes, which crackle as they burn and give off a distinctive aroma. Encountering the smell of a kretek cigarette anywhere in the world immediately transports one back to Asia. Cloves are an essential component of a clove orange, or pomander (see p. 370), a dramatic example of the antibacterial qualities of cloves.

Due to their high pungency, cloves must always be used sparingly in cooking, as too much can easily overpower a meal. Even though care is to be taken in their application, it is hard to imagine many traditional foods, including apple pie, ham, stewed fruit and pickles, without the addition of cloves. In Denmark they are an ingredient in the popular “pepper cake,” and they are frequently added to exotic Arabian dishes. A popular mulled wine of the Middle Ages called hippocras was made with ginger, cloves, and other spices. Right up to the present day, the warming spiced wines of Europe and Scandinavia are flavored in the same way. Cloves are used in Indian and Asian curries and, as a truly international spice, can be found in the kitchens of every continent of the world.



Cloves **Smoky Clove-Scented Beef**

This is a quick and easy way to “smoke” food. A bamboo steamer will work, as will a saucepan with a steamer insert. Serve with saffron rice garnished with fresh coriander.

- 1 ½ lbs (750 g) good-quality minced beef
- ¼ cup (50 mL) grated onions
- 2 tsp (10 mL) finely chopped garlic
- 1 tsp (5 mL) ground green cardamom seeds
- 1 tsp (5 mL) grated gingerroot
- ½ tsp (2 mL) medium-heat chili powder
- ½ tsp (2 mL) ground cloves

For Smoking

- 2 cups (500 mL) white rice
- 1 ½ tsp (7 mL) whole cloves, lightly crushed
- 2 green cardamom pods, bruised
- 2 dried bay leaves

Mix beef, onions, garlic, cardamom, ginger, chili powder and cloves in a bowl. Using an electric hand blender or the pulse button of a food processor, blend beef mixture until the mince breaks down and starts to take on a pasty texture, but be careful not to overblend.

Mold the minced beef around skewers about 8 inches (20 cm) long. Leave 1 inch (2.5 cm) at each end and make the minced beef about 1 ½ inch (4 cm) in diameter, to make 10 kebabs.

Line a pan that your steamer will sit over with 3 layers of aluminum foil, then add rice, cloves, cardamom and bay leaves. Place the steamer over the pan and turn heat to medium. After about 5 minutes, when you start to smell the rice mixture and it is smoking, place beef skewers in the steamer. Steam beef for 5 minutes, then turn over and steam for 5 minutes. Remove the skewers and cook on a medium-heat barbecue for 10 minutes. Makes 10.

Coriander



OTHER COMMON NAMES

- Chinese parsley
- cilantro
- fragrant green
- Japanese parsley

BOTANICAL NAMES

- *Coriandrum sativum*
- perennial coriander:
Eryngium foetidum

FAMILY

- Apiaceae (formerly Umbelliferae)

THE CORIANDER plant provides us with a distinctive culinary herb (the leaf and root) usually associated with Asian food, and an essential spice (the fruit, or seed) now used throughout the world in both sweet and savory cooking. Coriander is a vigorous annual that grows to about 32 inches (80 cm) tall and has dark green, fan-shaped leaves resembling Italian parsley. The stems are slender and branched, the lower leaves quite round but becoming more divided and serrated further up the stem. A profusion of small, umbrella-shaped, pale pink, mauve to whitish flowers form and produce the seeds. Coriander leaves, also referred to as cilantro, have a fresh, grassy, pervading, insect-like aroma and lemony, clean, appetizing taste. From my experience about 20% of North Americans do not like the flavor of fresh coriander leaves, perhaps justifying the use of the term “fetid,” which many 20th-century European writers used to describe its aroma.

Another, lesser-known plant that resembles coriander in taste is called perennial or long coriander (*Eryngium foetidum*). This variety has gained some popularity because of its perennial habit. Gardeners get impatient with annual coriander (*Coriandrum sativum*), because no sooner does it start growing well than it flowers, goes to seed and dies. We first saw perennial coriander in Vietnam, where it is known as *ngo gai*, *mui tau* or *ngo tay*. It is believed to be native to the Caribbean Islands and is now widely cultivated in Southeast Asia. We have also seen it growing since at a Spices Board research station in Kerala, in the south of India. “Long” coriander has serrated leaves about 2 inches (5 cm) long, making them particularly useful in Vietnam because of the propensity there to wrap food. The aroma when crushed is similar to that of conventional coriander leaves. The only drawback is a slightly grassy after-taste and a sharp, spiky feel in the mouth. I have started using it, but tend to put the whole leaves into soups and remove them before serving. Unlike many leaves, which get harder as they mature, the largest leaves of perennial coriander are noticeably softer than the young ones.

Coriander seeds, which attain a completely different character upon drying, are small and almost spherical, $\frac{1}{4}$ inch (0.5 cm) in diameter and ribbed with more than a dozen longitudinal

**NAMES IN OTHER
LANGUAGES**

- Arabic: kuzhbare
- Burmese: nannambin (leaf), nannamazee (seed)
- Chinese (C): wuh seui (leaf) heung seui (seed)
- Chinese (M): yuen sui (leaf), hu sui (seed)
- Czech: koriandr
- Dutch: koriander
- Filipino: ketumbar (leaf)
- French: coriandre
- German: koriander (seed), Chinesische petersilie (leaf)
- Greek: koliandro, koriandro
- Indian: dhania pattar, hara dhania (leaf), dhania kothimbir (seed)
- Indonesian: daun ketumbar (leaf), ketumbar (seed)
- Italian: coriandolo
- Japanese: koendoro
- Malay: daun ketumbar (leaf), ketumbar (seed)
- Portuguese: coentro
- Russian: koriandr
- Spanish: cilantro (leaf), koriandro (seed)
- Sri Lankan: kothamalli kolle (leaf), kothamalli (seed)
- Swedish: koriander
- Thai: pak chee (leaf), luk pak chee (seed)
- Turkish: kisnis
- Vietnamese: ngo (leaf) ngo tay (seed)

lines like a tiny Chinese lantern. Two types of seeds are generally available. The light tan to pale brown ones most commonly seen (var. *vulgare*) have a delicious taste reminiscent of lemon peel and sage. The so-called Indian, or green, variety (var. *microcarpum*) is slightly smaller, more egg-shaped, pale yellow with a greenish tinge, and tastes a little like the fresh leaf, with lemon-like overtones. Coriander seeds have a papery husk and even when ground finely retain a coarse, sand-like texture that should not be gritty, the fiber taking up moisture and helping to thicken curries and spicy sauces.

Origin and History

Coriander, native to Southern Europe and the Middle East, is one of the most ancient of herbs. It is mentioned in the Bible, its seeds have been found in the tombs of the pharaohs, and it was known to be a favorite herb among the Greeks, Hebrews and Romans of antiquity. The name “coriandrum” was used by Pliny and is derived from the Greek word *koros*, which means “bug” or “insect.” One theory for this naming is explained by the insect-like aroma fresh coriander leaves have, while another is that the smooth, light brown seeds look like small beetles. The Ebers Papyrus from 1550 BC mentions coriander, as does Hippocrates in 400 BC. Coriander grew in the hanging gardens of Babylon, and in AD 812 Charlemagne ordered it to be grown on the imperial farms in central Europe. Love potions were made from coriander in the Middle Ages and it is mentioned in the *One Thousand and One Nights* as an aphrodisiac.

Coriander was introduced to Britain by the Roman legions, who carried the seeds with them to flavor their bread. Although popular up until Elizabethan times, it seemed to go out of fashion in English cooking. The history of coriander also dates back many thousands of years in India and China, where both the leaf and seed have been used. Taken to the Americas by the early colonists, it is particularly popular in Peru and Mexico. Coriander grows well in the temperate zones of the world, where other seed crops thrive. The essential oil of coriander, extracted by steam distillation, is used these days in perfumes and to flavor sweets, chocolate, meat and seafood products, liquors such as gin and to mask the offensive odors in medicines.



Left, top to bottom: ground Australian coriander seed; whole Australian coriander seeds; dried coriander leaf; whole Indian coriander seeds. Right: fresh coriander (cilantro)

FLAVOR GROUP

- amalgamating

**WEIGHT PER
TEASPOON (5 ML)**

- whole seeds: 1.6 g
- ground: 2.0 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: 5 tsp
(25 mL) ground
seeds, ½ cup
(125 mL) fresh leaves
- white meats: 4 tsp
(20 mL) ground
seeds, ½ cup
(125 mL) fresh leaves
- vegetables: 4 tsp
(20 mL) ground
seeds, ½ cup
(125 mL) fresh leaves
- carbohydrates: 4 tsp
(20 mL) ground
seeds, garnish with
fresh leaves

Processing

Coriander leaves are dried in the same way as green herbs such as parsley. While a reasonable product can be achieved with sophisticated dehydrators that remove the moisture without damaging the color and losing too much flavor, coriander leaves are difficult to dry at home, usually resulting in a loss of volatile top notes. You can prolong your enjoyment of a bunch of fresh coriander in two ways. One is to simply put the bunch, preferably with the roots intact, in a glass of water in the refrigerator, where it will last for a few days. The other is to chop the leaves and softer stem, include some finely chopped or grated root as well, place in an ice cube tray, cover with water and freeze. When cooking an Asian, Peruvian or Egyptian soup, simply throw in the ice cube of coriander about 10 minutes before the end of cooking.

Coriander seeds are harvested in the early morning or late afternoon when the presence of dew prevents shattering of the fruit. In many countries, such as India, the plants are cut, hung to dry and then threshed to remove the seeds. In Australia up to 3,300 tons of coriander seed is produced a year in the South Australian and western New South Wales regions, where the harvesting is carried out using wheat headers, yielding a consistent high-quality material.

Buying and Storage

Fresh coriander is best bought in bunches that retain the root system as they will stay fresher for longer and the roots are also particularly useful, especially in Asian cooking. Good-quality dried coriander leaves are underrated because they have almost no aroma. However, when added at the end of cooking or when sprinkled over hot food such as steamed rice, the moisture in the steam is enough to release a surprising amount of flavor, making them a passable substitute for fresh if none is available. To test the quality of dry coriander leaf, place a couple of leaves on your tongue and wait for about a minute for the characteristic taste to emerge. Coriander seeds should appear clean, and although some may have retained the little tail, which is about ⅛ in (3 mm) long, they should be free of sticks and longer stalks. Ground coriander seed is best purchased in small quantities as the fragrant, volatile flavor notes evaporate easily after grinding.

Use

Coriander leaves (cilantro) are used mostly in Asian, Indian, Middle Eastern, Peruvian, and Mexican recipes. As the delicate flavor is driven off by prolonged cooking, add coriander leaves in the last five minutes to get the best flavor. Coriander seed is one of the most useful spices to have in the kitchen. This is because as an amalgamating spice it mixes well with almost any combination of spices, whether sweet or savory. It is interesting to note how the essential oil is used to make medicines more palatable, because I have always noticed the way ground coriander seed effectively balances the sweet and pungent spices in blends as diverse as a sweet mixed spice or a fiery Tunisian harissa paste.

It is almost impossible to use too much coriander seed; in fact, some North African dishes use it by the cupful rather than the spoonful. If you have made a spice blend and realize you have been too heavy-handed with a pungent spice like cloves or cardamom, simply add twice the amount of ground coriander seed compared to the quantity of the dominant spice. For example, if you put in 1 tsp (5 mL) of ground cloves, add 2 tsp (10 mL) of ground coriander seed and in most cases the blend will be brought back into balance.

Some recipes will call for lightly dry-roasting or toasting the whole seeds prior to grinding and adding to a dish. Roasting modifies the flavor and creates a more complex taste profile appropriate to many Indian, Asian and North African meals. Coriander seeds should not be roasted for sweet applications, such as cakes, biscuits, apple pies and other fruit dishes. Whole coriander seeds are delicious in chicken casseroles and a few of the green Indian seeds placed in a pepper mill and ground over grilled fish is delicious. For recipes that call for ground coriander seed, you may grind the seeds in a mortar and pestle. A more effective method is to use a coffee or pepper grinder because, when not finely ground, the husks may seem a little gritty to some if not cooked for long enough to soften, say 30–40 minutes.

COMPLEMENTS LEAVES

- Asian salads
- stir-fries and curries
- Indian rice dishes as a garnish

SEEDS

- curries
- cakes
- biscuits
- fruit pies
- chicken and seafood casseroles

USED IN SEEDS

- curry powders
- sweet mixed spice
- ras el hanout
- baharat
- berbere
- tagine spice blends
- dukkah
- harissa paste blends

COMBINES WITH LEAVES

- basil
- curry leaves
- dill
- fenugreek leaves
- garlic
- lemongrass
- lemon myrtle
- pandan leaf
- parsley
- Vietnamese mint

SEEDS

combine with all culinary spices but have a special affinity with:

- akudjura
- allspice
- caraway
- cardamom
- chili
- cinnamon
- cloves
- cumin
- fennel seed
- ginger
- pepper
- turmeric
- wattleseed

When my mother was writing her books on herbs in the late 1950s and '60s, one of my favorite recipes was for Coriander Apple Crumble. Using freshly ground coriander seeds, this version with apple and rhubarb is a clear representation of just how versatile this wonderful spice is. Serve with whipped cream, ice cream or custard.

- 6 Granny Smith apples, peeled and sliced
- 1 bunch rhubarb (about 10 oz/300 g), cut into 2-inch (5 cm) pieces
- 4 whole cloves
- 2 tsp (10 mL) ground cinnamon
- 1 cup (250 mL) old-fashioned rolled oats
- 1 cup (250 mL) all-purpose flour
- ½ cup (125 mL) lightly packed brown sugar
- 2 tsp (10 mL) ground coriander seed
- ½ cup (125 mL) butter

Preheat oven to 350°F (180°C). Layer the apple and rhubarb in a greased ovenproof dish and sprinkle with the cloves and cinnamon.

Place the oats, flour, sugar and ground coriander seed into a bowl, mix to blend, then rub in the butter with your fingertips until the mixture is crumbly. Spread the crumble mixture evenly over the apples and rhubarb. *Do not press it down.* Bake for about 30 minutes, or until golden brown on top. Serves 4–6.

Cress

OTHER COMMON NAMES

- American cress
- American upland cress
- Arabic cress
- Brazil cress
- curled cress
- French cress
- garden cress
- Indian cress (garden nasturtium)
- watercress

BOTANICAL NAMES

- watercress:
Nasturtium officinale
- land cress, garden cress, curled cress, French cress:
Lepidium sativum
- Arabic cress: *Arabis caucasica*
- American cress:
Barbarea vulgaris
- Brazil cress: *Spilanthes oleracea*
- Indian cress:
Tropaeolum majus

MANY VARIETIES of sharp, peppery-tasting, soft-leaved, water-loving plants are referred to as cress. Some come from the same family, which includes its well-known cousins mustard and the ubiquitous cabbage, and some are from different families. The best-known is true watercress, which grows in running water and has a 'creeping habit. The stalks are hollow and sap-filled, its pale green leaves are small $\frac{1}{3}$ – $\frac{1}{2}$ inch (8–10 mm) and almost round, and the small, delicate flowers are white. It is often believed that cress can only be grown in running water; however, to the delight of those who love the tangy, peppery taste of watercress, there are a number of annual varieties that can be grown in moist, partly shady conditions. The best-known of these land cresses are the curled, upland and French varieties, which, although different in appearance, all share the characteristic sharp flavor we associate with cress.

Curled cress is similar in appearance to parsley with somewhat fleshier-looking leaves and a flavor that is hot and sharp. Upland cress has a series of jagged leaves that grow out from the center of the plant in thick round layers. French cress grows in small clumps. Its leaves are pale green and have a fine

Upland cress; watercress



FAMILY

- Watercress, land cress, curled cress, French cress, Arabic cress, American cress: Brassicaceae (formerly Cruciferae)
- Brazil cress: Asteraceae (formerly Compositae)
- Indian cress (garden nasturtium): Tropaeoacea

NAMES IN OTHER LANGUAGES (WATERCRESS)

- Chinese (C): sai eng chai
- Chinese (M): shui jie cai
- Czech: potocnice
- Dutch: waterkers
- French: cresson de fontaine
- German: brunnenkresse
- Greek: nerokardamo
- Hungarian: vizitorma
- Indonesian: selada air
- Italian: crescione d’acqua
- Japanese: oranda garashi
- Malay: selada ayer
- Portuguese: agriao
- Russian: kress vodyanoj
- Spanish: berro de agua, crenchas
- Thai: salat nam
- Turkish: su teresi
- Vietnamese: cai soong

FLAVOR GROUP

- pungent

texture with ruffled edges. “Indian cress” is the name given to common garden nasturtiums, whose flowers and leaves can be used in the same way as cress, the pickled flower buds sometimes considered as a substitute for capers.

Origin and History

Watercress is native to Europe and now grows wild in and on the banks of streams in North America. The ancient Greeks and Romans were fond of cress, probably because it provided an economical source of peppery bite to foods, when compared to expensive black pepper from India. Watercress was popular in the Middle Ages, when it was called *cresse*, and is mentioned in an early Anglo-Saxon herbal. The first cultivation of watercress began with people diverting watercourses into special pools, where trapped organic matter would provide nutrients and an ideal compact area for harvesting. Varieties of annual land cress originated in Persia centuries ago, and were the source of popular English “mustard greens” when land cress and mustard were grown together as pot-herbs. Indian cress, native to South America, was introduced to Spain in the 16th century. A Middle Eastern variety (*Arabis caucasuca*) called *barbeen* is consumed in Iran, Iraq and the Gulf States as a salad herb. In Australia a yellow marsh cress (*Rorippa islandia*) grows wild on the edges of running creeks and in ditches. This has small, yellow flowers and resembles a nasturtium in appearance and taste.

Processing

The most suitable environment for growing watercress is in running water, as there is a danger of infection if grown in stagnant or contaminated conditions. In the past, watercress was known to be a cause of the spread of typhoid when harvested from unclean waters. Today cress is farmed under strictly controlled, hygienic conditions, usually being grown in tanks supplied with fresh water or by hydroponics, which is possibly one of the most appropriate marriages of this technology with agriculture.

Buying and Storage

Both watercress and the varieties of land cress do not lend themselves readily to drying, so are generally only available fresh. Watercress is best stored at room temperature, with its root stems in cold water and the leaves exposed until ready to use. Most of the varieties of land cress may be kept in the refrigerator or roughly chopped, placed into ice cube trays with a little water and frozen until needed.

Use

Cress is deceptively delicate and one could be surprised by the degree of piquancy generated by such an innocent-looking herb. It is as a salad herb and in sandwiches that cress is best known, and of course the aforementioned mustard greens in one's salad. Cress is often used as a garnish, can be included in a quiche as a substitute for spinach, and goes well with seafood and in soups. Its tangy bite complements cheeses and recipes including cheese, providing a refreshing foil to their fatty, cloying texture.

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 1 cup (250 mL) fresh leaves
- vegetables: 1 cup (250 mL) fresh leaves
- carbohydrates: 1 cup (250 mL) fresh leaves

COMPLEMENTS

- herb sandwiches
- chilled soups
- salads
- quiche
- cheese dishes

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- chervil
- chives
- dill
- garlic
- lovage
- parsley
- sorrel

Chilled Cress Soup

This recipe, from my mother's book *Herbs for All Seasons*, is refreshing on a hot summer's day and can be made in advance and kept in the refrigerator for a couple of days. For a light lunch, add small shrimp or fine julienned strips of chicken to the soup.

- 1 lb (500 g) potatoes, washed, peeled and diced
- 1 white onion, chopped
- 2 cups (500 mL) water
- 2 cups (500 mL) milk
- 1 cup (250 mL) finely chopped watercress leaves
- 1–2 tsp (5–10 mL) salt (or to taste)
- yogurt or sour cream, for garnish
- 4 whole cress leaves

Put the potatoes and onion into a saucepan with the water and simmer with the lid on for 1 hour. Press the mixture through a sieve or purée in a blender, then return it to the saucepan over low heat. Heat the milk in a separate saucepan and stir into the purée until thoroughly blended. Add the watercress and salt; remove from heat.

Chill the soup well, then pour into 4 cold bowls. Top each serving with a teaspoonful (5 mL) of yogurt or sour cream and a cress leaf. Serves 4.

Cress and Prawn Cocktail

Cress

This is good to prepare in advance (up to 2 hours) and serve chilled at a summer dinner party or lunch. Precooked prawns can also be used, but cooking them fresh before serving does them much justice as the focal point of this dish.

- 8 green king prawns (jumbo shrimp)
- 4 tomatoes, peeled, seeded and cut into ½-inch (0.5 cm) dice
- 1 avocado, peeled and cut into ½-inch (0.5 cm) dice
- 1 cup (250 mL) chopped cress + 2 tbsp (25 mL) additional chopped cress, for garnish
- few drops hot pepper sauce
- 2 cups (500 mL) homemade (or good-quality) mayonnaise
- cracked black pepper

Peel prawns, leaving the tails intact. Drop them into boiling water for 2–3 minutes, or until completely pink. Drain and set aside.

Gently fold tomatoes, avocado, cress and hot pepper sauce into mayonnaise and spoon into 2 tumblers or martini glasses. Top each glass with 2 king prawns and a grind of pepper. Scatter additional cress on top. Serves 4.

Cumin

CUMIN IS a small (around 24 inches/ 60 cm high), delicate-looking annual with slender branched stems. Due to their weakness, the stems are heavily weighed down by the fruits that follow its tiny white or pink flowers. These fruits are commonly referred to as cumin seeds. The deep, almost blue-green leaves are frond-like, and are divided into long, narrow segments like those of fennel. Cumin is a hot-climate plant, yet will not do well under extreme heat conditions. Cumin seeds are similar in appearance to caraway seeds and average $\frac{1}{4}$ inch (0.5 cm) in length. Tapered at both ends, they are only slightly curved and measure about $\frac{1}{8}$ inch (3 mm) thick. The seeds range in color from pale brown to khaki and have a fine, downy surface making them appear dull. Each seed has nine very fine ridges, or oil canals, running along its length and a hair-like tail $\frac{1}{8}$ inch (3 mm) long on one end. Ground cumin seed is a coarse-textured, deep khaki, oily-feeling powder.

The aroma of cumin is pungent, warm, earthy, lingering and sweet and yields a hint of dry peppermint. The flavor is similarly pungent, earthy, slightly bitter and warming and makes

OTHER COMMON NAMES

- black cumin
- cummin
- jeera
- white cumin

BOTANICAL NAMES

- cumin: *Cuminum cyminum*
- black cumin: *Bunium persicum*

FAMILY

- Apiaceae (formerly Umbelliferae)

Clockwise from top left: whole cumin seeds; ground cumin; black cumin seeds (true jeera kala)



one think predominantly of curry. Black cumin seeds are a similar shape to the familiar cumin, yet their color is darker brown. When crushed they are highly aromatic, almost piney and less earthy. The flavor is similarly pine-like, astringent, and bitter. Black cumin is not to be confused with nigella (kolonji), which is often incorrectly called black cumin seed. Another potential source for confusion is between cumin and caraway seed. This occurs for two reasons: first because the German for caraway is *kummel* (a word that sounds like cumin in English); and second because the Indian word for caraway and cumin is often just *jeera* or *zira*. As caraway is not used as often in India, it's not considered a problem there but may create some misunderstandings if you are buying at an Indian spice shop.

Origin and History

Cumin is believed to be indigenous to the Middle East, and was well known to the ancients 5,000 years before the birth of Christ. Cumin seeds have been found in the pyramids of the pharaohs and it is known that the Egyptians used it in mummifying their kings before they started using cinnamon and cloves. It is mentioned in the Ebers Papyrus (1550 BC) and in the first century AD Pliny referred to it as the best appetizer of all condiments. There are references to cumin in the Bible in both the Old and New Testaments. In Roman times cumin was a symbol of avarice and greed, and a common put-down was to say misers had eaten it. Thus the nickname for the avaricious Roman Emperor Marcus Aurelius was “Cuminus.”

Cumin has been used in England since the 13th century and was mentioned in 16th- and 17th-century herbals. It was a popular flavoring in the Middle Ages, with superstitious overtones, one being that it prevented lovers from becoming fickle. At German medieval weddings the bride and groom would carry cumin, dill and salt in their pockets during the ceremony to ensure faithfulness to each other. Cumin spread to the Americas when Spanish explorers introduced it along the Rio Grande, making cumin one of the most common spices, along with their indigenous chilies, to be found in many South American dishes. It is amusing to read in early English 20th-century texts how cumin is described as having a “very disagreeable” flavor, “caraway being much preferred.” Cumin is now grown predominantly in Iran, which has the reputation for producing the best-quality “green” cumin seed. Other major growers of cumin are India, Morocco and Turkey.

NAMES IN OTHER LANGUAGES

- Arabic: kammun
- Chinese (C): siu wuih heung
- Chinese (M): kuming, xiao hui xiang
- Czech: rimsky kmin
- Danish: spidskommen
- Dutch: komijn
- French: cumin, cumin du Maroc
- German: kreuzkummel
- Greek: kimino
- Indian: jeera, zeera, safed zeera (cumin seed), Jeera kala, shah jeera (black cumin)
- Indonesian: jinten-putih
- Italian: comino, cumino bianco
- Japanese: kumin, umazeri
- Malay: jintan puteh
- Portuguese: cominho
- Russian: kmin
- Spanish: comino
- Sri Lankan: sududuru
- Swedish: spiskummin
- Thai: yeeraa
- Turkish: kimyon

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 2.4 g
- ground: 2.6 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: 2 tsp (10 mL) seeds or powder
- white meats: 2 tsp (10 mL) seeds or powder
- vegetables: 1½ tsp (7 mL) seeds or powder
- carbohydrates: 1½ tsp (7 mL) seeds or powder

COMPLEMENTS

- Indian curries and practically all Asian red curries
- chicken and seafood dishes
- rice and vegetable dishes
- breads
- Mexican sauces
- liqueurs such as kummel

Processing

Cumin is harvested when the plant has finished flowering and before the ripe fruits begin to fall from its heavily laden umbels. Scythed, seed-bearing stems are tied in sheaves and hung in the shade to dry, or simply cut and left to dry in the sun before threshing to remove the seeds. After threshing, the seeds are rubbed to remove about 90% of the hair-like tails. I was fascinated to see this task still being undertaken manually in the state of Gujarat in northwestern India, where the women were simply rubbing cumin seeds on the palm of the hand and letting them fall past a large fan, which blew the fine tails away.

Buying and Storage

Although a pungent spice, cumin will start to lose its most desirable flavor notes after grinding, so look for good-quality, oily-textured, greenish brown, almost khaki-colored powder in airtight packaging. Because cumin seeds can be quite oily when ground, it is not uncommon for unscrupulous traders to mix in some cheaper ground coriander seed to reduce the cost. Whole cumin seeds will keep for up to three years and ground cumin for one year, if kept in airtight containers away from extremes of heat, light and humidity.

Use

While to many cooks, cumin may seem to be overtly pungent and tiresomely reminiscent of curries, do keep in mind that its flavor need not dominate. With subtle, judicious application, cumin can be surprisingly effective in balancing and rounding out the bouquet of other spices. I remember once making a spice mix to go with fish that contained turmeric, fresh dill, pepper, coriander seed and lime leaves. Somehow the flavor remained too harsh and just did not seem right. With the addition of a small amount of cumin — too little for most people to notice — the mix became full-bodied and balanced.

Cumin is, of course, used extensively in Indian curries; it is included with rice and vegetables, in breads and when making pickles and chutneys. The famous Indian seed blend *panch phora* contains whole cumin seeds. Middle Eastern dishes often feature cumin because it complements lamb particularly well, and it is an important ingredient in Moroccan spice combinations such as *chermoula* and *harissa*. Mexican chili powder, the blend we have all become familiar with in tacos

and chili con carne, is usually a simple mixture of chili, paprika, cumin and salt. An essential oil is extracted from cumin seeds by steam distillation and is an ingredient in perfumes and liqueurs such as the German drink kummel.

Cumin complements orange vegetables (carrots and squash) well, as the seeds may be added to the water when boiling or steaming. Ground cumin is a delicious addition to squash soup and vegetable casseroles. Black cumin tends to be used in rich North Indian dishes containing cream, yogurt and crushed nuts. It is generally used whole after a light roasting and is very rarely ground.

Recipes often call for dry-roasting cumin seeds or powder, as this brings out a pleasant, nutty flavor and reduces some of the bitterness. To roast cumin, heat a pan with no oil in it over medium heat, add the seeds or powder and keep the cumin moving around so it does not stick or burn. When the cumin begins to give off a toasted aroma and the color begins to darken, remove from heat and tip out of the pan so it won't be cooked further by the residual heat. Roasting is appropriate for a lot of Indian and Malay cooking; however, it must be remembered that it also changes the flavor, driving off some of the most delicate notes, and this effect may be undesirable in a mild chicken or seafood dish or a chili con carne. For more cumin uses, see "The Art of Combining Spices" (pp. 531–589), and in particular have a good look at the curries.

USED IN

- baharat
- barbecue spice blends
- curry powders
- berbere
- Chinese master stock
- chermoula
- dukkah
- harissa paste blends
- Mexican chili powder
- ras el hanout
- panch phora

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon
- cloves
- coriander seed
- fennel seed
- fenugreek seed
- ginger
- mustard
- nigella
- paprika
- tamarind
- turmeric

Beet, Feta and Toasted Cumin Salad

This somewhat less traditional use of cumin demonstrates how well it goes with root vegetables. This salad serves well warm, at room temperature or chilled. For a light meal, top a ready-made pizza shell with beet salad and cook in a 350°F (180°C) oven for 15 minutes.

- 1 tbsp (15 mL) cumin seeds
- 1 ¼ lbs (625 g) beets, roasted, peeled and cut into 1-inch (2.5 cm) cubes
- 3 ½ oz (100 g) feta cheese, crumbled
- 1 tbsp (15 mL) freshly squeezed lemon juice
- 1 tbsp (15 mL) olive oil
- ½ tsp (2 mL) ground cumin
- 1 large sprig fresh flat-leaf parsley, chopped

Toast cumin seeds (see instructions, p. 235). In a large bowl, gently combine toasted cumin seeds, beets, feta, lemon juice, olive oil and ground cumin. Serves 6.

Curry Leaf

BOTANICAL NAME

- *Murraya koenigii*

FAMILY

- Rutaceae

NAMES IN OTHER LANGUAGES

- Arabic: waraq al-kari
- Burmese: pyi-naw-thein
- Chinese (C): ga lei yihp
- Chinese (M): diao liao, jiu li xiang
- Danish: karry blad
- Dutch: kerriebladeren
- French: feuille de cari
- German: curryblatter
- Indian: meetha neem, karpattar, karuvepillay
- Indonesian: daun kari
- Italian: foglia di curry
- Japanese: kare-rihu
- Malay: daun kari, karupillay
- Portuguese: folhas de caril
- Russian: listya karri
- Spanish: hoja de cari
- Sri Lankan: karapincha
- Thai: bai karee
- Vietnamese: la ca ri

CURRY LEAVES actually come from the leaflets of an unassuming yet delightfully fragrant, small tropical evergreen tree that grows to about 13 feet (4 m) in height under favorable conditions. The trunk is slender and flexible and supports a series of stems with drooping leaves, giving an overall frond-like appearance to the tree. The leaves vary considerably in size, from 1–3 inches (2.5–7.5 cm) long and $\frac{1}{2}$ – $\frac{3}{4}$ inch (1–2 cm) wide. In summer the leaves are shiny and bright green on top and the underside is dull and pale green. Being deciduous, at the end of winter the leaves turn yellow and many of them may drop; however, in the tropics, leaves are usually available for picking all year round. The curry tree should not be confused with the decorative, silvery gray curry plant of European origin (*Helichrysum italicum*), which I believe has no culinary value although some people claim it has a curry-like flavor.

Curry leaves do not taste like curry, but they get their name from being used in curries, especially in southern India. It is not surprising that the curry tree belongs to the same family as oranges and lemons, as even when one inadvertently brushes past a curry tree, the most heavenly, slightly

Curry leaves, dried and fresh



CURRY LEAF

FLAVOR GROUP

- strong

WEIGHT PER TEASPOON (5 ML)

- whole average dry leaf:
0.1 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 10 leaves,
fresh or dry
- white meats: 6–8 leaves,
fresh or dry
- vegetables: 6 leaves,
fresh or dry
- carbohydrates: 6 leaves,
fresh or dry

COMPLEMENTS

- Indian and Asian curries
- stir-fries
- seafood marinades

USED IN

- curry powders
- sambar powder

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon
- cloves
- coriander leaf and seed
- fennel seed
- fenugreek seed
- ginger
- kaffir lime leaves
- mustard
- paprika
- tamarind
- turmeric
- Vietnamese mint

spicy, citrus-like aroma fills the air. As well as having distinct citrus characteristics, curry leaves release a strangely mouth-watering acrid scent that smells bizarrely like burning motor oil yet stimulates the taste buds. The flavor is similarly lemony but lacks the fruitiness of lemons or limes.

Origin and History

Curry trees are native to Sri Lanka and India and are commonly found in forests at low altitudes in the foothills of the Himalayas, from the Ravi to Sikkim and Assam. They are found in many domestic gardens, particularly in Kerala in the south of India, where to my mind they have become the distinct signature of South Indian cuisine. Curry trees are cultivated on farms in Andhra Pradesh, Tamil Nadu, Karnataka and Orissa. As the curry tree is a member of the citrus family, the rootstock has been used in the past for grafting varieties of citrus. They are also related to the well-known decorative mock orange tree (*Murraya paniculata*). Curry trees will grow in most parts of the southern United States that are free from extreme frosts, as long as they are in a position sheltered from wind.

Processing

Curry leaves may be dried successfully, provided a little care is taken to ensure they retain their color and flavor. Begin by stripping the best-looking, fresh green leaves from the stem and arranging them in a single layer on paper or wire gauze. Place them in a dark, well-aired place, avoiding humidity. In a few days the leaves should feel quite crisp and dry and can be stored in an airtight container, ready to use.

Buying and Storage

Good-quality dried curry leaves are difficult to find, most of them being quite black in color and lacking the characteristic volatile aroma and distinct flavor. Should you find any dry curry leaves that have retained their color, the flavor should be quite acceptable. Fresh leaves will keep in a plastic bag in the refrigerator for over a week and in the freezer for up to two months.

Use

Curry leaves are used to flavor Indian curries, especially the Madras style. For best results, the fresh or dried leaves can be fried in oil at the beginning of making a curry, as this extracts their full flavor potential. Curry leaves are also used in making pickles and they complement marinades for seafood particularly well. When I returned from my last visit to the South Indian state of Kerala, I was determined to replicate the wonderful curry leaf-flavored seafoods we had enjoyed there.

Curry Leaf Prawns Masala

For those cooks who would like this dish to have a little heat, add 1 tsp (5 mL) freshly cracked black pepper to the marinating purée. Pepper is indigenous to the south of India and is still more popular there than chili as a source of spicy heat.

12 green king prawns (jumbo shrimp)
4 sprigs fresh curry leaves (about 30 leaves), picked
2 cloves garlic
1 onion, roughly chopped
1 tomato, roughly chopped
1 tbsp (15 mL) Garam Masala (see p. 560)
1 tsp (5 mL) freshly cracked black pepper (optional)
1 tsp (5 mL) salt
½ tsp (2 mL) ground turmeric
3 tbsp (45 mL) vegetable oil

To Serve

1 ½ tsp (7 mL) coconut or vegetable oil
1 sprig fresh curry leaves (about 10 leaves), picked
½ tsp (2 mL) brown mustard seeds

Peel prawns, leaving the tails intact, and butterfly by making a deep incision down the back of the prawn right to the tail, so that the flesh parts and opens flat.

In a blender, purée curry leaves, garlic, onion, tomato, garam masala, pepper (if using), salt and turmeric. Slowly add oil to blender to make a paste.

Coat prawns in paste, cover and refrigerate for 1 hour, then barbecue or pan-fry until cooked through, about 3 minutes on each side.

In a separate pan, heat coconut oil and fry curry leaves and mustard seeds for 2–3 minutes, or until leaves curl up, darken in color and become papery and light.

Serve prawns garnished with fried curry leaves and mustard seeds. Serves 4 as part of a meal.

Dill

OTHER COMMON NAMES

- dill seed
- dillweed
- garden dill
- green dill

BOTANICAL NAMES

- European dill:
Anethum graveolens
- Indian or Japanese
dill: *A. sowa*

FAMILY

- Apiaceae (formerly
Umbelliferae)

THE HERB dill is a surprisingly hardy, delicate-looking, frond-like annual that has the appearance of a small version of fennel. Dill plants grow to about 3 feet (1 m) high, and have wispy, hair-like leaves at the top of upright, smooth, shiny, hollow stems. Dill, with its small, pale yellow flowers, is a member of the same family as parsley, caraway, anise, coriander and cumin, and bears similar umbrella-shaped flower heads followed by seed clusters. Fresh dill tips have a distinct parsley-like aroma and subtle hint of anise.

Dill seeds, which are actually the minute fruit divided in two, are pale brown with three fine, lighter-colored lines, or oil channels, running the length of the seed. Each seed is about $\frac{1}{6}$ inch (4 mm) long and oval. As most split in two after harvesting, the majority of dill seeds you see will look flat on one side and convex on the other, with a few seeds retaining a fine $\frac{1}{16}$ -inch (1 mm) stalk. Dill seeds have a more robust aroma and flavor than green dill tips, for upon drying a distinct anise character and suggestion of caraway develops while the parsley overtones, found in fresh dill leaves, disappear.

From left: green dill tips; fresh dillweed; whole dill seeds



NAMES IN OTHER LANGUAGES

- Arabic: shibith
- Chinese (C): sih loh
- Chinese (M): shi luo, tu hui xiang
- Danish: dild
- Dutch: dille
- French: aneth odorant
- German: dill, gurkenkraut
- Greek: anitho
- Indian: sowa, anithi
- Indonesian: adas manis, adas sowa
- Italian: aneto
- Japanese: deiru, inondo
- Laotian: phak si
- Malay: adas china
- Portuguese: endro
- Russian: ukrop
- Spanish: eneldo
- Sri Lankan: enduru
- Swedish: dill
- Thai: phak chee lao
- Turkish: dereotu
- Vietnamese: tie hoi huong

FLAVOR GROUP SEEDS

- pungent

LEAVES

- strong

WEIGHT PER TEASPOON (5 ML)

- whole seeds: 3.0 g
- whole dry dill tips: 1 g

Dried green dill tips are dark green and fine, and each piece is only $\frac{1}{8}$ – $\frac{1}{6}$ inch (3–4 mm) long. The aroma is grassy but more aromatic than many dried herbs and when placed in the mouth softens quickly to release a parsley and anise flavor reasonably close to that of fresh dillweed. The variety grown in India and Japan, *Anethum sowa*, is a smaller plant than European dill and has a less agreeable flavor; however, it does provide the oil extracted by steam distillation, which is widely used in the manufacturing of pickles and processed foods.

Origin and History

Dill is native to the Mediterranean regions and southern Russia and is known to have been cultivated as far back as 3000 BC by the ancient Babylonians and Assyrians. Dill was known to the Romans, who regarded it as a symbol of vitality, the herb being used to cover food given to the gladiators. Dill was mentioned by Pliny, as were so many herbs and spices. Medieval writers believed it had magical properties and could ward off evil and enhance love potions and aphrodisiacs. It is known to have been cultivated in England since 1570 and was more popular there in the 17th century than it is now. It is interesting to note that the name “dill” derives from the old Norse word *dilla*, which means “to soothe or lull,” a hint of the calming effect dill was believed to have on the digestive system and the reason dill water was given to crying babies. In America dill seeds were referred to as “meeting-house seeds,” as it was customary for members of church congregations to bring along a supply to nibble on during long Sunday sermons. Today dill is found in the cuisines of many countries and seems to be most popular in Scandinavia, Germany and Russia.

Processing

Dill seeds are harvested when the plant is mature, has finished flowering and the fruits (seeds) are fully formed. Gathering usually takes place in the early morning or late afternoon when there is some moisture from dew on the fruits. This moisture helps to prevent the seeds from shattering and being lost while cutting the seed-laden stems for later threshing.

When adequate care is taken, the fresh, green tips of dill can be readily dried to ensure a supply of this delectable herb all year round. Dill tips are best harvested when the plant is not yet fully mature and the flower buds are just starting to form. Cut

the stems and take these inside to snip off the feathery ends with a pair of scissors. Spread the cut tips out in a thin layer on clean absorbent-type paper (a kitchen paper towel is suitable) and place in a warm, well-aired dark place for a few days.

Alternatively, dill can be dried successfully in a microwave oven. Simply put the cut tips on a paper towel in the microwave and cook on high for two minutes. Continue to microwave for additional bursts of 30 seconds until the leaves feel quite crisp to the touch. When dry, from either method, store in an airtight container and keep in a cool, dark place. Under these conditions, your dry dillweed will keep its flavor and color for at least 12 months.

Buying and Storage

Fresh green dill is often available and is easy to store for a few days. Buy bunches that look bright and fresh, without any sign of wilting. Wrap the bottom 2 inches (5 cm) of the stems in foil and place in a container of water in the refrigerator. Dried green dill tips should always have a crisp feel, be dark green and not show any yellowing. This dried herb is best when stored away from any source of light, as exposure will bleach out color, and the flavor will diminish rapidly.

Dill seeds are readily available and in their whole form will have a shelf life of up to three years when stored away from extremes of heat, light and humidity. The whole seeds are not as light-sensitive as the green tips, so you will have little problem in keeping them in a spice rack if so desired. Powdered dill seeds lose their flavor fairly quickly, so when recipes call for ground dill seeds, I recommend grinding your own, which can be easily done in a mortar and pestle or even in a pepper or coffee grinder. In many applications, dill seeds will soften during cooking time, the flavor will be released and grinding is not really necessary.

Use

Green dill has a refreshing, refined taste that when used in modest amounts contributes an appetizing flavor and pleasing visual aspect to a wide range of foods. Finely chopped dill leaves are particularly good with cottage or cream cheese, in white sauces, seafood and chicken dishes, omelets and scrambled eggs, salads, soups, vegetable dishes and in infused herb vinegars. Dill tips and capers have become the “must have”

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp (10 mL) seeds, 1 tsp (5 mL) leaves
- white meats: 1½ tsp (7 mL) seeds, 1 tsp (5 mL) leaves
- vegetables: 1 tsp (5 mL) seeds, ½ tsp (2 mL) leaves
- carbohydrates: 1 tsp (5 mL) seeds, ½ tsp (2 mL) leaves

COMPLEMENTS SEEDS

- pickles, particularly cucumbers
- rye breads
- carrots
- squash and cabbage when added during cooking

LEAVES

- cottage and cream cheeses
- white sauces for chicken and seafood
- scrambled eggs and omelets
- fish dishes
- salad dressings and herb vinegars

USED IN SEEDS

- fish and poultry seasonings
- pickling spices
- ras el hanout

LEAVES

- salad herbs
- seafood seasonings
- vegetable salts

COMBINES WITH
SEEDS

- allspice
- bay leaves
- celery seed
- chili
- cinnamon
- cloves
- coriander seed
- fennel seed
- ginger
- mustard seed
- pepper

LEAVES

- basil
- bay leaves
- coriander leaf
- cress
- fennel fronds
- garlic
- lovage
- parsley

accompaniments to shaved smoked salmon. A few leaves in unflavored yogurt for dressing fresh cucumber makes a perfect side dish to have with spicy dishes or strong-flavored seafoods. We are particularly fond of the contribution green dill makes to Kuwaiti Fish Stew with Black Limes (p. 135). Although the combination of green dill with coriander leaves and spices seems unusual, the result is addictive. The appropriateness of the combination was reinforced when we travelled to North Vietnam and enjoyed *com pho*, a Chinese-style rice noodle soup laced with greens, including coriander and dill.

Dill seeds are used for pickles, hence the name “dill pickles” given to American pickled cucumbers. They are found in breads, particularly rye, and go well with other carbohydrates such as potatoes. Dill seeds complement vegetables and may be cooked with them or tossed in butter after cooking to flavor carrots, squash and cabbage. Dill seeds are an ingredient in the exotic Moroccan spice blend *ras el hanout* and are often found in commercial spice mixes for seasoning fish and poultry.



Yogurt and Dill Cucumbers

Dill

The following recipe, from *Herbs for All Seasons* by Rosemary Hemphill, reminds me of hot summer days, in the years before air conditioning, when sometimes the best relief from the midday heat was to have a light lunch with a cooling accompaniment.

- 2 cucumbers
- 1 cup (250 mL) plain yogurt
- 1 tbsp (15 mL) chopped green dill tips
- freshly ground black pepper to taste
- fresh or dried dill leaves, for garnish

Peel cucumbers and slice lengthwise. Blanch in boiling salted water, then refresh in cold water. Drain well. In a shallow dish, combine cucumbers, yogurt, dill and pepper. Serve chilled, garnished with fresh or dried dill leaves.

Smoked Trout and Dill Pasta

This is delicious eaten hot, and also makes a lovely cold salad.

- 1 lb (500 g) spiral pasta
- 4 oz (125 g) asparagus, cut into 1 ½-inch (4 cm) lengths
- 8 oz (250 g) smoked trout, flaked
- 6 tbsp (90 mL) chopped fresh dill
- ¼ cup (50 mL) crème fraîche*
- 3 tbsp (45 mL) freshly squeezed lemon juice
- 1 tsp (5 mL) freshly cracked black pepper

Cook pasta in boiling water until al dente, about 8 minutes. Meanwhile, in another pot of boiling water, cook asparagus until just tender, about 3 minutes. Drain pasta and return to the pot. Stir in asparagus, trout, dill, crème fraîche, lemon juice and pepper. Serves 4–6.

*Crème fraîche was traditionally made by allowing the bacterial cultures in cream to turn it slightly acidic and thick. If you are unable to buy prepared crème fraîche, an easy substitute may be made. First, drain the whey from 1 cup (250 mL) of plain yogurt by lining a sieve with cheesecloth, scooping the yogurt into the sieve and resting it in a dish in the refrigerator overnight to collect the whey. Discard the whey and mix the thick yogurt with an equal quantity of fresh cream.

Elder

OTHER COMMON NAMES

- black elder
- bore tree
- common elder
- elderberry
- pipe tree

BOTANICAL NAMES

- European elder:
Sambucus nigra
- American elder:
S. canadensis

FAMILY

- Sambucaceae
(formerly
Caprifoliaceae)

NAMES IN OTHER LANGUAGES

- Dutch: vlierbes,
vlierboom
- French: baie de
sureau
- German:
holunderbeere
- Italian: bacca di
sambuco
- Portuguese: sabugo
- Spanish: baya de
sauco
- Swedish: fladerbar

FLAVOR GROUP

- mild

ELDER TREES are not to be confused with the dwarf elder (*Sambucus ebulus*), which has fruit that is poisonous and violently purgative. The elder tree of culinary use is an attractive, vigorous-growing deciduous tree that reaches 33 feet (10 m) in height under favorable conditions. Because many cane-like shoots come up and spread out around the base, the appearance is often more hedge-like than tree-like. Elder trees have dark green, spearmint-shaped leaves $1\frac{1}{2}$ – $3\frac{1}{4}$ inches (4–8 cm) long with finely jagged edges. When bruised, the leaves of elder have a nondescript, faintly grassy aroma. Elder flowers form in large, creamy white, flat-topped clusters, over 3 inches (7.5 cm) in diameter, that look as though they have been painstakingly crafted in lace and designed to support the hordes of bees working busily over them. These fresh flowers have a somewhat bitter taste and a sweet aroma that is less than appetizing to some; however, after it is processed into products such as elderflower cordial, the more pleasant attributes of elderflowers become apparent. After flowering, the very dark purple, almost black berries develop and when fully ripe are $\frac{1}{3}$ inch (8 mm) in diameter. Fresh elderberries should not be eaten raw as they

Fresh elderberries; dried elderflowers



**SUGGESTED
QUANTITY
PER POUND (500 G)**

- vegetables: 1 cup
(250 mL) flowers

**COMPLEMENTS
FLOWERS**

- cordials for refreshing
cool drinks
- vegetable dishes

BERRIES

- wines
- jellies
- conserves and jams

USED IN

- not commonly used in
spice blends

**COMBINES WITH
FLOWERS**

- angelica
- bergamot
- lemongrass
- lemon myrtle
- lemon verbena
- mint

BERRIES

- allspice
- cinnamon
- licorice
- star anise

contain mildly toxic alkaloids and are somewhat bitter. The overall taste effect of fresh berries is not appealing; however, upon drying or cooking, the flavor becomes more agreeable and the toxicity is dissipated. The leaves should not be eaten at all, as they may contain traces of cyanide.

Origin and History

The elder tree is native to Europe, North Africa and Western Asia and has been known since Egyptian times. There is hardly any other member of the plant kingdom that can rival the elder tree for superstition and diversity of uses for all its parts. The young shoots have a soft pith that is easily pushed out to form a hollow tube, hence the name “pipe tree” or “bore tree.” These were used for making pipes, and the old English herbalist Culpepper referred to their appeal to small boys, who would make them into popguns. The close-grained white wood of old trees was polished and made into butchers’ skewers, shoemakers’ pegs, needles for weaving nets, combs, mathematical instruments and even musical instruments, probably woodwind.

One theory that supports the plethora of superstition surrounding the elder tree is that the Cross of Calvary was made of its wood. Perhaps it was this belief that made the elder tree a symbol of death and misfortune. Elder shoots were buried with the dead to protect them from witches and were used in making hearse drivers’ whips. In medieval times, hedgecutters would avoid attacking its rampant growth, gypsies would not burn it on campfires and in many parts of Europe it was associated with magic, especially black magic! It is somewhat puzzling that a tree with such a dark reputation should also have been used so much for practical, medicinal and culinary purposes. A blue coloring substance from the berries has been utilized as a kind of litmus paper, as it turns green with alkalis and red when detecting acid.

Processing

Although the flowering season is a relatively few short weeks in its native Europe, elder trees growing in the warmer parts of the United States may be in flower for a couple of months. The minute flower petals are used for making infusions such as

elderflower cordials and herbal teas. In Europe the elderflowers are picked in full bloom and thrown into heaps where they are left to warm for a few hours. This loosens the petals, which are then separated from the stalks and stems by sifting. To dry your own elderflowers, pick them early in the morning before the heat of the day has diminished their potency. Place the flower heads on clean paper in a warm, dark, dry place for a few days.

The berries are harvested when fully ripe and are used fresh in most cooking and processing applications, although they will sometimes be dried for later culinary use in much the same way that currants are.

Buying and Storage

Elderflower herbal teas are sometimes available from health food stores but it is very rare to see elderberries on sale, so one really needs to grow the tree. It is quite attractive in the garden or in a large tub, which has the added advantage of preventing it from running amok.

Use

The most popular parts of elder for culinary purposes are the flowers and berries. Both are used for making wines, although it is more common to use elderberries to color conventional wines, and especially port produced in Portugal, than to produce elderberry wine. Elderflowers make a refreshing drink when soaked in lemon juice overnight, and the flower heads, dipped in a light batter and fried, make an unusual side dish. My mother has found the blossoms give a muscatel grape flavor to gooseberry, apple or quince jelly when tied in a muslin bag and boiled in the fruit syrup for three to four minutes at the end of the cooking time.

Elderberries, which taste a little like black currants, are made into conserves and jams. They go well with apples and can be dried and put into pies as you would currants.

Elderflower Fool with Pistachio Biscotti

A fool was the forerunner to ice cream. Different versions may be made with your favorite seasonally available fresh berries.

- 2 cups (500 mL) whipping (35%) cream
- $\frac{3}{4}$ cup + 2 tbsp (200 mL) crème fraîche (see tip, p. 246)
- 6 tbsp (90 mL) elderflower cordial
- $\frac{1}{3}$ cup (75 mL) confectioner's (icing) sugar
- $\frac{1}{4}$ tsp (1 mL) vanilla
- 1 $\frac{1}{2}$ lbs (750 g) fresh raspberries, rinsed
- 5 to 6 heads fresh elderflowers, flowers gently removed
- Pistachio Biscotti (see recipe, opposite)

Lightly whisk together whipping cream, crème fraîche, cordial, confectioner's sugar and vanilla. The mixture will thicken considerably. Stir in three-quarters of the raspberries. Spoon into tumblers or martini glasses and top with the remaining raspberries and fresh elderflowers. Serve with biscotti. Serves 6.

Pistachio Biscotti

Biscotti will keep well in an airtight container for up to 2 months.

1 $\frac{3}{4}$ cups (425 mL) all-purpose flour
1 cup + 2 tbsp (275 mL) superfine (caster) sugar
2 tsp (10 mL) baking powder
 $\frac{1}{2}$ tsp (2 mL) ground cardamom
2 eggs, lightly beaten
1 tbsp (15 mL) elderflower cordial
6 $\frac{3}{4}$ oz (200 g) shelled pistachios
3 $\frac{1}{2}$ oz (100 g) pitted dates, chopped
grated zest of 1 lemon

Place rack in the center of the oven and preheat to 350°F (180°C). In a large bowl, combine flour, sugar, baking powder and cardamom, then add eggs and cordial to make a sticky, but not too wet, dough. Add pistachios, dates and lemon zest. Divide dough in half and, with wet hands, shape each half into a flattish log. Place logs on nonstick baking sheets (or baking sheets lined with parchment paper). Bake for 20 minutes, until golden brown, then remove from oven and let cool slightly. Turn oven down to 275°F (140°C).

Using a bread knife, slice logs on the diagonal into thin slices. Lay biscotti cut side up on baking sheets and cook for 10–15 minutes, or until golden. Remove from oven and let cool on wire racks before serving. Makes about 25 biscotti.

Epazote

OTHER COMMON NAMES

- American wormseed
- goosefoot
- Jerusalem parsley
- Mexican tea
- pigweed
- skunkweed

BOTANICAL NAME

- *Chenopodium ambrosioides*

FAMILY

- Chenopodiaceae

NAMES IN OTHER LANGUAGES

- Chinese (C): chau hahng
- Chinese (M): chou ching
- Czech: merlik, merlik vonny
- Dutch: welriekende ganzenvoet
- Finnish: sitruunasavikka
- French: epazote, thé du Mexique
- German: Mexicanischer traubentee
- Hungarian: mirhafu
- Italian: farinello aromatico

THERE ARE many varieties of epazote, but the one that features most in Mexican cooking is a profusely branching annual that resembles overgrown spearmint and grows to 4 feet (1.2 m), with either green or deep red and green leaves. The serrated leaves are 1–3 inches (2.5–7.5 cm) long and have a less than agreeable aroma and an unusual taste; one becomes accustomed to it in much the same way as one acquires a taste for coriander leaf and asafetida.

Epazote, fresh and dried



Origin and History

Indigenous to Mexico, epazote has become naturalized as far north as New York City, where it grows wild in parks and backyards. It was introduced to Europe in 1732, probably because of its medicinal attributes, as it was at one time recorded in the United States Pharmacopoeia; however, the only enduring mentions appear to be restricted to American folk medicine. The name “epazote” derives from words in the Nahuatl language of southern Mexico and Central America that mean “something dirty and smelling like an animal” — highly descriptive but not all that complimentary!

Processing

Epazote is generally used fresh; however, it can be dried in the same way as other green herbs, in a warm, dry, well-aired environment protected from light.

Buying and Storage

Widely available in North America from retailers that specialize in Mexican produce, epazote grows easily from seed.

Use

Epazote is favored in the cooking of the Yucatan Peninsula and features in a dish called *mole de epazote*, a red soupy casserole made from goat meat. It is reputed to control the production of wind in diets high in beans (another similarity to asafetida) and is used in soups, many bean dishes and tortilla. Some caution should be exercised in the amount consumed, as too much can spoil the flavor of a meal. Furthermore, I have read reports that, in cases where extremely large doses were eaten, it has been known to be poisonous, causing vertigo, deafness, sweating, paralysis and death.

NAMES IN OTHER LANGUAGES

- Japanese: Amerika-ritaso
- Polish: komosa pixmowa
- Portuguese: erva-formigueira, mastruz
- Russian: epazot, mar ambrozievidnaya
- Spanish: yerba de Santa Maria, epazote
- Swedish: citronmalla
- Turkish: meksika cayi
- Vietnamese: ca dau giun

FLAVOR GROUP

- strong

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tbsp (15 mL) dry leaves
- white meats: 2 tsp (10 mL) dry leaves
- vegetables: 2 tsp (10 mL) dry leaves
- carbohydrates: 2 tsp (10 mL) dry leaves

COMPLEMENTS

- Mexican casseroles and bean dishes
- tortillas

USED IN

- not commonly used in spice blends

COMBINES WITH

- chili
- cumin
- oregano
- paprika
- pepper

Chili Corn Tortillas

These make a tasty snack, or can be served as part of a Mexican meal.

- 1 ancho chili
- 8 oz (250 g) ricotta cheese
- ¼ cup (50 mL) shredded Cheddar cheese
- 1 tbsp (15 mL) chopped dried epazote*
- salt and freshly ground black pepper to taste
- 6 corn tortillas
- ¼ cup (50 mL) vegetable oil

Soak ancho chili in hot water until soft, then remove the stem and seeds and finely chop. Over low heat, warm ricotta, Cheddar, epazote and chili; season with salt and pepper. Place a large spoonful of mixture at one end of a tortilla and roll into a cigar shape. Heat oil in a frying pan and cook tortillas seal side down until golden, about 3 minutes, then turn over and fry on the other side until golden. Makes 6.

* Coriander leaves may be used in this recipe as a substitute for epazote.

Fennel

OTHER COMMON NAMES

- common fennel
- Florence fennel
- sweet fennel

BOTANICAL NAMES

- Florence fennel:
Foeniculum vulgare azoricum
- sweet fennel: *F. vulgare dulce*
- wild fennel: *F. vulgare*

FAMILY

- Apiaceae (formerly Umbelliferae)

THE ANNUAL Florence fennel, which is used for culinary purposes and produces the distinctive bulb that is eaten as a vegetable, should not be confused with the tall-growing (up to 6 feet/2 m and higher) wild fennel often seen growing in ditches by roadsides and in low-lying moist areas. Florence fennel is a small (35 inches/90 cm), attractive herb with soft, celery-like stems, covered in numerous, bright green frond-like leaves, giving the plant a ferny appearance. The bulb, when encouraged by cultivation, is white and firm. Masses of bright yellow, umbrella-shaped blossoms appear in summer, and are followed by the pale green fruits (seeds) in autumn. Fennel leaves have a slight anise aroma and some people think this is the anise plant, which it is not.

The dried seeds of sweet fennel are yellow with a green tinge, some more so than others; the greener the seed, the better the quality. On average the seeds are $\frac{1}{4}$ inch (0.5 cm) long and many will be split in two, making them flat on one side and convex on the other. Pale, hair-width ribs run along the

Fresh fennel, cut; whole fennel seeds



NAMES IN OTHER LANGUAGES

- Arabic: shamar
- Burmese: samouk-saba
- Chinese (C): wuih heung
- Chinese (M): hui xiang
- Czech: fenykl obecny
- Danish: fennilel
- Dutch: venkel
- Finnish: fenkoli
- French: fenouil
- German: fenchel
- Greek: finokio, maratho
- Indian: saunf, sonf, moti sonf
- Indonesian: jinten manis, adas
- Italian: finocchio
- Japanese: uikyo
- Malay: jintan manis, adas pedas
- Portuguese: funcho
- Russian: fyenkhel
- Spanish: hinojo
- Sri Lankan: maduru
- Swedish: fankal
- Thai: yira, pak chi duanha
- Turkish: rezene, irziyan, mayana
- Vietnamese: cay thi la, hoi huong

FLAVOR GROUP SEEDS

- amalgamating

FRONDS

- strong

WEIGHT PER TEASPOON (5 ML)

- whole seeds: 2.1 g
- ground seeds: 2.7 g

length and occasionally you will notice a seed with the small stalk intact. The aroma is initially wheat-like with a faint anise freshness. Upon tasting, fennel seeds release a strong anise flavor that is warm, spicy (but in no way hot) menthol-like and breath-freshening. The character of fennel seeds changes upon roasting, which is a common practice in Indian and Malay cooking and gives them a distinctive, sweet flavor, almost as if brown sugar has been added.

There is another kind of fennel seed, sourced only from India and referred to as Lucknow fennel seed. These seeds are about half the size of standard fennel seeds and are quite a bright green, similar to a good-quality cardamom pod. Lucknow fennel has an intensely anise aroma with mild licorice overtones. The taste is sweet and licorice-like, making it an ideal palate cleanser and breath freshener after meals.

Fennel pollen has been collected and used in Italy, proponents claiming its flavor is like fennel seed intensified a hundred times. Its rarity, and the level of hyperbole surrounding the flavor, has elevated it to saffron-like status. Although fennel pollen is delightfully fragrant and sweet and not unlike the small, sweet Lucknow fennel seeds that may be used as an acceptable substitute, its intensity is a trifle overstated.

Origin and History

Much of the history relating to fennel probably refers primarily to the wild, perennial variety, as the annual Florence fennel has been largely confined to its native Italy until recent times. Fennel is indigenous to southern Europe and the Mediterranean regions and since antiquity has been used as a condiment by the Chinese, Indians and Egyptians. The Romans used it as a spice and a vegetable and no doubt played a role in its introduction to the north of Europe, where it has been known for 900 years. Fennel was mentioned in a record of Spanish agriculture in AD 961, and it was one of the plants Charlemagne had cultivated on the imperial farms, which helped lead to its diffusion throughout Europe.

The name “fennel” derives from the Roman word for “fragrant hay,” *foeniculum*. In 16th-century Italy, fennel was a symbol of flattery, leading to the colloquial saying *dare finocchio*, which means “to give fennel.” Fennel was a symbol of success in ancient Greece and was referred to as “Marathon” after the battleground on which the Greeks achieved a spectacular victory over the Persians in 490 BC. Fennel is now cultivated or grows wild in practically every temperate climate in the world.

Processing

The bulb and leaves of fennel are rarely processed because their best attributes are appreciated when fresh. The seeds, however, are produced commercially in many countries when the plant has finished flowering and the fruits are fully formed. Like most seed crops, fennel is harvested in early morning or late afternoon (when the presence of moisture helps prevent the seeds from shattering) by cutting and drying the stalks prior to threshing to remove the seeds. Even fennel seeds are best dried in the shade, as this will retain a higher level of green color and sweet anise flavor. An essential oil of fennel is made by steam distillation of the seeds and is an ingredient in non-alcoholic drinks, ice creams and liqueurs such as anisette.

Buying and Storage

Fennel bulbs, complete with their green frond-like foliage, can usually be purchased from fruit and vegetable retailers, especially ones owned by Italians, who will invariably call this vegetable *finocchio*. Fennel seeds are readily available, but the quality varies considerably. Look for seeds that have at least some greenish tinge, and watch out for contamination from small pieces of dirt. The shape of fennel seeds makes it difficult to sieve out foreign matter, so the least line of resistance for some traders is to only give them a cursory cleaning. Ground fennel seed should be a pale fawn color with a hint of green, have a coarse texture and be highly aromatic. Whole fennel seeds will keep their flavor for up to three years and ground fennel for one year, provided they are kept in an airtight pack and stored away from extremes of heat, light and humidity.

Use

The fresh leaves of fennel may be used in very much the same way as green dill in salads and white sauces, with seafood and to garnish terrines, soups and aspic. Steaming a whole fish on a bed of fresh fennel foliage is a traditional way to impart its aromatic flavor during cooking. The bulb of fennel can be sliced into thin rings and separated like an onion to add to salads or it may be cut in half and cooked as a vegetable and served with a white sauce or cheese sauce. Fennel seeds are added to soups, breads, Italian sausages, pasta and tomato dishes, as well as pickles, sauerkraut and salads.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tbsp (15 mL) seeds, powder or fronds
- white meats: 1 tbsp (15 mL) seeds, powder or fronds
- vegetables: 2 tsp (10 mL) seeds, powder or fronds
- carbohydrates: 2 tsp (10 mL) powder or fronds

COMPLEMENTS

SEEDS

- breads and biscuits
- Italian sausages
- Malay curries
- pasta and tomato dishes
- satay sauces

FRONDS

- salads
- soups
- terrines as a garnish
- white sauces

USED IN

SEEDS

- curry powders
- garam masala
- Chinese five-spice
- pickling spices
- Cajun spice blends
- ras el hanout
- panch phora

FRONDS

- not commonly used in spice blends

FENNEL

COMBINES WITH SEEDS

- allspice
- cardamom
- chili
- cinnamon
- cloves
- coriander seed
- cumin seed
- fenugreek seed
- galangal
- ginger
- mustard
- nigella
- paprika
- tamarind
- turmeric

FRONDS

- bay leaves
- chervil
- chives
- coriander leaf
- cress
- garlic
- parsley

In Indian and Asian cooking, fennel seeds are nearly always roasted, which gives them a quite different, sweet, spicy flavor. Although the purists may disagree, I am quite comfortable roasting ground fennel seeds, which is easily done by heating a small dry pan on the stove. Then put about 2 tbsp (25 mL) of the powder in the hot pan and shake it slightly to prevent the fennel from burning. When the powder begins to change color and a heavenly aroma wafts in the air, tip the contents into a dish, then use in recipes for curries and satay sauces. One of my favorite ways to consume fennel seeds is to nibble on the sugar-coated ones often found in Indian restaurants.

Fennel seeds, whole and ground



Grilled Chicken Satay

Fennel

Satay is a popular flavor with many families, and this satay sauce can be made to any consistency you desire. It is a good introduction to spicy food for children and lacks the sharp acidity (required to achieve preservation) detectable in many prepared satay sauces. A thick satay sauce is also good for dipping crudités. Sauce will keep in the refrigerator for 2–3 days.

- 4 large boneless skinless chicken breasts, cubed
- salt and freshly ground black pepper to taste
- 1 English (seedless) cucumber, peeled and cut into matchsticks
- 1 bunch green onions, julienned

Satay Sauce

- 1 tbsp (15 mL) ground fennel seeds
- 2 tbsp (25 mL) Malay curry powder (see p. 554)
- 1 ½ tsp (7 mL) packed soft brown sugar or palm sugar (jaggery)
- 1 ½ tsp (7 mL) peanut oil
- 6 tbsp (90 mL) crunchy peanut butter
- water

Thread chicken onto skewers (if using wooden ones, soak them in water for 30 minutes before using). Season with salt and pepper and cook over high heat on a barbecue. (Allowing a little charring adds flavor to this recipe.)

For the satay sauce, dry-roast ground fennel seeds in a saucepan. Add curry powder, brown sugar and oil; cook, stirring constantly, for 1–2 minutes, or until a rich, dark paste has formed. Stir in peanut butter and heat through, stirring, until all ingredients are thoroughly blended together. Add water slowly, stirring, until desired consistency is reached.

Toss cucumber and green onions together and serve with chicken skewers and satay sauce. Serves 6.

Fenugreek

OTHER COMMON NAMES

- bird's foot
- cow's horn
- foenugreek
- goat's horn
- Greek hayseed
- methi

BOTANICAL NAMES

- *Trigonella foenum-graecum*
- blue fenugreek:
T. melilotus-caerulea

FAMILY

- Fabaceae (formerly Leguminosae)

NAMES IN OTHER LANGUAGES

- Arabic: hulba, hilbeh
- Chinese (C): wuh louh ba
- Chinese (M): hu lu ba
- Czech: piskavice
recke seno, senenka
- Dutch: fenegriek
- Finnish: sarviapila
- Indian: methi ka beej
(seed), methi ventayam (seed),
methi bhaji (leaf)
methi ka saag (leaf),
ventayam
- Indonesian: kelabet
- Italian: fieno greco
- Japanese: koroha
- Malay: halba
- Portuguese: alforva,
feno-grego

FENUGREEK IS a small, erect, slender annual herb that is a member of the pea family and has a similar appearance to alfalfa (lucerne). Its leaves are light green with three small, oblong leaflets. Fenugreek flowers are yellowish white, and the 4–6-inch (10–15 cm) long fruits that form are of a typical legume nature, resembling miniature fava beans and containing 10–20 seeds. The common names “goat’s horn” and “cow’s horn” refer to the horn-like shape of the seed pod.

Fenugreek seeds are like hard golden brown pieces of gravel $\frac{1}{8}$ – $\frac{1}{4}$ inch (3–5 mm) long. A pronounced furrow on one side looks as though it’s been made by pressure from a thumbnail. The aroma of these seeds is slightly spicy and sharp, and the flavor is bitter and leguminous; it reminds me of eating

Fenugreek seeds, whole and ground; fenugreek leaves



uncooked peas as a child while my grandmother was shelling them. Fenugreek seeds are often roasted, highlighting the bitterness and releasing a somewhat nutty, burnt sugar and maple syrup characteristic. Be careful not to over-roast the seeds, as this will make them extremely bitter. Dried fenugreek leaves are a tangled, pale green mass of fine tendril-like stems and triple leaflets. The aroma is grassy and warm and the leaves taste similar to the seeds but lack their underlying bitterness. A lesser-known and milder variety of fenugreek, native to the Caucasus and the mountains of southeastern Europe, is blue fenugreek, so named because of its blue flowers. Culinary use appears to be limited to its place of origin, where it is mostly used to flavor cheese and breads.

Origin and History

Fenugreek gets its Latin botanical name from *trigonella*, a reference to the triangular shape of the flowers, and *foenum-graecum*, which means “Greek hay,” the name given to it by the Romans when they brought it from Greece. The foliage was used there to sweeten the scent of mildewed or sour hay, making it more appealing to cattle, and even today it is used to supplement fodder for cattle and horses; many believe it improves the appetite and adds gloss to their coats. Fenugreek is native to western Asia and southern Europe, where it has grown wild for centuries, courtesy of its hardy nature. It is now cultivated in many parts of the Mediterranean, South America, India and the Middle East. This herb is known to have been one of the oldest cultivated plants and there is evidence in medical writings dating from 1000 BC of its use by the Egyptians in the embalming process. The emperor Charlemagne assisted the popularity of fenugreek by encouraging its cultivation in central Europe in AD 812.

Processing

Fenugreek is grown from seed and matures three to five months later. The most common method of harvesting is to uproot the whole plants and allow them to dry in the sun so the seeds can be easily removed by threshing, after which the seeds are again dried down to around 10% moisture content for optimum storage. I remember seeing a particularly practical method of threshing fenugreek and brown mustard seeds in the Indian state of Gujarat, where many seed spices are grown. A bullock cart was driven round and round in circles

NAMES IN OTHER LANGUAGES

- Russian: pazhitnik grecheski
- Spanish: alholva
- Sri Lankan: uluhaal
- Swedish: bockhornsklover
- Thai: luk sat
- Turkish: cemen, hulbe
- Vietnamese: co cari, ho lo ba

FLAVOR GROUP SEEDS

- pungent

LEAVES

- strong

WEIGHT PER TEASPOON (5 ML) SEEDS

- whole: 4.5 g
- ground: 3.5 g

LEAVES

- whole: 0.4 g

SUGGESTED QUANTITY PER POUND (500 G) SEEDS

- red meats: 1 tsp (5 mL) whole, 1½ tsp (7 mL) ground
- white meats: ½ tsp (2 mL) whole, ¾ tsp (4 mL) ground
- vegetables: ½ tsp (2 mL) whole, ¾ tsp (4 mL) ground
- carbohydrates: ¼ tsp (1 mL) whole, ½ tsp (2 mL) ground

SUGGESTED QUANTITY PER POUND (500 G)

LEAVES

- red meats: 2 tsp (10 mL) dried
- white meats: 2 tsp (10 mL) dried
- vegetables: 1 ½ tsp (7 mL) dried
- carbohydrates: 1 tsp (5 mL) dried

COMPLEMENTS

SEEDS

- Indian curries
- mayonnaise, for a sharp mustard-like bite
- extract used in making imitation maple syrup

LEAVES

- vegetable and fish curries
- spinach and potato dishes

USED IN SEEDS

- berbere
- curry powders
- hilbeh
- panch phora
- sambar powder
- zhug

LEAVES

- not commonly used in spice blends

over a pile of cut fenugreek to break up the pods and release the seeds. The crushed hay was loaded into a gigantic sieve about 6 feet (2 m) in diameter, and was then shaken by a few young men to separate the seeds from the pods and stems. Soon the shakers were standing ankle-deep in golden yellow fenugreek seeds.

Buying and Storage

Fenugreek leaves, or *methi ka saag* as the Indians call them, are usually available in their dried form from specialty spice shops. The best-quality leaves are pea green in color, with no sign of yellowing, and will have a sunny, hay-like aroma and distinct beany smell. It is most important to store them away from light as it will bleach the color rapidly and flavor will also be lost. Fenugreek seeds vary little in quality; however, because of their stone-like appearance it is common to be caught with seeds that have not been properly cleaned and are contaminated with little stones. For this reason, it's best to check your fenugreek seeds carefully before putting them in a coffee or pepper grinder. Buy ground fenugreek seeds in small quantities, as once ground the flavor does tend to dissipate. Store as you would other ground spices, in airtight packaging and away from extremes of heat, light and humidity.

Use

Fenugreek seeds are often included in sprouting mixes with alfalfa and mung beans or are sprouted on their own for inclusion in salads. The leaves have a unique flavor that complements vegetable and fish curries, and goes well in spinach, pea and potato dishes. Fenugreek seeds are important to the food manufacturing industry, providing an extract for making artificial maple syrup and pickles and baked goods. They are often included in curry spices, where they contribute a distinct sharpness and slightly bitter taste, as found in fiery vindaloo curries. Exercise caution when adding fenugreek seeds to a dish — the bitterness can become overpowering, as in cheap curries that overuse this relatively inexpensive spice. Fenugreek seeds are an important ingredient in panch phora, a versatile blend of seed spices that is usually fried in oil at the beginning of making a curry or added to spicy pastries and potato dishes. Ground fenugreek seeds may be added to mayonnaise, in the same way mustard powder is often called for, to provide a similar taste with less heat.

Kate developed this recipe after we had it at Laxmi Villas Pallas, an old shooting lodge surrounded by mustard fields between Agra and Jaipur, India. It is a perfect example of how well spices complement the richness of cashew nuts and coconut milk.

- 2 tsp (10 mL) yellow curry powder (see p. 554)
- 1 tbsp (15 mL) vegetable oil
- 1 onion, chopped
- 2 cloves garlic, crushed
- 1 tsp (5 mL) Chaat Masala (see p. 549)
- 1 tsp (5 mL) salt
- 2 $\frac{2}{3}$ cups (650 mL) raw unsalted cashews
- $\frac{3}{4}$ cup + 2 tbsp (200 mL) water
- 1 $\frac{2}{3}$ cups (400 mL) coconut milk
- 2 lbs (1 kg) Indian paneer cheese (or firm tofu), cubed
- $\frac{1}{2}$ cup (125 mL) fresh fenugreek leaves
- 2 tbsp (25 mL) fresh coriander leaves

Toast curry powder in a large frying pan, then add oil and onion. Sauté until onion is soft, then add garlic and sauté for 2 minutes. Stir in chaat masala and salt. Add cashews and water; simmer gently until soft, about 45 minutes. Blend to a paste in a food processor and return to pan. Stir in coconut milk, combining well. (Sauce can be prepared to this point up to 1 day ahead; cover and refrigerate.)

Add paneer and fenugreek to sauce and heat gently. Garnish with fresh coriander. Serves 8 as part of a meal.

Filé Powder

FILÉ POWDER is made from the young leaves of the American sassafras tree, a 100-foot (30 m) deciduous tree with slender branches, smooth orange-brown bark and broad oval leaves. Small, greenish yellow flowers form in 2-inch (5 cm) long clusters and develop into dark blue fruits with red stalks. While the leaves may be up to 5 inches (12 cm) long, it is the smaller 2–3-inch (5–7.5 cm) leaves that are used for making filé powder. Filé powder is dark green and fine-textured. The aroma is a little like dried savory, and the flavor calls to mind a very mild herb mix in which thyme and marjoram notes dominate.

OTHER COMMON NAMES

- augue tree
- gumbo filé
- sassafras leaf

BOTANICAL NAME

- *Sassafras officinalis*

FAMILY

- Lauraceae

NAMES IN OTHER LANGUAGES

- Arabic: sasafras
- Chinese (C): wohng jeung
- Chinese (M): huang zhang
- Czech: kastan belavy
- Dutch: sassafras
- French: sassafras
- German: fenchelholzbaum
- Hungarian: szasszafrasz baberfa
- Italian: sassafrasso
- Japanese: sassafurasu
- Portuguese: sassafras
- Russian: lavr amerikanski
- Spanish: sasafras
- Vietnamese: cay de vang

FLAVOR GROUP

- mild

Origin and History

Native to the Gulf of Mexico, the sassafras tree is believed to be the first American medicinal plant to arrive in Europe,

Filé powder



having been noted by Monardes in 1564. The roots and bark have been used medicinally, as a source for yellow dye, to scent perfumes and soaps and to flavor soft drinks. In Virginia a beer was made from the young shoots. The culinary interest in filé powder was inspired by the American Choctaw Indians, who dried and ground the young sassafras leaves and sold them in New Orleans markets to use as a flavoring and thickening agent for soups and stews.

Buying and Storage

Filé powder is not to be confused with sassafras powder, which is usually made from the bark or roots and has a strong, cinnamon-like medicinal taste. Although the sassafras tree contains safrole, a substance toxic to the liver, culinary use of the leaves is not deemed to be a problem. However, culinary or medicinal use of the bark or root is not recommended. The powder is a dark moss green and very dry and fine. Store in airtight containers, away from light, and be particularly careful to avoid humidity, as the powder absorbs moisture readily, hastening its deterioration.

Use

The most popular use for filé powder is as a thickening agent when making gumbo, a Creole dish that has an unmistakably gummy consistency. Filé becomes stringy when boiled, so it must be added after the cooking pot is removed from the heat, ideally a few minutes before serving. It does not reheat or freeze well either; therefore, if preparing gumbo in advance, add filé just prior to serving. The recommended quantity to use is 1–2 tsp (5–10 mL) per 4 cups (1 L) of liquid.

WEIGHT PER TEASPOON (5 ML)

- ground: 2.6 g

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 6 tsp (30 mL)
- vegetables: 6 tsp (30 mL)

COMPLEMENTS

- gumbo as a thickening agent

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- chili
- cinnamon
- coriander seed
- fennel seed
- garlic
- onion
- paprika
- parsley
- pepper
- thyme



Filé Powder Gumbo

This quick and easy gumbo uses readily available ingredients. If you love oysters, add them 5 minutes before serving.

- 2 tbsp (25 mL) vegetable oil
- 1 tbsp (15 mL) all-purpose flour
- 1 small onion, diced
- $\frac{1}{2}$ green bell pepper, diced
- 2 cloves garlic, crushed or finely chopped
- 2 small ripe tomatoes, seeded and diced
- $\frac{1}{4}$ cup (50 mL) tomato purée
- 1 tbsp (15 mL) Cajun Spice Mix (see p. 548)
- $\frac{1}{2}$ tsp (2 mL) dried thyme
- 1 bay leaf
- $\frac{1}{2}$ tsp (2 mL) each salt and freshly ground black pepper
- 10 small okra, chopped small
- 4 cups (1 L) fish stock
- 3–4 oz (90–125 g) scallops
- 6–7 oz (175–200 g) peeled uncooked shrimp
- 6–7 oz (175–200 g) mixed seafood, such as crab, mussels and clams
- 1 $\frac{1}{2}$ tsp (7 mL) filé powder
- 3 cups (750 mL) cooked long-grain rice

In a large stainless steel pot, heat the oil and stir in the flour. Stir constantly until a smooth golden brown roux has formed, then add the onion, pepper and garlic. Sauté until the onions are translucent, then add the tomatoes and tomato purée; cook over medium heat for 5 minutes, stirring frequently.

Add the Cajun spice mix, thyme, bay leaf and seasonings, then stir in the okra and cook for another 5 minutes. Pour in the stock, bring to the boil, then reduce heat and simmer for 30 minutes. Add the seafood after this time, adjusting heat so that the soup continues to simmer. Cook for a further 5 minutes. If you wish to use crab-meat, add it just before serving, so that it is just heated through.

Ladle out 1 cup (250 mL) of soup and stir the filé powder into it. It will become very thick and gluey — this is normal, so don't panic. Reheated filé becomes stringy, so only if you're planning to consume all of the gumbo at once, stir the cupful of filé paste through the soup. (If you intend to save some for another meal, only stir some of the paste into each serving.)

To serve, place about $\frac{2}{3}$ cup (150 mL) of cooked rice into each bowl and ladle the gumbo over and around it. Serves 3–4 as a meal, or 4–6 as an appetizer.

Galangal

OTHER COMMON NAMES

- greater galangal: galanga, Java root, Laos powder, lengkuas, Siamese ginger
- lesser galangal: China root, Chinese ginger, colic root, East Indian catarrh root
- kenchur: kentjur, kencur

BOTANICAL NAMES

- greater galangal: *Alpinia galanga*
- lesser galangal: *A. officinarum*
- kenchur: *Kaempferia galanga*

FAMILY

- Zingiberaceae

THE DIFFERENT varieties of galangal are all members of the ginger family, which is evident by the appearance of these tropical plants with their long, green blade-like leaves and ginger-like rhizomes. Greater galangal, the one used most in Southeast Asian cooking, grows to around 6 feet (2 m) tall, and has greenish white, orchid-shaped flowers with dark red veined tips. The red berries contain seeds that have been used in some countries as a substitute for cardamom. The knobbly, underground root-bearing stems (rhizomes) have a thin, orange-brown skin with lighter and darker “tiger-stripe” rings, while inside is the creamy, pale yellow flesh.

The aroma of greater galangal reminds one of ginger, with a sharp, sinus-penetrating perfume and similar biting, hot clean taste. The powder is creamy beige, and the texture is coarse, fluffy and fibrous.

Lesser galangal is smaller, as the name implies. It grows to around 3 feet (1 m) high, the rhizomes are orange-red to rusty brown with similar stripes, and the flesh is pale brown inside. This variety has medicinal applications and, aside from limited use in Malaysian and Indonesian recipes, is seldom used in cooking.

Dried galangal slices



NAMES IN OTHER LANGUAGES

- Arabic: khalanjan
- Burmese: pa-de-gaw-gyi
- Chinese (C): gou
leuhng geung, huhng
dau kau, saan geung
- Chinese (M): hong dou
kou, shan jiang
- Czech: galgan obecny,
kalkan
- Danish: galanga
- Dutch: grote galanga
- French: grand galanga,
souchet long
- German: galanga,
galgant
- Greek: galanki
- Indian: kulanjan, kosht-
kulinjan
- Indonesian: laos
- Italian: galanga
- Japanese: garanga,
nankyo
- Malay: lengkuas
- Portuguese: gengibre
de Laos
- Russian: galgant
- Spanish: galanga
- Thai: khaa, dok kha
- Turkish: galanga
- Vietnamese: rieng nep,
son nai, cao luong
khuong

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole average dried
slice: 2.5 g
- ground: 2.3 g

Kenchur looks like lesser galangal, with its reddish brown skin on the rhizome; however, the inside flesh is not as fibrous and when ground becomes a creamy white powder with a sweet, perfumed aroma reminiscent of orris root powder. Kenchur has a milder taste than greater galangal and very little heat, making it a safe spice to add when one wants to impart an exotic flavor of the Orient.

Origin and History

Greater galangal is native to Java and lesser galangal to southern China. These varieties of galangal originally came to Europe for both medicinal and culinary purposes, and were recorded in AD 869, when galangal was listed as an article of trade from the Far East. Galangal was known to the ancient Indians, the Arabs gave it to their horses to stir them up, and in the Orient the powder was taken as a snuff. One can appreciate the nasal-cleansing properties of galangal powder if an overenthusiastic sniff is taken. The old term “galingale” was used to describe both galangal and the roots of sweet flag, known as calamus.

Processing

To produce galangal and kenchur powders, the rhizomes are first harvested and the small rootlets are removed. Some of the outer skin is scraped off to hasten drying (usually in the sun), which takes a few days. Prior to grinding, the rhizomes are polished, a method that involves tumbling them in a drum made of mesh to remove most of the remaining rootlets and skin.

Buying and Storage

The fresh rhizomes of greater galangal are readily available from most Asian stores and many other specialty produce merchants. They look like ginger, have the characteristic circular stripes around them, but are larger and not as orange in appearance as fresh turmeric, which is often sold alongside ginger and galangal. Fresh galangal may be stored in a cool, dark place for up to two weeks. To prepare for cooking, scrape or cut off the skin and then grate finely or slice, depending upon the recipe instructions.

Dried galangal slices may generally be bought from Asian and specialty spice shops and will keep their flavor for between two and three years when stored correctly. Ground galangal and kenchur are best purchased in small quantities, as they will lose their flavor within about 12 months. Store in the same way as other ground spices, in airtight packs and protected from extremes of heat, light and humidity.

Use

Galangal is an important ingredient in many Asian dishes and is particularly associated with the flavor of Thai food. Freshly grated or sliced, galangal will be found, with lemongrass and lime leaves, in the popular hot-and-sour soups of Thailand, while the powder is included in Thai green and red curries, and also features in the cooking of China, Malaysia, Singapore and Indonesia. In a similar way to ginger, the tangy aromatic flavor of galangal helps to neutralize overly fishy flavors and is therefore often used in seafood recipes. Galangal features in sambal, a fiery Asian paste made with chilies, dried shrimp and tamarind water, and is an ingredient in the exotic Moroccan spice blend ras el hanout. Kenchur powder is an interesting alternative to galangal when a milder yet still aromatic taste result is desired.



Fresh galangal root

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 ½ tsp (7 mL) ground
- white meats: 1 tsp (5 mL) ground
- vegetables: 1 tsp (5 mL) ground
- carbohydrates: ½ tsp (2 mL) ground

COMPLEMENTS

- Thai soups
- Asian curries and stir-fries
- seafood dishes
- sambal pastes

USED IN

- Thai red and green curry blends
- rendang curry powder
- laksa spice mixes
- ras el hanout

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander seed
- cumin seed
- fenugreek seed
- ginger
- mustard
- nigella
- paprika
- tamarind
- turmeric
- zedoary

Black Fungus and Galangal Soup

This tasty Asian soup is a perfect balance of sweet, sour, salty and bitter flavors, made all the more appetizing by the inclusion of galangal.

- 2½ cups (625 mL) chicken stock
- 1⅔ cups (400 mL) coconut milk
- 10 slices fresh galangal*
- 3 coriander roots
- 2 shallots, quartered
- 2 kaffir lime leaves, halved
- 1 stalk lemongrass, coarsely chopped
- 1 clove garlic, halved
- 1 bird's eye chili, chopped
- 1 tbsp (15 mL) palm sugar (jaggery)
- ⅔ oz (20 g) dried black fungus,** broken into medium-sized pieces
- 2 tbsp (25 mL) fish sauce (approx.)
- 1 tbsp (15 mL) freshly squeezed lime juice (approx.)

Heat chicken stock and coconut milk in a large saucepan over medium heat. Meanwhile, vigorously pound galangal, coriander roots, shallots, lime leaves, lemongrass, garlic, chili and palm sugar in a mortar and pestle, then add to the stock mixture. Bring soup to a boil, then reduce heat and simmer gently for 25–30 minutes, or until fragrant. Strain soup and return to the pan, discarding solids. Add fungus, fish sauce and lime juice; simmer for 10 minutes, until fungus has reconstituted. Taste and add more fish sauce and lime juice, if needed. Serve immediately. Serves 4 as a starter.

*If fresh galangal is not available, dry slices may be infused in the stock for about 30 minutes and then removed before serving.

**Black fungus is available at Asian grocers. Shiitake or oyster mushrooms can also be used.

Garlic

OTHER COMMON NAMES

- clown's treacle
- poor man's treacle
- stinking rose

BOTANICAL NAMES

- *Allium sativum*
- elephant garlic: *A. ampeloprasum*
- society garlic: *Tulbaghia violacea*

FAMILY

- Alliaceae

GARLIC BELONGS to the same family as onions, chives, leeks and shallots. It is a hardy perennial with long, flat, solid, spear-shaped gray-green leaves, 12 inches (30 cm) long and 1 inch (2.5 cm) wide. The name "garlic" derives from the Anglo-Saxon word *garleac*, *gar* meaning "spear" and *leac*, "plant." The most attention-getting part of a garlic plant is its dramatic, top-heavy flower, comprising a compact collection of mauve-tinted white petals that rise above the leaves on a tall, rod-like stalk. The useful part of garlic, however, is the bulb, which lies beneath the ground. Garlic bulbs may be white or pink-skinned, and vary enormously in size from the small Asian ones to giant strains grown in California. The garlic bulb is a round, lumpy collection of bulblets encased in a parchment-like, flaky outer skin that looks like tightly clenched knuckles wrapped in tissue paper. The bulblets (commonly called cloves, from the word "cleave," meaning to split along the grain or separate by dividing) are compacted within the bulb (often called a head) and are separated by scaly membranes. Although the garlic clove in its protective husk emits no smell, when crushed or peeled the enzymes within are rapidly activated, producing allicin, which breaks down to become allyl disulfide; the resulting aroma is strong, sulfurous and lingering.

Garlic



**NAMES IN OTHER
LANGUAGES**

- Arabic: tsoum
- Burmese: chyet-thon-phew
- Chinese (C): suen tau
- Chinese (M): da suan
- Czech: cesnek
- Danish: hvidlog
- Dutch: knoflook
- Filipino: bawang
- French: ail
- German: knoblauch
- Greek: skordo
- Indian: lasan, lashuna
- Indonesian: bawang putih
- Italian: aglio
- Japanese: ninniku
- Korean: ma nl
- Malay: bawang puteh
- Norwegian: hvitlok
- Portuguese: alho
- Russian: chesnok
- Spanish: ajo
- Sri Lankan: sudu lunu
- Swedish: vitlok
- Thai: kratiem
- Turkish: sarmisak
- Vietnamese: toi

FLAVOR GROUP

- pungent

**WEIGHT PER
TEASPOON (5 ML)**

- whole average fresh clove: 5.0 g
- ground dehydrated powder: 4.6 g

Elephant garlic is more closely related to the leek than standard garlic. Although it has very large bulbs, the flavor is somewhat underwhelming, so it is not really a substitute for true garlic. Tulbaghia, a plant with small, mauve, star-shaped six-petaled flowers, was once known as society garlic because it was reputed not to produce garlic breath, making it tolerable in polite society. Tulbaghia is not a true garlic, and these days health professionals recommend against eating it.

Raw garlic has a sharp, acrid taste and gives the sensation of heat to the palate. Cooked garlic has a different, sweeter flavor and is not really as overpowering as some would have you believe. Dried garlic is pale yellow and sold either in slices $\frac{1}{3}$ – $\frac{1}{2}$ inch (8–10 mm) long, in granules $\frac{1}{16}$ inch (1 mm) in diameter or as a fine powder.

Origin and History

Garlic has been around for so long, the precise details of its origins are obscure. It was thought to have come from southeastern Siberia first, and to have then spread to Mediterranean countries, where it became naturalized. There is a firm belief that it was grown in India, China and Egypt before recorded history. Garlic is among the oldest of known cultivated plants; several bulbs were found in the tomb of Tutankhaman, dating from 1358 BC. The builders of the pyramids ate it regularly and Hippocrates noted its medicinal value in 400 BC. Reference is made to garlic in the Old Testament, in Mohammedan, Roman and Greek literature and in the Talmud. Although it was a common food of the Roman laborer, garlic was largely scorned by the upper classes of the day, who considered its consumption a sign of vulgarity. Nonetheless it was given to Roman soldiers before going into battle to give them courage, and no doubt helped them vanquish their barbarian enemies.

Introduced to England by the Romans, garlic begins to appear in Old English records of plants from the 10th century on. Garlic is mentioned, not always with favorable connotations because of its distinctive aroma, in the writings of Chaucer and Shakespeare. Its many health-giving properties have been well documented. Louis Pasteur reported on its antibacterial activity in 1858, and raw garlic juice was used as a field dressing in the trenches during the First World War. The common names “clown’s treacle” and “poor man’s treacle” are references to garlic’s home-cure status, a “treacle” being an antidote to poison, stings and bites. Even

in the 21st century, garlic is used for its microbiological stability as an aid to preservation in food manufacturing and is prescribed for a wide range of ailments by reputable health practitioners.

Processing

The global popularity of garlic has created demand for it in all kinds of processed forms, from fresh refrigerated to preserved in jars, and various forms of dehydrated garlic flakes, granules and powders. Dried garlic is the most common because it is easily transported and stored, and bears a pleasantly close resemblance to fresh garlic when used in cooking. To produce garlic flakes and granules, the cloves are peeled and either sliced or diced before being passed through a dehydrator that is warm enough to bring the moisture content down to around 6.75% but not so hot as to drive off the flavor.

Garlic powder is made in two ways. One is to grind dried sliced garlic, which typically attracts moisture (technically referred to as being hygroscopic), so starch is usually added to prevent it becoming sticky. The other method involves making a paste with freshly processed garlic, which is then spray-dried in the same way instant coffee is made. The result is a powder that dissolves readily, and for those on gluten-free diets, it has the benefit of being free of added starch. Garlic pastes in jars are made from crushed garlic, mixed with either oil or a food acid such as lemon juice or vinegar to achieve preservation. Sometimes these pastes do contain a percentage of reconstituted dehydrated garlic, which gives them a deeper yellow color.

Buying and Storage

When buying heads of fresh garlic, look for ones that are holding together firmly. The cloves should be hard and not showing signs of shrinking away from the papery sheath. Upon peeling, any spots of discoloration are best cut out, as they will have a rank flavor. Garlic stores best when the heads are kept intact, as separated cloves lose their flavor more rapidly. Keep complete heads in an open container in a cool, dark place away from humidity. Fresh garlic should not be stored in the refrigerator, as it then has a tendency to sprout. Garlic pastes will usually bear the instruction “refrigerate after opening,” which is essential because, even though the food

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 3–4 fresh cloves, 2 tsp (10 mL) powder
- white meats: 3–4 fresh cloves, 2 tsp (10 mL) powder
- vegetables: 2–3 fresh cloves, 1½ tsp (7 mL) powder
- carbohydrates: 2–3 fresh cloves, 1½ tsp (7 mL) powder

COMPLEMENTS

- practically every savory dish imaginable



USED IN

- barbecue spices
- Cajun spices
- chermoula
- curry powders
- harissa paste mixes
- Italian herb blends
- laksa spice blends
- meat seasoning mixes

COMBINES WITH

most culinary herbs and spices, but has a special affinity with:

- ajowan
- bay leaves
- caraway
- chives
- coriander leaves and seeds
- cress
- curry leaves
- fennel fronds and seeds
- kaffir lime leaves
- kokam
- mustard
- oregano
- parsley
- pepper
- rosemary
- sage
- tarragon
- thyme
- Vietnamese mint

acids and garlic's natural antibacterial qualities aid preservation, prolonged exposure to normal temperatures after removing the lid will cause mold to grow.

All forms of dried garlic are readily available and are best purchased in some style of high-barrier packaging, such as laminated plastic, foil or glass. Never buy garlic powder that looks lumpy, as this is an indication it has absorbed extra moisture and the flavor will have deteriorated. Always store dried garlic in an airtight pack and, just as for other spices, keep in a cool, dark place. Be particularly careful to avoid extreme humidity, and never shake the contents out of the pack over a steaming pot.

Use

Peeling the scaly membranes from cloves of garlic can be a fiddly procedure, but there are a few practical methods and household gadgets that make this task easier. A traditional way to peel a clove of garlic is to first thump it with the flat side of a heavy knife blade, as this slight crushing distorts the clove and loosens the skin; it is then easily peeled off by hand. Some cooks simply put a clove in their garlic press, squeeze out the flesh and the skin remains behind in the press. Another simple invention is a rubber tube about 5 inches (12 cm) long and $\frac{3}{4}$ inch (2 cm) in diameter. A few garlic cloves are placed inside the tube, which is then rubbed back and forth vigorously on the counter with the palm of your hand for a few seconds. Then presto, shake out the contents and you will have beautifully peeled cloves and separate bits of papery skin. Some cooks will slice a peeled garlic clove in half and remove the thin, pale-green beginnings of the shoot in the center. Depending on how developed the shoot is, it can (when quite green) make the garlic somewhat bitter.

When it comes to using garlic, it is tempting to be glib and ask, "Is there a savory dish that garlic is not used in?" But of course that would be doing this wonderful herb a terrible disservice. There is hardly any dish that is not improved by the flavor of garlic, and although its pungency tends to be frowned upon by non-users, when everyone indulges in garlic its telltale lingering on the breath is barely noticeable among fellow garlicophiles. They say one reeks less of garlic when it is consumed with red wine, an excellent idea in my opinion, and that eating parsley after garlic reduces its linger-

ing effect on the breath. I have also found that chewing a few fennel seeds works particularly well.

When cooked, garlic develops a more moderate and slightly sweeter taste than when it is raw, a transition most noticeable when a whole head is placed on the barbecue to cook slowly for about 30 minutes. The creamy beige flesh inside has none of the hot pungency of raw garlic and is delicious scooped out of the burnt, crisp casing and spread on accompanying barbecued meats and vegetables (I recommend slices of eggplant).

Garlic need not dominate a dish, and it is often surprising the extent to which a small amount can heighten the taste of many foods, including delicate vegetables, and how it can balance with other flavors, be they sweet, pungent or hot. Garlic is found in most cuisines, especially Mediterranean, Indian, Asian and Mexican, and is regularly applied to the manufacture of commercial pâtés, terrines and sausages. Garlic features in many prepared herb and spice blends, such as Italian herbs, pizza seasoning, garlic salt and practically every spice mix designed to sprinkle over white or red meats. It is an ingredient in the fiery Tunisian harissa paste and adds depth of character to Moroccan chermoula and Yemeni zhug.

To impart a mild garlic flavor to a salad, rub the inside of the bowl with a cut clove of garlic. This method can be used on the inside of a pot before making a soup or stew, and lamb or beef roasts and poultry may be similarly rubbed with a cut garlic clove before cooking. Garlic butter, flavored with freshly crushed garlic, goes well with seafood, as does garlic oil, made by steeping slices of fresh garlic in olive oil. The very rich and thick garlic mayonnaise, aioli, from the south of France, is a versatile sauce that complements globe artichokes, avocados, asparagus, fish, chicken or snails. I have often thought the best thing about snails is the heavenly garlic sauce which invariably accompanies them. A boned leg of lamb, stuffed with garlic, rosemary, peppers, apricots and crushed pistachio nuts prior to roasting, is one of my favorites.



Pork Tenderloins with Roasted Garlic and Artichoke Sauce

When fresh garlic is roasted, it develops a sweet, agreeable taste. To my mind, this sauce complements pork just as well as traditional apple sauce.

- 4 pork tenderloins
- 8 cloves garlic, peeled and bruised
- 4 sprigs fresh thyme
- $\frac{1}{4}$ cup (50 mL) olive oil
- 1 $\frac{1}{4}$ lbs (625 g) Anya or new potatoes, boiled and drained
- salt and freshly ground black pepper to taste
- 3 tbsp (45 mL) finely chopped fresh flat-leaf parsley
- 5 cloves garlic, very thinly sliced and fried in oil

Roasted Garlic and Artichoke Sauce

- 2 heads garlic
- salt and freshly ground black pepper to taste
- olive oil, for drizzling
- 1 can (14 oz/398 mL) artichoke hearts, drained
- $\frac{1}{3}$ cup (75 mL) freshly squeezed lemon juice
- 1 tsp (5 mL) ground cumin
- $\frac{1}{3}$ cup (75 mL) olive oil

Trim fat from pork tenderloins and place in a large sealable plastic bag with garlic, thyme and olive oil. Refrigerate for 2 hours or overnight.

Preheat oven to 350°F (180°C). For the sauce, prepare garlic by slicing off the tops to expose the cloves. Place in a roasting pan, season with salt and pepper and drizzle with olive oil. Cover with foil and roast for 1 hour, until soft. Remove garlic from oven, leaving oven on, and squeeze the cloves into a bowl. (They should be very soft and easy to manage. If the cloves don't come out easily, continue roasting.) Place roasted garlic, artichokes, lemon juice and cumin in a food processor and pulse until beginning to purée, then, with the motor running, add oil through the feed tube, leaving some texture to the sauce. Do not overblend. Set aside.

Slice cooked potatoes into quarters, season with salt and pepper and place on a baking sheet. Place in the oven to get slightly crispy while pork is cooking.

Remove pork from marinade and discard marinade. Pan-fry or broil pork for 15 minutes, turning twice, until just a hint of pink remains inside. Let rest for 5 minutes, then cut on the diagonal into 1-inch (2.5 cm) thick slices.

To serve, place potatoes in the center of each plate, top with slices of pork and a dollop of sauce, then garnish with chopped parsley and fried garlic. (Additional sauce will keep in the refrigerator for up to 1 week.) Serves 8.



Top to bottom: dried minced garlic; garlic powder (granulated garlic); large garlic flakes

Ginger

BOTANICAL NAME

- *Zingiber officinale*

FAMILY

- Zingiberaceae

NAMES IN OTHER LANGUAGES

- Arabic: zanjabil
- Burmese: gin
- Chinese (C): saang geung (fresh), geung (dry)
- Chinese (M): sheng jiang (fresh), jiang (dry)
- Czech: zazvor
- Danish: ingefaer
- Dutch: gember
- Finnish: inkivaari
- French: gingembre
- German: ingwer
- Greek: piperoriza
- Indian: adrak (fresh), sonth (dry)
- Indonesian: aliah
- Italian: zenzero
- Japanese: shoga
- Malay: halia
- Portuguese: gengibre
- Russian: imbir
- Spanish: jengibre
- Sri Lankan: inguru
- Swedish: ingefara
- Thai: khing
- Turkish: zencefil
- Vietnamese: gung

GINGER IS a lush-looking tropical perennial plant with erect, leafy shoots about $\frac{1}{4}$ inch (0.5 cm) in diameter, and it grows up to 4 feet (1.2 m) in height. Lateral, lance-shaped leafy shoots, which die down annually, sprout out from the reed-like stem. The separate flower stem rises directly from the rootstock, ending in an oblong spike from which grows the white or yellow blossom with a purple-speckled lip. The ginger flower of Asian culinary use comes from a plant known as torch ginger (*Etlingera elatior*, syn. *Nicolaia alatior*) that is chopped and served raw as a vegetable.

Gingerroot, dried slices and fresh



Gingerroot, as we commonly call it — the correct term is the “rhizome” — is the knobbly section that grows and increases underground in tuberous joints. These are referred to in the trade as “races,” or more often and appropriately “hands” because of their knuckled, arthritic shape, which is like a human hand. The smaller branches of the rhizome are logically enough called “fingers.” Ginger rhizomes are encircled by scales, which form a rough-looking, beige-colored skin that covers the pale, creamy to white fibrous flesh.

The aroma and flavor of ginger may vary depending upon the type of cultivar it comes from, the stage at which it is harvested and the region in which it is growing. Ginger rhizomes would generally be described as having a sweet, pungent aroma and lemony freshness. The flavor will be similarly tangy, sweet, spicy and warm to hot, depending upon when it has been harvested as, to a large degree, early-harvested ginger is sweet and tender, while later-harvested rhizomes are more fibrous and pungent. Ginger powder lacks the fresh, volatile aroma of the living rhizomes but retains a spicy fragrance and characteristic ginger taste. Preserved and crystallized gingers are particularly sweet from the sugar used in processing and may also be mild or hot, like fresh ginger.

Origin and History

The origins of ginger are not known for certain, nor is it known to occur in a genuine wild state anywhere, although it is grown in many tropical climates. Nonetheless, since antiquity there have been references to its cultivation by both the ancient Chinese and Hindus, suggesting that it may have originated somewhere between northern India and eastern Asia. Ginger is one of the oldest Oriental spices to have reached southeastern Europe. One tale recounts how around 2400 BC a baker on the isle of Rhodes, near Greece, made the first gingerbread. In the fifth century BC, the Persian trade missions, sent to India by Darius, brought back ginger. The beneficial properties of ginger were mentioned by Confucius (551–479 BC) and the Greek first-century AD physician Dioscorides, who wrote the *Materia Medica*, similarly extolled its virtues. Arab traders from the Orient brought ginger into Greece and Rome, characteristically keeping their sources of supply from India a secret.

In the second century AD, ginger was included in the list of imports to Alexandria from the Red Sea that were subject to

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole average dried slice: 1.5 g
- ground: 2.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp (10 mL) ground, 1 tbsp (15 mL) grated fresh rhizome
- white meats: 2 tsp (10 mL) ground, 1 tbsp (15 mL) grated fresh rhizome
- vegetables: 1 ½ tsp (7 mL) ground, 2 tsp (10 mL) grated fresh rhizome
- carbohydrates: 1 ½ tsp (7 mL) ground, 2 tsp (10 mL) grated fresh rhizome

COMPLEMENTS

- cakes
- pastries and biscuits
- pumpkin scones
- baked squash, when sprinkled on before cooking
- all curries
- Asian stir-fries
- red meats, having a tenderizing effect
- seafood, where it counters overt fishy flavors

USED IN

- barbecue seasoning mixes
- berbere
- Chinese master stock spices
- Jamaican jerk spices
- red and green curry spice blends
- curry powders
- mixed spice
- tandoori seasonings
- ras el hanout
- quatre épices

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander leaves and seeds
- cumin
- curry leaves
- fennel seed
- galangal
- kaffir lime leaves
- lemongrass
- lemon myrtle
- paprika
- star anise
- turmeric

Roman customs taxes. Ginger is mentioned in the Koran, indicating to those virtuous enough to reach Paradise that they will not be denied the pleasure of ginger-flavored water. Ginger was known in Germany and France in the ninth century and there are references to it in England in the 11th century. By the 14th century ginger was noted there as the next most common spice after pepper.

Because ginger could be readily transported still growing in pots aboard vessels, without having to be processed, it tended to be the living rhizomes that were traded extensively during the Middle Ages. This led to ginger being transplanted to many areas. Just as the Arabs took ginger from India to East Africa in the 13th century, the Spanish established plantations in Jamaica in the 16th century. By 1547 over 1,000 tons of ginger was said to have been exported to Spain. At around the same time the Portuguese also established ginger in West Africa. In Basel, the street where the Swiss spice traders conducted their business was called Imbergasse, which means “ginger alley.” The aphrodisiac properties of ginger have long been appreciated and are referred to in the *One Thousand and One Nights*. Henry VIII noted its medicinal powers and he recommended it. Later, gingerbread became a favorite confection of Queen Elizabeth I.

Processing

Ginger is processed in two main ways. One is to make preserved ginger, in either brine, syrup or crystallized form; the other method is drying to produce dried sliced ginger or ginger powder. For preserved ginger, the immature rhizomes (these are sweeter and less fibrous than mature ones) are harvested, washed and the roots trimmed off. The clean ginger is then peeled, cut to whatever shape is desired and graded for uniformity. There are three main grades of ginger. First are young stem and choice-selected stem, made from the ends or fingers of the rhizomes and cut into oval pieces about 1½ inches (4 cm) long. Second are fingers, smaller oblong pieces, and the third grade is called cargo ginger, made from the main stem of the rhizome and sub-graded into three levels determined by size. For the next stage in making preserved ginger, graded pieces are placed in barrels, salted and covered for 24 hours, after which the liquid that has formed is drained off. A fresh lot of salt is then added, this time with vinegar, and the ginger is left to pickle for seven days. At this stage in the

process it is referred to as “ginger preserved in brine” or “salted ginger.” Now most of this ginger will be preserved with sugar to make “ginger in syrup” or “dry” and “crystallized” ginger. To make ginger in syrup, it is removed from the brine, and washed and soaked in cold water, which is changed several times over two days. This process is followed by boiling the washed ginger in water for 10 minutes, then in sugar syrup a couple of times, until it has become well impregnated with sugar. Dry or crystallized ginger is then made by subjecting the ginger in syrup to boiling for a third time to evaporate more water. The pieces are then drained, dried and dusted with sugar, making absolutely delicious morsels.


Dried ginger is produced at varying levels of sophistication, yet the near-biblical experience we had seeing ginger being processed in India, in the same manner as it has been for thousands of years, was most rewarding. We had headed off to Kothamangalam, a few hours drive from Cochin, through beautiful, lush, tropical, typical Keralan vegetation to arrive at a timeless scene spread out over about five hectares of rocky hillside. Hundreds of farmers, who had leased small sections of the smooth rockface exposed to the burning sun, were spreading their harvest of ginger out to dry. Among this veritable sea of ginger, small family groups were gathered in twos and threes under makeshift shelters of cloth draped over sticks. Their job was to roughly scrape the skin off both sides of the rhizomes to speed up drying. This they did with the assistance of a steel “sickle” held between their feet so both hands could be used to scrape the ginger against the sickle. In some countries bleached, or white, ginger is preferred, so to achieve this the ginger is piled up in mounds about 3 feet (1 m) high, with what looks like a wicker chimney in the middle. A bowl of sulfur powder is lit and placed in the chimney, and the stack of ginger is covered with a tarpaulin until the fumes have had their effect. Because the spice industry is demanding increasingly higher standards of hygiene, and consumers are less likely to want a product treated with sulfur simply for cosmetic purposes, practices like this will gradually die out.

In the spice trade, dry ginger is sold in eight grades that indicate how it has been prepared prior to grinding. *Peeled*, *scraped* or *uncoated* refers to whole rhizomes that have had the outer skin cleanly removed without damaging the underlying tissue, and thus will have the best flavor. *Rough scraped* ginger has only had the skin partially removed from the flat sides to accelerate drying. *Unpeeled* or *coated* rhizomes are ones that



have been dried intact with the skin still on. *Black ginger*, a name that is a little misleading, describes whole live hands of ginger that have been scalded for 10–15 minutes in boiling water before being scraped and dried. This kills the rhizome, preventing the likelihood of sprouting, makes scraping easier and tends to darken its color. *Bleached* or *limed* ginger describes clean-peeled whole rhizomes that have been treated with sulfur or lime to make them lighter in color. *Splits and slices* are unpeeled rhizomes that have been split longitudinally or sliced laterally to speed up drying. *Ratoons* are the second “crop” of rhizomes from plants that have been left in the ground for over a year. They are smaller, darker in color, more fibrous and generally hotter.

Buying and Storage



Fresh hands of ginger are available from most greengrocers, and should be plump, firm and clean. Store fresh ginger in an open container in the cupboard in the same way as you keep your fresh onions and garlic. Minced or grated ginger can be bought, preserved in vinegar or some other food acid in glass jars; these must be refrigerated after opening. Ginger preserved in syrup or crystallized needs to be kept in a cool, dry environment, and will keep for over a year. While most preserved ginger came from China in the past, from the 1970s onwards Australian preserved ginger has been preferred for confectionery and baking due to its sweet, lemony flavor and pleasant texture, which lacks fiber.

Dry ginger slices and ginger powder may originate from different countries and this will influence their flavor. Jamaican ginger has a delicate aroma and taste. It is considered one of the better kinds for culinary purposes and is in demand for the flavoring of soft drinks. A great deal of Jamaican ginger finds its way into European and American supermarkets. Nigerian ginger has a pungent, camphorous note, as does ginger from Sierra Leone, and they are required by the food processing industry for their volatile oil and oleoresin. Indian dried ginger, from Cochin and Calicut, on the Malabar Coast, are widely exported types, with Cochin generally being considered the better of the two as it is not bleached (as the Calicut grade often is) and has a lemon-like aroma and pleasing pungency. Although produced in small amounts by world standards, Australian ground ginger has the least amount of fiber and for my money gives the best results

in cooking. Poor-quality ground ginger will have a sharp taste, a hot, biting aroma and often contains a lot of fiber, which may be sifted out in an ordinary flour sifter. Storage for sliced and ground dry ginger is the same as for other whole and ground spices; take particular care to keep the ground spice in an airtight pack away from extremes of heat, light and humidity.

Use

Ginger may be classed as one of the more versatile spices. Its tangy freshness, slight spiciness, warmth and sweetness complement a whole range of dishes from sweet to savory. Fresh, preserved or powdered ginger is often added to cakes, pastries and biscuits. My wife makes the most delicious pumpkin scones, which are flavored with a combination of finely chopped pieces of preserved ginger and ginger powder. Ginger goes well with red vegetables, as does nutmeg. Sprinkle ground ginger over squash before baking or toss with a little butter after steaming.

Ginger is used fresh in many Asian dishes, where it forms a perfect marriage with the flavors of garlic, lemongrass, chili and kaffir lime and coriander leaves. In Japanese cooking one often finds the preserved, pickled (and colored in this case), pink or red ginger. In a similar manner to galangal, ginger helps to neutralize overtly fishy notes, and as such I find it almost mandatory to use when cooking certain seafood. Ginger powder is found in the majority of Indian and Asian curries and when rubbed onto red meats before grilling adds a delicious taste and has a slightly tenderizing effect. Because the pungency of ginger can vary quite considerably, before adding it to a dish I recommend smelling it for signs of harshness and having a small taste as well. Should it be noticeably pungent, sharp or hot, reduce the amount intended by about a third to a half.

Honey and Ginger Eggplant

Eggplant does not need to be salted and drained, as these days the bitterness has been bred out. This dish is a great accompaniment to roast meats.

1 ½ lbs (750 g) eggplant, cut into 1-inch (2.5 cm) rounds
1 ¼ to 2 cups (300 to 500 mL) sunflower oil, divided
2 cloves garlic, crushed
4 tsp (20 mL) grated gingerroot
¼ cup (50 mL) water
⅓ cup (75 mL) liquid honey
1 tsp (5 mL) ground cumin
grated zest and juice of 1 lemon

Ensure that eggplant is dry. In a frying pan, heat ¾ cup (175 mL) of the oil over medium heat. In batches, fry eggplant, turning once, until brown on both sides, then drain on a paper towel. (This will take 2–3 batches, depending on the size of pan.) Add oil for each batch, as eggplant absorbs a lot of oil when cooking.

In a large pan or casserole, cook garlic and ginger over low heat. Add water, honey, cumin, lemon zest and lemon juice; cook for 10 minutes. Add fried eggplant, stirring gently to coat. Cover and cook for 10 minutes. Serve immediately or keep covered in a warm oven until ready to serve. Serves 4–6.

Grains of Paradise

OTHER COMMON NAMES

- alligator pepper
- ginny grains
- Guinea grains
- Melegueta pepper

BOTANICAL NAMES

- *Amomum melegueta*,
also known as
Aframomum amomum

FAMILY

- Zingiberaceae

NAMES IN OTHER LANGUAGES

- Arabic: gawz as Sudan
- Czech: aframom rajske
zrno
- Dutch: paradijskorrels
- French: poivre de
Guinée, malaguettes
- German:
malagettapfeffer,
guineapfeffer
- Greek: piperi melenketa
- Italian: grani de paradiso
- Japanese: manigetto
- Russian: rajskie zyorna
- Spanish: malagueta
- Turkish: idrifi

FLAVOR GROUP

- hot

WEIGHT PER TEASPOON (5 ML)

- whole: 3.0 g
- ground: 2.8 g

GRAINS OF PARADISE are the seeds from a plant that is a member of the ginger and cardamom family. These herbaceous, cardamom-like, leafy-stemmed shrubs grow from a stout rhizome and may vary considerably depending upon where they are growing in West Africa. Similar to cardamom, the flowers are borne on 2-inch (5 cm) stems that emerge at the base just above ground level, and are followed by pear-shaped, 4-inch (10 cm) long red to orange fruits that contain many seeds. The aromatic and pungent hard, roundish, dark brown, small seeds are $\frac{1}{8}$ inch (3 mm) in diameter. Their taste is initially piney, then peppery, hot, biting and numbing like native Australian mountain pepperberry (*Tasmannia lanceolata*). Similarly, a lingering camphor flavor with notes of turpentine is detectable.

Grains of paradise



**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: 1 tsp
(5 mL)
- white meats: $\frac{3}{4}$ tsp
(4 mL)
- vegetables: $\frac{1}{2}$ tsp
(2 mL)
- carbohydrates: $\frac{1}{2}$ tsp
(2 mL)

COMPLEMENTS

- most dishes in the
same way as pepper
- Tunisian stews
- game
- slow-cooked
casseroles

USED IN

This spice is so rare it is not generally added to spice blends; however, it has been included in:

- ras el hanout
- tagine spice blends

Origin and History

Grains of paradise (Melegueta pepper) is indigenous to the West Coast of Africa from Sierra Leone to Angola. The common name “Melegueta” derives from Melle, the name of an old empire inhabited by the Mandingos in the upper Niger country situated between Mauritania and Sudan. The Portuguese called it Terra de Malaguet, and the coast to its west, referred to as the “Gold Coast,” was also named the “Grain Coast” and the “Pepper Coast” after this spice.

The earliest records of grains of paradise date from 1214. In the 13th century, the court physician of Emperor John III at Nicea prescribed it and *grana paradisi* was listed among spices sold at Lyons in 1245. The name “grains of paradise” was coined because the Italian traders who shipped it from the Mediterranean port of Monti di Borea had no idea of its origin, as it was transported overland through the desert to Tripoli. By the mid-14th century, direct sea routes to West Africa were plied by ships loaded with ivory and *malaguette*. Although unrelated to pepper, but seen as an acceptable alternative, it enjoyed popularity in Europe, encouraged at the time because the sea route to India was not discovered until the rounding of the Cape in 1486.

The year 1460 saw the financial ruin of many spice merchants, brought about by a Portuguese squadron that returned from the West Coast of Africa with a cargo of slaves and grains of paradise. This sudden flooding of the market with Melegueta pepper caused the Lisbon price of black pepper to crash.

In the 16th century the English were actively trading ivory, pepper and grains of paradise from the Gold Coast. The herbalist John Gerard mentions its medicinal virtues and both the seeds and rhizomes were used medicinally in West Africa. The seeds were an ingredient in the spiced wine known as hippocras and its pungency was exploited to give an artificial strength of flavor to wines, beer, spirits and vinegar. Elizabeth I was reported to have a personal fondness for grains of paradise, but by the 19th century they had fallen out of favor in Western cuisine and during the 20th century were generally only referred to as a curiosity.

Processing

Unlike its cousins green and brown cardamom, grains of paradise are removed from their pod and surrounding sticky pulp to facilitate drying.

Buying and Storage

Grains of paradise are difficult to find in Western countries, as their supply is hampered by three limiting factors. First, to drug enforcement agencies, the name conjures up notions of mind-altering substances; second, their importation and use as an adulterant to pepper has been banned in some countries; and third, the crop has never experienced organized cultivation. Thus, with the exception of small quantities secured from West Africa by spiceophiles, it is likely to remain almost unprocurable. For those lucky enough to obtain some, only buy them whole and store in an airtight container away from extremes of heat and humidity. Under these conditions the flavor will last for up to five years.

A reasonable substitute for grains of paradise can be made by pounding together in a mortar and pestle six seeds from a brown cardamom pod, four black peppercorns and one mountain peppercorn. Store in the same manner as other ground spices.

Use

Grains of paradise are used in much the same way as pepper and in the region they come from are considered an acceptable alternative, as well as being the preferred spice in some of their local dishes. Exotic Moroccan spice blends such as ras el hanout may contain the crushed seeds and their peppery notes will be found in Tunisian stews spiced with cinnamon, nutmeg and cloves. It is best to grind grains of paradise before adding them to a dish, as this releases their flavor.

COMBINES WITH

- allspice
- bay leaves
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander seed
- cumin
- garlic
- ginger
- kokam
- rosemary
- star anise
- tamarind
- thyme
- turmeric

West African Beef Stew

Serve with mashed potatoes and a steamed leafy green such as spinach or Swiss chard.

- 2 tbsp (25 mL) vegetable oil
- 1 large onion, peeled and chopped
- 1 small hot chili, chopped
- 1 ½ lbs (750 g) beef round steak, cut into cubes
- 1 can (14 oz/398 mL) chopped tomatoes
- 2 tsp (10 mL) grains of paradise, roughly crushed with a mortar and pestle
- 2 tsp (10 mL) sweet paprika
- ½ cup (125 mL) peanuts, roasted and roughly crushed with a mortar and pestle
- 1 tsp (5 mL) butter
- salt to taste

In a heavy-based saucepan, heat oil over medium-low heat. Sauté onion until transparent, about 4 minutes. Increase heat to high and add chili, then beef, adding just a few cubes at a time so that each piece is seared on all sides. When all the beef has been seared, add tomatoes, grains of paradise and paprika; stir to combine. Bring to a boil, then reduce heat to low, cover and simmer until meat is tender — about 1 hour, depending on your butcher, the size of the meat cubes and your stove.

In a small frying pan, fry peanuts and butter, mashing them together to make a rough paste, then add to the stew. Add salt and cook for 3–5 minutes longer to allow flavors to blend.

Serves 6.

Horseradish

OTHER COMMON NAMES

- great raifort
- Japanese horseradish (wasabi)
- mountain radish
- red cole

BOTANICAL NAMES

- horseradish:
Armoracia rusticana,
also known as
Cochlearia armoracia
- wasabi: *Wasabia japonica*

FAMILY

- Cruciferae

NAMES IN OTHER LANGUAGES

HORSERADISH

- Arabic: fujl har
- Chinese (C): laaht gan
- Chinese (M): la gen
- Czech: kren, kren selsky
- Danish: peberrod
- Dutch: mierikwortel
- Finnish: piparjuuri
- French: raifort, cranson de Bretagne
- German: meerrettich, kren
- Greek: armorakia
- Hungarian: torma
- Italian: rafano, barbaforte
- Japanese: seyowasabi, hosuradisshu

HORSERADISH is a vigorous perennial herb with large, dark green, soft, fleshy leaves that resemble those of spinach and grow to about 24 inches (60 cm) long. Numerous small, white aromatic flowers form, followed by oblong wrinkled pods that contain mostly unviable seeds; hence, propagation is from the root. The young leaves are sometimes cooked like spinach, but this is not common as horseradish is mostly cultivated for the flavor in its root. The root system consists of a main taproot, 12 inches (30 cm) long, with smaller roots branching out at various angles; it looks similar to a radish but is more hairy and wrinkled with a yellowish brown skin. The inside flesh is white and fibrous and releases an intense, highly pungent, tear-inducing aroma that goes right up the back of one's nose. These characteristic head-clearing fumes and the strong, biting heat of horseradish are only created when the root is cut or scraped, a process that breaks separate cells and brings together two components, sinigrin (a glucoside) and myrosin (an enzyme), to form a fierce volatile oil identical to that of black mustard seeds. The full intensity is short-lived and even after 15 minutes will start to diminish unless a souring agent (lemon juice or vinegar) is added. Wasabi, or Japanese horseradish, is pale green, and comes from the tuber of a perennial herb that has a similar aroma and taste to horseradish, yet is often considered to be more complex and pungent. Although purists may say horseradish cannot be substituted for wasabi, some commercial wasabi pastes are made from horseradish colored with spinach powder.

Horseradish root



NAMES IN OTHER LANGUAGES

HORSERADISH

- Norwegian: pepperrot
- Portuguese: rabanao-bastardo
- Russian: khren
- Spanish: rabano picante, taramago
- Swedish: pepparrot
- Thai: hosraedich
- Turkish: yaban turbu

WASABI

- Chinese (C): saan kwai
- Chinese (M): shan kui
- Czech: Japonsky zelený kren
- Danish: Japansk peberrod
- Dutch: bergstokroosi, Japanse mierikswortel
- Finnish: Japaninpiiparjuuri
- French: raifort du Japon
- German: bergstockrose, japanischer kren
- Japanese: wasabi, namida
- Russian: vasabi
- Swedish: Japansk pepparrot
- Thai: wasabi

There is also a tree called the horseradish tree (*Moringa oleifera*) that is indigenous to the forests of the western Himalayas and is cultivated to make an oil (ben oil) that is extracted from the seeds and used in cosmetics and as a lubricant for precision instruments. The seed-bearing pods have a meaty taste and are sometimes used to flavor curries. The horseradish tree gets its name because the root is pungent like horseradish and has occasionally been used in a similar way to flavor food, although it is not considered to be a good substitute for horseradish.

Origin and History

The origins of horseradish are obscure. Some historians claim that the early Greeks knew of it 1,000 years before the birth of Christ and that it was used in Britain before the Romans invaded. Yet it is curious that the Roman epicure of the first century AD, Apicius, does not mention it. Horseradish is acknowledged as being native to Eastern Europe, near the Caspian Sea, and grew wild in Russia, Poland and Finland before spreading further as a result of its habit of thriving in temperate zones. By the 13th century, horseradish was naturalized in Europe and in the 16th century it was reported as growing wild in Britain, where it was referred to as “red cole.” John Gerard refers to it in his 1597 *Herball* as a condiment consumed with meat and fish by the Germans.

Horseradish is one of the bitter herbs eaten during the Jewish Passover as a reminder of the bitterness of their enslavement by the Egyptians. Horseradish was highly valued for its medicinal properties and is still popular with natural therapists to help relieve respiratory congestion. The early colonial settlers took horseradish to America, where it is now frequently found growing wild in moist, semi-shade conditions and is considered by many horticulturists to be a vigorous, difficult-to-eradicate weed.

Processing

Horseradish is best harvested, or “lifted,” in late autumn as the flavor improves with the onset of colder weather. The leafy tops are cut about a week before the roots are dug up (large areas are plowed; smaller holdings are forked). The roots are washed and trimmed; the small, lateral ones are cut for processing and the main taproot is kept for replanting. Prior to chopping or grating for making products like horseradish sauce, the harvested roots are packed away from light as expo-

sure to it will turn them green and make them less desirable in the market. Horseradish has an inner core like that found in carrots. When grating fresh horseradish, remove only the outer section of the root as the inner core has less flavor, can tend to be a bit rubbery and is difficult to grate.

Buying and Storage

Fresh horseradish should be thoroughly washed to clean off any remaining dirt. It may be stored in the refrigerator for up to two weeks or in the freezer for a couple of months. Jars of horseradish relish and paste are available in supermarkets. In the United States these are often colored red with beet juice, primarily for visual appeal, not flavor enhancement. You can usually buy dehydrated horseradish granules or flakes, which are a reasonable substitute to make sauce with or to add to dressings. All dehydrated horseradish will taste different from fresh, and it requires a long soaking time due to its firm, fibrous texture. Wasabi paste is often made using horseradish that is colored green with spinach powder. New Zealand now produces a very high-quality wasabi powder that, believe it or not, is exported in large quantities to Japan. Wasabi powder, like mustard powder, develops its full heat and pungency within seconds of coming into contact with cold water and is the next best option to fresh wasabi. Store horseradish granules and flakes and wasabi powder in airtight packs, protected from heat, light and humidity.

Use

Horseradish is usually served cold or added to warm foods at the end of cooking because much of the piquancy is diminished by heat, so when cooked it will have little flavor. The most familiar application of horseradish is to use it as you would mustard with cold meats such as ham, tongue, corned beef and especially roast beef. A simple horseradish sauce or relish is made by mixing freshly grated or finely sliced roots with sugar and vinegar. To complement pork, blend this mix with grated apples, mint and sour cream. Horseradish also goes well with fish and seafood, and many popular “red” seafood sauces are made by adding grated horseradish to a rich tomato base. In Eastern Europe and the Scandinavian countries, horseradish will be in recipes for soups, sauces and with cream cheese and is regarded as forming a zesty marriage with beets. In Japanese cuisine, wasabi is an ingredient in fillings for sushi, an accompaniment to sashimi (raw fish) and often mixed with Japanese soy sauce for dipping.

FLAVOR GROUP

- hot

WEIGHT PER TEASPOON (5 ML)

- whole dried chopped pieces: 3.0 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tbsp (15 mL) freshly grated
- white meats: 2 tsp (10 mL) freshly grated
- vegetables: 1 tsp (5 mL) freshly grated
- carbohydrates: 1 tsp (5 mL) freshly grated

COMPLEMENTS

- cold meats when used as a sauce
- seafood sauces containing tomato
- Japanese sushi and sashimi that use wasabi

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- bay leaves
- dillweed and dill seeds
- fennel fronds and seeds
- fenugreek seeds
- garlic
- lovage
- mustard
- parsley
- rosemary
- sesame seeds
- thyme

Horseradish Green Tea Noodles with Wasabi Dressing

If you'd prefer this dish hot, drain noodles without rinsing in water and return to pan. Add dressing and other ingredients and heat for 2 minutes before serving.

10 oz (300 g) green tea or soba noodles
5 oz (150 g) snow peas, cut on the diagonal into
1-inch (2.5 cm) pieces
1 tbsp (15 mL) toasted sesame seeds
sesame oil

Wasabi Dressing

2 tsp (10 mL) wasabi powder
2 tsp (10 mL) water
2 tbsp (25 mL) rice vinegar
2 tbsp (25 mL) peanut oil
1 tbsp (15 mL) soy sauce
1 tbsp (15 mL) freshly squeezed lemon juice

Cook noodles in boiling salted water, then drain and rinse with cold water.

For the dressing, mix wasabi powder and water. Whisk in rice vinegar, peanut oil, soy sauce and lemon juice.

Stir dressing through cooled noodles, then add snow peas and sesame seeds. Drizzle with sesame oil. Serves 4–6 as a side dish.

Dried horseradish



Juniper

OTHER COMMON NAMES

- juniper berries
- juniper fruits

BOTANICAL NAME

- *Juniperus communis*

FAMILY

- Cupressaceae

NAMES IN OTHER LANGUAGES

- Arabic: hab-ul-aaraar
- Chinese (M): du song
- Czech: jalovec, jalovcinky
- Danish: enebaer
- Dutch: jenever, jeneverbes
- Finnish: kataja,
- French: genièvre
- German: wacholder
- Greek: arkevthos
- Hungarian: borokabogyo
- Indian: aaraar, dhup, shur
- Italian: ginepro
- Japanese: seiyo-suzu
- Norwegian: einer
- Polish: scejzjobz, jagody jalowca
- Portuguese: junipero
- Russian: mozhzhevelnik
- Spanish: nebrina, enebro, junipero
- Swedish: enbar
- Turkish: ardic yemisi, ephel
- Vietnamese: cay bach xu

THERE ARE many different species of juniper, ranging from small shrubs 5–6 feet (1.5–2 m) high that provide us with the juniper berry of culinary use, to 40-foot (12 m) trees. Juniper bushes are compact with gray-green, ridged, sharp needle-like leaves that protrude at right angles, making the berries painful to harvest unless one is wearing strong gloves. The greenish yellow flowers are indistinct and are followed by small, $\frac{1}{4}$ – $\frac{1}{3}$ inch (5–8 mm) diameter berries that take three years to mature. Initially hard and pale green, juniper berries ripen to blue-black,

Juniper berries



JUNIPER

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 2.3 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 5 berries
- white meats: 5 berries
- vegetables: 3 berries
- carbohydrates: 3 berries

COMPLEMENTS

- game and rich, fatty foods
- soups and casseroles
- roast poultry

USED IN

- game spice blends

COMBINES WITH

- allspice
- bay leaves
- marjoram
- onions and garlic
- oregano
- paprika
- rosemary
- sage
- tarragon
- thyme

become fleshy and contain three sticky, hard brown seeds. When dried, the berries remain soft, but if broken open one will find the pith surrounding the seeds is quite friable. The aroma of juniper is immediately reminiscent of gin, with a woody, piney, resinous smell that is somewhat flowery and contains notes of turpentine. The flavor is equally pine-like, spicy, refreshing and savory, making it an excellent foil for rich, gamey or fatty foods. Although juniper is considered harmless for most people, pregnant women and people with kidney problems are advised to avoid it.

Origin and History

Juniper trees are native to the Mediterranean, Arctic Norway, Russia, the northwest Himalayas and North America. Juniper has been regarded as a valuable item for medicinal purposes since the birth of Christ and has been considered throughout the ages as a magical plant. The Greek physicians Galen and Dioscorides wrote of juniper's virtues around 100 AD, and it is also mentioned in the Bible. Because of its air-cleansing, piney fragrance, the foliage was used as a strewing herb to freshen stale air and the Swiss burned the berries with heating fuel in winter to sanitize stale classrooms. Juniper berries were sometimes used as a substitute for pepper, and they have been roasted and used as a coffee substitute. Gin, the alcoholic drink that derives its unique flavor from juniper berries, is named from an adaptation of the Dutch word for juniper, *jenever*.

Processing

Because juniper berries take three years to mature, a tree will bear both immature fruits and ready-to-be-harvested blue-black berries at the same time. The best-quality berries are picked by hand when ripe (usually in autumn) as any form of mechanical harvesting will crush these small pulpy spheres, allowing them to dry out and lose much of their flavor. We found picking juniper berries, nestled within their treacherous, needley foliage, so painful that we resorted to removing them with chopsticks. This was an inordinately slow task, which at least had the side benefit of greatly improving our chopstick-handling skills. Only ripe berries are suitable for distillation of the oil used for making gin and fresh ripe juniper berries are considered to be better for this process than dried.

Buying and Storage

Juniper berries are at their best when they are still moist and soft to the touch, squashing relatively easily between one's fingers without crumbling from excessive dryness. It is not unusual for some berries to have a cloudy bloom on their indented, smooth, blue-black skins, and although this is a harmless mold, berries that have not been properly dried may be excessively moldy and should be avoided. Always wait to crush or grind juniper berries just before you use them, as the volatile component evaporates rapidly once exposed to the air. Store in a cool place in an airtight container.

Use

Juniper berries perform a unique role by contributing as much to the character of food through their “freshening” ability as they do by way of their specific taste profile. As well as flavoring a dish, juniper cuts the gaminess of game, reduces the fatty effect of duck and pork and removes a perception of stodginess from bread stuffing. For this reason juniper berries are included in recipes for all sorts of game, such as venison, including reindeer in Scandinavia and wild duck in Ireland. They are added to fish and lamb and blend well with other herbs and spices, especially thyme, sage, oregano, marjoram, bay leaves, allspice and onions and garlic. One application I am particularly fond of is in a simple chicken casserole, moistened with plenty of rough red wine and spiced with all the above plus a few juniper berries.

Saddle of Venison with Juniper and Allspice

This recipe can also be made with caribou or any other red game meat. The pine-like taste of juniper and the sweetness of allspice will effectively balance the gamey flavors.

- 1 ½ lbs (750 g) venison fillet
- ¼ cup + 2 tsp (60 mL) red wine
- 1 tbsp (15 mL) whole juniper berries
- 1 ½ tsp (7 mL) whole allspice
- 1 tsp (5 mL) freshly cracked black pepper
- ¼ cup + 2 tsp (60 mL) butter
- 8 parsnips, peeled, halved and roasted with olive oil
- 1 tbsp (15 mL) crushed pistachios

Sauce

- 1 ¼ cups (300 mL) beef or game stock
- ⅔ cup (150 mL) red wine
- 1 tbsp (15 mL) red currant jelly
- 1 ½ tsp (7 mL) whole juniper berries
- 2 tsp (10 mL) cornstarch, dissolved in 2 tbsp (25 mL) water
- salt and freshly ground black pepper to taste

Remove the membrane from the venison and put in a large sealable plastic bag with wine, juniper, allspice and pepper. Refrigerate for 12 hours or overnight.

Preheat oven to 425°F (220°C). Place butter in a large roasting pan and heat in the oven until butter is foaming. Meanwhile, remove venison from marinade and discard marinade. Remove pan from oven and add venison, rolling to coat with butter. Return to the oven and roast for 45 minutes, basting frequently. Remove venison to a cutting board and cover with foil while you prepare the sauce.

For the sauce, place roasting pan over medium-low heat and skim off any fat. Add stock, wine, red currant jelly and juniper berries to the remaining juices in the pan. Simmer, stirring constantly and scraping the bottom of the pan, for 5 minutes. Stir in cornstarch and slowly bring to a boil; cook until sauce thickens. Season with salt and pepper.

Remove foil from venison and carve the two fillets off the center bone, then slice each fillet into 1-inch (2.5 cm) medallions. Serve with sauce and roasted parsnips sprinkled with crushed pistachios. Serves 6.

Kaffir Lime Leaves

OTHER COMMON NAMES

- Indonesian lime leaves
- lime leaf

BOTANICAL NAMES

- kaffir lime: *Citrus hystrix*, *C. papedia*
- leprous lime: *C. amblycarpa*

FAMILY

- Rutaceae

NAMES IN OTHER LANGUAGES

- Burmese: shauk-nu, shauk-waing
- Chinese (C): fatt-fung-kam, syun gam
- Chinese (M): suan gan
- Czech: kaffir citrus
- Danish: kaffir lime
- Dutch: kaffir limoen
- Filipino: swangi
- French: limettier hérissé
- German: kaffernlimette, kaffirzitrone
- Indonesian: daun jeruk purut, jeruk sambal
- Japanese: kobumikan
- Malay: duan limau purut (leaf), limau purut (fruit)
- Spanish: hojas de lima café

KAFFIR LIME trees are not to be confused with the common fruit-producing varieties such as Mexican, Tahitian or West Indian limes, nor the lime or linden trees (*Tilia curopaca*) of Europe and North America. Kaffir lime trees are small, shrubby trees, 10–16 feet (3–5 m) tall with numerous needle-sharp spikes and unusual double leaves. Each pair of citrus-looking leaves, joined head to tail, is 3¼–6 inches (8–15 cm) long and 1–2 inches (2.5–5 cm) wide. Dark green, leathery and glossy on top, they are pale green and matte underneath. When torn or cut, kaffir lime leaves emit a most heavenly scent that is a cross between lime, orange and lemon, but not like any one of these on their own. The taste of kaffir lime leaves is similarly citrus-like and reminds one of the zest of a mandarin, yet it is lacking in the acid tones usually associated with members of this family. The fruit is larger than a Tahitian lime and has an incredibly rough, knobbly surface and thick skin, the outer rind of which is generally the only part used.

Kaffir lime leaves, fresh and dried



**NAMES IN OTHER
LANGUAGES**

- Sri Lankan: kahpiri dehi, odu dehi
- Swedish: kafirlime
- Thai: makrut, som makrut, bai makrut (leaves), luuk makrut (fruit)
- Vietnamese: truc

FLAVOR GROUP

- medium

**WEIGHT PER
TEASPOON (5 ML)**

- whole average dry leaf: 0.5 g
- dry granulated leaves: 2.1 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: 3–4 whole fresh or dried leaves
- white meats: 3 whole fresh or dried leaves
- vegetables: 2 whole fresh or dried leaves
- carbohydrates: 2 whole fresh or dried leaves

COMPLEMENTS

- salads
- Asian stir-fries
- soups such as laksa
- curries

USED IN

- red and green curry blends
- Thai spice mixes

Origin and History

All citrus trees are native to Southeast Asia and their introduction to Europe in the Middle Ages was probably by Moorish and Turkish invaders. Citron, the citrus that was familiar before oranges, was known to the Chinese in the fourth millennium and mentioned by the ancient Egyptians. Citron was cultivated in southern Italy, Sicily and Corsica in the fourth century BC, and most citron for crystallized peel and perfumes still comes from Corsica. The lemon was widely used from the Middle Ages on; however, limes are often confused with lemons, and the history of lime trees is somewhat obscure. Until recent times there is little evidence of kaffir lime trees being known outside of Southeast Asia, though with the increasing interest in Asian cooking in general and Thai recipes in particular, kaffir lime leaves are becoming readily available in many Western cities.

Processing

Contrary to popular belief, kaffir lime leaves dry effectively when sufficient care is taken. The greatest problem when dehydrating a leathery leaf with a shiny skin is that the surface membranes do not yield up their water content easily. This means deterioration will start before the leaves are dry and many may end up with brown and black patches. Also, one may be tempted to apply too much heat, and this will make the leaves shrivel and turn yellow. Therefore, to achieve the best result, spread freshly picked leaves on porous paper in a single layer and place in a warm dark place where the humidity is low. Before investing in a dehydrator, we used to put all manner of herbs in the ceiling cavity of an iron-roofed shed, which, when the weather was dry, provided near perfect drying conditions.

Buying and Storage

Fresh kaffir lime leaves can often be bought from fresh produce retailers (especially Asian markets), the only restriction on availability being toward the end of winter. Fresh whole leaves may be stored in the freezer, in plastic bags, without any problem. Dry kaffir lime leaves should be green and not yellow and are best kept under the same conditions as other dried herbs. They will keep for up to 12 months in an airtight pack, protected from light and extremes of heat and humidity.

Use

Only the fresh leaves are suitable for adding to salads and because of their firm, leathery texture need to be cut finely, after removing the tough rib that runs down the center. When making a clear soup or stock, whole fresh or dried leaves may be added, as they will not necessarily be eaten once they have made their contribution to the flavor. Finely chopped fresh or crumbled dry kaffir lime leaves are used in dishes like laksa, stir-fried vegetables with chicken or seafood, and curries, especially those containing coconut cream.

COMBINES WITH

- basil
- cardamom
- chili
- coriander leaves and seeds
- cumin seed
- curry leaf
- galangal
- ginger
- star anise
- tamarind
- turmeric
- Vietnamese mint

Lime Leaf Jelly with Pear Compote

Jelly

- 1 tbsp (15 mL) gelatin
- 6 kaffir lime leaves, torn
- 1 cup (250 mL) water
- 3 tbsp (45 mL) superfine (caster) sugar

Compote

- $\frac{2}{3}$ cup (150 mL) diced peeled pears
- $\frac{1}{4}$ cup (50 mL) water
- 1 tsp (5 mL) raw (Demerara) sugar
- 1 kaffir lime leaf, torn
- 1 cinnamon stick (about 1 $\frac{1}{2}$ inches/4 cm)

For the jelly, soak gelatin in cold water until pliable. In a small saucepan, bring lime leaves, water and superfine sugar to a boil. Remove from heat and stir in gelatin. Let cool to room temperature. Brush 4 ramekins or tumblers with water, using a pastry brush, then strain jelly into molds. Chill until set.

For the compote, combine all ingredients in a small saucepan. Simmer over low heat for 15 minutes, or until reduced and very soft. Discard lime leaf and cinnamon stick. Serve a spoonful of compote on top of jelly. Serves 4.



Kokam

THE KOKAM tree is a slender, graceful tropical evergreen that reaches 49 feet (15 m) in height and has medium-density foliage of oval, light green leaves. The fruit looks similar to a small plum; it is 1 inch (2.5 cm) in diameter and dark purple when ripe. The dried, very dark purple, flattened rind is in small, leathery pieces about 1 inch (2.5 cm) long that can be unfolded into a half-fruit-sized skullcap. The aroma is slightly fruity and faintly balsamic with notes of tannin. The flavor is immediately sharp, acidic, astringent and salty, leaving a pleasing mouth-freshening dried-fruit sweetness. A closely related spice grown in Asia is assam gelugor (*G. atroviridis*). It has similar acidic properties to kokam and goes by the confusing name of tamarind slices, which it is not. Cambodge (*G. cambogia*) is a similar related tree that grows in the Nilgiri hills in India. Concentrates made from the dried rind are used in food manufacturing; however, in India it appears to be reserved mostly for medicinal use.

OTHER COMMON NAMES

- black kokam
- cocum
- fish tamarind
- kokum
- kokum butter tree
- mangosteen oil tree

BOTANICAL NAME

- *Garcinia indica choisy*

FAMILY

- Clusiaceae (formerly Guttiferae)

NAMES IN OTHER LANGUAGES

- French: cocum
- German: kokam
- Indian: kokam, kokum, raktapurka
- Italian: cocum
- Spanish: cocum

FLAVOR GROUP

- tangy

Origin and History

This solitary tropical forest tree — found in the Indian states of Karnataka and Maharashtra and the Western Ghats of Kerala, West Bengal and Assam — is difficult to propagate. It is not known anywhere else, although the Portuguese were certainly familiar with it in Goa. Kokam butter, an edible fat extracted from the seeds on a cottage-industry basis, is an item of commerce and sometimes finds its way into butter and ghee as an adulterant.

Processing

Kokam fruits are harvested when ripe, and it is only the rind, which comprises about 50% of the whole fruit, that is preserved by drying in the sun. Sometimes salt is rubbed onto the rind to speed up drying and assist with preserving the tangy, leathery morsels. Kokam is also boiled with sugar syrup to make a delicious, deep purple to red cordial, which our Indian hosts assured us would be beneficial in reducing obesity and cholesterol. Regardless of any therapeutic effects, on a steamy



Kokam

January afternoon on the outskirts of Cochin in southern India, following a day tramping around pepper, nutmeg and clove gardens, the kokam drink was memorably refreshing.

Buying and Storage

Kokam is available from spice retailers who either stock or specialize in Indian spices. Buy small quantities at a time, say 12–20 pieces, as the soft, pliable rinds dry out and lose some of their flavor if kept for too long. Should you notice evidence of white, crystalline powder on the surface, do not be concerned — it is not mold, but most often the result of using a little too much salt during drying. To ensure that the dish will not be overly salty, wash the pieces of kokam briefly in cold water before adding to cooking. Store kokam in the same manner as other spices, in airtight packaging, away from direct light and protected from extreme heat and humidity.

Use

Kokam is used as a souring agent in much the same way as tamarind, its slightly fruity flavor giving a milder effect than tamarind or amchur. Pieces of kokam are generally added whole to a dish without being chopped; however, do check first to make sure that no small stones remain within one of these flattened-out skullcaps of rind. Kokam complements all curries and those made with fish in particular, hence the South Indian common name “fish tamarind.” When I make curries I usually put a few pieces in with the tomato paste and let them infuse while the other preparations are being made.

WEIGHT PER TEASPOON (5 ML)

- whole: 1.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 4 pieces
- white meats: 4 pieces
- vegetables: 2–3 pieces
- carbohydrates: 2–3 pieces

COMPLEMENTS

- Indian curries, especially the fish curry of Goa

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander leaves and seeds
- cumin
- curry leaves
- fennel seed
- galangal
- lemongrass
- lemon myrtle
- paprika
- star anise
- turmeric

In the south of India, kokam is known as fish tamarind; this lightly spiced, fragrant dish is a perfect way to enjoy its fruity yet souring attributes.

- 2 tbsp (25 mL) coconut or vegetable oil
- ½ cup (125 mL) unsweetened shredded coconut
- 4 cloves garlic, crushed
- 4 onions, grated
- 2 green chilies, chopped
- 2 sprigs curry leaves, picked
- 2 pieces kokam
- 1 piece (about 1 inch/2.5 cm) gingerroot, grated
- 1 cup (250 mL) water
- 8 oz (250 g) fresh sardines
- salt and freshly ground black pepper to taste (optional)

In a wok or a large frying pan, heat oil over medium heat. Add coconut, garlic, onions, chilies, curry leaves, kokam and ginger; cook, stirring, for 5 minutes. Add water and sardines; cover, reduce heat and simmer for 10 minutes, or until fish is just about cooked. Carefully remove fish and flake off flesh; discard skin and bones. Return fish to the pan and stir for a few minutes until well combined. Season with salt and pepper, if desired, and serve. Serves 4–6 as part of a meal.

Lavender

OTHER COMMON NAMES

- English lavender:
broad-leaf lavender,
lavender vera,
lavender spica, true
lavender
- French lavender:
fringed lavender
- Italian lavender:
Spanish lavender
- cotton lavender:
santolina

BOTANICAL NAMES

- English lavender:
Lavandula
angustifolia, *L. spica*,
L. officinalis, *L. vera*
- French lavender:
L. dentata
- Italian lavender:
L. stoechas
- green lavender:
L. viridis
- cotton lavender:
Santolina
chamaecyparissus

FAMILY

- Lamiaceae (formerly
Labiatae)

LAVENDER IS a particularly attractive aromatic plant that is found in most herb gardens, although it is grown more for its fragrance and beauty than its culinary attributes. There are many different types of lavender, and while some of them are hybrids that have no application in cooking, the most fragrant English variety and the lesser-strength French type are used in recipes from Europe to the north of Africa. English lavender, the preferred variety for culinary use, is a small bushy shrub growing to around 3 feet (1 m) high with silvery gray-green, smooth, pointed leaves. Long, slender wheat stalk-like

Clockwise from top left: fresh English lavender; fresh French lavender; dried lavender flowers



NAMES IN OTHER LANGUAGES

- Arabic: el khzama, lafand
- Chinese (C): fan yi chou
- Chinese (M): xun yi cao
- Czech: levandule
- Danish: lavendel
- Dutch: lavendel, spijklavendel
- Finnish: tupsupaalaventeli
- French: lavande
- German: lavendel
- Greek: levanta
- Italian: lavanda
- Japanese: rabenda
- Norwegian: lavendel
- Portuguese: alfazema
- Russian: lavanda
- Spanish: lavanda
- Swedish: lavendel
- Thai: lawendeort
- Turkish: lavanta cicegi
- Vietnamese: hoa oai huong

FLAVOR GROUP

- strong

WEIGHT PER TEASPOON (5 ML)

- whole dry flowers: 0.7 g

stems reach upwards, and clustered on their waving, bee-attracting tops are 2½–4-inch (6–10 cm) highly perfumed flower heads, made up of whorls of tiny mauve petals. French lavender is distinguished from English by its deeply serrated leaves, thicker quadrangular stems, shorter flower stalks and fatter, fluffy-looking flower heads. It is worth noting that while the flowers of French lavender have much less aroma than English, their fleshy leaves contain more fragrance, making it a practical variety to grow for decorative purposes and to pick for giving a pleasing scent indoors.

English lavender flower heads are dried for culinary purposes, with only the soft, mauve flowers removed from the whorl being used. The aroma of English lavender is penetrating, sweet, fragrant, woody, grassy and floral. Its flavor is camphor-like, piney, floral and similar to rosemary with an edge of lingering bitterness.

Origin and History

All lavenders are native to the Mediterranean regions and there are varieties that were known to the ancient Greeks and Romans. Lavender was added to bathwater and there is little doubt that the English word “lavender” came from the Latin *lavare*, “to wash.” English lavender was not cultivated in England, where it has thrived, until around 1568. The quality of English lavender grown in England was acknowledged as the best in the world until the late 20th century. Since then, under ideal climatic and soil conditions, it has been cultivated in the Australian state of Tasmania for essential oil manufacture.

Processing

Lavender flowers are best harvested in the early morning, before the heat of the day has started to draw out the volatile essence. Flower heads that still have a few of the last buds unopened contain the highest oil content. After cutting the flower-laden stems, tie them in bundles of about 20 and hang upside down in a dark, well-aired, dry place for a few days. When dry, strip or gently thresh to remove the flowers from the stem and store in airtight containers away from extreme heat and light.

Buying and Storage

Lavender flowers can be bought from some spice retailers and florists. Do not buy lavender for cooking purposes from an establishment that does not specialize in culinary herbs and spices or specialty foods, as there is a high risk that the lavender may be contaminated with insecticides and may have other oils, perfumes or non-edible ingredients added to enhance the aroma.

Use

Lavender should be used sparingly in cooking, as its pungency can become overpowering and add unwanted bitterness to foods. Although lavender is not thought of by many cooks these days as a culinary herb, it was used in the 17th century, along with other flowers, to make a conserve that was mixed with sugar and used as a fragrant icing for cakes and cookies. In Morocco, lavender is known as *el khzama* and, along with rose petals, orris root powder, saffron, numerous spices and mind-altering substances, is added to the exotic blend ras el hanout, a name that literally translates as “top of the shop,” or the very best a spice trader (souk) has to offer. Lavender is also found in the well-known blend of savory herbs called herbes de Provence. I have been told by a French herb exporter that adding lavender to herbes de Provence began as a practice to boost the flavor of this blend when only poor-quality dried herbs were available. Lavender goes well with sweet dishes that contain cream and adds a colorful and complementary flavor to shortbread. The 17th-century use of lavender in icings is just as appropriate today.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL)
- white meats: 1 tsp (5 mL)
- vegetables: 1 tsp (5 mL)
- carbohydrates: 1 tsp (5 mL)

COMPLEMENTS

- ice cream
- shortbread
- cakes and icings

USED IN

- herbes de Provence
- ras el hanout

COMBINES WITH

- allspice
- bay leaves
- cardamom
- celery seeds
- cinnamon and cassia
- ginger
- marjoram
- parsley
- tarragon
- thyme

Lavender and Banana Bastillas

Bastilla is basically Moroccan for “parcel.” The most popular bastilla contains squab and spices. This is a deliciously fragrant dish that marries well with Orange Blossom Ice Cream (see recipe, p. 332).

- 2 ripe bananas, diced into $\frac{1}{4}$ -inch (0.5 cm) pieces
- 1 tsp (5 mL) dried lavender flowers
- 1 tsp (5 mL) liquid honey
- $\frac{1}{4}$ tsp (1 mL) ground cinnamon
- pinch dried thyme
- 12 sheets phyllo pastry
- 2 tbsp (25 mL) butter, melted
- confectioner's (icing) sugar, sifted

Preheat oven to 400°F (200°C). Combine bananas, lavender flowers, honey, cinnamon and thyme in a bowl and mix well.

Lay one phyllo sheet out and brush with melted butter. Place another sheet of phyllo on top and brush with butter, then repeat once more. Cut phyllo stack lengthwise into 3 pieces.

Place a large spoonful of banana mixture in the left corner of a piece of phyllo and fold pastry over filling to create a triangle, then continue to fold as if folding a flag. Brush finished parcel with melted butter and place on a baking sheet. Repeat with remaining phyllo and banana mixture.

Bake bastillas for 10–15 minutes, or until browned. Dust with confectioner's sugar and serve immediately.

Makes 12.

Lemongrass

OTHER COMMON NAMES

- camel's hay
- citronella
- serai

BOTANICAL NAMES

- *Cymbopogon citratus*
- Malabar or Cochin grass:
C. flexuosus
- rosha grass: *C. martini*
- citronella grass:
C. nardusi

FAMILY

- Poaceae (formerly Gramineae)

NAMES IN OTHER LANGUAGES

- Arabic: hashisha al-limun
- Burmese: zabalin
- Chinese (C): heung masu tso, chou geung
- Chinese (M): chao jiang, feng mao
- Czech: citronovatrava
- Danish: citrongraes
- Dutch: citroengras, sereh
- Filipino: tanglad
- Finnish: sitruunaruoho
- French: citronnelle
- German: zitronengras
- Greek: lemonochorto
- Hungarian: citromfu
- Indian: bhustrina, ghandha, ghandhtrina, sera

AT FIRST glance, lemongrass does not appear to be overly inviting as a culinary herb with its 1½–3-foot (0.5–1 m) high, blade-like leaves. However, this opinion rapidly changes once one has experienced the delicious lemon fragrance of this plant. Lemongrass grows in tight, tufted, dense clumps that increase in size each year and are rarely seen to flower. The razor-like, slightly sticky blades have a central rib running along them, and vary in color from pale green to rust red at the tips during certain stages. While these lance-like leaves have some distinct lemongrass aroma, it is in fact the lower,

Lemongrass, dried and fresh



NAMES IN OTHER LANGUAGES

- Indonesian: sere, sereh
- Italian: erba di limone, cimbopogone
- Japanese: remon-su
- Laotian: bai mak nao
- Malay: serai
- Portuguese: capim-santo
- Russian: limonnoe sorgo
- Spanish: limoncillo, zacate de limon
- Sri Lankan: sera
- Swedish: citrongras
- Thai: takrai, cha khrai
- Turkish: limon otu
- Vietnamese: xa, sa chanh

FLAVOR GROUP

- strong

WEIGHT PER TEASPOON (5 ML)

- dried and cut: 1.4 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 3¼–4 inches (8–10 cm) of fresh stem
- white meats: 3¼–4 inches (8–10 cm) of fresh stem
- vegetables: 3¼–4 inches (8–10 cm) of fresh stem
- carbohydrates: 2–2½ inches (5–6 cm) of fresh stem

almost white section of the stem that is most used in cooking. Lemongrass has a tangy flavor similar to the zest of lemon thanks to the high presence of citral, a substance also found in the outer rind of lemons.

Origin and History

Lemongrass grows throughout tropical Asia and was used by the Romans, Greeks and Egyptians as a medicine and as a cosmetic. Its popularity in Asia could be linked with the fact that lemons do not grow readily in the tropics, so this has become another source of the tangy taste of lemon that is sought after in practically every cuisine. Lemongrass is cultivated in South America, central Africa and the West Indies. When dining on seafood on the Malabar coast of India, one of the delights is to enjoy the flavor of lemongrass along with ginger, kokam and curry leaves. In Florida it is grown for citral, the oil extracted by steam distillation that is used as a natural substitute for lemon peel flavor and in the manufacture of soaps. The oil from another *Cymbopogon*, rosha grass, has a sweet, geranium aroma and is employed to water down attar of roses, an essence of roses used in perfumes.

Processing

Should you be fortunate enough to have lemongrass growing, remember to divide the clump into two or three smaller ones each year; this way they will thrive and give you better stems. To harvest, cut the stems down low, just above the ground, then remove the sharp, flat leaf section.

Besides oil extraction, the other two processes undertaken are dehydration and bottling of freshly prepared lemongrass. Lemongrass tends to lose its best volatile character on drying and does not really develop any concentration of flavor or other attributes, as some herbs, such as lemon myrtle, do. Jars of lemongrass are usually preserved with lemon juice or vinegar, and as these flavors are compatible with lemongrass and appropriate in most recipes using lemongrass, they do make an acceptable substitute for fresh.

Buying and Storage

Fresh lemongrass is usually sold in bunches of three to four stems about 16 inches (40 cm) long with the tuberous roots removed and the sharp leaves cut off. They should be firm, white with a greenish tinge and not look at all dry or wrinkled. These fresh stems can be kept in the refrigerator for a few weeks when wrapped in plastic, or in the freezer for at least six months. Dried lemongrass is either sliced in small rings $\frac{1}{4}$ – $\frac{1}{3}$ inch (5–6 mm) in diameter, or finely chopped. Store in the same manner as other dry herbs and spices, in an airtight pack in a cool place, protected from direct light.

Use

For best results, lemongrass needs to be carefully prepared before adding to most dishes. The only time I don't worry too much is when it is being simmered for later removal. Then I tie the full length in a knot (being careful not to cut my hands on the leaves), put it in the pot, where the bruised lemongrass releases its flavor, and remove the knotted, spent bunch at the end of cooking. When chopping to crush in a mortar and pestle or to add to stir-fry dishes and curries, take the stems and strip off any remaining upper section that is at all leaf-like and not tightly rolled. Peel off a couple of outer layers, keeping the tender, white section, and slice it crossways into very thin disks. If you don't do this, the longitudinal fibers will remain and give a hairy appearance and less-than-pleasant mouth-feel.

Lemongrass lends its own special character to many Asian dishes and is well worth considering as an addition to steamed seafood and poultry dishes, marinades for pork, and whole fish barbecued in foil. The citral content in lemongrass is quite robust, so it can withstand long cooking and will not diminish as quickly as, say, lemon myrtle.

COMPLEMENTS

- Asian soups
- curries and stir-fries
- steamed seafood
- marinades for fish, pork and chicken

USED IN

- Thai seasoning blends
- green curry blends

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon
- cloves
- coriander leaves and seeds
- cumin
- fennel seed
- fenugreek seed
- galangal
- ginger
- mustard
- nigella
- paprika
- tamarind
- turmeric
- Vietnamese mint



Lemongrass Mussels with Lemongrass Broth

This is a delicious, low-fat and very quick dish to make.

- 2 lbs (1 kg) mussels, scrubbed and beards removed
- 1 tbsp (15 mL) vegetable oil
- 4 stalks lemongrass, very finely chopped (see p. 309)
- 1 tsp (5 mL) grated gingerroot
- $\frac{1}{4}$ cup (50 mL) dry white wine
- $\frac{1}{4}$ cup (50 mL) chicken stock
- 1 green onion, finely sliced

Discard any open mussels. In a large stockpot, heat oil over medium heat. Fry lemongrass and ginger for 3 minutes, then increase heat to high and add mussels, wine and stock. Cover tightly and cook mussels for 5 minutes, giving the pot a good shake every 30 seconds to move mussels around from top to bottom. After 5 minutes the mussels should all be open (discard any that aren't). Spoon mussels and broth into large bowls and sprinkle with green onion. Serves 2.

Lemon Myrtle

OTHER COMMON NAMES

- lemon ironwood
- lemon-scented myrtle
- sand verbena myrtle
- sweet verbena tree
- tree verbena

BOTANICAL NAME

- *Backhousia citriodora*

FAMILY

- Myrtaceae

NAMES IN OTHER LANGUAGES

- Chinese (M): ning meng xiang tao mui
- Czech: myrtovník citronový
- French: myrte citronnée
- German: zitronen myrte
- Hungarian: citrom allatu mirtusz
- Italian: foglio di limoncino Australiano macinato, mirto dal profumo di limone
- Japanese: remon-matoru
- Korean: remon meotul
- Russian: mirt limonnyj
- Spanish: limon mirto
- Swedish: citronmyrten

OF ALL THE useful native Australian plants, the magnificent rainforest lemon myrtle tree is my culinary favorite. These attractive trees grow to around 26 feet (8 m) tall and may even reach 60 feet (20 m) in tropical conditions. The growth is bushy with low branches covered in dark green, oval, tapering leaves that look like bay leaves. In autumn, small white flowers bloom in thick, soft clusters making this an excellent tree to grow for its appearance as well as its usefulness. Both the flowers and fruits may be eaten, as well as the leaves.

Lemon myrtle leaves, whole and ground



FLAVOR GROUP

- strong

WEIGHT PER
TEASPOON (5 ML)

- whole dried leaf: 0.5 g
- ground: 2.2 g

SUGGESTED
QUANTITY
PER POUND (500 G)

- red meats: ¼–½ tsp
(1–2 mL) ground
dried leaf
- white meats: ¼–½ tsp
(1–2 mL) ground
dried leaf
- vegetables: ½ tsp (2 mL)
ground dried leaf
- carbohydrates: ½ tsp
(2 mL) ground dried
leaf

The aroma of lemon myrtle is similar to a blend of lemon verbena, lemongrass and kaffir lime with a haunting eucalyptus background, something that is particularly noticeable after rain. The flavor is distinctly lemony and tangy, with distinct lime zest notes and a pleasantly lingering, slightly numbing camphor aftertaste. Lemon myrtle’s citral content (the component that gives it a lemon flavor) is around 90%, compared with around 80% in lemongrass and only 6% in lemons. Powdered lemon myrtle leaf is coarse, pale green and when fresh releases all of these aroma and taste attributes.

Origin and History

Although there are no records to establish the exact antiquity of native Australian herbs and spices, these hardy yet frost-sensitive trees have been growing wild in the coastal areas of New South Wales, Victoria and South Australia for many thousands of years. When these were identified and classified, the botanical name *Backhousia* was given to this species after a Yorkshire nurseryman, James Backhouse. Lemon myrtle trees are now grown in South Africa, the southern United States and southern Europe, and in more recent times, propagation with a view to extracting the essential oil has taken place in China, Indonesia and Thailand. The most active undertakings in the 20th century, dedicated to the development of a culinary and essential oil industry revolving around lemon myrtle, were thankfully in this plant’s native Australia.

Processing

Lemon myrtle leaves may be picked throughout the year. As with bay leaves, harvest only older, mature, dark leaves that are quite firm as these will have the best flavor. While lemon myrtle may be used fresh, the flavor intensifies on drying, and unlike many highly fragrant herbs, it seems to lose none of its delicate “top note” perfume when carefully dried away from sunlight. The flesh of the fruit is only used when fresh, and it is important to remove the hard core before adding to a dish.



Buying and Storage

Fresh lemon myrtle leaves can sometimes be bought from specialty native Australian foods suppliers; however, the more convenient whole or powdered lemon myrtle leaf is readily available from herb and spice shops and many gourmet food retailers. Because of the volatility of the essential oil, it is important to purchase only small quantities (say less than $1\frac{2}{3}$ oz/50 g for normal household requirements) of freshly produced lemon myrtle powder in airtight packaging. Store in the same way as other delicate green herbs, in a well-sealed container in a cool, dark place.

Use

Lemon myrtle has an incredibly varied number of uses, as its aromatic lemonyness goes with almost any food. There are, however, two basic guidelines worth remembering to achieve the best results. One is to add only a small amount, say $\frac{1}{4}$ – $\frac{1}{2}$ tsp (1–2 mL), or 1–2 leaves, to 1 lb (500 g) of meat or vegetables, then taste before adding more. The other is to put lemon myrtle only in recipes that cook for a short time, never subjecting it to extreme temperatures for more than 10–15 minutes. The reason for this caution is that when too much lemon myrtle is used, or when it is cooked for too long, the flavor-giving volatile oils will be destroyed and a sharp, possibly unpleasant eucalyptus flavor will dominate.

Lemon myrtle is an excellent substitute for lemongrass and complements Asian stir-fry dishes, especially those with chicken, seafood and vegetables. Broiled chicken, pork and fish are given a lift when a little lemon myrtle is sprinkled on before cooking, as is smoked salmon served cold. While some cooks like to put lemon myrtle in cakes and muffins, I generally prefer it in sweet things that are cooked more quickly at a lower heat, such as blinis and pancakes. In these quick-cooking applications, infuse lemon myrtle in a little hot water to bring out the flavor first. Shortbread cookies are particularly delicious when flavored with ground lemon myrtle. However, they are best consumed within a few days of baking, as the fresh lemon notes deteriorate quite quickly.

COMPLEMENTS

- Asian dishes when added in small amounts
- grilled chicken, pork and fish
- shortbread
- cakes and muffins

USED IN

- blends containing native Australian herbs and spices
- stir-fry seasonings
- laksa spice blends
- green curry mixes

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon
- cloves
- coriander leaves and seeds
- cumin seed
- fennel seed
- fenugreek seed
- galangal
- ginger
- mustard
- nigella
- paprika
- tamarind
- turmeric
- Vietnamese mint

Lemon Myrtle Scallops with Citrus Salad

Try these scallops on top of Akudjura Risotto (see recipe, p. 79). When segmenting the citrus fruits, be sure to remove the flesh from between the membrane.

Citrus Salad

- 2 oranges, peeled and segmented
- 2 pink grapefruit, peeled and segmented
- 1 lime, peeled and segmented
- 3 cups (750 mL) baby spinach leaves
- 2 tsp (10 mL) extra-virgin olive oil
- 12 scallops
- $\frac{3}{4}$ tsp (4 mL) ground lemon myrtle
- 2 tsp (10 mL) butter

For the salad, blanch orange, grapefruit and lime segments in boiling water for 30 seconds. Drain, toss with baby spinach and dress with olive oil.

Trim scallops of any membrane and dust with lemon myrtle. In a frying pan, melt butter over high heat. When butter just starts to foam, add scallops and cook for 2–3 minutes on each side. Divide salad evenly among 4 plates and top with seared scallops. Serves 4 as a starter.

Lemon Verbena

BOTANICAL NAME

- *Aloysia triphylla*
(formerly *Lippia*
citriodora)

FAMILY

- Verbenaceae

FLAVOR GROUP

- Chinese (C): nihng
mung mah bin chou
- Chinese (M): ning
meng ma bian cao
- Czech: sporys
- Danish: jernurt
- Dutch:
citroenverbena
- Finnish: lippia
- French: verveine
citronelle
- German:
zitronenverbene
- Greek: louiza, verbena
- Hungarian: citrom
verbena
- Japanese: boshu-boku
- Polish: lippia trojlistna
- Portuguese: limonete
- Russian: verbena
limonnaya
- Spanish: cedron,
hierbaluisa

FLAVOR GROUP

- strong

FEW PLANTS evoke such powerful recollections of my own childhood as lemon verbena. My parents had a grove of trees that we constantly harvested in summer to put in pot-pourri, which we would sell at Christmastime from our roadside shop. Then, when my wife, Liz, and I had built our first home and our three daughters were little tots, to supplement our income Liz made fragrant pillows using leaves she picked from the same grove.

Not to be confused with another plant called verbena or vervain (*Verbena officinalis*), lemon verbena is an attractive deciduous tree that grows to about 15 feet (4.5 m) tall, spreads (if not pruned) to at least 6 feet (2 m) across and has pale green pointed leaves 4 inches (10 cm) long. These highly aromatic leaves feel sticky and almost rough on the underside from their oil-bearing glands. Delicate, pale, lavender-colored flowerets form in hazy plumes at the ends of its leaf-covered branches. When the fresh leaves of lemon verbena are crushed, or even when one just brushes past its foliage, a heavenly lemon fragrance fills the air. The easiest way to describe the aroma and taste is as like that of highly perfumed lemons, devoid of acidity and fruitiness.

Lemon verbena



SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 4 fresh leaves
- white meats: 4 fresh leaves
- vegetables: 4 fresh leaves
- carbohydrates: 4 fresh leaves

COMPLEMENTS

- shortbread
- cakes and muffins
- rice and milk puddings

USED IN

- not commonly used in spice blends

COMBINES WITH

- cardamom
- cinnamon
- ginger
- tamarind
- Vietnamese mint

Origin and History

Native to South America, lemon verbena was introduced to Europe by the Spaniards and by 1784 was growing in England, where it quickly became a garden favorite. Because the dried leaves retain their aroma so effectively, lemon verbena was a popular ingredient, along with rose petals, lavender and other flowers, in potpourri. Greek folklore has it that dried lemon verbena in one's pillow will ensure sweet dreams. This was the inspiration behind Liz's "sleep pillows," which contained lavender to induce sound sleep, lemon verbena for sweet dreams and rose petals to help one wake refreshed.

Processing

Lemon verbena is best harvested a couple of months after the new season's leaves have appeared in spring, as young tender ones tend to shrivel up and don't retain much aroma. About 30% of the tree's growth may be cut back the first time and the same again in late summer. This encourages abundant new growth and dense foliage; if not harvested or cut back to this extent, the trees can become very leggy and sparse-looking. It is then easiest to strip the leaves off the cut branches before drying, a task simply done by taking the thin end between thumb and forefinger and zipping along to the thick end, by which time you'll have a handful of leaves. Lay these stripped-off leaves on frames of insect screening or sheets of paper in a dark, warm, well-aired place for a few days, until they feel quite crisp and dry.

Buying and Storage

Fresh lemon verbena is rarely available. In dry form it is most often found in finished products such as fragrant gifts or blended with other herbs for tisanes (teas). Dry lemon verbena leaves should be dark green, crisp and lemon-scented and should not smell at all musty. Store in airtight containers until you want to enjoy the fragrance. After the leaves are mixed into a potpourri or other scented item, the aroma will naturally evaporate over a year or two as the fragrance permeates the air.

Use

Fresh lemon verbena leaves will add a tantalizing bouquet to chocolate cake when a few leaves are placed in the bottom of the cake tin before spooning in the mixture. These can be peeled off when the cake has cooled, leaving behind the aromatic oils released during baking. My mother would often put two or three leaves on top of rice puddings and baked custards before putting them in the oven. They can also be finely chopped and added to Asian dishes in much the same way as lemon myrtle.

My Mother's Lemon Verbena Rice Pudding

Lemon Verbena

This makes a lovely brunch dish.

- 4½ tsp (22 mL) brown rice
- 1 tbsp (15 mL) raw (Demerara) sugar
- 2 cups (500 mL) milk
- 3–4 fresh lemon verbena leaves*

Place oven rack in the center of the oven and preheat to 250°F (120°C). Stir the rice, sugar and milk together in a greased ovenproof dish and lay the lemon verbena leaves on top. Bake for 2–2½ hours. During cooking, stir the pudding gently once or twice with a spoon, sliding the spoon under the skin from the edge. Serve hot or cold with a compote of fruit and either cream, unflavored yogurt, crème fraîche or sour cream. Serves 4.

*Native Australian lemon myrtle leaves may be used as a substitute.



Licorice Root

THE LICORICE plant is a small, herbaceous, perennial legume that grows 3–5 feet (1–1.5 m) tall in a clump of straight, woody stalks. Its frond-shaped leaves are set among the stems and loose racemes of butterfly-like, lilac-blue flowers form in long spiked clusters, growing where the leaf stalk meets the main stem. Small bean-like pods, which contain five seeds, develop after flowering. These have no culinary application. The parts used are the large taproot, which can grow down vertically as far as 3 feet (1 m), and the numerous horizontal rhizomes that spread out in a meandering tangle underground.

Although there are a few different types of *Glycyrrhiza*, the variety considered best for culinary purposes is *G. glabra*. The root sections of *G. glabra* are grayish brown on the outside and have a yellow, fibrous middle. The aroma is slightly mild (even when cut or bruised) and sweet, with a dry, new-mown straw-like note. The flavor is initially bitter, developing to be very sweet and anise-like in the mouth, while leaving the characteristic licorice taste lingering and freshening one's breath. Powdered licorice root is gray-green in color, very fine like talcum powder, and has an extremely strong flavor.

OTHER COMMON NAMES

- black sugar
- Spanish juice
- sweetroot
- sweetwood

BOTANICAL NAME

- *Glycyrrhiza glabra*

FAMILY

- Fabaceae (formerly Leguminosae)

Origin and History

Licorice is native to southeastern Europe, the Middle East and Southwest Asia, where there is little doubt it was a popular and free source of something sweet to chew on for generations, long before its medicinal properties were appreciated. Licorice root was known to the Greeks, Egyptians and Romans as a remedy for coughs and colds, and the botanical name *Glycyrrhiza* was derived from the Greek word for “sweet root.” The Greek physician Theophrastus wrote in the third century BC that it quenched one's thirst if held in the mouth. A black juice extracted from the roots, in the same way as it is produced today, was taken as a refreshing drink by the Greeks and Romans.

Its use as a medicine continued throughout the Middle Ages, although it does not appear to have been cultivated in central or western Europe until the 15th century. The Dominican Black Friars' monastery at Pontefract, in Yorkshire,



Licorice root, ground and chopped

which first cultivated licorice in the 16th century, later became the center of the licorice confectionery industry. Thus the name “Pontefract cake” was given to the small, black tablets of licorice extract, which were concentrated by evaporation. Licorice root contains about 4% glycyrrhizin, which is reputed to be 50 times sweeter than cane sugar. It is worth noting that the particular sweetness in licorice root is safe for people with diabetes (not the confectionery, though, which has sugar added). The distinctive flavor of licorice is used to mask the bitter taste of some medicines, especially herbal ones, and it is an ingredient in alcoholic beverages such as Guinness beer, anesone, raki and sambuca, as well as being used in snuff and to flavor chewing tobacco.

Processing

Licorice roots are harvested when the plant is in about its third or fourth year, with the whole root system being taken up in autumn. When the roots are severed, the crowns and suckers are stored for replanting in spring. After the roots are washed and trimmed, the long straight pieces are sometimes

NAMES IN OTHER LANGUAGES

- Arabic: irqu as-sus, sous
- Chinese (C): gam chou
- Chinese (M): gan cao
- Czech: lekorice, sladky drevo
- Danish: lakrids
- Dutch: zoethout
- Finnish: lakritskasvi
- French: réglisse
- German: lakritze, sussholz
- Greek: glikoriza
- Hungarian: edesfa
- Indian: jethi madh, madhuka, mithi lakdi
- Italian: liquirizia
- Japanese: nankin-kanzo
- Norwegian: lakrisrot
- Portuguese: alcacuz
- Russian: lakrichnik, solodka
- Spanish: orozuz, regaliz
- Swedish: lakrits
- Thai: chaometes
- Turkish: meyan koku
- Vietnamese: cam thao

FLAVOR GROUP

- pungent



LICORICE ROOT

WEIGHT PER TEASPOON (5 ML)

- whole chopped pieces: 2.5 g
- ground: 2.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL) chopped pieces
- white meats: ¾ tsp (4 mL) chopped pieces
- vegetables: ½ tsp (2 mL) chopped pieces
- carbohydrates: ½ tsp (2 mL) chopped pieces

COMPLEMENTS

- stewed fruit
- ice cream
- marinades for poultry and pork

USED IN

- Chinese master stock spices

COMBINES WITH

- allspice
- cardamom
- cinnamon and cassia
- cloves
- coriander seed
- fennel seed
- ginger
- mace
- pepper
- star anise
- Sichuan pepper

sold as licorice sticks and the variable-diameter twisted roots are chopped and ground into powder or processed to make extract. Licorice extract is made by crushing the roots to a pulp in a mill, then boiling them in water until a decoction is drawn off and further boiled down to evaporate into a black, sticky mass. This may be rolled into sticks and stacked on boards to dry. Some confusion is generated because both the even pieces of rootstock and these lengths of dried concentrate are referred to as “sticks.” The waste fiber left over after processing licorice is used for making particleboard.

Buying and Storage

Licorice root is often available from spice specialists in a number of forms, usually in whole pieces, chopped and as powder. Licorice root is quite stable and requires no special storage conditions, other than being kept away from extreme heat. The powder, however, is very likely to pick up moisture from the atmosphere, so it must be kept in an airtight pack. Humid conditions are best avoided, as they will make the powder sticky and lumpy. Licorice sticks and Pontefract cakes made from the concentrate will also get sticky when exposed to humidity, so store them in an airtight container in a cool place.

Use

One needs to be conservative with the quantity of licorice put into a dish, as its underlying bitterness can be overpowering. Chopped pieces of licorice may be added when stewing fruits, along with star anise, cinnamon and vanilla. An Asian “master stock” may contain pieces of licorice along with brown cardamom, star anise, fennel, mace, Sichuan pepper, cinnamon, ginger and cloves. A master stock is something like a sweet, thick, spicy soy sauce, and I often use it in Asian cooking as a substitute for regular soy sauce. The secret is in the spices, which are tied in cheesecloth to create a spice bag that infuses the soy sauce, sugar and water. This spice bag can be used more than once; in China, families will keep a master stock spice bag for many years, adding more spices to freshen up the flavor until they end up with something the size of a soccer ball. I have even heard of families that have willed their master stock spice bag to the next generation! Being cautious Westerners, though, we’d recommend using a master stock spice bag only about three times. Between infusions, keep it in the fridge.

Pork Spareribs in Chinese Master Stock

Licorice
Root

Master Stock

- 3 whole star anise
- 2 tsp (10 mL) chopped licorice root
- 1 slice (1–1½ inches/3–4 cm) dried ginger
- 1 piece (1–1½ inches/3–4 cm) dried mandarin orange peel
- ½ cassia quill (½ inch/4 cm)
- 1 tsp (5 mL) whole Sichuan pepper
- ½ tsp (2 mL) whole allspice
- ½ tsp (2 mL) fennel seeds
- ½ tsp (2 mL) coriander seeds
- 1 dried long chili
- ½ cup (125 mL) granulated sugar
- 2 cups (500 mL) boiling water
- ⅔ cup (150 mL) soy sauce

8 pork spareribs

For the master stock, mix star anise, licorice root, ginger, mandarin peel, cassia, Sichuan pepper, allspice, fennel seeds, coriander seeds and chili. Tie in a square of cheesecloth, creating a spice bag. Dissolve the sugar in boiling water, add soy sauce and spice bag and simmer, uncovered, for 1 hour.

Marinate spareribs in the cooled master stock for 1–8 hours in the refrigerator. Place spareribs and marinade in a baking dish and cook for 1½ hours at 300°F (150°C) or until the liquid is caramelized and the spareribs well cooked.

Serves 8.



Lovage

OTHER COMMON NAMES

- Cornish lovage
- Italian lovage
- old English lovage

BOTANICAL NAME

- *Levisticum officinale*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Chinese (C): yuhn yihp dong gwai
- Chinese (M): yuan ye dang gui
- Czech: libecek
- Danish: lovstikke
- Dutch: lavas
- Finnish: lipstikka
- French: liveche
- German: liebstoeckel, badekraut
- Greek: levistiko
- Italian: levistico
- Japanese: robejji
- Norwegian: lopstikke
- Polish: lubczyk ogrodowy
- Portuguese: levistico
- Russian: goritsvet, gulyavitsa
- Spanish: ligustico
- Swedish: libsticka
- Thai: kot cheyng
- Turkish: selam out, deniz maydanozu

FLAVOR GROUP

- mild

LOVAGE IS a stout perennial that looks like a sparse version of angelica with leaves closely resembling Italian parsley. The stems are channeled, similar to those of celery, and grow 3–5 feet (1–1.5 m) high. Sulfur yellow flowers are borne in delicate umbels that are smaller than angelica's great round heads. Lovage has a gray-brown, thick, fleshy root shaped like a carrot that is about 4–6 inches (10–15 cm) long. The root has medicinal properties but no culinary use. The flavor of lovage leaves is slightly yeasty and reminds one of a combination of celery and parsley, with a very mild peppery bite.

Origin and History

Lovage is native to the Mediterranean and some experts contend that it may have its origins in China. The Phoenicians first recognized the medicinal attributes of its root, leaves and seeds, and the plant was valued for medicinal, culinary and cosmetic applications by the Greeks and Romans, who were cultivating it at around the time of the birth of Christ. Lovage has been grown commercially in Czechoslovakia, France and Germany since the 12th century and it was used medicinally in England in the 14th century. Two other plants besides true lovage that have been referred to as lovage are Scotch lovage, or sea lovage, which is Scotch parsley (*Ligusticum scoticum*), and black lovage, which is actually alexanders (*Smyrniolum olusatrum*). Ajowan seeds have also been passed off as lovage seeds. The popularity of the peppery foliage of lovage has waned in recent times, possibly because the more subtle flavors of the past have less appeal in the 21st century. This is a time when our tastebuds are being bombarded by all manner of flavor-enhancing delights, from the natural and spicy to the highly artificial.

Processing

Lovage leaves may be dried in the same way as parsley, in a dark, well-aired place spread out on paper or mesh for a few days so the air can circulate until the leaves are crisp and dry. Fresh lovage can also be chopped and put in ice cube trays with a little water and frozen until required.



Lovage

Buying and Storage

Due to the lack of demand for lovage as a culinary herb, the fresh or dried leaves are rarely seen for sale. Should you be able to buy dried lovage, it must be green like parsley and packed in a well-sealed airtight container. Store in the same way as other dried herbs, in a cool, dark place. Keen gardeners will find lovage plants available from nurseries that specialize in herbs.

Use

The subtle flavor of lovage with its hint of pepper is a perfect complement to salads when included along with parsley, chervil, dill and finely chopped onions and red peppers. This combination may also be added to omelets, scrambled eggs and mashed potatoes for an attractive appearance and pleasing taste. Potentially bland soups and sauces are given a “safe” lift when lovage is added to them instead of other stronger-tasting herbs or spices.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: $\frac{1}{2}$ cup
(125 mL) fresh leaves
- white meats: $\frac{1}{2}$ cup
(125 mL) fresh leaves
- vegetables: $\frac{1}{2}$ cup
(125 mL) fresh leaves
- carbohydrates: $\frac{1}{2}$ cup
(125 mL) fresh leaves

COMPLEMENTS

- green salads
- scrambled eggs and omelets
- mashed potatoes
- white sauces

USED IN

- fines herbes

COMBINES WITH

- alexanders
- arugula
- chervil
- dill
- garlic
- parsley
- salad burnet
- sorrel

Lovage Frittata

This frittata keeps well in the refrigerator for up to 3 days. It can be served cold or gently warmed in a 350°F (180°C) oven for about 10 minutes.

- ¾ cup (175 mL) extra-virgin olive oil, divided
- 3 onions, finely sliced
- 14 eggs, lightly beaten
- 2 red bell peppers, roasted, peeled and sliced
- 3 cups (750 mL) lovage leaves, firmly packed
- 6¾ oz (200 g) feta cheese, cubed
- salt and freshly ground black pepper to taste

In a 12-inch (30 cm), deep, heavy ovenproof frying pan, heat ¼ cup (50 mL) of the oil over medium-low heat. Add onions and cook for 3–5 minutes, until golden. In a large bowl, combine onions, eggs, red peppers, lovage and feta. Season well with salt and pepper.

Preheat broiler. In the same frying pan, heat the remaining ½ cup (125 mL) oil over high heat until smoking. Pour in egg mixture. After 30 seconds, stir gently, just moving the raw and cooked mix around. After 2 minutes, reduce heat to medium and cook for 5 minutes. Transfer skillet to broiler and broil until frittata is just set. Cool for 10 minutes, then invert onto a large plate for serving. Serves 6–8.

Mahlab

OTHER COMMON NAMES

- mach lepi
- mahaleb
- mahlebi
- mahlepi
- St Lucie's cherry

BOTANICAL NAME

- *Prunus mahaleb*

FAMILY

- Rosaceae

NAMES IN OTHER LANGUAGES

- Arabic: mahlab, mahleb
- Czech: visen turecka
- Dutch: weichsel
- Finnish: veikselinkirsikka
- French: mahaleb, cerisier de Sainte-Lucie
- German: steinweichsel, felsenkirsche
- Greek: mahlepi, agriokerasia
- Italian: mahaleb, ciliegio di Santa Lucia
- Japanese: maharibu
- Polish: wisnia wonna
- Portuguese: abrunheiro-bravo
- Russian: vishnya makhalebka
- Spanish: mahaleb, cerezo de Santa Lucia
- Swedish: vejksel
- Turkish: mahlep, idrisagaci

MAHLAB IS an unusual fragrant spice made from the husked kernels of a small wild black cherry that comes from a spreading deciduous tree of the same family as peaches and plums. The tree grows to about 36 feet (12 m) in height and has 2½-inch (6 cm) long, bright green, oval, finely serrated leaves and single, early-blooming white flowers. The green fruit is only ⅓ inch (8 mm) in diameter and ripens to become black, at which stage it is harvested. Kernels of mahlab are light tan in color, tear-shaped, ¼ inch (5 mm) long and creamy white inside. The strange thing about mahlab is that even when you smell it for the first time, it seems incredibly familiar. This familiarity comes from its distinct aroma, which is cherry-sweet, almond-like and floral and bears a resemblance to marzipan. The flavor is a combination of fragrant rosewater-like sweetness and a somewhat nutty and surprisingly bitter aftertaste.

Mahlab seeds



FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 4.7 g
- ground: 2.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- carbohydrates: 2 tsp (10 mL) ground

COMPLEMENTS

- Middle Eastern breads
- cookies and crackers
- cakes and pastries
- Turkish rice dishes
- fruit flans and milk puddings

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- cinnamon and cassia
- cloves
- coriander seed
- ginger
- nutmeg
- poppy seed
- sesame seed

Origin and History

Native to southern Europe, this northern-hemisphere tree grows wild in the Mediterranean region across to Turkey. It was first used for perfumes and medicine in the Middle East and Turkey, where it later became a popular culinary spice, especially for flavoring breads. The world’s major production of mahlab is now in Iran, followed by Turkey and Syria.

Buying and Storage

Although mahlab may sometimes be bought ground, once powdered it goes from creamy white to dirty yellow and loses its flavor and aroma rapidly. Therefore, I recommend buying the whole kernels only and grinding them in a mortar and pestle or coffee grinder, just before using. Store mahlab kernels in an airtight container, partly to lengthen their shelf life, and also to prevent the aroma contaminating other foods in the pantry. Keep away from direct light and extreme heat and humidity.

Use

Mahlab will give an authentic flavor of the Middle East and Turkey to breads, cookies, crackers, cakes and pastries. A Greek friend of ours gave us a traditional Easter bun flavored with mahlab and decorated with brightly colored eggs, the shells having been dipped in red food color. Mahlab is also an ingredient in Turkish rice, complements fresh fruit flans when added to the pastry, and goes well in milk puddings. Due to its perfumed character and potential for bitterness, only a small amount, 1/2–1 tsp (2–5 mL) of the ground spice, is required per 2 cups (500 mL) of flour in a recipe.

Mahlab Morning Bread

Mahlab

This recipe is based on an Arabian bread called ka'kat and is delicious with cherry jam as an alternative to croissants. The mahlab in the bread counteracts and complements the sweetness in the cherries. These small loaves will keep in an airtight container for up to 2 days.

- 2 tbsp (25 mL) superfine (caster) sugar
- 2 tsp (10 mL) active dry yeast
- 2 cups (250 mL) warm water
- 4 to 5 cups (1 to 1.25 L) bread flour
- ¼ cup (50 mL) unsalted butter, melted
- 1 tsp (5 mL) salt
- ¼ tsp (1 mL) mahlab seeds, ground to a powder
- 1 egg, beaten and strained, for egg wash
- 3 tbsp (45 mL) sesame seeds

In a large bowl, dissolve sugar and yeast in warm water. Add flour 1 cup (250 mL) at a time, stirring constantly *in the same direction* until a thick dough begins to form. Once 3 cups (750 mL) have been added, stir for 1 minute, then let stand for 10 minutes.

Stir in butter, salt and mahlab. Resume adding flour 1 cup (250 mL) at a time until the dough will not take any more without getting too dry. Turn out onto a lightly floured surface and knead for 10 minutes, or until smooth and elastic. When you push your finger into the dough, it should spring back. Place dough in a clean, lightly oiled bowl, cover with a tea towel and let rise in a draft-free place for 1½ hours, or until doubled in size. (Inside a microwave is generally a good place for dough to proof — just don't accidentally turn it on!)

Knead dough for 2 minutes, then divide it into 16 pieces. Roll each piece between your palms into a cigar-shaped roll, then pinch the ends together to create a circle. Place circles at least 2 inches (5 cm) apart on a lightly oiled baking sheet. Cover with a tea towel and let rise for 30 minutes. Meanwhile, preheat oven to 400°F (200°C).

Just before baking, brush bread with egg wash and sprinkle with sesame seeds. Bake for 20 minutes, or until golden. Let cool slightly on a wire rack before serving. Makes 16 bread circles.



Mastic

THE GUM mastic tree, or “schinos,” as the *chia* variety is called in its native Greek island of Chios, is a slow-growing, hardy evergreen that averages 6–9 feet (2–3 m) in height, although some have been known to reach 16 feet (5 m). The mastic tree has shiny dark green leaves, resembling those of myrtle. The trunk is rough and gnarled and when tapped yields a clear resinous substance that, when coagulated, is called gum mastic. The valuable gum mastic flows when the gray bark has been cut, or “hurt,” to tap the supply. Full growth of these charming trees is achieved after 40–50 years and some trees are known to be up to 200 years old. Mastic production commences when the trees are five to six years old, reaching maximum yield of up to 2 pounds (1 kg) per tree when the tree is 15 years old. The end of a tree’s productive life comes at about 70 years of age.

The sappy gum hardens after “hurting” and is most often seen in either large ($\frac{1}{4}$ inch/5 mm) or small ($\frac{1}{8}$ inch/3 mm) pieces referred to as tears. The texture of these tears is brittle and somewhat crystalline. When broken, mastic tears reveal a shiny surface resembling a piece of chipped quartz and release a faint pine-like aroma. The flavor is initially bitter and mineral-like, becoming more neutral after a few minutes chewing, when it takes on the consistency and opaque fawn color of chewing gum. Even after 15–20 minutes of chewing, a surprising degree of mouth-freshening flavor remains, unlike today’s highly flavored chewing gums, which seem to expire in a matter of minutes. In cooking, mastic does contribute to flavor although its main function is for texture and as a binding agent. A gum mastic oil is also produced by distillation of the leaves and branches of mastic trees; however, few cooks would be familiar with it as its primary use is in manufacturing sweets, liqueurs and medicines.

OTHER COMMON NAMES

- gum mastic
- masticha
- mastika

BOTANICAL NAME

- *Pistacia lentiscus*

FAMILY

- Anacardiaceae

NAMES IN OTHER LANGUAGES

- Arabic: aza
- French: mastic
- German: mastix
- Greek: mastikha
- Italian: lentischio, mastice
- Spanish: lentisco, mastique

FLAVOR GROUP

- pungent

Origin and History

One legend, which I feel is particularly appropriate, has it that when Saint Issidoros was tortured to death by the Romans in AD 250, his body was dragged under the mastic tree. Upon seeing the saint’s mutilated form, the tree started to cry with real tears.



Mastic tears

There are many varieties of mastic trees in the Mediterranean and Middle East, yet most of the world's production of gum mastic comes from the Greek island of Chios, where an unsurpassed passion and dedication to the gum mastic tree is evident and there is even a Gum Mastic Growers Association. Mastic has a long history that dates back to classical times, and it is mentioned by erudite Greek authors such as Pliny, Dioscorides, Galenus and Theophrastus. Mastic was well known to the pharaohs, and Hippocrates (the ancient doctor known as “the father of medicine”) cited it as a cure for all manner of ailments, from baldness to intestinal and bladder problems, as a paste for toothache and to apply in cases of snakebite.

From the 10th century on, Chios became famous for its *masticha*. The name derives from the Greek word *mastichon*, which means “to chew” and is the root of the English word “masticate,” for it was as a chewing gum and mouth freshener that mastic was commonly used. By the 14th and 15th centuries, the production of mastic was highly organized and controlled by the *scriba masticis*, clerks whose job was the registration of the production of gum mastic. Such was the importance of mastic that during Turkish occupation, mastic-producing villages on Chios were given special privileges,

WEIGHT PER TEASPOON (5 ML)

- whole tears: 2.0 g

SUGGESTED QUANTITY PER POUND (500 G)

- carbohydrates: $\frac{1}{4}$ tsp (1 mL) ground

COMPLEMENTS

- Turkish delight
- ice cream
- sweet puddings and cakes
- toothpastes and chewing gums

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- cardamom
- cinnamon and cassia
- ginger
- mahlab
- vanilla



such as their own management and permission to strike the church bells. In all there were 21 mastic villages, which paid their tithes with 29 tons of mastic and were made free from paying all other taxes. As with most valuable commodities, the penalties for stealing gum mastic were draconian, to say the least, and the severity related directly to the quantity stolen. Receivers of stolen mastic also had the same punishment meted out to them. These punitive measures ranged from having one's ears and/or nose cut off to branding with red-hot steel on the forehead or getting your eyes burnt out. The ultimate penalty was hanging if one was caught with over 400 pounds (200 kg). Thus Kyriakus Pitsiccoli of Angona, on one of his many visits to Chios between 1435 and 1440, was heard to say, "If you wish to live in Chios, just keep the gum mastic and never steal it."

Today, the Gum Mastic Growers Association lists 64 uses for mastic, extolling among other things its anti-cancer properties, use in treatment of duodenal ulcers, benefits for oral hygiene and use in South Morocco and Mauritania as an aphrodisiac.

Processing

Production of gum mastic is still strictly controlled and occurs between June and September. This begins by first cleaning and leveling the ground around the base of the trees with white clay, a process called "currying." The white clay contains limestone, which promotes drying and contributes to the clarity in mastic that falls onto it. The first cutting, or "hurt," of 10–20 wounds is made on the trunk, typically in the morning, which is the best time for maximum sap flow. Up to 100 cuts are made over the season; however, too much "hurting" of young trees will inhibit future yields. Over the next 10–20 days, coagulation takes place as gum mastic oozes out of the cuts. The tears are collected, first using a special tool called a *timitiri* to remove them from the trunk. The rest of the mastic on the ground is collected, put into wooden crates and transferred to the houses where it is sorted, ready for cleaning by the village's womenfolk during winter. After sieving to remove any adhering leaves and soil, the gum is washed in cold, soapy water, rinsed thoroughly and spread out on bags inside the houses to dry. After drying, a small knife is used to remove any remaining dirty particles. Much of the winter in the mastic villages is spent carefully cleaning the summer's production by hand to prepare it for sale. Clean gum mastic is categorized into three main

grades. Pitta is the foam that occurs when many drops become one; this grade is the largest (pieces up to 3 inches/7.5 cm in diameter) and has an oval shape. Next are large tears, which measure about $\frac{1}{3}$ – $\frac{1}{2}$ inch (6–10 mm) in length, and small tears, which average $\frac{1}{8}$ – $\frac{1}{4}$ inch (3–5 mm) in diameter. Tiny pieces are classified as powder. Any uncleaned leftovers are usually distilled for use in perfumes and alcoholic drinks such as ouzo and raki.

Buying and Storage

Gum mastic can be purchased from Greek and Middle Eastern food stores and specialty food retailers. The most common pack size is 1–5 g, because it is relatively expensive and a recipe only requires a small amount to be used at a time. Tears should be quite clear and transparent with a slight golden tone. The best storage conditions are in a cool place, as exposure to extreme or prolonged heat will cause the tears to become cloudy and discolor, with a subsequent loss of flavor.

Use

Mastic has myriad applications, ranging from the medicinal to the functional, including use as a stabilizer in paints and to make varnishes, especially for musical instruments. It has been used in the production of tires, aromatic soaps, insecticides and electrical insulators. Frankincense is produced from gum mastic and rosin, and mastic has been used in the tanning, weaving and bee-keeping industries. Where mastic really shines, of course, is when it comes to culinary uses. Besides being used in toothpaste, chewing gum and confectionery, it is an ingredient in making liqueurs. Included in the best and most authentic Turkish delight, it is found in recipes for breads and pastries, ice creams, sweet puddings and almond cake. Although purists may disagree, mastic can be an acceptable substitute for the almost impossible to acquire salep (see p. 512). Mastic is also used as a binding agent with oil, lemon juice and spices to coat the traditional Turkish doner kebab. For most applications in cooking, mastic is pounded with a little sugar and mixed with rose- or orange blossom water. The usual quantity is $\frac{1}{4}$ tsp (1 mL) of crushed mastic to four dessert servings.

Orange Blossom Ice Cream

Our favorite recipe using mastic was given to us by Tess Mallos, the well-known author of a number of cookbooks on Middle Eastern food. This ice cream is an Egyptian delicacy and has a distinct velvet consistency and wonderfully refreshing flavor made possible by the combination of mastic and orange blossom water.

- ¼ tsp (1 mL) mastic tears
- ½ cup (125 mL) superfine (caster) sugar, divided
- 4½ tsp (22 mL) cornstarch
- 2 cups (500 mL) whole milk, divided
- 1¼ cups (300 mL) whipping (35%) cream
- 4–5 tsp (20–25 mL) orange blossom water
(more or less to taste)

Pound mastic to a powder, mix with 1 tbsp (15 mL) of the sugar and all of the cornstarch and stir in ½ cup (125 mL) of the milk. Put remaining milk and sugar in saucepan, stir in whipping cream and heat. When almost boiling, stir cornstarch mixture again and add to pan, stirring constantly until thick and bubbling. Sit pan in cold water to cool, stirring often. Add orange blossom water to taste and churn in ice cream machine according to maker's instructions or put in tin, freeze until frozen around the edges, break up and beat well in bowl. Transfer to container, seal and freeze for 24 hours. Move to refrigerator 1 hour before serving.

Mint

OTHER COMMON NAMES

- spearmint: garden mint, common mint, green mint, lamb mint, our lady's mint, peamint, sage of Bethlehem, spire mint

BOTANICAL NAMES

- spearmint: *Mentha spicata*, *M. crispa*, *M. viridis*
- peppermint: *M. piperita officinalis*
- applemint: *M. rotundifolia*
- eau-de-cologne mint: *M. piperita* 'Citrata'
- pennyroyal: *M. pulegium*

FAMILY

- Lamiaceae (formerly Labiatae)

THE MINT family encompasses a vast array of varieties, a situation brought about by its tendency to hybridize readily within the species. Among all of these, spearmint stands out as the most useful and popular culinary herb, along with applemint. Peppermint is widely favored medicinally, and it flavors sweets and is found in many breath-freshening applications, yet I don't consider it to be a regular inclusion when cooking. Spearmint is generally seen in two forms: the mid- to light green, narrow-leaved, low-growing classic variety, and the coarser, round, crinkly-leaf variety we in Australia call common or garden mint, and invariably have growing in a shady spot not far from a dripping tap. Spearmint has a distinct mint aroma and pleasing light flavor that is not pungent, warm or too antiseptic.

Peppermint leaves are more oval than spearmint leaves; they are dark green with an almost peppery heat, an obvious mouth-freshening, germicidal characteristic, and sweet,

Fresh mint



NAMES IN OTHER
LANGUAGES

SPEARMINT

- French: baume vert, menthe verse
- German: grüne minze
- Indian: podina, pūdeena, pudina
- Indonesian: daun kesom
- Italian: mentastro verde
- Japanese: hakka
- Laotian: pak hom ho
- Malay: daun kesom, pudina
- Spanish: menta verde

PEPPERMINT

- Arabic: naana
- Chinese (M): yang po ho
- Dutch: pepermint
- Filipino: yerba buena
- French: menthe Anglaise
- German: pfefferminze
- Italian: menta pepe
- Japanese: seiyo hakka
- Malay: pohok
- Portuguese: hortela
- Russian: myata
- Spanish: hierbabuena
- Sri Lankan: meenchi
- Swedish: pepparmynta
- Thai: bai saranae
- Vietnamese: rau hươg lui

FLAVOR GROUP

- strong

balsamic taste that instantly evokes peppermint throat lozenges. There are two types of peppermint: “black” peppermint has dark, almost purple stems; “white” peppermint has green stems. Applemint, also called pineapple mint, has leaves that are crinkly, sometimes variegated, and look much like common mint except for a covering of light down, giving them a soft, fuzzy appearance. Their flavor is similar to spearmint, with a pleasing hint of green apple. Eau-de-cologne mint is taller and more erect than spearmint and peppermint and is grown for decorative purposes and the refreshing eau-de-cologne fragrance it gives off when brushed past in the garden. Pennyroyal is a low-growing ground-cover mint with small, light green leaves; it should not be eaten, but when picked and put under the pet dog’s blanket it will deter fleas. Further varieties you may hear of are cornmint, watermint, Japanese peppermint, American wild mint, Egyptian mint, Corsican mint, woolly mint, European horsemint, licorice mint, ginger mint, basil mint and lemon mint. Vietnamese mint is not a true mint; it is actually a *Polygonum* and is covered in more detail in the chapter on Vietnamese mint (see p. 520).

Origin and History

Peppermint does not seem to have been known until the 17th century in England, when it is thought to have hybridized from watermint and spearmint. Spearmint is native to the temperate regions of the Old World and is mentioned in Roman mythology, its name being derived from Minthe. Minthe was a charming nymph who inspired a fit of jealousy in Proserpina (the envious wife of Pluto), who transformed her into the lowly, downtrodden mint plant. I could not help thinking how enticing Minthe must have been when I walked through a field of mint near the small town of Nizip, in southeastern Turkey. The aroma of fresh mint wafting up through the warm summer air was enough to make one swoon — no wonder Proserpina was afraid Pluto would succumb to Minthe’s charms! Hippocrates and Dioscorides mentioned the medicinal benefits of mint. In Roman times, it was an aromatic and room-freshening strewing herb, and the Pharisees in the Bible were paid their taxes in mint, anise and cumin. Mint grows so profusely it is now found wild in many temperate zones of the world.

Spearmint and peppermint oils are among the most important flavoring ingredients in the world today. It is difficult to recall a day in one's life when the flavor of mint is not experienced in one form or another. And yet, it was not until the 18th century that large quantities of peppermint and spearmint were cultivated in England, in the medicinal herb gardens at Mitcham, in County Surrey. It is recorded that by 1796 up to 3,000 pounds (1,350 kg) of oil was extracted by steam distillation in London from approximately 100 acres of mint at Mitcham. The variety of peppermint known as Black Mitcham, a hardy variety that produces more oil of a better quality, remains the backbone of the peppermint oil industry today.

A century later, the United States was a major player in the mint oil industry. High grades of mint oil, guaranteed free from contamination by weeds and adulterants, were cleverly marketed, while the producers sought to manipulate growers and raw material prices. The mint oil industry experienced incredible highs, prices crashed and the dynamics that emerge in most developing markets, such as speculation, monopoly and fraudulent advertising, were all apparent. Those early pioneers, many of whom persisted in the face of incredible hardship, would rest easily if they could see the consumer's love of mint flavorings today.

Processing

The oils of spearmint and peppermint for the food and pharmaceutical industries are extracted by steam distillation. Dried mint is produced in much the same way as other green leaf herbs, by dehydrating in a warm, dark, low-humidity environment until the moisture level is around 10%. Home-grown mint is easily dried by hanging in bunches under the conditions mentioned above, or in a microwave oven. For microwave drying, place the leaves in a single layer on a sheet of paper towel and microwave on High for 20-second bursts, checking for crispness after each burst. As the leaves become crisp and dry to the touch, remove them and zap the remaining ones until dry. To prevent damage to the magnetron in your microwave, place $\frac{1}{2}$ cup (125 mL) water in with the leaves.

WEIGHT PER TEASPOON (5 ML)

- rubbed dried leaves: 1.0 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 4 tsp (30 mL) fresh chopped, $1\frac{1}{2}$ tsp (7 mL) rubbed dried leaves
- white meats: 2 tsp (10 mL) fresh chopped, $\frac{3}{4}$ tsp (4 mL) rubbed dried leaves
- vegetables: 1 tsp (5 mL) fresh chopped, $\frac{1}{4}$ tsp (1 mL) rubbed dried leaves
- carbohydrates: 1 tsp (5 mL) fresh chopped $\frac{1}{4}$ tsp (1 mL) rubbed dried leaves



COMPLEMENTS

- roast meats such as chicken, pork and veal
- new potatoes and green peas tossed in butter
- tomatoes and eggplant, in small amounts
- salad dressings
- refreshing sorbets
- yogurt, in raita

USED IN

- harissa paste mixes
- lamb seasonings
- tandoori spice blends
- special blends of mixed herbs

COMBINES WITH

- chili
- cumin
- marjoram
- oregano
- parsley
- rosemary
- sage
- savory
- thyme

Buying and Storage

Fresh spearmint is readily available from the majority of fresh-produce retailers. If you have a choice between the smooth, narrow-leaved or crinkly, round-leaf varieties, buy the former, as it does have a better flavor for cooking. Fresh mint stores well if the bunch is stood in a glass of water in the refrigerator. Change the water every few days and your fresh mint will last up to two weeks. Dried spearmint is usually sold simply as “mint,” and in most cases it will be quite dark green, almost black in color. Strictly speaking, this is called “rubbed” mint, and the pieces of leaf will be quite small, about $\frac{1}{8}$ inch (3 mm), as they break up when rubbed off the stem after drying. Good-quality dried mint may be either dark or light green, but should not look dusty or be contaminated with pieces of pale yellow stalk. Store in the same way as other dried herbs, in an airtight package and a place where it is cool, dark and away from extreme humidity.

Use

Peppermint is far more limited in the kitchen than spearmint and will mostly be found in the occasional recipe for sweets, such as peppermint creams, or added as flavoring to baked items like chocolate cake. Peppermint tea is possibly the most agreeable of all herbal beverages. It is a pleasant-tasting, relaxing tea that aids the digestion and helps clear the head of minor winter sniffles.

Spearmint, on the other hand, has myriad applications, made possible because its light, minty taste brings an element of freshness to the foods it is combined with. Some writers hold the view that mint does not combine well with other herbs; however, when it is added in small amounts, I have seen it complement thyme, sage, marjoram, oregano and parsley very well. When many of us think of mint, the first dish that comes to mind is roast lamb with mint sauce or mint jelly. Mint is a good accompaniment to chicken, pork and veal, and it is delicious sprinkled on new potatoes, as well as cooked green peas that have been tossed in a little butter. It also goes well with tomatoes and eggplant when used sparingly. Salads and salad dressings benefit from the addition of a little mint, as do cold dishes such as iced cucumber soup and fresh fruit

salad. Traditional mint julep, the liqueur crème de menthe and many alcoholic drinks owe their character to the humble mint plant.

Middle Eastern, Moroccan, Indian and Asian cooking all benefit from the inclusion of mint in a variety of recipes that range from stuffed vine leaves, tagines, butter chicken and stir-fried vegetables, to chutneys of freshly grated coconut, curry leaves, fried mustard seeds and chili. A favorite of mine is the cooling cucumber, yogurt and mint raita, which is a perfect fillip to spicy Indian meats like tandoori lamb or chicken and meat koftas.

Rubbed mint leaves





Mustard

A DEGREE of confusion prevails about mustard seeds, as there are three types of mustard most often used for culinary purposes (white or yellow mustard, black mustard and brown mustard) and two other closely related plants (field mustard and rape) whose seeds are also pressed to make mustard oil. All belong to the Cruciferae family (now referred to as Brassicaceae), so named because the flower petals are shaped in the form of a Greek cross.

White mustard has the smallest growing habit, reaching about 3 feet (1 m) in height, and is distinguished by its hairy appearance. The 1–2-inch (2.5–5 cm) long pods have a pronounced shape, like a bird's beak, and contain around six seeds, which are yellow. The leaves are pale green, soft and lobed, and the bright yellow flowers are relatively large. Yellow mustard seeds (as I will call them because they are a creamy yellow color) are close to $\frac{1}{8}$ inch (3 mm) in diameter and have the mildest flavor of the mustard triumvirate. The husk of yellow mustard seeds is microscopically pitted and has such effective moisture-absorbing properties that they have been used to thoroughly dry laboratory glasses after washing.

Black mustard is a taller, smooth-looking plant with lance-shaped upper leaves and grows 6–9 feet (2–3 m) high. It bears yellow flowers that are similar in appearance to those of white mustard, but smaller. The seed pods of black mustard are erect, smooth, $\frac{3}{4}$ inch (2 cm) long and hold about 12 dark reddish brown and almost black $\frac{1}{2}$ -inch (1 cm) diameter seeds that are more pungent than the yellow seeds.

Brown mustard is similar to black mustard in size, except the leaves are large and oval, the flowers are pale yellow and the pods are 1–2 inches (2.5–5) cm long. Brown mustard seeds look almost identical to black but have only about 70% of the pungency.

All mustard seeds have little discernable aroma when whole and barely give off any fragrance even when ground. This is because mustard seeds contain an enzyme called myrosinase, and it is this enzyme, which is activated by coming into contact with liquids, that creates the typical hot, pungent taste of mustard. The heat of a fully developed hot mustard is sharp, irritating and bitingly hot and rushes up the back of one's nose, clearing the

OTHER COMMON NAMES

- brown mustard:
Chinese mustard,
Indian mustard, leaf
mustard, mizuna
mustard, mustard
greens

BOTANICAL NAMES

- white or yellow
mustard: *Brassica alba*
or *Sinapis alba*
- black mustard: *B. nigra*
- brown mustard:
B. juncea
- field mustard:
B. campestris
- rapeseed: *B. napus*

FAMILY

- Brassicaceae (formerly
Cruciferae)



Clockwise from top left: whole brown mustard seeds; ground yellow mustard seeds; superfine mustard powder; whole yellow mustard seeds

sinuses and making the eyes water. Not all mustards are hot, however, and a mild mustard may be tangy, savory, smooth and pleasing to the palate. Mustard greens and sprouts may be produced from all of the above, although the sharp, tangy flavor of black mustard makes it a popular variety for this purpose.

Origin and History

Mustard is one of the oldest herbs known and has been used since the earliest recorded history. Much appreciated for its medicinal applications, both internally as a stimulant and diuretic and externally for general muscular relief, it was highly regarded by Pythagoras and Hippocrates. Mustard is referred to in the Bible as “the greatest among herbs.” In 334 BC, Darius III of Persia sent Alexander the Great a bag of sesame seeds (symbolizing the vast numbers of his army). Alexander returned a bag of mustard seeds, to imply not only the number, but the power and energy of his men. Mustard was used as a condiment in Roman times, when it was simply sprinkled over food in the same way as pepper and the leaves were eaten as a vegetable.

NAMES IN OTHER LANGUAGES

- Arabic: khardal abyad (yellow), khardal (black)
- Chinese (C): baahk gaai choi (yellow), gai lat, gaai choi (black)
- Chinese (M): bai jie cai (yellow), hei jie zi (black)
- Czech: horcice bila (yellow), horcice cerna (black), horcice cerna sitinnvita (brown)
- Dutch: witte mosterd (yellow), zwarte mosterd (black)
- Finnish: keltasinappi (yellow), mustasinappi (black)
- French: moutarde blanche (yellow), moutarde noire (black), moutarde de Chine (brown)
- German: weisser senf (yellow), schwarzer senf (black), Indischer senf (brown)
- Greek: moustarda, sinapi agrio (yellow), sinapi mauro (black)
- Indian: rai, sarson, lal sarsu, kimcea (black)
- Indonesian: biji sawi
- Italian: senape bianca (yellow), senape nera (black)
- Japanese: shiro-karashi (yellow), kuro-karashi (black)
- Malay: biji sawi (black)

NAMES IN OTHER LANGUAGES

- Portuguese: mostarda branca (yellow), mostarda preta (black)
- Russian: gorchitsa belaya (yellow), gorchitsa chyornaya (black)
- Spanish: mostaza silvestre (yellow), mostaza noire (black), mostaza de Indiaas (brown)
- Sri Lankan: abba
- Swedish: vitsenap (yellow), svartsenap (black), brunsenap (brown)
- Thai: mastartd
- Turkish: beyaz hardal tohum (yellow), kara hardal (black)
- Vietnamese: bach gioi tu (yellow), hac gioi (black)

In AD 812, Charlemagne decreed that mustard was to be grown on the imperial farms in central Europe, and around that time the French grew it on convent lands near Paris as a source of revenue. Human nature being what it is, mustard became the basis for more complex concoctions once the power of the activated enzyme was appreciated. Thus, blends of mustard with honey, vinegar and grape must (the unfermented juice of ripe grapes) became popular. A plausible theory on the derivation of the name “mustard” is that it is from the Latin words for “must” and “hot”: *mustum* and *ardens*.

Mustard was introduced into England by the Romans. In the 13th century, Parisian vinegar makers were granted the right to make mustards. By the 18th century, both the English and French were perfecting methods of processing. On the French side it consisted of adding ingredients such as tarragon, mushrooms, truffles, champagne, and even vanilla. The English focused on ways of separating the husk from the center, creating superfine mustard powders that often included wheat flour and turmeric. This activity spawned a mustard manufacturing industry, which grew by making accessible to the masses a pleasant-tasting condiment that could add zest and interest to what must sometimes have been an interminable diet of bland vegetables and salted meats.

Processing

Mustard seeds need to be harvested when the pods are fully developed but not yet ripe, as they burst open easily. Black mustard is particularly difficult to harvest mechanically, so it has been replaced in many countries by the slightly less pungent brown variety, which does not shatter so readily. After cutting, the mustard “hay” is stacked in sheaves to dry and then threshed to remove the seeds. Mustard powders are produced by milling and finely sieving — individually or in combinations — yellow, black and brown seeds to remove the husks. Occasionally starches and colors are added to achieve the desired flavor and appearance.

Prepared mustards, as the mustard pastes in jars are called, are made by soaking the seeds in cold water to activate the enzyme, then adding acidic liquids like vinegar, white wine or verjuice (the juice of unripe fruit, most often grapes) to inhibit or stop the enzyme reaction. Black and brown mustard seeds contain different glucosides than yellow seeds, their



reaction with the enzyme myrosinase making them more pungent and thus preferred for making hot mustard. Nonetheless the effects of different liquids on the enzymes tend to have more to do with the final heat than the type of mustard seed does. Water gives a sharp, hot taste; vinegar a mild, tangy flavor; wine a pungent, spicy taste; and beer an extremely hot flavor. Even when water has been used to make hot mustard, vinegar should still be added when it has achieved the correct heat level, as this will not destroy the volatile oil developed by the enzymes, and it will prevent the mustard from deteriorating over time. Mustard oil, which is often found as an ingredient in Indian recipes, is produced by the cold-pressing method of oil extraction. Mustard oil is not hot and is used simply as a cooking oil in the same ways that peanut, olive, canola, safflower, sesame and other cooking oils are.

Buying and Storage

Yellow mustard seeds are readily available; however, whole black mustard seeds are rare as their wide-scale production has been replaced by that of brown, and it is difficult for even an expert to tell the difference between the two. When recipes call for black mustard seeds, brown ones will make an acceptable substitute. Mustard powder is the finely sieved flour that has the husk removed and this is most suitable for making hot mustard by adding a little cold water and letting stand for 15 minutes to develop its heat. Ground yellow mustard seed is simply the whole seed powdered and it contains the husk, which has great moisture-absorbing qualities. Whole mustard seeds are quite stable, and while storage in a cool place is not essential, they must be kept dry.

There are myriad varieties of prepared mustard on sale, ranging from mass manufactured to boutique specialty and homemade brands. It is best to avoid jars that show signs of separation where the vinegar appears on the surface, as this is a sign of age: the product could be beyond its use-by date. Good-quality prepared mustard does not need to be refrigerated after opening, as the natural microbe-inhibiting qualities of mustard will prevent it from going moldy. Mustard will last longer when kept in the refrigerator; however, in my opinion, the flavor of cold mustard is not as appealing as that of mustard kept at room temperature.

FLAVOR GROUP

- hot

WEIGHT PER TEASPOON (5 ML)

- whole: 4.5 g
- ground: 2.6 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 4 tsp
(20 mL) seeds, 1 tbsp
(15 mL) powder
- white meats: 4 tsp
(20 mL) seeds, 1 tbsp
(15 mL) powder
- vegetables: 2–3 tsp
(10–15 mL) seeds,
1½ tsp (7 mL) powder
- carbohydrates: 2 tsp
(10 mL) seeds, 1½ tsp
(7 mL) powder



COMPLEMENTS

- pickles
- Indian curries
- salad dressings and mayonnaise
- spiced vinegars
- curry powders
- panch phora
- pickling spices
- meat seasonings
- sambar powder

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon
- cloves
- coriander seed
- cumin seed
- fennel seed
- fenugreek seed
- galangal
- ginger
- nigella
- paprika
- pepper
- star anise
- tamarind
- turmeric

Use

Whole mustard seeds are an important ingredient in pickling spice blends and the Indian seed mix panch phora, and are added to steamed vegetables such as cabbage. When fried in oil at the beginning of making a curry, mustard seeds release a deliciously nutty taste and slight piquancy without any heat (as the enzyme has not been activated). It is common in South Indian cooking to fry mustard seeds, curry leaves, cumin seeds and asafetida in oil and add the tasty concoction to the dish before serving, a process called tempering (you have to be quick to put the lid on the saucepan to prevent the mustard seeds from popping out all over the kitchen). Mustard powder should not be added directly to vinegar as the enzymes will be killed and a bitter flavor will develop; always put some cold water with it first, but never hot water as this kills the enzyme. To make hot mustard for the table, mix cold water with mustard powder and leave for 15 minutes for the heat to develop. Make only enough for that day, as by the next day the heat will have dissipated. Ground yellow mustard seed is worth adding to water, then to oil and vinegar salad dressings, as the water-absorbing properties of the retained husk acts as an emulsifier and will prevent the mixture from separating for 10 minutes or more after shaking. An effective coating for roasted red meats can be made by combining 2 tsp (10 mL) of brown mustard seed with 1 tbsp (15 mL) each of paprika and sumac, and oregano and salt to taste. As well as delicious meat, a lovely by-product is the gravy made from the pan juices, which is rich, dark and full-bodied. Mild prepared mustard makes an ideal substitute for butter or margarine on veggie sandwiches as it contains almost no fat and has a complementary taste.



Homemade Whole-Grain Mustard

Mustard

Making your own mustard is relatively easy and particularly rewarding when you serve it to friends, telling them you made it from scratch. This recipe is for a full-flavored, coarse-textured mustard that is ideal for accompanying meats and using as a coating to crust roast beef or lamb. You can experiment with making your own creations by varying the amounts of spices or adding other ingredients such as chilies and sun-dried tomatoes.

- 1 tbsp (15 mL) yellow mustard seeds
- 1 tbsp (15 mL) brown mustard seeds
- $\frac{1}{2}$ tsp (2 mL) green peppercorns
- $\frac{1}{4}$ tsp (1 mL) ajowan seeds
- $\frac{1}{4}$ tsp (1 mL) sea salt
- 4 allspice berries (whole pimento)
- $\frac{1}{4}$ tsp (1 mL) brown sugar
- $\frac{1}{2}$ tsp (2 mL) dried tarragon
- 4 tbsp (50 mL) red wine vinegar

Crush together the mustard seeds, peppercorns, ajowan seeds, salt and allspice to a coarse blend in a mortar and pestle or process in a coffee grinder. Make sure the majority of mustard seeds are cracked, as this will help them absorb the liquid and create a spoonable consistency. Add the brown sugar and tarragon, mixing thoroughly. Add the red wine vinegar, stirring well for about 3 minutes. Place in a clean glass jar with a secure lid and store in a cool dark place for about 1 week to allow the flavor to develop.

Don't be surprised if the flavor appears sharp and harsh when it is first made, as the first week of storage is required for the flavor to fully develop. Should the mustard appear too runny after a week or two, regrind the entire mix to crack more mustard seeds so they can absorb any excess moisture.



Crunchy Roasted Potatoes

Whether accompanying a curry or served alongside barbecued meats, these potatoes cooked with Indian seeds are delicious.

- 2 lbs (1 kg) potatoes, peeled and cut into 2-inch (5 cm) chunks
- 5 cloves garlic, peeled and bruised
- 2 tbsp (25 mL) Panch Phora (see p. 574)
- 1 tsp (5 mL) sea salt
- $\frac{1}{4}$ cup (50 mL) olive oil

Preheat oven to 400°F (200°C). Cook potatoes in boiling salted water until tender. Drain and return to pot. Cover and give pot a good shake to rough up the edges of the potatoes. Put potatoes in a large roasting pan and add garlic. Sprinkle with panch phora and salt, then pour in oil to coat the potatoes. Bake for 35–40 minutes, shaking pan every 10 minutes. Serve hot or at room temperature. Serves 4–6.

Osaka mustard leaves (top); green mustard leaves



Myrtle

OTHER COMMON NAMES

- Corsican pepper
- sweet myrtle

BOTANICAL NAME

- *Myrtus communis*

FAMILY

- Myrtaceae

NAMES IN OTHER LANGUAGES

- Arabic: hadass, murd
- Chinese (C): heong tou muhk
- Chinese (M): tao jin niang
- Czech: myrta obecna
- Danish: myrte
- Dutch: mirte
- Finnish: myrtti
- French: myrte
- German: myrte, brautmyrte
- Greek: myrtia
- Hungarian: mirtusz
- Indian: vilayatimehendi
- Italian: mirto
- Japanese: ginbaika
- Portuguese: murta
- Russian: myrt
- Spanish: arrayan, mirto
- Swedish: myrten
- Turkish: mersin, murt

ON FIRST appearance, evergreen myrtle trees do not conjure up the notion of culinary use. These large shrubs, or small trees — with their tightly clustered, shiny, waxy 1- to 2-inch (2.5 to 5 cm) long leaves and attractive white flowers bursting with an anemone-like abundance of stamens — look as though their only purpose is to be decorative. The bitterness and astringency of the leaves and the piney juniper and rosemary flavor notes in the berries mean this herb is not often used to flavor food in the traditional manner. In Italy, the sweet, orange blossom taste of the fresh flowers is appreciated in salads. Myrtle is, however, a popular cooking wood and, when used on the fire to grill and roast meats, transmits a unique and appetizing flavor to them. Myrtle should not be confused with crepe myrtle (*Lagerstroemia indica*) or lemon myrtle (*Backhousia citriodora*).

Myrtle



FLAVOR GROUP

- strong

**WEIGHT PER
TEASPOON (5 ML)**

- whole average-size
fresh leaf: 0.5 g

**SUGGESTED
QUANTITY PER
POUND (500 G)**

(when removed after
cooking)

- red meats: 10 leaves
- white meats: 5 leaves
- vegetables: 2 berries
- carbohydrates:
2 berries

COMPLEMENTS

- game
- poultry
- roasted red meat

USED IN

- not commonly used in
spice blends

COMBINES WITH

- allspice
- bay leaves
- black pepper
- juniper
- marjoram
- oregano
- rosemary
- sage
- savory
- tarragon
- thyme

Origin and History

Myrtle is native to southern Europe, North Africa and western Asia, and grows widely around the Mediterranean. It is often mentioned in the Bible, and in Greek mythology it was considered to be sacred to Aphrodite. It also has a reputation as an aphrodisiac. Linked with love and feminine allure, myrtle is included in an Israeli bride's wedding bouquet. Myrtle is also connected with fidelity and immortality. In parts of Asia, the dried, powdered leaves were made into a dusting powder for babies. The berries were used to flavor wine in the Mediterranean; nowadays, they tend to be used in sweet recipes and some liqueurs.

Buying and Storage

As it is the branches and leaves that are most often used, and because they are often not readily available from food providers, myrtle is worth growing at home. Myrtle needs to be grown in a well-drained, medium-rich soil in a sunny position. Dried myrtle leaves and the deep purple to black berries, in their whole or coarsely crushed form, can be purchased from some specialty spice shops. Store in airtight packaging and keep away from extremes of heat, light and humidity. Bunches of fresh myrtle leaves will store for up to three months in the freezer.

Use

Because of its bitter taste, myrtle is rarely served with food after cooking. Either meats are wrapped in the leafy branches, or the leaves are stuffed into the cavity of poultry before roasting. In this manner the aromatic, piney and juniper-like flavor notes are transmitted to the dish without the bitterness of the myrtle itself. A few myrtle leaves can be added to casseroles in the same manner as bay leaves, but I recommend removing them before serving. An essential oil used in the manufacture of perfumes, soaps and skin care products is made by steam distillation of the bark, leaves and flowers. A perfumed water known as *eau d'ange* is made from the flowers. It is as a cooking wood, where myrtle branches are burned to impart a fragrant, smoky note to food, that myrtle appears to be most popular.

Nigella

OTHER COMMON NAMES

- charnushka
- kalonji
- devil-in-the-bush
- love-in-a-mist
- (and, incorrectly, black cumin or wild onion seed)

BOTANICAL NAME

- *Nigella sativa*

FAMILY

- Ranunculaceae

NAMES IN OTHER LANGUAGES

- Arabic: habbet as-suda
- Chinese(C): hak jung chou
- Chinese (M): hei zhong cao
- Czech: cerny kmin
- Danish: sortkommen
- Dutch: nigelle
- Finnish: ryytimeito, sipulinsiemen
- French: cheveux de venue, nigelle
- German: zwiebelsame, nigella, schwarzkummel
- Greek: melanthion
- Hungarian: feketekomeny
- Indian: kolonji, kalanji, kalonji
- Indonesian: jinten hitam
- Italian: nigella, grano nero
- Japanese: nigera
- Malay: jintan hitam
- Portuguese: nigela, cominho-preto
- Russian: nigella, chernushka
- Spanish: neguilla, pasionara

THE NIGELLA of culinary use is an erect annual, a member of the buttercup family and close relative to the decorative plant that is known as love-in-a-mist (*Nigella damascena*). Nigella is less attractive. It grows 12–24 inches (30–60 cm) high and has wispy, thread-like gray-green leaves and small, five-petaled blue or white flowers about 1 inch (2.5 cm) across, which develop spiky-looking capsules that resemble the seed head of a poppy. Each capsule is divided into five seed-bearing compartments that are crowned by vertical, prominent spikes. When ripe they shatter to disperse the tiny, matte-finish jet black seeds. Each angular tear-shaped seed is about $\frac{1}{8}$ inch (3 mm) long and has a cream-colored center. The seeds are occasionally confused with and passed off as black sesame. Nigella seeds give off little aroma; however, the flavor is pleasantly sharp and not unlike carrot. It is nutty and has a distinctly metallic, lingering, peppery, throat-drying quality.

Origin and History

Nigella is native to western Asia and southern Europe, although it now grows profusely in Egypt, the Middle East and India. Although there is little recorded history about nigella, its medicinal properties were known to ancient Asian herbalists. The Romans used it in cooking and it is known that the early settlers took it to America, where the seeds were used like pepper as a seasoning. A great deal of confusion surrounds nigella as in India it is occasionally referred to as black cumin, which it is not, and it has quite a different taste to true

Nigella seeds



NIGELLA

NAMES IN OTHER LANGUAGES

- Swedish: svartkummin
- Thai: thian dam
- Turkish: corek out, siyah kimyon

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 3.7 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 4 tsp (20 mL) seeds
- white meats: 4 tsp (20 mL) seeds
- vegetables: 2–3 tsp (10–15 mL) seeds
- carbohydrates: 2 tsp (10 mL) seeds

COMPLEMENTS

- Turkish bread and Indian naan
- savory biscuits
- curries

USED IN

- panch phora

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon
- cloves
- coriander seed
- cumin seed
- fennel seed
- fenugreek seed
- galangal
- ginger
- mustard
- paprika
- pepper
- star anise
- tamarind
- turmeric

black cumin seed. Nigella is also often called black onion seed or wild onion seed, another misnomer made more confusing by the fact that true onion seeds have little flavor, and are usually only for sprouting purposes. On reflection, I believe the majority of recipes that call for onion seeds actually intend the cook to use nigella. I have read that in French cookery nigella has been called quatre épices, which I find bizarre, as quatre épices is a blend of four spices (white pepper, nutmeg, ginger and cloves) traditionally used with preserved meats in charcuterie. Nigella seed oil is used for therapeutic purposes and goes by the unenlightening name of blackseed oil.

Processing

The seed capsules of nigella are harvested as they ripen but before they have had a chance to explode and lose their cargo. After further drying the pods are threshed to remove the seeds.

Buying and Storage

Nigella seeds are best bought whole and should be coal black in color. As they are less expensive than black sesame seeds, you are unlikely to be sold black sesame by mistake; more often than not, the substitution is the other way around. Poor-quality uncleaned seeds are recognized by the presence of pale, flaky bits of husk from the pods. Nigella seeds are quite stable in their whole form and will keep their flavor for up to three years when stored in airtight packaging in a dry place.

Use

Nigella seeds are often seen on Turkish bread and in Indian naan breads because their flavor complements carbohydrates so well. Nigella is an essential ingredient in the Indian five-seed spice blend panch phora, along with cumin, fennel, fenugreek and mustard seeds. Panch phora also happens to go well with potatoes, another carbohydrate, when it is fried in oil and then chunks of partially cooked potato are fried until brown and coated with all the spice seeds. Lightly roasting or frying the seeds in a little oil before adding to recipes tends to bring out the nutty flavor and reduces some of its metallic sharpness. One of my favorite ways to enjoy nigella seeds is in Spiced Cocktail Biscuits (p. 74).

Baked Sweet Potatoes with Nigella, Yogurt and Lime

Nigella

These sweet potatoes are the perfect accompaniment to roasted or barbecued meats.

- 4 sweet potatoes, skin on
- olive oil, for drizzling
- ½ long red chili, seeded and finely chopped
- ½ cup (125 mL) plain yogurt
- 2 tbsp (25 mL) chopped fresh coriander
- 2 tbsp (25 mL) grated lime zest
- 2 tbsp (25 mL) feta cheese, crumbled
- 2 tsp (10 mL) nigella seeds
- salt and freshly ground black pepper to taste

Preheat oven to 350°F (180°C). Roast sweet potatoes for 45 minutes, then split lengthwise and drizzle with olive oil. Return to the oven for 10 minutes (or, if you're having a barbecue, place cut side down on the grill for 5 minutes).

Meanwhile, combine chili, yogurt, coriander, lime zest, feta and nigella seeds. Season with salt and pepper. Gently mash the tops of the sweet potatoes with a fork, then spoon yogurt mixture on top and serve. Serves 8 as a side.

Nutmeg and Mace

OTHER COMMON NAMES

- muskat
- muskatnuss

BOTANICAL NAMES

- *Myristica fragrans* Houtt., also known as *M. officinalis*, *M. moschata*, *M. aromatica* and *M. amboinesis*

FAMILY

- Myristicaceae

NAMES IN OTHER LANGUAGES

NUTMEG

- Arabic: basbasa
- Burmese: zalipho thi
- Chinese (C): dauh kau syuh
- Chinese (M): dou kou shu
- Czech: muskatovy orech
- Danish: muskatnod
- Dutch: notemuskaat
- Finnish: muskottipahkin
- French: muscade noix
- German: muskatnuss
- Greek: moschokarido
- Hungarian: szerecsendio
- Indian: jaiphal
- Indonesian: pala
- Italian: noce moscata

OF ALL THE sweet spices, the strongest-tasting one, nutmeg, shares its parentage with a lesser-known pungent spice, mace. Although there are some similarities in flavor, nutmeg and mace are used in quite different ways.

Nutmeg and mace share the botanical name of *Myristica fragrans*, and they both come from a tropical evergreen tree that grows 23–33 feet (7–10 m) tall. The leaves are shiny and dark on the top, with a pale green underside. Nutmeg trees are either male or female, and as only one male tree is required to fertilize 10 female trees so they can bear fruit, it is necessary to cull unwanted male trees, although their sex cannot be determined until the tree is about five years old. Nutmeg trees become fully mature in 15 years and keep producing fruit for up to 40 years. Originally a native of Indonesia, it can now be found growing in most of the tropical spice-growing countries of the world. The nutmeg fruit looks like a firm yellow nectarine, and is

Whole nutmeg, shelled



exactly the same shape. Unfortunately, it's not delicious like a nectarine but has a sour, rather unpleasant flavor. The local people use it for making pickles and sometimes it is preserved with salt and sugar and eaten as a tangy confection.

I was first captivated by the magic of nutmeg when I visited a spice grower's farm — referred to by the locals as a “spice garden” — in Kerala, in southern India, and was lucky enough to find one ripe nutmeg (it was a little early in the season for the full crop). The farmer cut the fruit open, and the flash of wet, shining, blood red mace as it opened was breathtaking! Mace is the placenta that conveys nourishment from the fruit to the seed. It clings to the shell of the nutmeg like a hand with its fingers holding so tightly that they leave little indentations to show where they've been on the brittle dark brown shell. The wonderful glistening wet look soon dulls as oxidization takes place in the open air, and within a day of being placed in the sunshine, the mace has dried to the dull red-orange appearance found on good-quality dried mace. When it's in this whole or roughly broken form, it is referred to in most recipe books as “blade mace.”

The volatile oil in nutmeg and mace contains small amounts of myristicin and elemicin, which are narcotic and poisonous; therefore, they should never be consumed to excess.

Origin and History

Native to the Banda Islands in the Indonesian archipelago known as the “Spice Islands,” nutmeg had reached China, Asia and India before the birth of Christ. By AD 500 nutmeg had arrived in the Mediterranean and during the Crusades moved north into Europe, so that by the 13th century its use was widely known. During the 16th century the spice trade flourished, with the Portuguese, Spanish and Dutch all vying for a piece of the action, taking enormous risks to secure their valuable charges and bring them back to Europe.

One of the many colorful stories of the spice trade is about a Dutch trader in the 16th century who noticed that mace was always rarer and more expensive than nutmeg, and that it seemed to be in shorter supply. So he decided to have his own little fiddle at market manipulation. Being a pen pusher who had never visited the East Indies, where the spices grew, he decided to order the destruction of most of the nutmeg trees. This, he thought, would make nutmeg harder to get, and therefore more expensive, while at the same time pushing up the sales of mace. He probably had quite a bit of nutmeg in

NAMES IN OTHER LANGUAGES

NUTMEG

- Japanese: nikuzuku
- Malay: buah pala
- Norwegian: muskatnott
- Portuguese: noz-moscada
- Russian: oryekh-muskatny
- Sri Lankan: sadikka
- Spanish: nuez moscada
- Swedish: muskot
- Thai: chan thet
- Turkish: hindistancevizi
- Vietnamese: dau khau

MACE

- Chinese (C): yuhk dauh kau
- Chinese (M): rou dou kou
- Czech: muskatovy kvet
- Danish: muskatblomme
- Dutch: foelie
- Finnish: muskottikukka
- French: macis
- German: muskatblute, macis
- Hungarian: szerecsendio virag
- Indian: jaffatry, javatri, tavitri
- Indonesian: sekar pala
- Italian: mazza
- Japanese: nikuzuku
- Malay: kembang pala
- Portuguese: macis
- Russian: muskatnyi tsvet
- Spanish: macis
- Swedish: muskotblomma
- Thai: dok chand
- Turkish: besbase

NUTMEG AND MACE

WEIGHT PER TEASPOON (5 ML)

- average nutmeg: 3.8 g
- ground nutmeg: 3 g
- average blade of mace: 0.5 g
- ground mace: 2.3 g

FLAVOR GROUP

NUTMEG

- sweet

MACE

- pungent

SUGGESTED QUANTITY PER POUND (500 G)

NUTMEG

- red meats: 2 tsp (10 mL) ground
- white meats: 1½ tsp (7 mL) ground
- vegetables: 1 tsp (5 mL) ground
- carbohydrates: 1 tsp (5 mL) ground

MACE

- red meats: 1½ tsp (7 mL) ground
- white meats: 1 tsp (5 mL) ground
- vegetables: ¾ tsp (4 mL) ground
- carbohydrates: ¾ tsp (4 mL) ground

his stores and hoped to send the prices through the roof before he sold it. Anyway, not realizing that nutmeg and mace came from the same tree, he ruined his lucrative mace business at the same time! Spice traders have been a pretty tricky lot for many centuries, and I'm sure there are some who will resort to a few scams to force prices up. (The trader who soaked strips of banana peel in vanilla essence, then sold the strips as vanilla beans, comes to mind!) After all, the spice trade is probably the world's second-oldest profession!

Processing

The mace is peeled away from the nutmeg seed shell, and each is dried in the sun. Once it is dry, the nutmeg seed rattles within its smooth, mace-embossed outer shell, which bears the tracks of where the mace used to be wrapped around it. In India, nutmeg is often sold complete with this thin and brittle outer shell, but in most other countries, you just get the dull brown, wrinkled and hard inner nutmeg that we know and love, with its distinctive pungent flavor and aroma.

When the mace is whole it is generally used in slow-cooking meat dishes. It's more frequently found in a ground form that doesn't need to be cooked for so long, the grinding process releasing the flavor more readily. Mace has a flavor similar to nutmeg; however, it is more delicate and has somewhat fresher, lighter and less robust notes, making it ideal for use in cooking seafood.

To get the best flavor, many people like to grind their nutmeg fresh (like pepper), and you can purchase a nutmeg mill that will shave fine pieces off the whole nutmeg. Otherwise, you can rub it on the finest part of your kitchen grater — being very careful of your fingers! When a whole nutmeg is cut in half a symmetrical light and dark brown pattern of oil-containing veins is revealed. Because nutmeg is so high in oil, it retains its flavor well even when ground, so it's one of the ground spices whose taste is very nearly as good as the freshly ground form.

Buying and Storage

When buying nutmegs, one needs to be aware that the quality can vary enormously. When whole nutmegs have been stored for too long they begin to dry out, losing some of the volatile oil, and start to be attacked by insects that leave tiny drill holes in the nutmegs. These are referred to in the trade as BWP (broken, wormy and punky) and when ground yield a light brown

dry powder with not much flavor. In whole form they are useless in a nutmeg grinder as they will crumble and not shave off the even, moist, aromatic powder we expect.

Nutmeg has also been the subject of adulteration for many centuries, often for practical reasons. Good-quality shelled nutmegs are so high in oil content they tend to clog in a commercial spice grinder and in extreme cases come out as a slurry rather than a powder. The easiest way to overcome the excessive oiliness is to add some form of starch to the material being ground, the starch taking up the excess oil and to all intents and purposes being indistinguishable from ground nutmeg itself.

An English spice trader whom I met in India told me they used to leave the bags of whole nutmegs out in the yard overnight. In the morning they would be frozen and in this brittle state would pass through the grinder without any problems. Many spices are ground these days by either freezing them as they pass through the spice mill (referred to as cryogenic grinding) or more economically, by cooling the grinding head of the mill to reduce volatile oil loss from heat generated by friction.

If you've ever seen mace in a delicatessen or supermarket, you might have noticed that it's much costlier than nutmeg.

COMPLEMENTS

NUTMEG

- cooked squash tossed in butter
- squash and potato, before baking
- pâtés and terrines
- cooked spinach
- cheese sauces
- milk and rice puddings
- sweet spicy cakes
- biscuits

MACE

- seafood before broiling or pan-frying
- stock for steaming shellfish
- sauces with veal and in terrines
- fish pies

Mace clinging to nutmeg



NUTMEG AND MACE

USED IN

NUTMEG

- mixed spice
- quatre épices
- apple pie spice
- some sweet, rich curries

MACE

- pickling spice
- ras el hanout

COMBINES WITH

NUTMEG

- allspice
- cinnamon
- cloves
- coriander seed
- ginger

MACE

- cloves
- paprika
- pepper

This stands to reason when you think that from one nutmeg fruit, you get a small quantity of mace, about 0.5 g compared to about 3 g of nutmeg.

Use

Nutmeg's warm, aromatic, full-bodied flavor complements a diversity of foods, and although predominantly sweet in character, should generally be added sparingly. It has long been used in old-fashioned food such as rice puddings and sprinkled over milkshakes. Once, all milk bars had a shaker of nutmeg on the counter — a sprinkle on a shake was as common a practice as today's sprinkle of powdered chocolate over cappuccino. Nutmeg is also included in cookies and cakes. There is a wonderful Dutch recipe for a nutmeg cake, no doubt inspired by the close association the Dutch had with Indonesia, the home of nutmeg.

Nutmeg also complements vegetables, especially root vegetables, making microwaved or steamed potatoes, carrots and squash delicious. Toss them in a little butter and nutmeg after they're cooked. Another popular practice is to season cooked spinach with nutmeg, the robust sweetness seeming to neutralize the somewhat metallic taste of spinach.

Mace, on the other hand, is more likely to be found in savory foods, such as seafood dishes, and with sauces to flavor meats such as chicken or veal. Mace also goes well with carbohydrates such as pasta. If you come upon a recipe requiring mace and you don't have any, a reasonable substitute is to use about a quarter the quantity or less of nutmeg, mixed in equal proportions with ground coriander seed.

Blade mace pieces; ground mace



This delicious, moist, sweet cake is one of the finest culinary showcases I've encountered for the unique and wonderful flavor of nutmeg. Nutmeg cake is a traditional European recipe no doubt inspired by the merchandise brought back to Europe by the Dutch East India Company. You can make it with all-purpose flour for a change — it is still delicious, but moister and more dense.

If you're feeling indulgent, serve with a dollop of whipped cream sprinkled with freshly grated nutmeg.

- 2 cups (500 mL) self-rising flour*
- 2 cups (500 mL) lightly packed brown sugar
- 2 tsp (10 mL) ground cinnamon or cassia
- 1 tsp (5 mL) ground allspice
- 1 tsp (5 mL) ground coriander seed
- ½ cup (125 mL) butter
- 1 egg
- 2 tsp (10 mL) ground or freshly grated nutmeg
- 1 cup (250 mL) milk

Preheat oven to 350°F (180°C) and butter sides of an 8-inch (20 cm) round cake pan. Line the base with greased parchment paper. Set aside.

Mix together flour, brown sugar, cinnamon, allspice and coriander, then rub the butter into the mixture until it resembles coarse bread crumbs. Spoon half of this mixture over the base of the prepared pan.

Whisk the egg and nutmeg into the milk, then add to the remaining flour mixture to make a very runny batter. Stir thoroughly. Pour the batter over the crumbs in the pan.

Bake for 70 minutes, or until golden brown and springy to the touch in the center. Cool in the tin for a few minutes, then turn out and cool thoroughly on a wire rack.

*If you can't find self-rising flour, substitute an equal amount of all-purpose flour and add 1 tbsp (15 mL) baking powder and 1 tsp (5 mL) salt.

Green Ricotta Ravioli with Burnt Sage Butter

In this savory recipe, the distinct flavor of mace complements both spinach and ricotta.

Pasta

- 1 lb (500 g) durum semolina flour
- 5 eggs, lightly beaten with 1 tbsp (15 mL) extra-virgin olive oil

Filling

- 1 small zucchini, grated
- 1 package (10 oz/300 g) frozen spinach
- 1 egg, beaten
- 6 tbsp (90 mL) ricotta cheese
- 1 tsp (5 mL) ground mace

Sage Butter

- ¼ cup (50 mL) butter
- 2 tbsp (25 mL) small fresh sage leaves
- freshly ground black pepper

For the pasta, sift semolina into a food processor. With the motor running, slowly add egg mixture through the feed tube until flour and egg start to bind together. Turn out onto a lightly floured surface and knead gently for 4–5 minutes, or until smooth. Wrap in plastic wrap and chill for 30 minutes. (This dough can be made 1 day in advance.)

For the filling, cook zucchini and spinach over medium heat for 5–7 minutes, or until liquids release, then drain through a sieve. After draining, squeeze vegetables in a paper towel to remove all moisture. Combine with egg, ricotta and mace.

If using a pasta machine, cut dough into 4 pieces and roll out to the final setting. If rolling by hand, cut dough into 4 pieces and roll out with a rolling pin. The pasta should be no more than $\frac{1}{16}$ inch (1 mm) thick.

Place 1 tsp (5 mL) of filling at 4-inch (10 cm) intervals on a sheet of pasta. Using a pastry brush, dampen the pasta around the filling. Top with another sheet of pasta and, using your fingers, push down around the filling, pushing all air out. Using a pastry cutter (or the edge of a glass tumbler), cut out ravioli. Repeat with remaining pasta sheets and filling. Dry ravioli on a wire rack (this will take about 10 minutes, depending on weather and kitchen conditions).

Bring a large pot of water to a boil and add 1 tbsp (15 mL) salt. When ravioli are dry, drop them into pot for 3–4 minutes, or until they rise to the surface. Drain.

For the sage butter, melt butter over medium-high heat. Add sage leaves and cook, stirring, until crisp.

Serve 8 ravioli per main course portion with sage butter and a good grind of pepper. Serves 4.



Olida

OLIDA HAS been one of the most confusingly named Australian native herbs since its popularization in the 1990s. Until 2005, the common name for olida was “forest berry herb,” so named because of its distinct berry-like flavor notes. The name was misleading because the part of the tree that is used is actually the leaf; the conical fruits are not eaten. *Eucalyptus olida* is an attractive 65-foot (20 m) tall tree with gray-brown bark that sheds in long ribbons to reveal a majestic light gray trunk. The canopy is bushy and covered in dark green, oval, tapering leaves that resemble bay leaves and other eucalypts. The aroma is distinctly passion fruit-like with cinnamon and summer berry notes. The flavor is astringent, eucalypt-like and grassy, while the taste on the palate is numbing and herbaceous.

OTHER COMMON NAMES

- forest berry herb
- strawberry gum

BOTANICAL NAME

- *Eucalyptus olida*

FAMILY

- Myrtaceae

FLAVOR GROUP

- mild

WEIGHT PER TEASPOON (5 ML)

- ground: 2.5 g

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: $\frac{1}{2}$ tsp (2 mL)
- red meats: 1 tsp (5 mL)
- fruit and vegetables: $\frac{1}{2}$ tsp (2 mL)
- carbohydrates: $\frac{1}{2}$ –1 tsp (2–5 mL)

Origin and History

Olida is native to Australia’s dry forest and woodland areas on the eastern side of the New South Wales northern tablelands. The region is the traditional home of the Australian Aboriginal Bundjalung people. Olida thrives in shallow, infertile soil and on acid granite.

Olida contains high amounts of methyl cinnamate (cinnamic acid), which has been used for many years in Europe to boost the flavor of fruit jams and preserves. As a natural flavor enhancer, methyl cinnamate has allowed processors to bulk out manufactured fruit-based products with low-cost, less flavorful ingredients. You could see it as a sweet food version of the savory food enhancer MSG (monosodium glutamate, or glutamic acid), which also occurs naturally in food. Excessive use of high concentrations of MSG has, however, earned it a dubious reputation. Fortunately, the same cannot be said for using methyl cinnamate in its natural form, as found in olida.

Buying and Storage

Fresh olida leaves are rarely available; however, the more convenient whole dried or powdered leaves are becoming more readily available from herb and spice shops and gourmet food retailers. Most of these will refer to olida as forest berry herb.



Whole dried olida leaf; ground olida

Because of the volatility of the essential oil, it is advisable to purchase only small quantities (say $\frac{1}{3}$ oz/10 g at a time for normal household requirements) of freshly produced olida powder in airtight packaging. Store as you would other delicate green herbs, in a well-sealed container in a cool, dark place.

Use

Olida has a wide variety of uses, but it is often best to think of it as a flavor enhancer rather than expecting it to overtly flavor a dish with its own character. There are two basic guidelines worth remembering to achieve the best results with olida. One is to add only a small amount, say $\frac{1}{4}$ – $\frac{1}{2}$ tsp (1–2 mL), or 1–2 leaves, to 1 lb (500 g) of fruit or vegetables, then taste before adding more. The other is to add olida only to recipes that cook for a short time, never subjecting it to extreme temperatures for more than 10–15 minutes. The reason for this caution is that when too much olida is used, or when it is cooked for too long, the flavor-giving volatile oils will be destroyed and a sharp, hay-like, less than pleasant eucalyptus flavor may dominate. Although olida's own flavor will be diminished in a fruit jam, it will still enhance the fruit and berry flavors.

While olida does go quite well in shortbread, cakes and muffins, I prefer to add it to sweet things that are either not cooked (e.g., fruit salads) or are cooked more quickly at a lower heat, such as blini and pancakes. In quick-cooking applications, it is most effective to infuse olida in a little warm milk or hot water to bring out the flavor before adding it to the dish.

COMPLEMENTS

- fruit salads
- stone fruits and berries
- whipped cream and ice cream
- cheesecake
- pancakes
- shortbread
- broiled seafood

USED IN

- blends containing native Australian herbs and spices
- chicken and seafood seasonings

COMBINES WITH

- allspice
- cardamom
- cinnamon
- cloves
- coriander seed
- fennel seed
- ginger
- vanilla



Alternative fillings of whole or mashed summer berries may also be used.

Crêpe Mix

2 eggs
1 cup (250 mL) buttermilk
 $\frac{1}{2}$ tsp (2 mL) salt
 $\frac{1}{2}$ tsp (2 mL) ground olida
 $\frac{3}{4}$ cup (175 mL) self-rising flour*

Filling

2 bananas
1 tbsp (15 mL) whipping (35%) cream
 $\frac{1}{2}$ tsp (2 mL) ground olida

butter or margarine

For the crêpe mix, beat eggs, buttermilk, salt and olida in a mixing bowl. Sift in flour and beat to a smooth batter. For best results, refrigerate for 1 hour before making crêpes. Meanwhile, preheat oven to 200°F (100°C).

For the filling, mash bananas with cream and olida.

Heat a heavy-based crêpe pan or frying pan over medium-high heat. Add a little butter and roll around pan until fully oiled. Add 2 tbsp (25 mL) batter and tilt pan in a circular motion to evenly distribute. When top is just firm and bottom is lightly browned, turn crêpe over and cook until bottom is lightly browned. Turn out onto a plate and place in oven to keep warm. Repeat with remaining batter, adding more butter as necessary. When all the crêpes are made, spread filling evenly over each crêpe, roll up and serve. Makes 8 crêpes.

* If you can't find self-rising flour, substitute an equal amount of all-purpose flour and add 1 tsp (5 mL) baking powder and $\frac{1}{4}$ tsp (1 mL) salt.

Oregano and Marjoram

OTHER COMMON NAMES

- oregano: wild marjoram, rigani
- marjoram: sweet marjoram, knotted marjoram, pot marjoram, winter marjoram, rigani

BOTANICAL NAMES

- oregano: *Origanum vulgare*
- marjoram: *O. marjorana*, also known as *Marjorana hortensis*

Varieties referred to in Greece as *rigani*:

- pot marjoram: *O. onites*
- winter marjoram: *O. heracleoticum*

FAMILY

- Lamiaceae (formerly Labiatae)

NAMES IN OTHER LANGUAGES

OREGANO

- Arabic: anrar
- Chinese (C): ngou lahk gong
- Chinese (M): ao le gang
- Czech: dobromysl
- Danish: oregano
- Dutch: wil de marjolein

OREGANO AND MARJORAM are grouped together here because they are so closely related and similar that it seems unnecessary to classify them separately. Sweet marjoram, the variety we use most often in cooking, is a reasonably dense tender perennial (although in cold climates it will become dormant or die out in winter) that grows 12–18 inches (30–45 cm) high. The leaves are deep green, up to 1 inch (2.5 cm) long, lightly ribbed, slightly darker on top and pale on the underneath side, and oval to elongated in shape. Both marjoram and oregano have tiny white flowers, knotted marjoram being characterized by flowers bursting out from tight green knots at the tips of the stems. The flavor and aroma of marjoram is mildly savory and grassy and resembles thyme. Dried marjoram leaves are also like a mild version of thyme with an agreeable bitterness and lingering camphor quality. Pot marjoram has an inferior taste to sweet marjoram and is not cultivated widely, although it was introduced into

Dried oregano; rubbed marjoram



OREGANO
AND
MARJORAM

NAMES IN OTHER
LANGUAGES

OREGANO

- Finnish: makimeirami
- French: origan,
marjolaine bâtarde
- German: dosten,
oregano, wilder
majoran
- Greek: rigani
- Italian: oregano, erba
acciuga
- Japanese: hana-hakka
- Portuguese: ouregao
- Russian: dushitsa
- Spanish: oregano
- Swedish: oregano, vild
megram
- Thai: origano
- Turkish: kekik otu

MARJORAM

- Arabic: marzanjush
- Chinese (C): mah yeuk
laahn faa
- Chinese (M): ma yue lan
hua
- Czech: majoranka
- Danish: merian
- Dutch: marjolein
- Finnish: meirami
- French: marjolaine
- German: majoran
- Greek: matzourana
- Hungarian: majoranna
- Indian: mirzam josh
- Italian: maggiorana
- Japanese: mayarona
- Norwegian: merian
- Portuguese: manjerona
- Russian: mayoran
- Spanish: almaraco
- Swedish: mejram
- Thai: macheoraen
- Turkish: mercankosk

England in the 18th century and tends to be grown as a substitute in areas that are too cold for sweet marjoram. Oregano is more robust and spreading in appearance than sweet marjoram. It thrives as a perennial in most climates, grows to around 24 inches (60 cm) tall, has much rounder leaves and is covered by a down of fine hairs. Oregano has a more piercing scent than marjoram and its flavor is stronger, in keeping with its bold appearance. When dried, oregano has a pleasing depth of taste with a distinct, sharp, peppery element to it. There are a number of different types of *Origanum* that grow wild in Greece and are variously referred to as rigani. The flavors and, to a lesser degree, the appearance of the different types of oregano can vary greatly depending upon climatic and soil conditions, making it difficult to find outside its homeland that particular rigani that took your fancy while you were holidaying in Greece. Some confusion is also created by the loose application of the term “za’atar” for a Middle Eastern marjoram (*Marjorana syriaca*). Za’atar is, however, generally used to describe the herb thyme and also the popular mix containing thyme, sesame and sumac.

Origin and History

The *Origanums* are native to the Mediterranean region and for centuries were cultivated as flowering and strewing herbs. They were popular in ancient Greece and Egypt, and Apicius, the Roman epicure, used them. They became widely distributed in Asia, North Africa and the Middle East and sweet marjoram was introduced to Europe in the Middle Ages. Marjoram was regarded as a symbol of happiness, and to have it growing on a grave signified eternal peace for the departed. The name of the species, *Origanum*, comes from the Greek words *oros* and *ganos* and means “joy of the mountain,” an expression coined because of the joyous aroma and appearance created by drifts of this fragrant herb growing on picturesque rocky Greek hillsides.

These members of the *Origanum* family are sometimes confused with the pungent Mexican oregano, which is actually a small aromatic shrub, a member of the verbena family, and goes by the botanical names of *Lippia graveolens* and *L. berlandieri*. Another variety of Mexican oregano is a Lamiaceae, the same family as Mediterranean oregano, and goes by the botanical name of *Poliomenantha longiflora*. Oregano is a common ingredi-

ent in Mexican cooking; however, the oregano grown in South America these days and exported to many countries is actually the Mediterranean *Origanum vulgare*.

Processing

While fresh marjoram and oregano are excellent with salads and mild-flavored foods, they have the best taste and greatest pungency when they are dried. Harvesting should be carried out just before the plants are in full flower, when their vitality is at its greatest and their flavor is at its peak. Cut the long, most densely leaved stems, together with any flower heads that have developed, and hang in bunches in a dark, well-aired, warm, dry place for a few days. When the leaves are crisp and dry, they may be rubbed off the stalks and stored in an airtight container.

Buying and Storage

Fresh marjoram and oregano are readily available from fresh produce retailers, and when buying in bunches, make sure they are not wilted. To keep them fresh, put the stems in a glass of water, where they will last comfortably for at least a week. There has been much confusion, especially in the last century, between dried marjoram and oregano. This often has had more to do with price and availability than anything else, as when oregano is scarce (being by far the more popular culinary herb of the two), traders are tempted to make it go further by mixing in a percentage of sweet marjoram. To make identification even harder, oregano can vary greatly in appearance and flavor depending upon its country of origin.

European oregano is generally an intense dark green, almost black, like dried mint, and has a distinct flavor. Chilean oregano is pale green, very clean without pieces of stem, and has a strong savory flavor that is less peppery than the European types. Greek oregano, which may or may not be rigani, is usually sold in dried bunches packed in cellophane bags. This is the most pungent of the oreganos, and the leaves are best rubbed from the stalk as soon as it is purchased, then stored in an airtight jar. Keep your dehydrated marjoram and oregano under the same conditions as other dried herbs, in an airtight pack, in a cool, dark place and away from extreme humidity.

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- rubbed dried leaves:
0.7 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp
(10 mL) dried, 5 tsp
(25 mL) fresh
- white meats: 1 tsp
(5 mL) dried, 1 tbsp
(15 mL) fresh
- vegetables: 1 tsp (5 mL)
dried, 1 tbsp (15 mL)
fresh
- carbohydrates: 1 tsp
(5 mL) dried, 1 tbsp
(15 mL) fresh

COMPLEMENTS OREGANO

- pizza
- Italian pasta dishes
- moussaka
- meat loaf
- roast beef, lamb and
pork

MARJORAM

- lightly cooked fish and
vegetables
- salads
- scrambled eggs
- omelets
- savory soufflés
- stuffings for poultry
- dumplings

OREGANO AND MARJORAM

USED IN

OREGANO

- Italian herbs
- some mixed herbs
- seasoning blends for barbecued meats
- stuffing mixes

MARJORAM

- bouquet garni
- herbes de Provence
- Italian herbs
- mixed herbs

COMBINES WITH

OREGANO

- ajowan
- basil
- bay leaves
- chili
- garlic
- marjoram
- paprika
- pepper
- rosemary
- sage
- savory
- thyme

MARJORAM

- ajowan
- basil
- bay leaves
- chili
- garlic
- oregano
- paprika
- pepper
- rosemary
- sage
- savory
- thyme

Use

Fresh marjoram will add zest to salads and goes well with the more delicate-tasting foods such as egg dishes, lightly cooked fish and vegetables. When dried, it is stronger in taste than fresh and is a traditional ingredient in the classic Anglo-Saxon herb blend, mixed herbs, along with thyme and sage. Marjoram goes well with pork and veal and complements stuffing for poultry, dumplings and herb scones, as well as being delicious mixed with a little parsley and butter for making herb bread.

Oregano is more pungent than marjoram, especially when dry, and is a popular ingredient in the regional dishes of many countries. Oregano and marjoram, like thyme and bay leaves, have a more complex flavor profile when dried, and for this reason are used almost exclusively in their dried form in many traditional regional dishes. Oregano complements basil, and the combination of these two herbs with liberal amounts of tomato has become synonymous in most developed and developing countries with pizza and Italian pasta. Oregano flavors dishes that contain eggplant, zucchini and bell peppers and is found in recipes for moussaka and meat loaf. Roast beef, lamb and pork will develop a full-bodied taste and mouth-watering crust when rubbed with a mixture of paprika, sumac, oregano and garlic before cooking. Dried oregano has become popular — along with marjoram, thyme, bay leaves, allspice berries and pepper — for marinating olives.

Baked Ricotta with Anchovy Toast

Oregano

Serve for lunch as a light and tasty meal.

- 2 lbs (1 kg) ricotta cheese
- 1 tbsp (15 mL) dried oregano
- ½ tsp (2 mL) chili flakes
- grated zest of 1 lemon
- salt and freshly ground black pepper to taste

Toast

- 2 anchovies
- 1 clove garlic, crushed
- 1 tsp (5 mL) dried oregano
- 1 tbsp (15 mL) extra-virgin olive oil
- 6 slices ciabatta

Preheat oven to 400°F (200°C). Push ricotta through a sieve and stir in oregano, chili flakes and lemon zest. Season with salt and pepper. Divide ricotta among 6 lightly oiled small ramekins and push down with the back of a spoon. Bake for 20 minutes, until golden, then remove from the oven to cool slightly, leaving oven on.

For the toast, pound anchovies, garlic and oregano in a mortar and pestle until a paste forms. Mix in oil. Spread evenly over ciabatta and toast in the oven for 5–10 minutes, or until crisp.

Turn out baked ricotta and serve warm with toast. Serves 6.

Chicken Stuffed with Marjoram and Mascarpone and Wrapped in Prosciutto

As this dish is quite rich, it needs only a salad to accompany it.

4 boneless skinless chicken breasts
2/3 cup (150 mL) mascarpone cheese
6 tbsp (90 mL) chopped marjoram (or 2 tbsp/25 mL dried)
1/2 tsp (2 mL) crushed garlic
1/2 tsp (2 mL) grated lemon zest
salt and freshly ground black pepper to taste
12 slices prosciutto
12 oz (375 g) mixed salad greens
balsamic vinegar and extra-virgin olive oil

Place chicken breasts smooth side down and make an incision with a knife vertically into the breast, toward the tenderloin. Be careful not to cut through, while making as big a pocket as possible.

In a small bowl, combine mascarpone, marjoram, garlic and lemon zest. Season with salt and pepper. Spoon into the pocket of the chicken breasts, packing firmly. Place 3 strips of prosciutto on your work surface, overlapping them vertically. Place a chicken breast at one short end and gently roll to wrap completely, then put chicken, seal side down, on a plate. Repeat with remaining ingredients. Refrigerate for 30 minutes, allowing the filling to become quite firm.

Preheat oven to 350°F (180°C). In a lightly oiled frying pan, over medium heat, cook chicken breasts for 2–3 minutes on each side, or until prosciutto is golden. Transfer to a roasting pan and roast for 25 minutes.

Wash and drain salad greens and toss in vinegar and olive oil. Serve each chicken breast with a large portion of salad on the side. Serves 4.

Orris Root

OTHER COMMON NAMES

- Florentine iris

BOTANICAL NAMES

- *Iris germanica*
florentina
- *I. pallida*

FAMILY

- Iridaceae

NAMES IN OTHER LANGUAGES

- French: racine d'iris
- German: Florentina
schwertlilie
- Italian: giaggiolo
- Spanish: raiz de iris
Florentina

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- ground: 2.3 g

THE ORRIS ROOT powder of culinary use (and the most fragrant variety) comes from the rootstock (rhizome) of Florentine iris, one of a vast family of plants grown primarily for their magnificent blooms, which are popular for decorating garden beds in spring and early summer. Although sometimes called flag irises, these are not to be confused with sweet flag (calamus), which is also sometimes called wild iris in the United States.

The Florentine iris is an attractive perennial plant with bluish green, narrow, flat, sword-like leaves 1–1½ inches (2.5–4 cm) wide. The flower stems reach to 3 feet (1 m) and higher and bear either white flowers tinged with violet and a yellow beard or pure white flowers with no beard. Orris root powder is pale cream to white in color, is very fine-textured like talcum powder and has an aroma distinctly similar to that of violets. The flavor is also floral and has a characteristic bitter taste.

Orris root powder



Origin and History

The irises from which orris root powder is produced are native to the eastern Mediterranean region. They extended into northern India and North Africa and were cultivated for their rhizomes in southern Europe. Such is the beauty and variety of colors in this family that it is no wonder they were named after the rainbow goddess, Iris. Orris root was used in perfumery in ancient Greece and Rome and its medicinal qualities were appreciated by Theophrastus, Dioscorides and Pliny. During the Middle Ages *Iris germanica florentina* and *I. pallida* were cultivated in northern Italy, and this is why the ancient heraldic arms of the city of Florence were a white iris on a red shield, an indication that it was renowned for the growth of this plant. During the 16th and 17th centuries, orris root was used in cooking; however, its popularity as a fragrance appeared to outweigh its culinary applications, the majority of violet perfumes having more orris, or extract of orris, in them than actual violets. In Morocco, orris root powder is still featured as one of the exotic ingredients, along with Spanish fly and hashish, in the fragrant and heady spice blend ras el hanout.

Processing

The best variety of iris for making orris root powder is *I. germanica florentina*. It takes three years for the plants to mature, after which the rhizomes are dug up, peeled, dried and powdered. The degree of care taken with respect to peeling and preparation of the rhizomes has an important bearing on quality, just as it does when processing the rhizomes of ginger, turmeric, galangal and other rootstock spices. Premium-grade Florentine iris is almost white in color, while less carefully peeled orris root may yield a powder that is brownish and contains corky, reddish brown particles of skin.

Buying and Storage

Orris root powder was readily available from pharmacies in North America in the 1950s, but these days it is necessary to seek out a specialty herb and spice retailer for your supply. Buy it in its powdered form, as it would be too difficult and not worth the effort to grind it yourself. Avoid powder that is an off-color or has too many lumps. The powder is a magnet for moisture, so it is essential to store it in an airtight container, well protected from humidity.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: ¼ tsp (1 mL) powder
- white meats: ⅛ tsp (0.5 mL) powder
- vegetables: ⅛ tsp (0.5 mL) powder
- carbohydrates: ⅛ tsp (0.5 mL) powder

COMPLEMENTS

- Moroccan tagines
- potpourris
- clove oranges (pomanders)

USED IN

- ras el hanout

COMBINES WITH

- allspice
- caraway
- cardamom
- cloves
- coriander seed
- cumin
- dill seed
- ginger
- fennel seed
- paprika
- pepper
- turmeric

Use

For a spice that does not make one think instantly of food, or even cause salivation at the mere whiff of it, I was surprised to find there was no substitute for the haunting floral characteristic of orris root in the exotic Moroccan blend *ras el hanout*. This mixture has a unique aroma and flavor (even when leaving out the illegal substances) that is partially created by the 20-plus different spices in the recipe, and also without doubt, by the inclusion of orris root powder.

I could not write about orris root and fail to mention two uses that are deeply etched in my childhood memory. One is when my father made potpourri from rose petals, various scented-leaved geraniums, lavender and calendula flowers, lemon verbena, cinnamon, cloves, orris root and essential oils. I remember the family picking these fragrant ingredients on balmy, bee-laden days. Dad then dried the harvest and brought it together to make potpourri in a veritable act of alchemy. The final result was only made possible by using orris root powder as a fixative and carrier for the few drops of priceless oils that he would mix in with the spices and then add to the brightly colored, sweet-smelling leaves and petals. It does sadden me to see how the notion of a potpourri has become debased these days, to being either just another commercial room-freshener, redolent with sickly, artificial scents, or an extremely poor imitation of the original concept, but made of inferior-quality dried leaves and colored wood shavings.

The other memorable application for orris that has stayed with me is rolling a clove-orange pomander in it when the cloves had been pressed in and the surface was sticky. This final “garnishing” prior to storage for up to three months while it “mummifies” is crucial to making a long-lasting clove orange.



Clove oranges, or pomanders, were made in medieval times to ward off evil, prevent disease and discourage insects. A pomander hanging in a wardrobe gives off a pleasant fragrance (much nicer than mothballs) and keeps moths at bay; it is a perfect gift. At the height of the citrus season, my family would make clove oranges, my grandmother being particularly dexterous and faster than the rest of us. We even had an attractive tea towel printed by local artist Bruce Clark to sell in our family shop. It was bordered by images of cloves and the words “A charm against sickness/ To sweeten linen/ A guard against moths.” In the center was a poem we devised as a rather hilarious family exercise:

A POMANDER

(Clove Orange or Apple)

Before this task you begin to tackle
 Select a ripe, fresh orange or apple
 Sharp cloves all around the fruit you stick.
 Then on some paper (not too thick)
 Mix orris-powder and cinnamon-spice
 For rolling fruit, to keep it nice.
 Fold paper round and put away
 For several weeks, rock-hard to stay.
 Our recipe is given in all sincerity
 This prickly pomander for posterity.

To make a clove orange, pick the orange from the tree yourself (if you can!), cutting the stem and not pulling it off, thus retaining the little button in the top. They always work better when the orange is fresh. Next, proceed to stud the orange with cloves, putting them in about a clove’s head apart so you can see orange clearly in between the cloves. This is important, as when the orange shrinks it will split if the cloves are too close together. When the orange is studded with cloves, roll it in a mixture of 2 tsp (10 mL) each of orris root powder and ground cinnamon. Wrap in tissue paper and store for 8 to 12 weeks in a dry place.

To hang the preserved clove orange, tie an attractive ribbon from “pole to pole” and around the “equator,” leaving a loop at the top about 12 inches (30 cm) long to suspend it by. Your pomander will last for many years, perhaps 50, gradually shrinking and becoming rock hard over time.

Pandan Leaf

OTHER COMMON NAMES

- pandanus leaf
- screwpine
- rampe

BOTANICAL NAME

- *Pandanus amaryllifolius*

FAMILY

- Pandanaceae

NAMES IN OTHER LANGUAGES

- Chinese (C): baan laahn
- Chinese (M): ban lan
- Danish: skruepalme
- Dutch: schroefpalm
- Finnish: kairapalmu
- French: pandan
- German: pandanus, schraubenbaum
- Hungarian: panpung level
- Indian: rampe
- Indonesian: daun pandan
- Italian: pandano
- Japanese: nioi-takonoki
- Malay: daun pandan
- Norwegian: skrupalme
- Portuguese: pandano
- Spanish: pandano
- Sri Lankan: rampe
- Swedish: skruvpalm
- Thai: bai toey
- Vietnamese: la dua, dua thom

FLAVOR GROUP

- medium

PANDAN LEAVES of culinary use are gathered from the 26-foot (8 m) screwpine tree, a prehistoric-looking ancient species that is neither a pine nor a palm. It is characterized by its stiff branches supported on stilt-like masses of aerial roots, and sharp-edged leaves arranged spirally (the reason for the name “screwpine”) and bent at 45 degrees about halfway along, creating a drooping, windswept look to its dense upper foliage. Fragrant white flowers are followed by 8-inch (20 cm) diameter fruit heads that look like green pineapples. There are over 500 species of pandanus, with almost as many variations in the colors of their foliage.

The variety known as Nicobar breadfruit (*P. odoratissimus*) is also referred to as the walking-stick palm. It is not related to the true breadfruit, although its fruit looks similar. A fragrant essence called kewra is made from the male flowers of another variety, *P. fascicularis*. Kewra is a powerful perfume, redolent in notes of musk and jasmine, and is the distinct scent added to

Pandan leaf powder; fresh pandan leavess



**WEIGHT PER
TEASPOON (5 ML)**

- ground 1.3 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: ½ tsp (2 mL) powder
- white meats: ½ tsp (2 mL) powder
- vegetables: ½ tsp (2 mL) powder
- carbohydrates: ½ tsp (2 mL) powder

COMPLEMENTS

- Asian sponge cake
- steamed rice
- green curries

USED IN

- not commonly used in spice blends

COMBINES WITH

- chili
- coriander leaf and seed
- galangal
- garlic
- ginger
- kaffir lime leaves
- lemongrass
- lemon myrtle

shavings of areca nut that are chewed with betel leaf and called paan.

The bouquet of the pandan leaf of culinary use is sweet, mild and grassy and always reminds me of the fragrance of rice in Singapore; its flavor is similarly grass-like, sweet and agreeable. Fresh young pandan leaves have a similar appearance to the blades on palm fronds. Pandan leaf powder is fine, slightly fibrous, aromatic and bright green.

Origin and History

These ancient plants are native to Madagascar, their natural habitat stretching across the Indian Ocean to Southeast Asia, Australia and the Pacific Islands. They are often seen in these areas clinging to the water's edge by their masses of stiff aerial roots, which also protect and bind the banks they are growing on. The tough, fibrous leaves were traditionally used for house thatching and were also woven into sails, clothing, floor mats and baskets. The rustling, flesh-revealing, ancient-mariner-arousing grass skirts worn by Pacific Island women were made from split, bleached pandan leaves.

Australian Aborigines ate the globular, pineapple-sized fruits, destroying an irritating component by roasting them before chewing off the flesh. The 19th-century explorer Leichhardt discovered, much to his discomfort, with a blistered tongue and violent diarrhoea, that the fruits could not be eaten without first being processed to neutralize their noxious properties. The increased popularity of Asian cuisine in many Western countries over the past decades has made pandan leaf a familiar and increasingly accessible ingredient.

Processing

Because color is one of the key attributes of pandan leaf, it must be carefully dried to retain its bright green appearance and unique fragrance. The leaves are then chopped into pieces large enough to remove from a dish after cooking or powdered finely so the texture is no longer reedy and fibrous. Fresh whole leaves are either crushed or boiled to make an extract that is used to color cakes or confectionery.



Buying and Storage

Fresh pandan leaves are available from Asian grocery stores and some specialty produce retailers. The best way to store them is whole, in a plastic bag in the freezer. Pandan leaf powder can be bought from spice shops. Make sure it is bright green when you buy it, and keep it stored away from light so it retains its color. Pandan extract for coloring cakes and confectionary is available in Southeast Asia; however, it usually has artificial color added, and the flavor barely resembles that of pandan leaf. Kewra extract may be found in a limited number of specialty Asian food stores.

Use

On first sighting, slices of bright green pandan cake, a dense yet surprisingly light type of sponge cake, look incredibly artificial, but their chartreuse color actually comes from the pandan leaf. Strips of pandan leaf are also put into rice while it is cooking, and attractive little woven baskets for sticky rice are made from pandan leaves (this was what reminded me so vividly of Singapore rice when I smelled it again in Australia). Sometimes whole leaves are tied in a couple of knots, in the same way one would do for lemongrass, and immersed in a soup or curry while it is cooking. The bruised knotted leaves give up their flavor and are easily removed at the end. Kewra, the fragrant essence made from the flowers of *P. fascicularis*, is referred to as “the vanilla of the East,” and is used in sweet dishes and ice creams, as well as festive Kashmiri dishes and some curries.



Paprika

PAPRIKA IS the name commonly given to a wide range of bright red powders made from various strains of *Capsicum annum*, the same family as chili (see p. 180). Paprika plants and their fruits vary considerably in size and appearance. All are described as early-maturing, erect shrubs with oval leaves, single white flowers and non-woody stems. Paprika pods, or fruits, may be long (8 inches/20 cm) and thin like a giant chili or small and round (1½ inches/4 cm diameter), resembling a miniature bell pepper. The fruits may range in color from bright red to dark red and almost brown and are all harvested when fully ripe. Paprika's vivid color is determined by the amount of capsanthin (the red pigment present) and the lack of capsaicin (the heat element in chilies).

While there are many types and grades of paprika, the consistent attributes are strength of color and styles of warm bell pepper-like flavors that complement so many foods without dominating them. Paprika is grown in most of the temperate climates around the globe, with varieties from Hungary and Spain being the best known. In recent years, Israel and Zimbabwe have become major producers of paprika and some of their sweet, dark red grades have a depth of character, strength of color and agreeable non-bitter flavor that makes them extremely useful. Paprika powder from these sources sometimes finds its way to the market via Hungary and Spain and is incorrectly passed off as paprika from those countries.

Hungarian paprika is classified into six main grades, each determined by the quality of fruits used, the ratios of seeds, connecting tissue (placenta) and stem to outside flesh, and degrees of thoroughness employed in the grinding process.

KÜLÖNLEGES (exquisite delicate) is a very mild grade, considered to be the best quality and richest in color. It is made only from the flesh of specially selected fruits that have been finely ground to yield an almost silky powder. The removal of seeds, capsaicin-bearing placenta and stem before grinding makes this tantalizingly sweet with no trace of bitterness or aftertaste.

OTHER COMMON NAMES

- hot paprika
- Hungarian paprika
- mild paprika
- ñora paprika
- pimentón
- pod pepper
- smoked paprika
- Spanish paprika
- sweet paprika
- sweet pepper

BOTANICAL NAME

- *Capsicum annum*

FAMILY

- Solanaceae



Clockwise from top left: sweet paprika (Hungarian-style); mild Spanish paprika; hot paprika; smoked sweet paprika

DELICATESSEN (delicate) is less mild than *Különleges* with a more pronounced bell pepper flavor and a light red color.

ÉDESNEMES (noble-sweet) is the most widely exported variety, valued for its bright red color and sweetness. The sweet flavor, lack of bitterness and full-bodied aroma is achieved by grinding the flesh with seeds that have been washed and macerated in water to remove most of the heat-giving capsaicin.

FÉLÉDES (semi-sweet) is similar to noble-sweet with slight traces of heat. This variety is made from the outer flesh and some placenta, giving it an almost discernable “kick.”

ROSZA (rose quality) is made from the whole fruit except the stem and section joining the stem to the fruit. *Rosza* has a less distinct red color and a little more heat than the above grades.

ERÖS (hot, pungent or second quality) is made from complete fruits that have not been of a high-enough quality to make the previously mentioned grades. Generally coarser in texture and darker red than the other paprikas, *Erös* bears a distinct background bitterness and lingering heat that I liken to a mild chili powder.

NAMES IN OTHER LANGUAGES

- Arabic: filfil ahmar
- Chinese (C): tihm jiu
- Chinese (M): tian jiao
- Czech: paprika, sladka paprika
- Danish: rod peber
- Dutch: spaanse peper, paprika
- Finnish: ruokapaprika
- French: paprika, paprika de Hongrie
- German: paprika
- Greek: piperia
- Hungarian: paprika, edes paprika, piros paprika
- Indian: deghi mirch
- Italian: paprica, peperone
- Japanese: papurika
- Portuguese: pimentao
- Russian: struchkovy pyerets
- Spanish: pimentón (powder), pimientos (fresh pods), cascara (dried whole pods)
- Swedish: spansk peppar
- Thai: prik yowk, laiplai
- Turkish: kirmizi biber

FLAVOR GROUP

- amalgamating

PAPRIKA

WEIGHT PER TEASPOON (5 ML)

- whole average dried ñora: 5.2 g
- ground: 3.5 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: up to $\frac{1}{2}$ cup (125 mL) sweet paprika
- white meats: up to $\frac{1}{2}$ cup (125 mL) sweet paprika
- vegetables: 4 tsp (20 mL) sweet paprika
- carbohydrates: 2–3 tsp (10–15 mL) sweet paprika

COMPLEMENTS

- Hungarian goulash
- chicken
- veal and pork casseroles
- broiled, barbecued or roasted meats when sprinkled on before cooking
- egg dishes when used as a garnish
- sauces
- meat loaf

Spanish paprika is similarly graded, but because of its history, cultivation and processing methods differs quite markedly from the Hungarian styles. In general, the Spanish paprika fruits tend to be smaller and rounder, are darker in color and have varying degrees of smoky and “cooked” flavor notes, coarser textures (but not always) and more robust aromas. There are three main types of Spanish *pimentón* (as they call them) and three grades within each type. The grades are: *extra*, which contains no seeds milled with the fruit, *select*, containing 10% seeds, and the *ordinary* grade, which contains around 30% seeds. Naturally the percentage of seeds influences the heat level and degree of bitterness in each. The three main types of smoked paprika from the La Vera region in Spain are described according to their levels of sweetness, bitterness and heat.

DULCE (sweet) has a sweet, smoky aroma and pleasant, metallic taste. It is dark red and fine-textured.

AGRIDULCE (bittersweet or semi-sweet) has a distinct bitterness and appetizingly sharp edge to its flavor. The color and aroma are similar to *dulce*.

PICANTE (hot) is similar in heat level to the Hungarian *Erös*, yet maintains a characteristic distinct “Spanish paprika” aroma and flavor. An acceptable substitute may be made by combining three parts smoked sweet paprika with one part chili powder.

There are also various grades of loosely named “mild” Spanish paprikas on the market, sometimes passed off as Hungarian paprika. A particular dark red, coarse-textured and faintly burnt-smelling one is often regarded as inferior, but I find it complements Moroccan and Middle Eastern foods better than any other. Whole ñora paprika is a small (1 inch/2.5 cm diameter), dark burgundy-red pepper with a sweet, warm, appetizing aroma and mild fully developed bell pepper flavor. These paprikas are the same variety as standard Spanish paprika, but the pods are left on the plant until very dark and ripe. Ñora paprika is my favorite for making Romesco sauce.

Origin and History

The origin of paprika goes back 7,000 years, when the Mexican Indians consumed various chilies, forerunners to paprika, as a regular part of their diets. The history of paprika is comparatively short, as it was not until Columbus arrived in the New World in 1492 that the circumstances were created for the Spanish and the Hungarians to create what we now know as paprika. It was the Spanish who first powdered the bell peppers that Christopher Columbus brought back to Europe. Such was the popularity of this deep red powder called *pimentón* (named after the Spanish for peppers, *pimienta*) that it rapidly spread through Spanish cooking at the time. It is said that the first cultivation of paprika in Spain was at the Jerónimo monastery of Guadalupe, near La Vera, after Columbus presented his first samples of capsicum to the Catholic monarchs there in 1493. There is now a characteristic Spanish paprika, based on subsequent years of cultivation and hybridization, combined with the development of various methods of drying, smoking and milling. While the hybrids in Spain evolved in their unique way, similarly in Hungary, constant breeding of milder, sweeter strains since the 17th century, combined with the weather and soil conditions, have given the world a unique, cooler-climate paprika that is renowned for its own special attributes.

In the same way that chilies gave the underprivileged an accessible substitute for the elitist pepper, paprika made it possible for almost anyone to have a tasty and colorful condiment that would enhance almost any meal. Hungary was under Turkish occupation in the 17th century, and although the cultivation of “Turkish pepper,” as paprika was called then, was prohibited on pain of death, many who had tasted its warmth and piquancy could not resist growing it illegally. The history of the spice trade is riddled with examples of monopolistic traders, in collusion with governments keen to maintain their revenue bases, imposing draconian threats on the general population if they should dare challenge these monopolies. Fortunately for culinary posterity, when it comes to the foods we love there has usually been a handful of renegades who have not been swayed by such impositions.

USED IN

- tandoori spice blends
- barbecue spice blends
- baharat
- Cajun spices
- chermoula mixes
- curry powders
- harissa paste mixes
- Mexican chili powder
- ras el hanout
- tagine spice blends

COMBINES WITH

nearly all culinary herbs and spices, but has a special affinity with:

- allspice
- basil
- caraway
- cardamom
- chili
- cinnamon
- cloves
- coriander seed
- cumin
- fennel seed
- garlic
- ginger
- oregano
- parsley
- pepper
- rosemary
- sage
- thyme
- turmeric

Processing

Methods of processing vary among the key producing nations of the world, with Hungary and Spain tending to retain more traditional practices based on their long heritage of production and family business structures that have been in the trade for many generations. Yields from paprika farms can vary from 1 to 4 tons per hectare, and on average it takes 11 pounds (5 kg) of fresh pods to produce less than 2 pounds (1 kg) of paprika powder. In Hungary the thick-fleshed leathery fruits are allowed to fully ripen and color to bright red before harvesting. After they have been picked, the ripe fruits are cured for 25–39 days, as this greatly increases the pigment content. Studies have shown the pigment capsanthin can increase by as much as 120% during the curing process. Besides the desirable result of increased color, the ascorbic acid (vitamin C) level increases proportionally with the concentration of capsanthin. An interesting point for vitamin C watchers is that research has shown that the vitamin C content is lower when the capsaicin (heat) content is high.

Traditionally, curing is achieved by piling the paprika pods in sheltered positions in the windows of houses or by stringing together large garlands of the fruits and hanging them on fences, in open-sided sheds and even on clotheslines. Completion of the curing process is signaled by the dry pods rattling in the wind. A more modern method of storage during curing is to place the ripe pods in large cotton-mesh sacks. After curing, the pods are nearly dry and are laid out in the sun for two to three weeks to finish drying — or, more often these days, are maintained in a 120°F (50°C) kiln for around three days.

The next critical phase is milling, which creates the different grades of paprika referred to above and is based on the amount of stem, seeds and placenta removed or amount of washed, reduced-pungency seeds to be ground and put back. Paprikas tend to be much redder than chilies because of their thicker flesh, higher capsanthin content and lower quantity of seeds. Friction in the grinding process generates heat, an often undesirable function when grinding highly volatile spices such as cardamom. By contrast, with paprika this heat creates a degree of caramelization, which enhances the product and forms a key aspect of the bouquet of well-processed paprika. Too much heat during milling means the powder will take on a sharp, bitter note that would be considered undesirable in the best grades of Hungarian paprika.

Spanish paprika, especially the delicious smoked, aromatic grades from La Vera, in Extremadura, are processed a little differently. The ripe fruits used to make unsmoked paprika are piled up on hillsides for about 24 hours to commence curing, after which they are dried in the searingly hot summer sun for around four days. The pods are then cut open into halves or quarters and exposed for a further eight days until completely dry. The removal of seeds and stem by milling and sifting in such a way as to create different levels of sweetness is similar to that employed for Hungarian paprika.

The smoked varieties of paprika are traditionally made by drying ripe, freshly harvested fruits in low-lying adobe smoke-houses gently heated by smoking grills fired with slow-burning oak wood. The smoking process has to be monitored closely to ensure proper drying is achieved, as too much heat would allow the paprika to cook in its own moisture. Milling is equally painstaking, with the first grinding taking up to eight hours, the heat generated by friction making a vital contribution to the final flavor, deep red color and smooth, silky texture.

Buying and Storage

With the exception of a few special varieties of paprika such as ñora, which is available from some specialty stores whole, most paprika is sold in powdered form. Pickled paprika and paprika paste can also be purchased at European delicatessens, and although these are somewhat acidic due to the vinegar required to achieve preservation, they make useful spreads for savories and a compatible accompaniment to tomato paste in recipes. Paprika powder should be labeled to indicate whether it is Hungarian, Spanish or from another source, or should at least state if it is sweet, mild or hot. When buying smoked paprika, make sure it is the genuine article; it is a common practice these days to add smoke flavor and MSG to sweet or mild paprika and pass it off as proper smoked paprika. Smoked paprika that is dark in color and has a coarse texture is usually an inferior grade containing ground seeds and stem. Although historically paprika has been known to be adulterated with hideous fillers such as red lead and brick dust, current food laws do protect the consumer against such flagrant misrepresentation. Consumers with a gluten intolerance are advised to seek confirmation from the supplier that the paprika is gluten-free. Gluten in paprika has been documented as a result of processors cleaning their mills by grinding a quantity of wheat, thus leaving gluten residues that may be harmful to some individuals.

Use

Paprika is used extensively to both color and flavor food, and is a popular substitute for the artificial red colors commonly added to sausages and preserved meats. Paprika is one of those essential spices I classify as “amalgamating,” because its well-rounded and beautifully balanced flavor profile complements most savory flavors. The majority of commercial seasonings designed to be sprinkled on meats prior to cooking will contain paprika. Fast-food barbecued and charcoal-roasted chicken generally gets its mouth-watering color and flavor from seasonings rubbed onto the surface, among them a reasonable amount of paprika.

In home cooking, sweet paprika is the mandatory ingredient that gives Hungarian goulash its characteristic color and flavor, combining wonderfully with the beef or veal and cream. Paprika also enhances the flavor of pork and chicken and is often used, with a result that delights the sight and taste buds, to garnish lobster, shrimp and crabmeat. Eggs, whether scrambled, poached, fried, hard-cooked or made into an omelet, will benefit greatly from a judicious sprinkling of your favorite paprika. Romesco, the famous Catalan sauce, gets its brilliant color and depth of flavor from the paprika, often *ñora*, used to make it.

Paprika is an excellent substitute for chili, as it delivers the same flavor profile without the heat. You can make a mild yet tasty and aromatic curry simply by replacing the chili powder with an equal quantity of paprika. Paprika can also be used to tone down the heat of chili if you’ve been a bit heavy-handed. Adding paprika to a hot chili dish won’t upset the flavor, but it will help to bring those fiery notes on the palate under control. Add $\frac{1}{2}$ tsp (2 mL) paprika for each fresh chili used, or double the amount of chili powder or flakes used.

Smoked paprika should always be used more sparingly than non-smoked varieties because the flavor is relatively intense. It is an excellent addition to many vegetarian meals, as it imparts a smoky bacon flavor without the meat. It is great in mayonnaise, especially when it accompanies seafood. Grilled cheese sandwiches almost become a meal when sprinkled with smoked sweet paprika before grilling.

Romesco Sauce

Paprika

This recipe is one of our favorites and possibly better than any other demonstrates the subtlety and the flavoring power of paprika. It's a wonderfully tasty addition to grilled chicken or fish, with salads, or even (when nobody's looking) by the spoonful! Serve with grilled meats, fish or vegetables such as char-grilled baby leeks or fennel bulbs. It will keep in a screw-top jar in the fridge for up to 2 weeks . . . if it lasts that long.

- 2 ñora paprikas (or 4 tbsp/60 mL mild Spanish paprika powder)
- 5 vine-ripened tomatoes
- 3 cloves garlic, unpeeled
- ½ tsp (2 mL) Spanish paprika
- ½ cup (125 mL) roasted almonds
- ½ cup (125 mL) roasted hazelnuts
- 1 slice white bread, fried
- bay leaf
- ⅓ cup (75 mL) red wine vinegar
- salt and pepper
- ½ cup (125 mL) extra-virgin olive oil

Simmer the ñora paprikas in a cup of water for 10 minutes. Meanwhile, peel, core, seed and chop the tomatoes. Seed and chop the ñora paprikas, then in a blender mix them (or paprika powder) with the tomatoes, garlic, Spanish paprika, almonds, hazelnuts, bread and bay leaf.

With the motor running, gradually add the vinegar, salt and pepper, then the olive oil until you have a thick liquid.



Parsley

OTHER COMMON NAMES

- curled parsley
- triple-curved parsley
- moss-curved parsley
- Italian parsley
- flat-leaf parsley
- large-leaf parsley
- Hamburg parsley

BOTANICAL NAMES

- curled parsley:
Petroselinum crispum
- Italian parsley: *P. crispum neapolitanum*
- Hamburg parsley:
P. sativum tuberosum
- fool's parsley (this is poisonous): *Aethusa cynapium*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Arabic: baqḍunis
- Chinese (C): heong choi
- Chinese (M): yang yuan sui
- Czech: petrzel
- Danish: persille,
- Dutch: peterselie, krulpeterselie (curled parsley)
- Finnish: persilja
- French: persil
- German: petersilie
- Greek: maintano, persemolo

THE AROMA and taste of parsley is particularly distinct for an herb that is generally described as being mild and subtle. This is because parsley complements most flavors it is put with and never seems to dominate, yet always manages to make its presence felt. Curled parsley is the variety most often used in cooking and as a garnish. It grows to around 10 inches (25 cm) high and is easily recognized by its masses of small, tightly bunched, bright green leaves. There are over 30 variations of curled parsley; some kinds may be more tightly curled and others relatively sparse.

Italian (flat- or large-leaf) parsley grows to 18 inches (45 cm), is a darker green than curled parsley, looks a bit like the tops of celery and has a slightly stronger flavor. Another variety, called Hamburg parsley, is grown for its parsnip-like root, which is cooked and eaten as a vegetable in much the same way as fennel bulbs are. Fool's parsley is a poisonous plant that looks remarkably similar to Italian parsley; it is found in English gardens sometimes growing among real parsley. Fool's parsley has a disagreeable flavor; nonetheless, many people have inadvertently gathered it with parsley, eaten it and subsequently become ill. This may explain why the curled varieties are by far the most popular in England. "Chinese parsley" is a common name often given to fresh coriander leaves, but there is no such thing as a *Petroselinum* Chinese parsley.

Origin and History

Parsley has been cultivated and developed over so many centuries that its precise origins are difficult to pinpoint, compounded by the probability that all the parsleys we know nowadays bear little resemblance to their ancestors. Linnaeus considered parsley to be native to Sardinia; however, others have said its origins lie in the eastern Mediterranean region. The botanical name *Petroselinum* comes from the Greek word for stone, *petro*, given to parsley because it was found growing on rocky hillsides in Greece. Although the ancient Greeks did not use parsley in cooking, it was revered as a symbol of death and as a funeral herb. It was made into garlands and given to horses as fodder. By the second century AD the Romans were appreciating parsley's moderating effects on the fumes from



Fresh curled parsley; fresh Italian (flat-leaf) parsley

wine and other rich indulgences that left their tell-tale signs on the breath.

In medieval times parsley was surrounded by much superstition, one belief being that the long germination period for the seeds was to allow them to travel to hell and back seven times before sprouting. Superstitious farmers would refuse to transplant parsley and some were even too afraid to grow it at all. In the 17th century the early colonists took parsley to America and it never looked back. Dehydrated curly parsley is one of the most popular culinary herbs and is found in home cooking, restaurant meals, fast foods and numerous processed and dried food products.

Processing

Despite its delicate appearance and reputedly subtle flavor, parsley dehydrates quite well. Because effective drying depends upon removing the water content within the cell structure of the leaf without driving off the flavor-giving volatile oils, those leaves lacking leathery, moisture-trapping, shiny surfaces often dry easily. This is the case with parsley and the method is quite astonishing. Washed leaves removed from the stems are blown by a strong air draft into a chamber that is heated by something similar to a jet engine. Upon contact with the superheated air of some hundreds of degrees Celsius, the leaves almost instantly lose all but 10% of their moisture, and in this lighter state are sucked up through the top and out of the chamber. Amazingly, the process is so rapid that the surface of the leaves never even gets hot enough to cause loss of

NAMES IN OTHER LANGUAGES

- Hungarian: petrezselyem
- Indonesian: seledri, peterseli
- Italian: prezzemolo
- Japanese: paseri
- Norwegian: persille
- Portuguese: salsa
- Russian: pyetrushka
- Spanish: perejil
- Swedish: persilja
- Thai: partasliyat, phakchi farang
- Turkish: maydanoz
- Vietnamese: rau mui tay

FLAVOR GROUP

- mild

WEIGHT PER TEASPOON (5 ML)

- whole dried chopped leaves: 0.3 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 5 tsp (25 mL) fresh, 1–2 tsp (5–10 mL) dried
- white meats: 5 tsp (25 mL) fresh, 1–2 tsp (5–10 mL) dried
- vegetables: 5 tsp (25 mL) fresh, 1–2 tsp (5–10 mL) dried
- carbohydrates: 5 tsp (25 mL) fresh, 1–2 tsp (5–10 mL) dried

COMPLEMENTS

- omelets, scrambled eggs and savory soufflés
- mashed potatoes
- tabouleh
- soups
- pasta dishes
- sauces for fish and poultry

USED IN

- bouquet garni
- herbes de Provence
- mixed herbs
- Italian herbs
- fines herbes
- chermoula spice mix

COMBINES WITH

- arugula
- basil
- bay leaves
- chervil
- chicory
- chives
- cress
- dill
- fennel fronds
- garlic
- lovage
- marjoram
- mint
- oregano
- rosemary
- sage
- thyme

flavor, resulting in a product that tastes surprisingly like the fresh item, especially when added to moist foods such as egg dishes and even mashed potatoes. Home-grown parsley is easily dried in an oven preheated to 250°F (120°C). Place the leaves on a tray in the oven after turning off the heat and turn a few times while the oven has residual heat but is slowly cooling. After 15–20 minutes the parsley should be crisp and dry. Store it in an airtight container in a dark place.

Buying and Storage

Fresh parsley, often the curly variety, is the most commonly available of all fresh herbs. Choose bunches that are not wilted and that have springy, erect, almost bristly leaves. Rinse thoroughly in cold water to remove any grit trapped in the curly leaves and squeeze dry. To store, either put the bunch of parsley in a glass of water and then keep it in the refrigerator or wrap the fresh sprays in foil and freeze them. Dried parsley is best purchased in small amounts and regularly, as it loses its color and flavor rapidly when sitting on a supermarket shelf. Look for deep green “flakes” that are free from pieces of stalk and yellow leaves. Always store away from any source of direct light and keep in airtight packaging away from extreme heat and humidity.

Use

Parsley’s fresh, balanced flavor and crisp mouth-feel make it an ideal accompaniment to most foods. It can diminish the tendency of some foods to linger on the breath, the most notable of these being garlic. It is traditionally featured in well-known herb blends like fines herbes (with chervil, chives and tarragon) and in a bouquet garni with thyme, marjoram and bay leaves. Fresh or dried parsley may be used in omelets, scrambled eggs, mashed potatoes, soups, pasta and vegetable dishes and in sauces to go with fish, poultry, veal and pork. Fresh parsley withstands long cooking times better than most fresh herbs. It is included with garlic and butter when making garlic bread and makes a simple garnish for a juicy, sizzling barbecued steak. Parsley is a key ingredient, along with mint, in the healthy and nutritious Middle Eastern salad, tabouleh. Flat-leaf parsley features in Moroccan dishes from ras el hanout–spiced tagines with preserved lemons to dishes flavored by a chermoula blend that includes coriander leaves, onions, cumin and cayenne pepper.

Fennel and Parsley Dressing for Crustaceans

Parsley

Spoon this dressing over cold cooked lobster or shrimp for a divine experience.

- 1 cup (250 mL) packed flat-leaf parsley leaves
- 3 tbsp (45 mL) freshly squeezed lemon juice
- 1 tbsp (15 mL) fennel seeds
- 1 tbsp (15 mL) extra-virgin olive oil
- salt and freshly ground black pepper to taste

Pound all ingredients in a mortar and pestle, leaving a fair amount of texture. Makes 1 cup (250 mL) dressing.

Pepper — Pink Schinus

THE SOURCE of peppercorns is the cause of much confusion in my native Australia, where many of us grow up with a “pepper tree” providing shade in the schoolyard, in the garden at home or in parklands. It is not uncommon to see “pepper trees” lining the banks of small creeks and in paddocks with cattle huddled underneath, seeking some respite from the blazing sun in rural and outback areas. One can therefore understand why it is often assumed that pepper comes from the “pepper tree.” True pepper actually comes from the vine *Piper nigrum*, which gives us the genuine black, white, green and pink peppercorns of commerce (see Pepper — Vine, p. 394).

To return to the pseudo-pepper, two varieties of schinus tree bear small, red berries that are often sold as pink peppercorns. *Schinus ariera*, commonly seen in Australia, grows 23–66 feet (7–20 m) tall, depending upon water supply. It has drooping, frond-like leaves and small, yellowish flowers and bears long catkins of berries. The berries are first green, turn yellow and ripen in chains of rosy pink peppercorns. The variety most often grown for culinary purposes is *S. terebinthifolius*, a denser, shorter tree with glossy, oval leaves that look more like bay leaves. The tiny flowers are white and the fruits are borne

OTHER COMMON NAMES

- peppercorn tree
- Christmas berry
- Brazilian mastic tree

BOTANICAL NAMES

- *Schinus terebinthifolius*
- *S. areira*, also known as *S. molle*

FAMILY

- Anacardiaceae

Pink schinus peppercorns



in thick upright bunches, larger than *S. ariera* and ripening to a deeper pink and scarlet. *S. terebinthifolius* berries, when dried, are up to ¼ inch (0.5 cm) in diameter, have a pale to bright pink friable outer husk that has little aroma or flavor and contain a small (⅛-inch/3 mm diameter) hard, dark brown irregular seed. The seed, when crushed, releases a sweet, volatile, pine-like aroma faintly smelling like piperine oil, the key component in true black pepper. The flavor burst is similarly sweet, warm, fresh and camphorous with a lingering astringency but little heat.

Origin and History

These attractive trees are native to the Andean deserts in Peru, and one can only imagine the uses they may have been put to by what are now lost civilizations. It is known that South American Indians use the berries to flavor alcoholic beverages. Sometimes the trees are referred to as “Brazilian” or “American mastic trees” because the whitish sap of *S. molle* was used in South America as a chewing gum. It is also a member of the same family as the tree that yields the resinous sap mastic (see p. 328) used in Greek cooking. The *Schinus* species of tree grows prolifically in arid, well-drained soils in almost any temperate area of the world.

Schinus terebinthifolius, or “Christmas berry,” as it is often called, is grown commercially on the French Indian Ocean island of Réunion, and is either pickled in brine or dried. These pink peppercorns became fashionable, more for their appearance than flavor, to put into glass peppermills along with black, white and green dried peppercorns. Food fashion aficionados were dealt a blow in the 1980s when some articles in the United States press mentioned over-consumption of this type of pink pepper could cause illness. Following extensive analysis, it appears the most dramatic effects of excessive use of *S. terebinthifolius* are varying degrees of intestinal irritation depending upon one’s age and health, as could happen with chili or black pepper. Consequently, it is not deemed to be highly toxic, and consumption of amounts that would be considered normal to flavor food would present the average cook with no problems. Some authorities do, however, still advise against using *S. ariera* berries, as their toxicity is believed to be greater and may have a bad effect on people with intestinal problems.

NAMES IN OTHER LANGUAGES

- Chinese (C): ba sai wuh jiu muhk
- Chinese (M): ba xi hu jiao mu
- Czech: ruzovy pepr
- Danish: rod peber
- Dutch: roze peper
- Finnish: rosepippuri
- French: poivre rose, baies roses, poivre de Bourbon
- German: Brasilianischer pfeffer, rose pfeffer
- Greek: roz piperi
- Hungarian: rozsaszin bors
- Italian: pepe rosa, schino brasiliano
- Japanese: kurisuma-beri, sansho-modoki
- Polish: owoce schimusowe
- Portuguese: pimenta-rosa
- Russian: perets rozovyj
- Spanish: arveira, pimienta roja
- Swedish: rosepeppar
- Turkish: pembebiber, yalanci karabiber

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 1.8 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: 2 tsp (10 mL) whole
- white meats: 1 ½ tsp (7 mL) whole
- vegetables: 1 tsp (5 mL) whole
- carbohydrates: ¾ tsp (4 mL) whole

COMPLEMENTS

- fish
- game and rich foods in a similar manner to juniper
- salad dressings

USED IN

- some peppermill blends, although this is not recommended

COMBINES WITH

- allspice
- bay leaves
- chili
- coriander seed
- fennel fronds and seeds
- juniper
- myrtle
- paprika
- parsley
- rosemary
- sage
- tarragon
- thyme

Processing

The ripe, fully mature, bright pink berries of *S. terebinthifolius* are either put into brine or dried. Berries dried in the shade retain a high degree of color; however, by far the best quality in color and flavor are the freeze-dried pink schinus peppercorns.

Buying and Storage

As true pink pepper from the *Piper nigrum* vine is always preserved in brine, it is difficult to identify which species of pepper you are buying unless it is correctly labeled. A sad indictment of the spice industry is that traders usually opt for providing consumers with less information rather than more, using the excuse that it is not wise to confuse people with too many facts. I recommend buying schinus pepper only in its dried form; that way you can smell it and know what you are being sold. Unfortunately, true pink pepper is only available preserved in brine, as even when freeze-dried the pericarp is so papery it simply crumbles off, making it unattractive to consumers. Store dried pink peppercorns in the usual manner, in an airtight pack, avoiding extremes of heat, light and humidity.

Use

Schinus pepper is used in many fish recipes in the Mediterranean region and the refreshing, pine-like flavor also complements game and other rich foods in the same way as juniper berries do. Although they may look trendy in a peppermill, the friable outer husk tends to clog the mechanism of most peppermills.

Pink Peppercorn Pork Rilette

Pink Schinus Pepper

This is delicious, and though time-consuming, it's very easy to make. The pink peppercorns complement the pork wonderfully, cutting through its richness. The rilette will keep for 1 week in an airtight container in the refrigerator.

Marinade

- 2 shallots, crushed
- 2 cloves garlic, crushed
- 2 slices lemon
- 2 tbsp (25 mL) olive oil
- 1 tbsp (15 mL) salt
- 2 tsp (10 mL) pink schinus peppercorns
- ½ tsp (2 mL) juniper berries
- 2 lbs (1 kg) pork belly
- 2 to 4 cups (500 mL to 1 L) olive oil
- 1 tbsp (15 mL) pink schinus peppercorns, lightly crushed
- Lavash, crispbread or toasted thinly sliced ciabatta

Place all marinade ingredients in a large sealable plastic bag and shake to combine. Cut pork belly into 2 or 3 pieces and add to the marinade. Refrigerate for 1–2 days.

Preheat oven to 225°F (110°C). Remove pork from marinade, brushing off spices, and discard marinade. In a deep baking pan, lay pork fat side up and immerse in olive oil (the amount will depend on the pan you are using). Cover tightly with foil and roast for 4–5 hours, or until meat is tender and falling apart. Remove from oven and let cool.

When pork is cool enough to handle, remove from oil, reserving oil. Using your hands, remove the meat from the fat. Discard the fat and roughly chop the meat. In a bowl, combine meat, 3–4 tbsp (45–60 mL) of the cooking oil and pink peppercorns. More oil may be needed to bind the rilette together. Push the mixture firmly into 2 large ramekins and top with a few more lightly crushed pink peppercorns.

Serve with lavash, crispbread or ciabatta. Serves 8 as canapés.

Pepper — Sichuan

NOT TO BE confused with vine peppers, Sichuan pepper refers to the dried berries of the prickly ash, a small deciduous tree growing to 10 feet (3 m) high, with sharp, spiny prickles on the stem and branches. It has 12-inch (30 cm) long leaf clusters divided into 5–11 oval leaflets that resemble small bay leaves. In late spring, small, greenish yellow flowers appear before the leaves, and are followed by spherical red berries up to $\frac{1}{4}$ inch (0.5 cm) in diameter. When dried the berries split, revealing a tiny black seed that is particularly gritty when crushed. These split berries look somewhat like one seed section of a star anise, the theory being that this likeness led to the often-used name of “anise pepper” for this spice. The aroma of Sichuan pepper is warm, peppery and fragrant with citrus notes, and when crushed it smells of lavender flowers. Its flavor is similarly pepper-like and tangy, while leaving a lingering, numbing, fizzy sensation on the tongue. The leaves, powdered and used in Japanese cooking as sansho, are considerably milder and have a slight lemony taste.

OTHER COMMON NAMES

- anise pepper
- Chinese pepper
- fagara
- Japan pepper
- prickly ash
- sansho (leaves)
- Sichwan pepper
- Szechwan pepper
- tirphal

BOTANICAL NAME

- *Zanthoxylum piperitum*

FAMILY

- Rutaceae

Sichuan peppercorns



Origin and History

Native to Sichuan, the southwest province of China that borders on Tibet, Sichuan pepper is thought to have come into culinary use during the first millennium BC as a result of Indian cultural influences. Prickly ash trees of the *Zanthoxylum* species are found in China and Japan and in North America, where the American Indians employed the bark as a general stimulant and a panacea for toothache. This variety, *Z. americanum*, is referred to appropriately as the “toothache tree.” The Japanese make mortars and pestles from the wood of prickly ash trees, claiming that it imparts a distinct yet mild flavor to the food being pounded.

Processing

The berries are dried when they turn from red to reddish brown and split open. Cleaning by sieving and winnowing removes many of the seeds, sticks and sharp thorns. The leaves are dried away from direct light in a warm, dry environment and powdered for packaging as sansho.

Buying and Storage

Although ground Sichuan pepper may be bought from specialty spice retailers, it is better to buy the whole split berries and crush them yourself just before cooking to retain the greatest amount of flavor. Before crushing or grinding, take care to remove all of the small inner black seeds, as they have little recognizable flavor and will contribute an unpleasant gritty texture when powdered. Prickly pieces of stem and savage, rose-like thorns are often found among even good-quality whole Sichuan pepper, as they are difficult to remove by machinery. Therefore, always pick through them and throw out the nasty bits before adding to a dish.

Sansho (the powdered leaf) is available in stores that specialize in Japanese ingredients and is usually packed in small, airtight foil pouches. Only buy a little at a time, as the color and flavor dissipate shortly after opening. I have found that ground native Australian lemon myrtle leaves are an acceptable alternative for sansho; substitute about half the suggested quantity of sansho.

Store both Sichuan pepper and sansho in airtight packs, away from extremes of heat, light and humidity.

NAMES IN OTHER LANGUAGES

- Bhutan: thingey
- Chinese (C): chi faa jiu,
- Chinese (M): hua jiao
- Czech: pepr Secuansky
- Danish: Sechuan peber
- Dutch: Sechuan peper
- Finnish: Setsuanin pippuri
- French: poivre anise, poivre de Sichuan
- German: anisepfeffer, Szechuan-pfeffer
- Hungarian: anizbors, Szecsuan bors
- Indian: tirphal
- Indonesian: andaliman
- Italian: pepe d’anice
- Japanese: kinome (fresh leaf), sansho (dry powdered leaf)
- Nepalese: timbur
- Russian: Sychuanskij perets
- Spanish: pepe di anis
- Swedish: Sezchuanpeppar
- Thai: ma lar
- Vietnamese: dang cay

FLAVOR GROUP

- hot



**WEIGHT PER
TEASPOON (5 ML)**

- whole: 1.8 g
- ground: 2.5 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: 2 tsp
(10 mL) whole
- white meats: 1½ tsp
(7 mL) whole
- vegetables: 1 tsp
(5 mL) whole
- carbohydrates: ¾ tsp
(4 mL) whole

COMPLEMENTS

- rich and fatty foods
such as pork and duck
- Peking duck
- salt-and-pepper squid

USED IN

- Chinese master stock
spices
- shichimi-togarashi

COMBINES WITH

- allspice
- bay leaves
- chili
- coriander seed
- fennel fronds and seeds
- ginger
- juniper
- paprika
- parsley
- pepper
- rosemary
- sage
- star anise
- tarragon
- thyme

Use

Sichuan pepper is traditionally found in Chinese five-spice blends, but due to its cost and the lack of availability of cleaned, well-ground, non-gritty powder, true pepper is most often used. The tangy, sharp flavor of this spice makes it an ideal accompaniment to rich and fatty foods such as pork and roast duck. Peking duck, served with rich, dark, salty sauces and wrapped in paper-thin pancakes, gets much of its unique flavor from Sichuan pepper. Dry-roasting the split husks enhances their taste. A friend of ours likes to roast Sichuan pepper when it is ground and mixed with salt. It can then be rubbed onto quail and other game prior to roasting, or placed on the table as a condiment in which to dip crisp fried chicken wings and other delicacies. Salt-and-pepper squid has become a popular Asian restaurant menu item in recent years, the distinctive flavor achieved by blending black pepper, Sichuan pepper, chili and salt in equal proportions.

In Japan, Sichuan pepper is an ingredient in the spice blend shichimi-togarashi, along with salt, black sesame seeds and MSG. Sansho is used to season noodle dishes and spicy soups, while the fresh leaves, referred to there as *kinome*, flavor vegetables such as bamboo shoots and are a garnish for soups.

Sichuan pepper goes well with star anise and ginger, and a small quantity (say less than one-quarter by volume) adds extra tang to a blend of black, white and green peppercorns (*P. nigrum*) that is rubbed on meats before cooking.

Stuffed Sichuan Squid

Sichuan Pepper

The distinctive floral aroma and tingling peppery bite of Sichuan pepper is perfect with squid and prawns.

Spice Mix

- 1 tsp (5 mL) Sichuan peppercorns
- 1 tsp (5 mL) salt
- ½ tsp (2 mL) chili flakes
- ¼ tsp (1 mL) whole black peppercorns

Stuffing

- 1 tsp (5 mL) sesame oil
- 4 slices bacon, diced
- 4 oz (125 g) cooked baby prawns (baby shrimp)
- 1 cup (250 mL) cold cooked white rice
- 8 green onions, finely sliced
- 1 tbsp (15 mL) vegetable oil
- 1 tbsp (15 mL) soy sauce
- 12 small squid, between 4 and 6 inches (10 and 15 cm) long, cleaned and tentacles removed
- ½ cup (125 mL) fresh coriander leaves

Dipping Sauce


- 6 tbsp (90 mL) tomato sauce
- 1 tbsp (15 mL) palm sugar (jaggery), dissolved in 3 tbsp (45 mL) boiling water
- 1 ½ tsp (7 mL) black bean sauce
- juice of 1 lime

Grind all spice mix ingredients in a mortar and pestle.

For the stuffing, heat sesame oil in a frying pan over medium-high heat. Add bacon and prawns; fry for 3 minutes. Add rice, green onions, vegetable oil, soy sauce and 1 tsp (5 mL) spice mix. Stir-fry for 5 minutes, allowing mixture to crisp slightly.

Stuff squid tubes with rice mixture, leaving about ⅛ inch (3 mm) clear at the end for expansion when cooking. Dust lightly with the remaining spice mixture. Cook on a griddle or in a frying pan over high heat for 3 minutes on each side. (The squid doesn't take long to cook, but you need enough time to heat the rice through.)

Combine all ingredients for the dipping sauce. Garnish squid with fresh coriander and serve with dipping sauce. Serves 6 as an appetizer and 3–4 as a main course.



Pepper—Vine

PEPPERCORNs ARE the fruits of a tropical perennial climber that can reach over 33 feet (10 m) in height. There are over 1,000 species in the Piperaceae family; however, those of the greatest importance are the ones that give us peppercorns, cubeb pepper and long pepper (both Indian and Javanese). Betel leaves (*Piper betle*) belong to the same family and are the leaves used in India for paan, a mouth-reddening, tooth-decaying, hypnotic concoction that is chewed together with areca nut (*Areca catechu*), sometimes incorrectly called betel nut. Yet another member of this family is kava (*P. methysticum*) whose roots are used to make the popular, muddy-looking, reputedly intoxicating Polynesian beverage.

Pepper vines are a particularly attractive sight in their native southern India, where in the western ghats (steps) of Kerala, they are trellised on palm trees, and sometimes eucalyptus, in what the locals charmingly call “spice gardens” rather than plantations. The pepper vine is not a parasite, so the living tree simply provides an accessible trellis and its canopy of foliage gives shade for the vine and to the pickers during harvesting. In some countries, such as Malaysia, pepper vines are grown on poles or accessible trellises. A pepper vine has dark green, oval leaves that are shiny on top and pale on the underside. The leaf size varies by type but tends to average somewhere between 7 inches (18 cm) long and 5 inches (12 cm) wide. The minute flowers are borne on 1–6-inch (3–15 cm) long catkins that hang among the foliage. Pollination of the hermaphrodite flowers, a genetic characteristic of the most commonly cultivated varieties, is assisted by rain, which increases the efficiency of pollen distribution as water flows down the flower cluster. The fruits (peppercorns) form in densely packed spikes 2–6 inches (5–15 cm) long and over ½ inch (1 cm) wide at the thickest part near the top, then tapering down to ¼ inch (0.5 cm) or less at the bottom tip. Each spike may produce 50 or more single-seeded fruits, which, when fully formed, are deep green. The peppercorns then ripen from their green state to turn yellow and finally become a bright reddish pink color when completely ripe.

Green peppercorns have a fresh, hot bite to them, and even when correctly dried will yield a more subtle flavor than

OTHER COMMON NAMES

- black pepper
- white pepper
- green pepper
- pink pepper

BOTANICAL NAMES

- black pepper, including white, green and “true” pink: *Piper nigrum*
- cubeb or “tailed” pepper: *P. cubeba*
- Indian long pepper: *P. longum*
- Javanese long pepper: *P. retrofractum*
- native Australian pepper: *P. rothianum* and *P. New Hollandiae*

FAMILY

- Piperaceae

black, white or true pink peppercorns. Black peppercorns, with their dark brown to jet black wrinkled skins, are the dried green fruit of *P. nigrum*. They are by far the most popular form of pepper and have a warm, oily, penetrating aroma and full-bodied, pungent flavor and lingering heat. White peppercorns are creamy white in color and absolutely smooth on the surface. White peppercorns are the “heart” of the fruit that has had the oil-bearing outer skin (pericarp) removed, thus making them less aromatic but hotter and sharper to taste. True pink peppercorns (which differ from those from the schinus pepper tree, covered in an earlier chapter, p. 386) are the fully ripe fruits of *P. nigrum*, which have an almost sweet, ripe, berry-like fruity flavor and appetizing late pepper heat. “Mignonette pepper” and “shot pepper” are terms used to describe the coarsely ground blend of black and white peppercorns that has become popular in France.

Cubeb pepper, also called “tailed” pepper, comes from a tropical climber native to Indonesia. Cubebs are dried until

Clockwise from top: black Tellicherry peppercorns; whole long peppercorns; white peppercorns; black Asta peppercorns



NAMES IN OTHER LANGUAGES

PEPPER — VINE

- Arabic: fulful, fulful aswad (black), fulful abyad (white), fulful akhdar (green)
- Burmese: nga-youk-kaun
- Chinese (C): wuh jiu, hak wuh jiu (black), baahk wuh jiu (white),
- Chinese (M): hua jiao, hei hua jiao (black), bai hua jiao (white),
- Czech: pepr, cerny pepr (black), bily pepr (white), zeleny pepr
- Danish: peber, sort peber (black), hvid peber (white)
- Dutch: peper, zwarte peper (black), witte peper (white)
- Filipino: paminta
- Finnish: pippuri, mustapippuri (black), valkopippuri (white), viherpippuri (green)
- French: poivre, poivre noir (black), poivre blanc (white), poivre vert (green)
- German: pfeffer, schwarzer pfeffer (black), weiber pfeffer (white), gruner pfeffer (green)
- Hungarian: bors, feketebors (black), feherbors (white), zoldbors (green)
- Indian: kali mirich, gol mirch, gulki, kali mirch (black)
- Indonesian: merica, merica hitam (black), merica putih (white), merica hijau (green)

black and are similar in appearance to a black peppercorn, except for the little $\frac{1}{8}$ – $\frac{1}{3}$ -inch (3–8 mm) stalk protruding from one end like a spherical cartoon bomb with its fuse. Cubeb pepper has a small seed suspended inside, but does not contain a white core like *P. nigrum*. The aroma is fresh, peppery, piney and citrus-like, while the flavor is distinctly pine-like, hot and pungent.

The long peppers of India and Indonesia come from slender climbers that have sparser-looking foliage than *P. nigrum*, the most noticeable difference between the two being that the fruits of Indian long pepper are smaller and less pungent than those of Javanese long pepper. Long pepper is so called because the fruits are long, cylindrical spikes $\frac{1}{4}$ inch (0.5 cm) in diameter and 1–1½ inches (2.5–4 cm) long. Each dark brown to black, rough-surfaced spike resembles a male pine flower catkin; when viewed in cross-section, it reveals a cartwheel of up to eight minute, dark red seeds. Long pepper has an extremely sweet, fragrant aroma that seems like a cross between incense and orris root powder. The flavor is biting hot, lingering and numbing, belying its innocent smell.

There are several native species of *Piper* in the tropical rainforests of North Queensland that are tall climbers with similar leaf structures to the rest of the *Piper* family. Young native pepper vines attach to tree trunks, but as they mature they eventually grow free of the original support to become like a stout rainforest liana. The flavor of the dried fruits is a poor substitute for commercially grown pepper, the only recorded edible variety being *P. rothianum*. As yet it has achieved no economic importance.

Origin and History

Pepper is acknowledged as the “King of Spices,” and its history is almost the history of the spice trade. No individual spice has had such far-reaching effects on commerce, voyages of discovery, cultures and cuisines over the centuries than the history of pepper has. Native to the western ghats of southern India, pepper is referred to in early Sanskrit writings dating back to 1000 BC. *Pippali* was the Sanskrit word used to describe long pepper and it is the name from which the Greek word *peperi*, the Latin *piper* and the English *pepper* are derived. In the fourth century BC, Theophrastus described long pepper and black pepper and in the first century AD, Pliny mentioned long pepper, which was known in ancient

Greece and Rome before black pepper and was considered to be superior. Around this time Dioscorides refers to white pepper and the belief that it was produced from a different plant than black pepper. Sometime between 100 BC and AD 600, Hindu colonists took pepper to the Indonesian archipelago. Long pepper and white pepper attracted a customs duty at the port of Alexandria in AD 176; however, for what are believed to be political reasons, black pepper, the more popular type used by the common citizen, was spared this impost.

Pepper was one of the earliest articles of commerce between the Orient and Europe and in their heyday the ports of Alexandria, Genoa and Venice owed their prosperity to the trade in spices in general and pepper in particular. It was the search for pepper and faster and safer ways to bring this “black gold” back to Europe that prompted great voyages of discovery such as Vasco da Gama’s in 1498, when he landed on the Malabar coast of India. Every time I visit the St. Francis Church in Cochin, which houses the tomb of Vasco da Gama and was built by the Portuguese in 1503, I imagine what Cochin Harbor must have looked and smelt like in those frenetic, dizzying days at the zenith of the spice trade.

By the Middle Ages, pepper was as valuable a commodity as the currency, and many landlords, with perhaps little confidence in the coin of the realm, would demand that their tenants pay their rent in peppercorns. Thus the term “peppercorn rent” was coined, although in those days it meant quite the opposite of the modern meaning of a very cheap lease. At the end of the 10th century in England, the Statutes of Ethelred required Easterlings (East Germans from the Baltic and Hanseatic towns who traded spices and other Eastern goods in England) to pay a tribute that included 10 pounds (5 kg) of pepper for the privilege of trading with London merchants. It has been suggested that the word “sterling” is derived from “Easterlings.” Under the reign of Henry II, a pepperers’ guild was formed in London in 1180 and was subsequently incorporated into a spicers’ guild, which in 1429 became the Grocers’ Company.

When Constantinople fell to the Turks in 1453, the need for a sea route to the Orient via the west became more urgent as the Moslem rulers, seizing on an opportunity to add to their coffers, imposed high duties on the spice trade. This was a key factor in prompting Columbus to sail west to the Spice Islands. Such was his crew’s preoccupation with pepper on this voyage that when the allspice berry was discovered with

NAMES IN OTHER LANGUAGES

PEPPER — VINE

- Italian: pepe, pepe nero (black), pepe bianco (white), pepe verde (green)
- Japanese: kosho, peppa, burakku-peppa (black)
- Laotian: phik noi
- Malay: lada, biji lada, lada hitam (black), lada putih (white), lada hijau (green)
- Portuguese: pimenta, pimenta-negra (black), pimenta-branca (white), pimenta-verde (green)
- Russian: perets, chyornyj perets (black), belyj perets (white), zelyonyj perets (green)
- Spanish: pimienta, pimienta negra (black), pimienta blanca (white)
- Sri Lankan: gammiris
- Swedish: peppar, svartpeppar (black), vitpeppar (white), gronpeppar (green)
- Thai: prik thai
- Turkish: biber, kara biber (black), beyaz biber (white), yesil biber (green)
- Vietnamese: cay tieu, hat-tieu, tieu den (black), tieu trang (white)

**NAMES IN OTHER
LANGUAGES**

LONG PEPPER

- Chinese (C): bat but, cheung jiu
- Chinese (M): bi bo, chang jiao
- Czech: pepr dlouhy
- Dutch: langwerpige peper
- French: poivre long
- German: langer pfeffer
- Greek: makropiperi
- Indian: krishna, pippal, pipar, pippli
- Indonesian: cabe bali
- Italian: pepe lungo
- Japanese: Indonaga-kosho
- Malay: bakek
- Russian: clinnyj perets
- Spanish: pimienta largo
- Swedish: langpeppar
- Thai: dok dipli
- Turkish: uzun biber
- Vietnamese: tat bat

help from the native Indians of Cuba, it was incorrectly named “Jamaica pepper,” or *pimienta*, which is Spanish for pepper. This has been a source of much confusion that has prevailed to the present time. It is also worth mentioning here that Columbus also called chilies “pepper,” further compounding our tendency to muddle up the three peppers (all-spice, black pepper and chilies).

Cubeb was the East Indian name given to *P. cubeba*, or “tailed” pepper, which the Arabs recognized as having come from Java as early as the 10th century. The popularity of cubeb pepper has waxed and waned over the centuries. In the 13th century it was popular in Europe as a condiment and for its medicinal qualities, but by the 17th century cubebs were rarely seen. At times of high pepper prices during the 20th century, cubebs, when available at a low enough cost, were used to adulterate true pepper, causing them to fall into disrepute and even to be banned as an admixture to pepper by some authorities.

As with the nutmeg and clove trade, control of the various sources of supply of pepper shifted between the Portuguese and Dutch. By the time the English were dominant, the value of pepper was considerably less and the trade not nearly as profitable as it had been for many centuries. In the 18th century the Dutch East India Company collapsed and entrepreneurial traders with fast schooners turned the ports of Salem and Boston in the United States into key players in the pepper market well into the 20th century.

Processing

The processing of vine pepper, especially *P. nigrum*, is pivotal to the creation of the green, black, white and true pink peppercorns of commerce. Peppercorns contain an enzyme in the outer skin (pericarp) that has to be carefully controlled during the drying or preserving process to make the desired final product.

Black peppercorns are traditionally produced by harvesting, six months after flowering, the full-sized but not yet ripe fruits of *P. nigrum* and then drying them in the sun. During this process, an enzyme in the pericarp of the peppercorn is activated; it oxidizes to turn them black and, among other pungent principals, a volatile oil containing piperine is created, along with oleoresins that contribute to the total complex, mouth-watering fragrance and robust flavor of black pepper. When traveling in the south of India between

December and March, one sees woven mats by the roadside covered in millions of peppercorns in various stages of drying, from just-picked, bright green berries looking like a sea of miniature peas to dark brown and jet black ones ready to be bagged. Another, more sophisticated method of processing is to plunge the sorted green berries into boiling water for a short period. This accelerates the enzyme reaction, and rather than taking several days in the sun to turn black, these scalded peppercorns turn black in about two hours. They may then be either sun-dried or have the moisture brought down to about 12% in a kiln. Either way, this process produces an intensely black, highly aromatic peppercorn that emits a heavenly aroma when freshly ground over food.

There will always be a percentage of black peppercorns that are empty — that is, they lack the firm, white heart inside — and in the spice trade these are referred to as “light” berries. A specification for whole black peppercorns will usually quote a minimum percentage of light berries permitted. Ground black pepper that is particularly black has, more often than not, an

Clockwise from top left: whole cubeb peppercorns; green peppercorns (for mills); freeze-dried green peppercorns



**NAMES IN OTHER
LANGUAGES**

CUBEB PEPPER

- Arabic: kabaaba
- Chinese (M): bi ji
- Czech: pepr cubeba
- Dutch: cubebepeper
- French: cubebe, poivre de Java
- German: kubebenpfeffer
- Greek: koubeba
- Hungarian: javai bors
- Indian: kabab-chini
- Indonesian: tjabe djawa
- Japanese: kubeba
- Italian: cubebe
- Malay: chabai ekur
- Portuguese: cubeba
- Russian: dikij perets, kubeba
- Spanish: cubebe
- Thai: prik hang
- Turkish: hint biberi tohomu, kubabe
- Vietnamese: tieu that

inordinately high ratio of these low-cost light berries added before grinding. Therefore, pale gray ground black pepper is generally of a better quality than one that is extremely black.

Green peppercorns are picked by hand when they have reached full size but have not yet begun to ripen. To keep them green, the enzyme has to be prevented from activating and turning the fruit black. The oldest, most traditional process was to put these green peppercorns, either still intact on the stem in attractive spikes or as single peppercorns, in a salt-water solution (brine). Brine inhibits the enzyme, preventing it from becoming active and turning the fruits black. To make dried green peppercorns, the freshly harvested green berries are plunged into boiling water for 15 minutes. This is sufficient time to kill the enzyme and allow the berries to be dried in the sun, or in a kiln, where they will remain dark green, shrivel up to the texture of a black peppercorn, but keep their characteristic green peppercorn flavor. The most suitable dried green peppercorns for putting in peppermills are late-picked berries, which are firmer and less likely to crumble or clog a pepper-mill's mechanism than those harvested early in the season. The best high-technology process for producing green peppercorns is freeze-drying. In much the same way that chives, peas, some other vegetables and even shrimp are freeze-dried, fresh green peppercorns can be freeze-dried to retain their full, plump appearance and bright green color. Freeze-dried green peppercorns reconstitute soon after coming into contact with moisture, so they are great for cooking, but they are not recommended for use in a peppermill, as they are too soft.

White peppercorns are produced by removing the enzyme-containing pericarp from the fruits before they are dried. Alternatively, the outer husk may be rubbed off black peppercorns mechanically, in a process called decortication. Because decorticated white pepper is difficult to produce and does not yield as good a final product, the traditional soaking and macerating method, developed in Indonesia, is still preferred. This involves picking fruits that are ripening, their color turning to yellow and pink. These berries are then tightly packed into gunny (hessian) sacks and immersed in water, preferably a clean, flowing stream, for between two and three weeks, depending upon the ripeness of the fruit. During this period, and aided by bacterial activity, the outer husk softens in a process called retting and loosens from the hard core. After being removed from the water, the macerated peppercorns are trampled and washed until no pericarp remains. When dried

in the sun or in ovens, these peppercorns remain creamy white, because there is no enzyme there to turn them black. Thorough drying is crucial at the final stage, because if they are not properly dry, mold will easily form and give the white peppercorns a musty, old-socks smell. Another method for producing white pepper is to harvest only fully ripe berries. These ripe berries shed their skins more easily in a shorter period; however, the practice of collecting only ripe berries is impractical. Ripe berries are prone to shattering, and birds have a fondness for picking them when ripe, resulting in greater losses.

In January 2005, the Indian Spices Board in Cochin told me about a new process that has been developed for the production of white pepper called bacterial fermentative skin removal. Bacteria capable of degrading pepper skin (pericarp) for removal were identified in pepper-retting water and the four most potent strains were named PSFB (pepper skin fermenting bacteria) 1, 2, 3 and 4. When these four isolates (a group of similar microorganisms isolated for study) were used, the pepper skin degradation time was substantially shortened. This process works because, during bacterial fermentation with equal parts of PSFB1, PSFB2, PSFB3 and PSFB4, pectin (the intercellular cementing substance under the skin) degrades and breaks away from the core of the peppercorn. When cleaned and dried, these white peppercorns have a good flavor and heat level, while lacking the musty aroma that often comes with conventionally produced white peppercorns. Time will tell if the production of white pepper through the bacterial fermentation method becomes widely commercialized.

True pink peppercorns are produced by putting the ripe red fruits into brine in the same manner as the traditional method for green pepper. Unfortunately, pink peppercorns cannot be boiled and dried or freeze-dried, as the pericarp is so soft and friable at this stage that it will only break up if subjected to any process other than immersion in brine. (Dried pink peppercorns from the *Schinus* species of trees are discussed on pp. 386–388.)

Pepper oleoresin is manufactured principally for the processed food industry, where it is often desirable to have an ingredient that has a consistent aroma and flavor, is easily mixed with other ingredients and has no bacteria. Pepper oleoresin is extracted from black pepper using organic solvents such as ethanol, whereas black pepper oil, used in perfumery and for flavorings, is produced by steam distillation.

FLAVOR GROUP

- hot

WEIGHT PER TEASPOON (5 ML)

- whole black: 3.8 g,
- white: 4.2 g,
- freeze-dried green: 1.5 g,
- true pink, drained: 6.0 g
- ground black: 3.2 g, white: 2.6 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp (10 mL) whole
- white meats: 1 ½ tsp (7 mL) whole
- vegetables: 1 tsp (5 mL) whole
- carbohydrates: ¾ tsp (4 mL) whole

COMPLEMENTS

all savory foods, whether included in cooking or added at the table

BLACK

- red meats
- game
- strongly flavored seafood
- egg dishes, when used in moderation

WHITE

- sauces
- charcuterie
- soups and casseroles

GREEN

- red meats
- poultry
- game
- pork and duck
- pâtés
- terrines
- white sauces

PINK

- salad dressings
- seafood and poultry
- terrines
- white sauces

USED IN

- peppermill blends
- curry powder
- baharat
- berbere
- stuffing mixes
- barbecue spice blends
- Chinese master stock
- Jamaican jerk spice
- garam masala
- Chinese five-spice
- ras el hanout
- Cajun spices
- pickling spices

Buying and Storage

When you're buying pepper in the supermarket, it is fascinating to think of how it has been grown, harvested and processed, but spare a thought for how the centuries-old traditions of the spice trade live on, with a little bit of help from modern technology. When Rajiv Ghandi was in power in the 1970s, he wanted the farmers of Kerala to have access to modern communications. That is why the traveler in southern India will be surprised to see ISD telephone booths tucked away in the jungle, thousands of feet above sea level in the cool western ghats. Pepper farmers with small holdings will literally keep their harvest of peppercorns from the spice gardens under their beds. The farmers now have the ability to call overseas or access the Internet to find out the price of pepper on the New York Commodities Exchange, and then decide when to take their pepper to the local trader, in the knowledge of getting a realistic price. It is also sobering to remember that, of the hundreds of thousands of tons of pepper harvested every year, nearly every catkin of peppercorns is picked by hand.

One place I love to visit in India is the International Pepper Exchange in Mattancherry, the district in Cochin that is also home to the historic Jewish synagogue, with its amazing display of blue hand-painted Chinese tiles, so atmospherically described by Salman Rushdie in his book *The Moor's Last Sigh*.

Entry to the Pepper Exchange, just around the corner from the synagogue, is only by invitation, which can generally be arranged for those of us in the spice trade. The Cochin Pepper Exchange works just like the stock market, with speculators, hedgers, futures and all the usual bourse jargon. The experience is made truly exciting and goose bump-inducing by hearing the trading taking place in the traditional "open outcry" system. In what sounds and looks like chaos, all the buyers and sellers are shouting their contracts and bids in Malayalam (the local native language of Kerala) with the cacophony and fury of sword-brandishing warriors in full battle. Amid the hubbub, these soldiers of fortune in their own private spice war manage to keep in contact with their clients from New York, Rotterdam, London and Singapore with the phone receiver in one hand while the other arm gesticulates furiously in punctuation of their cries. In 1999 computers had been installed and I thought the melee of traders would then

have become a thing of the past. However, I am happy to report that in spite of modern technology speeding up this process, the bombastic, charismatic pepper traders of Cochin still shatter the peaceful, tropical Mattancherry afternoon air with their excited “open outcry” bids and contracts.

The flavor characteristics of pepper are influenced primarily by their source. The varieties cultivated and the effects of climatic and soil conditions in different parts of the world all make a contribution to the ultimate aroma and flavor of the pepper you buy. The next most important factor is the degree of care taken when drying, storing and grading pepper. To deal with the latter first, sometimes pepper is not dried sufficiently. This happens when farmers are greedy, because by selling a batch of pepper that has 14% moisture content rather than the required 12%, the farmer (who is paid by weight) literally has more kilos of pepper to sell. The downside of this is that the moister pepper is susceptible to mold, which should make it unsellable. However, unscrupulous traders will try to rectify the appearance of moldy pepper by undertaking the frowned-upon practice known as reconditioning. This involves spraying the gray, moldy black peppercorns with oil (in some cases even waste motor oil has been used) and sieving them until the mold has disappeared and the peppercorns are black and shiny. Therefore, while it might be desirable to buy good-quality, extremely black peppercorns, the patina of any black peppercorns should always be dull, never shiny.

Peppercorns from different countries have specific characteristics and the following descriptions, while by no means exhaustive, provides some basic guidelines to be aware of when buying pepper.

Indian pepper originates from the Malabar Coast, and the two main types of black pepper are named after the centers from which they are traded. Tellicherry, situated to the north of Cochin, gives its name to a grade referred to as Tellicherry, Garbled, Special, Extra Bold (TGSEB). To clarify the terminology, “garbled” means cleaned to remove stems, stones and most of the light berries; “special” is an indication that this is the best grade based on flavor profile; and “bold” describes it as a large peppercorn, this grade being “extra” large. The other grade important to the Indian spice trade is known as Malabar, Garbled, No. 1 (MG1). This is a top-grade cleaned peppercorn that was known as Alleppey pepper (Alleppey being the picturesque region, latticed with man-made canals, to the south of Cochin) but is now most often just named after the Malabar

COMBINES WITH

nearly all culinary herbs and spices, but has a special affinity with:

- allspice
- basil
- caraway
- cardamom
- chicory
- chili
- cinnamon
- cloves
- coriander seed
- cumin
- curry leaves
- fennel seed
- fenugreek leaves and seeds
- garlic
- ginger
- oregano
- paprika
- parsley
- rosemary
- sage
- savory
- thyme
- turmeric

Coast from which it comes. Indian pepper is regarded by many as the best pepper in the world, highly esteemed for its high oleoresin and volatile oil content, which explains why the aroma and pungency is so pleasing.

Indonesian pepper berries tend to be smaller than the Indian ones and in recent times Indonesian black pepper has become quite popular in the rest of Asia, Australia and New Zealand for its distinct, lemon-like flavor and competitive prices. There are two main types of Indonesian pepper: “Lampong black,” named after the Lampong district of south-eastern Sumatra, a key pepper-producing area; and “Muntok white,” a mild-flavored white pepper produced on the island of Bangka and exported from the port of Muntok.

Malaysian black and white pepper is produced almost exclusively in Sarawak and exported from the port of Kuching; both geographic names lend themselves as descriptors for pepper from Malaysia. Sarawak pepper has a milder aroma and less pungent flavor than either the Indian or Indonesian peppercorns, but large amounts of it are ground for sale as the familiar standard black and white pepper seen in supermarkets.

From time to time you may see the prefix “ASTA” used to describe pepper, more often than not from Indonesia and Malaysia. This means that the pepper meets the minimum standards of cleanliness, volatile oil content, moisture level and other technical specifications set down by the American Spice Trade Association. Thus it is an indication of a particular quality standard, which may be of significant importance to an industrial spice buyer procuring 110 tons of pepper.

Other countries producing pepper are Sri Lanka, Brazil and Australia. Australian black peppercorns are more fruity in flavor than those from Sarawak and have a “pipe tobacco” aromatic quality. Australian white pepper rates in my estimation as among the best for uniform color and good white pepper flavor, without the distinct mustiness so often experienced in Malaysian and Indonesian white peppers.

Use

Pepper possesses the ability to stimulate the appetite with its provocative aroma; it causes salivation in anticipation of its expected taste, and activates our gastric juices as its pungency warms the tongue. No wonder pepper has been the world’s most popular and most frequently traded spice for thousands

of years. Pepper can be classed as one of the few spices that is not only an embellishment for the cook to employ, but is also something, in the hands of the diner, that has the ability to turn an uninspiring repast into a subject of culinary ecstasy. Faced with a pallid, uninspiring platter, the judicious shake, pinch or grind of black pepper may be all that is required to achieve satisfaction.

Black pepper has the most distinct flavor and is more often than not associated with robust foods such as red meat, strongly flavored fish and seafood and game. Black pepper, when applied in moderation, complements delicate foods as well; after all, what better way is there to give a lift to salad than to flick a few turns of the peppermill over it? And believe it or not, a small sprinkling of freshly ground black pepper will complement the taste of fresh strawberries and slices of pear served with a soft cheese. Black pepper is found in many spice blends, but (food technologists please take note) it does have one strange attribute when mixed with ingredients that are high in certain fats and oils, such as coconut. A reaction takes place over a couple of months that creates a distinctly soapy and unpleasant off-taste (though I have never experienced this in home cooking).

To make a tasty but not too hot pepper steak, roughly grind black peppercorns and sieve them to separate the pericarp from the heart (your own try at decortication). Then season the meat with the oil-bearing, tasty outer husk only, discarding the hotter, inside part of the berry or retaining it for another use.

White pepper is often used by Europeans who don't like the idea of having black specks in their white sauces. White pepper is worth having on hand for occasions when you want a pepper "bite" without the fragrance of black pepper dominating the other flavors. This is particularly noticeable in Thai and Japanese food, where the light, fresh flavors of ginger, lemongrass, kaffir lime, galangal and coriander could be swamped by the robust oiliness of black pepper. Always use white pepper in moderation, as its heat can override more subtle ingredients and you risk a musty, old-socks flavor permeating your food if you are too heavy-handed with an average grade of white pepper. The European blend known as savory *quatre épices* is a mixture of white pepper, nutmeg, ginger and cloves. Besides being used in charcuterie, savory *quatre épices* is wonderful on the table in place of ordinary ground white pepper. Sweet *quatre épices* is almost identical, except that the white pepper is replaced with ground allspice.



Green peppercorns complement both black and white pepper and are often included in a blend for putting in peppermills. The flavor of green peppercorns is particularly pleasant in gravies and white sauces for poultry, red meats and seafood. Pâtés and terrines are enhanced by the addition of green peppercorns, as are the majority of rich foods like pork, duck and game.

True pink peppercorns should be thoroughly rinsed to remove the saltiness of their brine. They are delicious crushed in a mortar and pestle with a little olive oil and even less vinegar to make a colorful and tasty salad dressing. Pink peppercorns are also appropriate in the above applications for green.



Pepper Water

Pepper water is an almost clear, peppery soup that is often sipped from a glass or mug while one is eating a devastatingly hot curry. You can use it to moisten the rice being eaten with a dry curry or simply drink it with the meal the same way you'd have green tea with a Chinese meal. This recipe makes 2 cups (500 mL) of pepper water.

- 1 full tsp (5 mL) whole black peppercorns
- ½ tsp (2 mL) ground cumin
- ½ tsp (2 mL) brown mustard seeds
- 1 whole dried red chili (the finger-length one, not a tiny hot one)
- ¼ tsp (1 mL) ground turmeric
- 2 tsp (10 mL) crushed garlic
- 1 tbsp (15 mL) ghee, butter or vegetable oil
- 1 small onion, finely chopped
- 6 curry leaves, fresh or dried
- 2 cups (500 mL) good-quality beef, chicken or vegetable stock
- ½ tsp (2 mL) tamarind concentrate or a thumb-sized piece of block tamarind

First, put the peppercorns, cumin, mustard seeds, dried chili and turmeric into a mortar. Add garlic and pound spices together to a paste.

Heat the ghee in a saucepan and add the finely chopped onion and the curry leaves. Fry them gently for about 5 minutes, then add the stock and the tamarind. (If you're using a piece of tamarind, you'll need to simmer it in a little of the stock for a few minutes, stirring to dissolve it as much as possible, then strain it through a sieve, using a wooden spoon to press as much of the pulp through as possible.)

Finally, scoop all of the spices into the liquid, stir well, then leave to simmer gently for about 1 hour. If you prefer a clear liquid, you can strain the soup before serving and just float a few whole peppercorns in each bowl. Serves 2.



Pepperleaf and Pepperberry — Tasmanian

OTHER COMMON NAMES

- Dorrigo pepper
- mountain pepper
- mountain pepperberry
- mountain pepperleaf
- native pepper
- Tasmanian pepper

BOTANICAL NAMES

- pepperleaf and pepperberry:
Tasmannia lanceolata
- Dorrigo pepper:
T. insipida

FAMILY

- Winteraceae

THE *TASMANNIA* genus of peppers, native to Australia, including Tasmanian pepper and Dorrigo pepper, should not be confused with native pepper (*Piper rothianum*), which is a vine and belongs to the Piperaceae family. Tasmanian and Dorrigo pepper plants are similar to each other, except that the Dorrigo variety is from a more northern habitat along the eastern seaboard of New South Wales, Australia, and it has a less pungent taste. Hence the botanical name *T. insipida*. Tasmanian pepper shrubs are distinguished by the attractive deep red of their young stems and branches, which color in the same way as new crimson gum tips. In ideal conditions, Tasmanian pepper will grow from 13–16 feet (4–5 m) tall, basically a small tree. However, I tend not to call this a tree, as it only adds to the confusion between all the types of pepper, including the variety that is commonly called a pepper tree (*Schinus* species). The broad-based, tapering leaves on Tasmanian pepper are longer on plants growing in lowland areas — up to 5 inches (13 cm) — and much shorter on alpine-dwelling ones, which may have leaves only $\frac{1}{2}$ inch (1 cm) in length. Small yellow to cream-colored flowers are followed by shiny, deep purple to black, plump fruits about $\frac{1}{4}$ inch (0.5 cm) in diameter that contain a cluster of tiny black seeds inside. The leaves, fruits and even the fresh flower buds all have a distinct Tasmanian pepper aroma and taste, albeit at varying intensities.

Pepperleaf, which is stronger when dried, has a pleasing woody fragrance with vague pepper and dry, cinnamon-like notes. The flavor is similarly woody and camphor-like until its sharp pepper taste and lingering heat become apparent. Pepperberries have an oily, mineral-like, turpentine aroma, and when even minute grains of the ground fruits are tasted,

PEPPERLEAF
AND
PEPPERBERRY –
TASMANIAN



Tasmanian pepperberries

an initial sweet, fruity flavor is quickly followed by an intense, biting, tongue-numbing and eye-watering heat that continues to build and will not subside for some minutes. This continuing heat development, which is experienced with both the leaves and the berries, is a result of the enzymes contained in Tasmanian pepper being activated by one's saliva.

Origin and History

Native to the eastern seaboard of Australia, *T. lanceolata* is found growing wild in the rainforests and wet mountain gullies of Tasmania and Victoria to altitudes of 3,900 feet (1,200 m). Dorrigo pepper grows wild in New South Wales, Queensland and the Northern Territory. Although these plants grow prolifically on the East Coast of Australia, there is little evidence of their culinary or medicinal application by the indigenous people. It is thought that some 19th-century colonists made use of its bark, possibly as an external liniment; however, culinary interest in the flavor components of native Australian plants is a 20th-century development that has recently become fashionable.

Processing

Tasmanian pepper leaves are dried in the same way as bay leaves. For best results, cut the leaves off the branches before

NAMES IN OTHER LANGUAGES

- Chinese (M): shan hu jiao
- Dutch: bergpeper
- French: poivre indigène
- German: Tasmanischer pfeffer, bergpfeffer, Australischer pfeffer
- Hungarian: hegyi bors, tasman bors
- Italian: pepe di montagna australiano macinate (mountain pepperleaf), bacche di pepe montagna australiano macinate (mountain pepperberry)
- Russian: tasmanijskij perets

FLAVOR GROUP

- hot

WEIGHT PER TEASPOON (5 ML)

- ground leaf: 2.4 g
- ground berry: 3.0 g

PEPPERLEAF AND PEPPERBERRY – TASMANIAN

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL) ground leaf, ¼ tsp (1 mL) ground berry
- white meats: 1 tsp (5 mL) ground leaf, ¼ tsp (1 mL) ground berry
- vegetables: 1 tsp (5 mL) ground leaf, ¼ tsp (1 mL) ground berry
- carbohydrates: 1 tsp (5 mL) ground leaf, ¼ tsp (1 mL) ground berry

COMPLEMENTS LEAF

- most foods in the same manner as black and white pepper

BERRY

- game and rich foods when used sparingly
- casseroles
- kangaroo fillets

USED IN LEAF

- native Australian lemon pepper
- barbecue spices

BERRY

- barbecue spices
- an Australian version of dukkah
- seafood spice blends

drying and spread them out on porous material such as insect screening or netting. Put in a dry, dark, well-aired place and leave for a few days until each leaf is crisp and dry. Ripe pepperberries do not need to be sun-dried in the same manner as conventional pepper (*P. nigrum*) to achieve their flavor; they may be dehydrated for convenient storage using the same process as for pepper leaves. Pepperberries can also be preserved in brine, which is effective as long as you remember to rinse the salty brine out thoroughly, just as you would with pickled green or pink peppercorns, before use. By far the best quality and most pleasant-tasting result is achieved by freeze-drying (a capital-intensive industrial process). Freeze-dried pepperberries are not as hot when consumed as the air-dried ones, and they have a pleasant background fruitiness and an appetizing, mineral-like flavor that is delicious with red meats and game.

Buying and Storage

Tasmanian pepperleaf is predominantly sold in its powdered form, which looks somewhat granular and has a khaki color. Buy small quantities, as a tiny amount is sufficient to flavor food and, once ground, flavor loss is rapid even under ideal storage conditions. Pepperberries are occasionally available in their frozen form, but it is more common to find them ground to a coarse, oily-looking black powder. Freeze-dried pepperberries are reddish black, friable and plump, and when ground yield a deep purple powder, a little like ground sumac. Store both powdered leaves and berries in airtight packs and keep well protected from extremes of heat, light and humidity.

Use

Tasmanian pepperleaf, when dried and powdered, may be used in the same way as ground black or white pepper (*P. nigrum*). Because the flavor is relatively sharp and intense, I recommend adding only about half the amount of pepperleaf and then increasing the quantity to suit your taste. Pepperleaf goes well with other native Australian herbs and spices, such as lemon myrtle, wattleseed and akudjura (bush tomato). A lemon pepper mix may be made by blending, in whatever proportions suit your taste, lemon myrtle leaf powder with pepperleaf and salt. Blend pepperleaf with ground coriander seed, wattleseed, akudjura and salt to sprinkle on kangaroo, lamb or venison fillets before cooking.

Extreme caution is suggested when using air-dried pepperberries. My rule of thumb is to use only one-tenth the quantity of conventional pepper. The freeze-dried berries are milder and may be used a little more generously. Only the brave, foolish or taste-bud-deficient would entertain putting ground air-dried pepperberries directly onto food; they are so hot and numbing that, when not cooked, the flavor attributes cannot be fully appreciated. However, I have tasted a modest sprinkling of freeze-dried pepperberries on crème fraîche and fruit, and it was absolutely delicious! Pepperberries work particularly well when added to slow-cooked dishes such as stews and soups, as the extended cooking time tends to dissipate their pungency and the unusual flavor gets a chance to really complement the food. They are also excellent with game meats and, when used sparingly, in marinades for both white and red meat.

PEPPERLEAF AND PEPPERBERRY – TASMANIAN

COMBINES WITH LEAF

- akudjura
- basil
- bay leaves
- coriander leaf and seed
- ginger
- lemongrass
- lemon myrtle
- mustard seed
- wattleseed

BERRY

- black pepper
- cardamom
- coriander seed
- cumin seed
- fennel seed
- garlic
- juniper berries
- marjoram
- parsley
- rosemary
- thyme

Pepperleaf and Pepperberry

Kangaroo Fillets in Tasmanian Pepper Sauce

If kangaroo meat is not available, lamb or venison may be used instead. The sauce is also delicious tossed through fettuccine.

- 4 kangaroo fillets (each about 6 oz/175 g)
- ¼ cup (50 mL) dry white wine
- 1 tsp (5 mL) ground Tasmanian pepperleaf
- 4 tsp (20 mL) butter

Tasmanian Pepper Sauce

- ⅔ cup (150 mL) dry white wine
- 3 tbsp (45 mL) brandy
- ½ cup (125 mL) chicken stock
- 1 ¼ cup (300 mL) table (18%) cream (or double cream)
- 1 tbsp (15 mL) port wine
- 1 tsp (5 mL) mountain pepperleaf
- 4 freeze-dried Tasmanian pepperberries
- salt and freshly ground black pepper to taste

Put kangaroo fillets in a large sealable plastic bag with wine and pepperleaf. Refrigerate for at least 1 hour or overnight.

For the sauce, pour wine and brandy into a saucepan and boil until reduced by two-thirds. Add the stock and boil for 5 minutes. Add the whipping cream and boil, stirring occasionally, for 5 minutes, until sauce has reduced by a third and is pouring consistency. Add the port, pepperleaf and pepperberries and season with salt and pepper. Keep warm while cooking kangaroo.

Melt butter in a frying pan over high heat. Add kangaroo and sear for 30 seconds on each side. Reduce heat slightly and cook for 5 minutes on each side. The meat should be tender and pink in the middle. (You could also barbecue the kangaroo, but be careful not to burn it.) Serve kangaroo fillets with pepper sauce and Wild Arugula Mash (see recipe, p. 106). Serves 4.

Pomegranate

OTHER COMMON NAMES

- grenadier
- pomegranate molasses
- anardana
- Carthaginian apple

BOTANICAL NAME

- *Punica granatum*

FAMILY

- Punicaceae

NAMES IN OTHER LANGUAGES

- Arabic: rumman
- Chinese (C): ngon sehk lau
- Chinese (M): an shi liu
- Czech: granatovník
- Danish: granataeble
- Dutch: granaatappel
- Finnish: granaattiomena
- French: grenade
- German: granatapfel
- Greek: rodia
- Indian: anar (fresh fruit), anardana (dried seeds)
- Hungarian: granatalma
- Indonesian: delima
- Italian: melagrana
- Japanese: zakuro
- Malay: delima
- Portuguese: roma
- Russian: granat
- Spanish: granada
- Swedish: granatapple
- Thai: tap tim
- Turkish: nar, rumman
- Vietnamese: luu, cay luu

THE DECIDUOUS pomegranate may be either an attractive, densely foliated shrub growing up to 13 feet (4 m) tall or a sparser, splendid tree to 23 feet (7 m) high. Its deep green foliage, the luxuriant leaves being about 3¼ inches (8 cm) long, look similar to bay leaves borne on spiny-tipped branches. The striking waxy, orange-vermilion flowers are followed by yellowish brown-red fruits the size of an apple and containing dozens of seeds held in compartments in an inedible bitter, soft pulp. Fresh pomegranate seeds are angular and up to ⅓ inch (8 mm) long, including their juicy, jelly-like, pink casing. These fresh seeds give off little aroma, yet their flavor is pleasantly astringent and fruity.

My most vivid memory of pomegranate is eating the fresh seeds during a visit to the former capital city of Queretero in Mexico. After inspecting vanilla plantations in Papantla, nestled shadily among the foothills of the southeast coast, we were served a meal of chicken poached in a creamy sauce spiced with chili and fresh pomegranate seeds. My delight at experiencing the subtle, fruity, tobacco notes of pasilla chili in the sauce was only exceeded by the unexpected bursts of flavor from popping pomegranate seeds bombarding my taste buds.

Dried pomegranate seeds are used in Indian cooking and referred to there as anardana. When dry, anardana are dark red

Pomegranate seeds; pomegranate molasses



FLAVOR GROUP

- tangy

WEIGHT PER TEASPOON (5 ML)

- whole dried seeds: 3.5 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL) seeds, 4 tsp (20 mL) molasses
- white meats: 1 tsp (5 mL) seeds, 1 tbsp (15 mL) molasses
- vegetables: 1 tsp (5 mL) seeds, 1 tbsp (15 mL) molasses
- carbohydrates: 1 tsp (5 mL) seeds

COMPLEMENTS SEEDS

- curries in a similar way as tamarind

MOLASSES

- chicken and pork when brushed on before cooking
- in salad dressings

USED IN

- not commonly used in spice blends

to black, exceedingly sticky and have a delicious fruity, tangy flavor, making them an ideal substitute for tamarind. Pomegranate molasses, used extensively in Middle Eastern cuisine, is a deep red, almost black, thick molasses with a rich, berry-like fruitiness and citric acid style of tang. Less intense and concentrated but equally delicious is the non-alcoholic drink grenadine, made from the juice of sweet pomegranates.

Origin and History

Pomegranate is native to Persia, where it was cultivated at least 4,000 years ago, and was known to the ancient Egyptians and later to the Romans by way of Carthage. Some like to believe that the pomegranate was the original apple from the Garden of Eden. The botanical name given to the genus of *Punica* is derived from the Latin *malum Punicum*, meaning “apple of Carthage,” while *poma granata* means “apples with many seeds.” Pomegranate is mentioned in the Song of Solomon in the Bible; Mohammed refers to it in the Koran; and it is still used in some Jewish ceremonies. It is in the Ebers Papyrus, grew in the hanging gardens of Babylon and formed part of the decoration of the pillars of King Solomon’s temple. When traveling in Turkey, we were told about the custom whereby a newly wed bride would drop a pomegranate on the ground and, when it split, the number of seeds that fell out would indicate how many children she was to have.

The Spanish brought pomegranate to South America and it now features as an important ingredient in Mexican cooking, where it is called *granada*. The bark and root bark of pomegranate have been used medicinally. The rind of the fruit was peeled and dried at one time, producing small, orange-yellow chips called malicorium. There are three main types of pomegranate, ranging from quite sweet ones, most suitable for eating fresh and making grenadine, to the more sour varieties that are preferred for making pomegranate molasses or drying to become the tangy anardana seeds.

Processing

The best-tasting pomegranates come from trees that grow in conditions where the summers are hot and dry and the winters are cold; they do not fruit so well in humid, tropical climates. When the fresh seeds are required, it is important to carefully remove them from the bitter pith and connecting membrane. A traditional way to eat pomegranate was to pick each seed out

of the opened fruit with a pin, thus enjoying each flavor burst of juicy, jelly-like translucent pulp while avoiding any of the bitter flesh. To make anardana, the seeds are dried with the pulp on the outside. It is not feasible to grind anardana in anything but a mortar and pestle, as the residual stickiness on the surface of the seeds will clog up a spice, pepper- or coffeemill. Pomegranate molasses is made by boiling down the seeds until the liquid becomes highly concentrated; at this stage it develops its thick consistency and robust flavor.

Buying and Storage

Fresh pomegranates can be bought from many fruit retailers and are definitely worth buying, especially if you have a good Mexican recipe that uses them. Anardana is available from Indian food stores and specialty spice shops (which also sell pomegranate molasses, as do Middle Eastern ingredient suppliers). Anardana is best stored in an airtight container, as any humidity tends to make the seeds even stickier. The molasses is easy to keep and does not need to be refrigerated after opening. In winter it may go thick in the bottle, but sitting it in hot water for a few minutes should be all that's needed to make it less viscous and easier to pour.

Use

The fresh seeds are added to sauces and are especially suitable served with chicken and seafood. They may be put into fruit salads and on pavlova (a dessert of meringue, fruit and cream). Anardana can be soaked in water like tamarind and the liquid used as a souring agent, or the seeds can be crushed in a mortar and pestle, then sprinkled directly onto food for an acidic lift. Pomegranate molasses adds piquancy to and has a tenderizing effect on chicken and pork when it is brushed on like a marinade before cooking. I make a simple salad dressing with it by mixing 3 tbsp (45 mL) each of balsamic vinegar and olive oil with 1 tbsp (15 mL) of pomegranate molasses and 1 tbsp (15 mL) of water with $\frac{1}{2}$ tsp (2 mL) of ground mustard seeds dissolved in it. The ground mustard acts as an emulsifier and stops the liquids from separating for at least 10 minutes after shaking. In summer, a teaspoonful (5 mL) of pomegranate molasses in the bottom of a glass filled with soda water makes a refreshing, thirst-quenching drink.

COMBINES WITH SEEDS

- ajowan
- allspice
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander seed and leaf
- cumin
- fennel
- fenugreek
- ginger
- mustard
- pepper
- turmeric

MOLASSES

- allspice
- cardamom
- cinnamon and cassia
- cloves
- ginger
- mustard
- pepper



Pomegranate **Pomegranate Quail**

The fruity astringency of pomegranate molasses works well in both the marinade and the dressing for this recipe.

- 4 quails
- 1 clove garlic, crushed
- 2 tbsp (25 mL) pomegranate molasses
- 1 tsp (5 mL) ground cumin
- 1 tsp (5 mL) ground cinnamon
- 1 ½ tsp (7 mL) boiling water
- salt and freshly ground black pepper to taste
- 6¾ oz (200 g) mixed salad greens
- 1 tbsp (15 mL) lightly crushed pistachios
- 1 tbsp (15 mL) fresh pomegranate seeds

Dressing

- 1 ½ tsp (7 mL) pomegranate molasses
- 1 tbsp (15 mL) olive oil
- pinch granulated sugar
- salt and freshly ground black pepper to taste

To prepare the quail, use sharp kitchen scissors to remove the backbones and innards, then cut each quail in half through the breastbone.

Mix garlic, pomegranate molasses, cumin and cinnamon and add boiling water to make a paste. Coat quail pieces in marinade, cover and refrigerate for 2 hours or overnight.

Heat barbecue to medium. Remove quail from marinade and discard marinade. Season quail with salt and pepper. Cook for 5 minutes on each side, until meat is just cooked and not pink.

Combine all dressing ingredients and toss through salad greens. Arrange greens on a plate and top with two pieces of quail per person. Sprinkle with pistachios and pomegranate seeds. Serves 4 as a starter.

Poppy Seed

OTHER COMMON NAMES

- blue poppy seed
- black poppy seed
- white poppy seed
- maw seed

BOTANICAL NAMES

- blue poppy seed:
Papaver somniferum
- white poppy seed:
P. somniferum album
- field poppy, Flanders poppy, corn poppy:
P. rhoeas

FAMILY

- Papaveraceae

POPPY PLANTS are straggly-looking, sometimes hairy-stemmed annuals and perennials that grow to around 4 feet (1.2 m) tall. The decorative varieties (*Papaver rhoeas*) have attractive flowers that vary from pure white through pink to 'reddish purple, and include the blood red Flanders poppy worn in Canada on 'Remembrance Day, originally in memory of the soldiers who fell during the First World War and now in memory of all soldiers in all wars. Blue and white poppy seeds are gathered from the same varieties of poppy that produce opium. Opium contains the alkaloids morphine, codeine and thebaine. It should be noted, however, that once the seeds of culinary use have formed within the capsule, there is virtually no narcotic content. The alkaloid content in poppy seeds is a minute 50 ppm and does not have any pharmaceutical effect. But to the horror and dismay of some sports people who have been submitted to drug tests, it can be detected in urine after heavy poppy seed consumption. Their

Blue poppy seeds; white poppy seeds



NAMES IN OTHER LANGUAGES

- Arabic: khashkhash
- Chinese (C): ying suhk hohk
- Chinese (M): ying su
- Czech: mak
- Danish: valmue-fro
- Dutch: slaapbol
- Finnish: uniko
- French: graines de pavot, pavot somnifère
- German: mohn, schlafmohn, opiummohn
- Greek: paparouna
- Indian: khas-khas, kus-kus, cus-cus, postdana
- Hungarian: mak
- Italian: papavero
- Japanese: keshi, papi
- Malay: kas kas
- Portuguese: dormideira
- Russian: mak snotvornyj
- Spanish: adormidera
- Swedish: vallmo
- Thai: ton fin
- Turkish: hashas tohumu
- Vietnamese: cay thuoc phien, vay anh tuc

FLAVOR GROUP

- amalgamating

flowers also bloom in myriad colors, ranging from white to lilac and pink with purple markings. After flowering, a rounded, parchment-colored, papery-looking woody capsule with a small, multi-pointed crown on top forms. Inside this ribbed, brittle casing are several chambers containing hundreds of tiny kidney-shaped seeds, each one no more than a millimeter long. Two pounds (1 kg) of poppy seeds contains well over 1.5 million seeds. Both the slate blue and creamy white poppy seeds have a sweet, unassuming aroma and mild, slightly nutty taste. Blue poppy seeds are a little larger than the white ones, and they will also seem to be a degree oilier. The flavor of blue poppy seed is marginally stronger than white poppy seed, especially noticeable after roasting, making the distinctive nutty flavor a familiar taste when baked on breads.

Origin and History

The opium poppy is native to the Middle East and has been cultivated for both culinary and medicinal use for over 3,000 years. Homer refers to poppy; it was known to the early Egyptians, Greeks and Romans; and it was being cultivated in India and China by AD 800. In India, poppy seeds were made into a confection by mixing them with sugar cane juice. The plant’s specific name, *somniferum*, means “sleep-inducing” and it is the unique narcotic attribute of the opium poppy that has provided so much incentive to its cultivation. In the Middle Ages an anesthetic was produced called “the soporific sponge,” an infusion made of poppy, mandrake, hemlock and ivy that was poured over a sponge and held under the patient’s nostrils. The decorative qualities of the poppy did not go unnoticed, so for many centuries, colorful varieties were developed and even today displays of these flowers adorn herbaceous borders with other old-fashioned herbs and flowers. Sadly, this plant that has been so useful to the human race for thousands of years has become a pariah. It was not until the 18th century that opium, which contains a number of valuable pain-killing alkaloids such as morphine, began to be abused because of its mind-altering attributes.

Processing

Because morphine has not been successfully synthesized to date, opium poppies are grown on large-scale plantations under strict government supervision in a number of countries. The opium is gathered by first making cuts in the green

capsule with a small, sharp implement before the seeds have formed inside. The latex that oozes out of the incisions is scraped off and collected for further processing. These plants then go on to form their seed-filled pods, which are harvested when the seed heads are ripe and before they burst open.

Because many countries have banned the cultivation of *P. somniferum*, poppy seeds are often an illegal import. A common practice is to “denature” poppy seeds, either by heat treatment or fumigation, so they will not germinate and can therefore be freely sold. Two products are made from the seed oil: one a clear, cold-pressed oil the French call *olivette*, which can be used as a substitute for olive oil in cooking; the other a non-edible, further refined version for artist’s paints.

Buying and Storage

Blue poppy seeds are widely available in supermarkets and continental delicatessens. White poppy seeds can be bought from specialty spice shops and many Indian, Middle Eastern and Asian food stores. Because poppy seeds contain a fairly high amount of oil, they are prone to becoming rancid when they are old or have been stored badly. They are also prone to insect infestation, so if you have them in the pantry with flour or grains that may contain some dormant life forms, make sure their container is well sealed. Accordingly, buy small amounts of poppy seeds regularly only from shops that have a high turnover, so you can expect them to be fresh. When kept away from extreme heat, in an airtight container, poppy seeds will keep for 12–18 months.

Use

Blue poppy seeds are thought of as “European” poppy seeds because they are the kind we see most often on Western bread rolls, buns and bagels and in confectionery, whereas white poppy seeds are sometimes referred to as “Indian,” “Middle Eastern” or “Asian,” as they tend to feature in these cuisines. White poppy seed has also been called “maw seed,” an out-of-date term relating to its use as bird seed. As there is little flavor difference between the two kinds of poppy seeds, which one you decide to use comes down to aesthetics or how strictly you feel the need to follow a particular recipe. Like many seed spices, poppy seeds, with their pleasantly nutty flavor, complement carbohydrates particularly well. It is a good idea to lightly toast poppy seeds first (if they are not going to

WEIGHT PER TEASPOON (5 ML)

- whole: 3.7 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 6 tsp (30 mL)
- white meats: 6 tsp (30 mL)
- vegetables: 6 tsp (30 mL)
- carbohydrates: 6 tsp (30 mL)

COMPLEMENTS

- breads
- biscuits, crackers and cookies
- pasta, when sprinkled over a cheese topping
- mashed potatoes
- cream toppings on desserts

POPPY SEED

USED IN

- vindaloo curry powder
- shichimi-togarashi

COMBINES WITH

- allspice
- cardamom
- cinnamon and cassia
- cloves
- coriander seed
- ginger
- nutmeg
- sesame seed
- sumac

be cooked) by tossing them for a couple of minutes in a hot, dry pan, as this brings out the nutty flavor. In addition to breads, savory and sweet biscuits, crackers, cookies and cakes, poppy seeds are delicious when sprinkled over mashed potatoes or pasta, especially when the latter is served with a cheese sauce or tossed in oil. The flour-free continental poppy seed cake utilizes 1½ (375 mL) cups of blue poppy seeds, and when topped with whipped cream, mandarin segments and an extra sprinkling of poppy seeds, is difficult to resist. Poppy seeds are difficult to grind because they are so small, so one method of reducing them to a thickening paste is to pour some boiling water on them and allow to soak for an hour or two. The softened and slightly swollen seeds will then grind more easily in a blender or food processor. Poppy seed is known in India as *khus khus* and should not be confused with the Middle Eastern dish called couscous. White poppy seeds thicken and add flavor to Indian curries such as vindaloo and may be used as a substitute for ground almonds in North Indian kormas. In Turkey a paste for filling pastries is made from ground poppy seeds mixed with poppy seed oil.

Poppy Seed Pasta

Next time you're wondering how to give a taste boost to a quick bowl of noodles (or any type of pasta), take the drained pasta and mix through a spoonful of olive oil and then the same quantity of roasted blue or white poppy seeds. Garnish with slices of marinated sun-dried tomato and torn basil leaves. On a balmy summer afternoon, wash down with your favorite red wine.

Poppy Seed and Parmesan Soufflés

Poppy Seed

In addition to giving visual appeal, blue poppy seeds add a pleasant nuttiness to these soufflés.

3 tbsp (45 mL) butter
½ cup (125 mL) dry white bread crumbs
¼ cup (50 mL) all-purpose flour
pinch dry mustard
pinch cayenne pepper
1 ¼ cup (300 mL) milk
4 eggs, separated
½ cup (125 mL) shredded Cheddar cheese
½ cup (125 mL) grated Parmesan cheese
2 tsp (10 mL) blue poppy seeds
Salt and freshly ground white pepper to taste

Preheat oven to 400°F (200°C). In a saucepan, melt butter over low heat. Brush six 4-inch (10 cm) ramekins with melted butter and dust inside with bread crumbs, tipping out any excess. Stir flour, mustard and cayenne into remaining butter and cook for 2 minutes. Remove from heat and gradually whisk in milk. Return to heat and cook, stirring constantly, until sauce boils and thickens. Remove from heat and let cool slightly, then add egg yolks, Cheddar, Parmesan and poppy seeds. Season well with salt and pepper.

In a large clean bowl, whisk egg whites until just stiff. Fold gently into cheese mixture. Fill ramekins to within ½ inch (1 cm) of the rim, then run your finger around the rim (to give the soufflés a good “hat”).

Bake soufflés for 8–10 minutes, or until risen and golden. They should still wobble slightly when shaken. Rush to the table before they collapse! (For a twice-baked soufflé, let cool, invert into a baking dish, cover with table (18%) cream, grated Parmesan and poppy seeds, and bake for 5 minutes at 400°F/200°C.) Serves 6.



Purslane

GREEN PURSLANE is a familiar, succulent-looking annual that has a prostrate habit, growing 6–20 inches (15–50 cm) tall (depending on soil and climate conditions), with round, pinkish green to red soft stalks and small, juicy, smooth green leaves 1–2 inches (2.5–5 cm) long. Clusters of bright yellow flowers bloom around the middle of the day and are followed by pods containing thousands of tiny black seeds. There is also another edible, golden-leaved variety but it is smaller, reaching only about 6 inches (15 cm), and is not as hardy as the green. While the leaves, seeds, flowers and even roots may be eaten, it is mainly the leaves that are of culinary importance. Purslane leaves have a fresh lemony tang with a slight hint of spinach-like bitterness (from the oxalic acid in them) and a juicy, crunchy texture. The distinctly glutinous mouth-feel, caused by its high mucilage content, may seem strange to some; however, it is barely noticeable when used in moderation. Purslane may be grown as an attractive ground cover in the herb garden, especially when the green and golden yellow varieties are planted together.

OTHER COMMON NAMES

- green purslane
- kitchen-garden purslane
- little hogweed
- munyeroo (an Aboriginal term)
- pigweed
- poor man's spinach
- portulaca

BOTANICAL NAME

- *Portulaca oleracea*

FAMILY

- Portulacaceae

FLAVOR GROUP

- mild

SUGGESTED QUANTITY PER POUND (500 G)

- vegetables: 1 cup (250 mL) fresh

COMPLEMENTS

- salads
- soups and sauces for its thickening effect
- stir-fries

Origin and History

Members of the Portulacaceae family are found all over the world and have the dubious distinction of being included among 18 of the “world’s worst weeds” in a book of that title published in 1977. Purslane was known as a food and for its medicinal properties in India, the Middle East and Australia long before it was cultivated in Europe. A number of varieties have been bred from the wild species and the green purslane in most common use today is believed to have been first developed in the Middle East, from where it spread via the ancient trade routes to other parts of the world. It was cultivated in Europe by the Middle Ages and there are records of it being grown in England in the 16th century, although it is believed to have been known in France and Italy well before then. Early Australian colonists cooked it as a substitute for spinach, hence the name “poor man’s spinach.” In India it is known as *kulfa*, and it is still collected from the wild in Africa, India, Asia and Australia.

*Purslane*

Processing

The leaves of purslane do not dry satisfactorily; however, the Aborigines of outback Australia made a sticky, gelatinous paste by grinding the leaves and stems with water, then rolling it into balls, which they either ate or dried to store for later sustenance. The minute, hard, oily-textured seeds are difficult to grind, although with sufficient patience they can be pulverized in a mortar and pestle to produce a fine flour.

Buying and Storage

Buy purslane within a day of wanting to use it as it does not keep well, and make sure the bunches look fresh and are not wilted. Cut off the roots and place the stems of the bunch in a glass or stainless steel container of water. Do not keep in aluminum as the oxalic acid reacts with alloys (in the same way that spinach does). Alternatively, the stems and leaves will keep for a day or two when sealed in a plastic bag and stored in the vegetable crisper at the bottom of the refrigerator.

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- bay leaves
- chervil
- chicory
- chives
- garlic
- nutmeg
- oregano
- tarragon
- thyme



Use

The astringency of purslane makes it an ideal accompaniment to salads, and when combined with rich foods, it has a palate-cleansing effect. The French soup known as *bonne femme* contains purslane because, like okra, the mucilage in it has a thickening effect on soups and sauces. Purslane is used in the salads of Syria, Lebanon, Greece and Cyprus. It is an important ingredient in the Middle Eastern salad *fatoush* and is also found in an Armenian cucumber and yogurt salad that has a cooling effect similar to Indian *raita*. In Asia it is added to stir-fries and eaten raw, dipped into fish sauce. In Europe the mature shoots were traditionally cooked as a *potherb*, and in a form of preservation, the pickled stems were kept for putting into winter salads. To reduce the jelly-like texture of the leaves, blanch for a few minutes in a stainless steel saucepan with the lid off (this prevents the oxalic acid from condensing and dripping back in), then rinse thoroughly and allow to cool before using. Purslane may be cooked and eaten as a substitute for spinach when prepared in the same manner and seasoned with a little nutmeg.



Rose

OTHER COMMON NAMES

- rosa
- rose hips
- rose petals
- roza

BOTANICAL NAMES

- damask rose: *Rosa damascena*
- cabbage rose, hundred-leaved rose: *R. centifolia*
- provins rose: *R. gallica*
- China rose: *R. chinensis*
- dog rose: *R. canina*

FAMILY

- Rosaceae

ROSES CONJURE up immediate emotions of romance, fragrance, beauty, color and outright sensuality. Like many fragrances associated with temptation and pleasure, the natural aroma of a fresh rose is subtle yet heady and in this form is never crass, sickly or overpowering. For me, the fragrance of roses conjures up memories of warm spring mornings spent with my father, harvesting rose petals for his famous potpourri. Friends and fellow nursery owners Roy and Heather Rumsey were famous rose growers, and in the 1950s and '60s they had many acres of stock plants on their farm at Dural, in New South Wales. The blooms on these roses were never picked for sale, so Dad and I would spend hours filling wicker baskets with fresh rose petals for later drying. Each bloom would be grabbed and just the petals plucked away, often to reveal a surprised bee who had been happily gathering pollen until we came along. Over the years we must have picked millions of blooms and kidnapped hundreds of bees,

Dried rose petals



NAMES IN OTHER LANGUAGES

- Arabic: warda, ward alaham
- Chinese (C): daaih mah sih gaak muih gwai
- Chinese (M): damashi ge mei gui
- Czech: ruze, ruze damascenska
- Danish: rose
- Dutch: roos
- Finnish: ruusu
- French: rose de damas
- German: rose
- Greek: triantafillo damaskinato
- Indian: gulab, sudburg
- Hungarian: honaposrozsa
- Indonesian: mawar
- Italian: rosa
- Japanese: damasuku-roza
- Portuguese: rosa-cha, rosa-palida
- Russian: roza damasskaya
- Spanish: rosa
- Swedish: ros
- Thai: kulaap-on
- Turkish: yagi gulu, it burnu, yabani gul
- Vietnamese: hvong, que hoa

FLAVOR GROUP

- sweet

WEIGHT PER TEASPOON (5 ML)

- dried petals: 0.3 g

yet I recall being stung only once, and that was when picking scented geraniums.

In excess of 10,000 varieties of rose are cultivated, and any scented variety can be used in food. The most popular varieties for culinary use, either as fresh or dried petals or for the manufacture of rosewater, are the damaşk rose, the cabbage rose and the provins rose. The aroma of rose petals is slightly sweet, mildly musk-like, floral, dry and comforting. The flavor is grassy and light with a lingering and appetizing dryness. Rosewater’s fragrance is remarkably true to fresh rose petals. The flavor is initially astringent and rosemary-like, yet it leaves a refreshing floral dryness on the palate. This subtle liquid has a flavoring impact far greater than one would expect, even when only a small amount is used. When the flowers are left on certain varieties of rose bushes (especially the dog rose), the red, bulbous fruit that forms is referred to as a rose hip. Rose hips have a fruity astringency and are appreciated mostly for their high vitamin C content.

Origin and History

Believed to be indigenous to northern Persia, roses spread across Mesopotamia to Palestine, Asia Minor and Greece. Roses have been cultivated since ancient times, and there are even records of Pliny giving advice on soil preparation for the best growing conditions for roses. The Persians exported rosewater to China around the time of Christ, and the lavish use of roses epitomized ancient Rome’s reputation for excess. Rose petals were strewn on floors at banquets, and brides and grooms were crowned with garlands of roses, as were the images of Cupid, Venus and Bacchus.

The word “rose” derives from the Greek word *rhodon*, which means “red,” as ancient rose blooms were deep red in color. In many languages, in fact, the word for rose derives from the word for red. An early method of rose oil production was to soak the petals in oil, making an oil infused with the aroma of roses rather than producing the volatile oil. Otto, or attar, of roses, the volatile oil, is said to have been discovered in the early 17th century, when Akbar’s son, Djihanguyr, had his wedding feast. A canal was dug surrounding the gardens and filled with rosewater for the bridal couple to row upon. They observed oil floating on the water that had been separated by the heat of the sun; when skimmed off, it had an amazing perfume. The discovery was

effectively commercialized, and by 1612 distilleries in Shiraz were producing attar of roses on a large scale. To give an idea of the level of concentration, it takes about 220 pounds (100 kg) of fresh rose flowers to produce $\frac{1}{3}$ ounce (10 g) of essential oil.

Processing

Rose petals contain very small amounts of essential oil, less than 1%, and must be harvested in the early morning, before the heat of the day has started to drive off some of the volatiles. Rose petals are dried in much the same way as herbs. Spread the petals out in a thin layer (less than 1 inch/2.5 cm deep) on clean paper or a gauze screen. Store in a warm, dark, well-ventilated area. Within a week the petals will shrivel and dry but will retain most of their color and develop an agreeable flavor.

Rose oil is produced by steam distillation and rosewater is made by steeping rose petals in water. Rosewater retains some flavor components that are lost by steam distillation, so rosewater is always recommended for culinary use, while rose oil is used mostly for perfumery.

Buying and Storage

When buying either fresh or dried rose petals to use in cooking, make sure they have been grown and produced for culinary use. This may be critical, as many roses are grown for and sold by florists, whose main objective is to have an unblemished, attractive flower. For this reason, many flowers grown for the flower markets have been subjected to heavy doses of pesticides, making them unfit for human consumption. Dried rose petals are also sold for their appearance and perfume, and to make pot-pourri. Again, many have been put on sale without any food safety considerations. For fresh petals you may need to experience the joy of growing your own. Dried rose petals suitable for food and rosewater are available from many specialty food retailers and spice shops. You may also see a bright pink product called rose syrup. This is generally made from sugar, water, rose essence, coloring and citric acid. Rose syrup is used as a dessert topping and flavoring for drinks, most commonly milkshakes. Due to its intense sweetness and lollipop-like flavor, it should not be used as a substitute for rosewater.

Store as you would other herbs and spices, away from extremes

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 6 whole fresh petals, 1–2 tsp (5–10 mL) dried, 1 tsp (5 mL) rosewater
- red meats: 10 whole fresh petals, 2–3 tsp (10–15 mL) dried, 1 $\frac{1}{2}$ tsp (7 mL) rosewater
- vegetables: 6 whole fresh petals, 1–2 tsp (5–10 mL) dried, 1 tsp (5 mL) rosewater
- carbohydrates: 6 whole fresh petals, 1–2 tsp (5–10 mL) dried, 1–1 $\frac{1}{2}$ tsp (5–7 mL) rosewater

COMPLEMENTS

- rice and couscous
- ice cream
- shortbread and cakes
- Indian sweets (gulab jamun)
- Iranian and Turkish sweets
- Moroccan tagines

USED IN

- ras el hanout
- fragrant sweet spice blends

of heat, light and humidity. Although humidity will not affect rosewater, it will last longer when kept away from light.

COMBINES WITH

- allspice
- cardamom
- cassia and cinnamon
- cloves
- coriander seed
- fennel seed
- ginger
- lavender
- mahlab
- mastic
- nutmeg
- poppy seed
- saffron
- vanilla
- wattleseed

Use

To many Westerners, the notion of using flowers such as roses and lavender to flavor food seems unusual, but as a result of ever-broadening exposure to different cultures and cuisines, these traditional flavor enhancers are finding new devotees. Rose petals have been used to flavor wines and liqueurs for centuries, the sickly-sweet Bulgarian rose liqueur being one of the best known today. Rose petal jam is made in the Balkans, and I remember my mother making a rose hip conserve. Crystallized rose petals are used to decorate cakes along with other edible flowers such as violets. Rose petals are often used in ras el hanout, the exotic Moroccan spice blend, and I make a heavenly (if I do say so myself) fragrant sweet spice blend that contains dried rose petals, along with allspice, cassia, cinnamon, cloves, ginger, nutmeg and poppy seeds. This deluxe mixed spice complements sponge cakes, shortbread, pancakes and desserts with bananas. Rose vinegar to add to salad dressings can be made by steeping fresh or dried rose petals in vinegar for a few weeks. Fresh rose petals garnish salads and are particularly appropriate when served with tagines, Persian rice dishes and spiced couscous.

Rosewater flavors the Indian gulab jamun (*gulab* meaning “rose”), a dessert of deep-fried balls of condensed milk and flour served with a sweet syrup. It also complements strawberries when added along with a cinnamon stick to sugar syrup (1 tsp/5 mL to 1 cup/250 mL water and ½ cup/125 mL sugar) and used as a glaze.

Rose Petal Macaroons

Rose

Enjoy these macaroons on their own, or sandwich them together with some rosewater-flavored whipping cream or mascarpone.

- 3 oz (90 g) ground almonds
- 6 tbsp (90 mL) confectioner's (icing) sugar
- 3 egg whites
- 4 tbsp (60 mL) superfine (caster) sugar
- 2 tsp (10 mL) chopped dried rose petals
- 4–5 drops rosewater
- 3 drops vanilla

Preheat oven to 325°F (160°C). Mix together almonds and confectioner's sugar. Beat egg whites until stiff, then beat in superfine sugar, 1 tbsp (15 mL) at a time, until meringue is thick and glossy. Gently fold in almond mixture, rose petals, rosewater and vanilla until well combined. Spoon mixture into a piping bag and pipe small macaroons, about 1½ inches (4 cm) in diameter, onto baking sheets lined with parchment paper. When they are all piped, wet your finger to smooth the tips so they don't burn. Let macaroons stand for 10 minutes to develop a little skin. Bake in preheated oven for 10 minutes, or until macaroons are just changing color and peeling off the baking sheet (they will still be spongy and should not be brown). Let cool slightly, then carefully remove to a wire rack to cool completely. Makes 20–25.



Rosemary

ROSEMARY IS a hardy, sun-loving perennial shrub. There are two main varieties: an upright plant that grows to 5 feet (1.5 m) tall, with a stiff, bushy appearance making it suitable for hedges; and a low-growing prostrate variety that is no higher than 12 inches (30 cm). Although there are some other varieties of rosemary — one with white flowers and another with gold-edged leaves — they are rarely seen or used for culinary purposes. Prostrate rosemary grows particularly well in rockeries and on top of retaining walls, where it can spill down over the sides, making an attractive, fragrant display. Both prostrate and upright rosemary have similar woody stems and leathery, needle-like leaves. Each leaf is dark green and glossy on top with a longitudinal crease down the middle. Its edges have the appearance of being neatly rolled down. The leaf underside is dull, pale gray-green, and concave with a central rib underneath. When viewed from this angle, its rolled edges make it look like a miniscule canoe. The leaves of upright rosemary are about 1 inch (2.5 cm) long, whereas prostrate rosemary leaves are almost half the size. The flowers of prostrate rosemary are also smaller and a delicate Wedgwood blue.

Rosemary leaves, when bruised, give off an aroma that is fragrant, pine-like, cooling, minty and refreshingly head-clearing with hints of eucalyptus. Their flavor is astringent, pine-like, peppery, warming, woody and herby, with a lingering camphor-like aftertaste. Upright rosemary is a little more pungent than the prostrate variety; otherwise, their sensory characteristics are the same. When dried, the rolled edges of rosemary leaves curl tightly in minute scrolls, losing their flat appearance and becoming like hard, curved pine needles. These are often cut into $\frac{1}{4}$ inch (0.5 cm) lengths to make them easier to use. When dry the flavor remains pungent, woody and pine-like but does lose some of the volatile “green” notes.

OTHER COMMON NAMES

- old man
- polar plant
- compass weed
- compass plant

BOTANICAL NAMES

- upright rosemary:
Rosmarinus officinalis
- prostrate rosemary:
R. prostratus

FAMILY

- Lamiaceae (formerly Labiatae)

Origin and History

Rosemary is native to the Mediterranean region and gets its botanical name from *ros* (dew) and *marinus* (sea), in reference to the areas around the Mediterranean, where it grows so



Clockwise from top left: dried rosemary; freeze-dried rosemary; fresh rosemary; ground rosemary

abundantly. Rosemary thrives in sandy, well-drained soils and in misty, sea-spray-filled air. Dioscorides recognized the medicinal qualities of rosemary, as did Pliny in the first century AD. Many legends surround rosemary, a herb that has been respected for all its virtues for thousands of years. One such legend is that rosemary had plain white flowers until Mary, fleeing into Egypt with the Christ child, threw her blue robe over a rosemary bush while they rested beside it. The flowers then ceased to be white and turned forever into the blue color of her garment; thus the herb was referred to thereafter as “rose of Mary.” Another holy story is that the rosemary bush will never grow taller than the height of Christ (less than 6 feet/2 m).

It is believed that rosemary was introduced into Britain by the Romans and was probably in cultivation there before the Norman Conquest, as its medicinal qualities are mentioned in an 11th-century Anglo-Saxon herbal. Rosemary’s culinary use with salted meats was customary in Europe in the Middle

NAMES IN OTHER LANGUAGES

- Arabic: ikلیل al-jabal
- Chinese (C): maih diht heung
- Chinese (M): mi die xiang
- Czech: rozmaryna
- Danish: rosmarin
- Dutch: rozemarijn
- Finnish: rosmariini
- French: romarin
- German: rosmarin
- Greek: dentrolivano
- Hungarian: roxmaring
- Italian: rosamaria
- Japanese: mannenro
- Portuguese: alecrim
- Russian: rozamarin
- Spanish: romero
- Swedish: rosamarin
- Thai: rosmari
- Turkish: biberiye, hasalban, kUSDili
- Vietnamese: la huong thao

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole dried leaves: 1.8 g
- ground: 1.6 g

Ages and one of the first essential oils distilled by Raimundus Lullus in 1330 was oil of rosemary. Rosemary twigs were burnt as incense in 17th-century English courtrooms to protect the court officials from diseases and jail fevers carried by the unfortunate prisoners brought before them. French hospitals would similarly burn rosemary and juniper, thereby preventing the spread of infections by sanitizing the air.

Rosemary’s stimulating and health-giving properties are well documented, many of them primarily associated with functions relating to one’s head. Rosemary hair rinses are said to promote vigor and growth, and Greek scholars used to wear sprigs of rosemary entwined among their locks to help them commit their studies to memory. On a day when you are finding deep concentration elusive, crush some fresh rosemary leaves and deeply inhale their stimulating aroma. As the penetrating vapor courses through your brain cells, a clarity of mind and purposefulness of thoughts will emerge! The association with memory, lovers’ fidelity and remembrance is a long one. The famous quotation of Ophelia’s words to Laertes in Shakespeare’s *Hamlet*, Act IV, scene 5, “There’s rosemary, that’s for remembrance; pray love, remember,” immortalized a sentiment that prevails today. In Australia, sprigs of rosemary are worn on ANZAC day, in remembrance of the soldiers who died at Gallipoli in the First World War.

On a personal note, my mother (who wrote Australia’s first book on herbs in the late 1950s) was christened Rosemary in memory of her elder sister. The baby died aged three months after a difficult birth and feeding problems, a tragedy for my courageous English grandmother and my swashbuckling, pearling-master grandfather in the then remote town of Broome, in the northwest of Western Australia.

Processing

Rosemary must be dried immediately after harvesting to prevent the loss of volatile oils. This is achieved by hanging freshly cut bunches in a dark, well-aired, warm place for a few days. When the leaves are quite dry, they can be easily stripped off the stems and crumbled into small pieces to help them soften and disperse their flavor in cooking. Rosemary oil, a colorless volatile oil used in the manufacture of confectionery, processed meats, beverages, soaps and perfumes, is produced by steam distillation.

Buying and Storage

Because the texture of dried rosemary is so hard and it takes so long to soften (if ever) in cooking, buy fresh rosemary whenever possible or, better still, experience the joy of growing your own upright or prostrate variety in a pot or garden. Sprigs of fresh rosemary will keep for a week or more when the stems are immersed in a little water that is renewed every few days. Alternatively, sprays of fresh rosemary may be wrapped in foil, sealed in a plastic bag and stored in the freezer for some months.

When stripping fresh rosemary leaves from the stem, always hold the stem by the bottom end in one hand, and with the thumb and forefinger of the other hand, pluck each leaf off in an upwards motion. Pulling leaves off in a downwards action will tear off a strip of coarse outer stem bark, the texture of which is unpleasant to eat.

Dried rosemary is widely available, and while the little cut pieces have a surprisingly well-concentrated flavor, good-quality powdered rosemary is quite strong and convenient to use. Normally I would never recommend buying ground dried herbs, as their already delicate volatile oils are all but dissipated by the grinding process. Rosemary, however, does seem to be an exception when you consider how tasty a little powdered rosemary is when sprinkled on lamb cutlets before grilling. Freeze-dried rosemary looks like the fresh herb and softens readily in cooking; however, it lacks the concentration of volatile oil found in conventionally dried rosemary.

Use

The astringent, fresh, savory taste of rosemary complements starchy foods; it is delicious in herb scones, dumplings and breads; and it counters the richness in meats such as pork, lamb and duck. The Italians love it, their butchers often putting a complementary sprig of fresh rosemary in with cuts of lamb. In some countries where rosemary grows profusely, the locals would not dream of eating it, describing the taste as violent and only fit for peasants. On a visit to the southeastern town of Gaziantep in Turkey, we were surprised to learn that their beautiful rosemary bushes were never used to season the copious quantities of lamb they consume. Rosemary's unarguably powerful flavor does not overpower a dish when matched with other strong ingredients like garlic and wine.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 2 tsp
(10 mL) fresh, 1 tsp
(5 mL) dried
- white meats: 1 ½ tsp
(7 mL) fresh, ¾ tsp
(4 mL) dried
- vegetables: ¾ tsp
(4 mL) fresh, ½ tsp
(2 mL) dried
- carbohydrates: ¾ tsp
(4 mL) fresh, ½ tsp
(2 mL) dried

COMPLEMENTS

- scones
- dumplings and breads
- pork
- lamb and duck
- mashed potatoes
- soybeans
- pâtés and game
- zucchini and eggplant

USED IN

- Italian herbs
- seasoned stuffing mixes

COMBINES WITH

- ajowan
- basil
- bay leaves
- coriander seed
- garlic
- marjoram
- nutmeg
- oregano
- paprika
- sage
- savory
- tarragon
- thyme

I like to add $\frac{1}{2}$ tsp (2 mL) finely chopped fresh rosemary to mashed potatoes and soy or butter beans. A sprig of fresh rosemary will enhance most casseroles. Try putting a sprig in a bottle of olive oil to infuse, then brush the flavored oil on pita bread before grilling it on the barbecue. One of my favorite basic meals is a leg of lamb with sprigs of rosemary and slivers of garlic stuffed into slits on the outside, and liberally dusted with sumac and sweet paprika before roasting. Rosemary is used in liver pâté and it goes well with game including venison, kangaroo and rabbit. Vegetables such as zucchini, eggplant, Brussels sprouts and cabbage are all enlivened by the fresh, resinous taste of rosemary. Rosemary scones, made by adding 1 tbsp (15 mL) of freshly chopped rosemary to enough savory scone mixture for about a dozen scones, are delicious. Serve hot spread with butter. Not even the crumbs will be left.



Leg of Lamb Stuffed with Olives, Grapes and Rosemary

Rosemary

Roast lamb with rosemary was my favorite meal when I was young, and this contemporary take on it is difficult to surpass.

Stuffing

- 1 egg, beaten
- 1 red onion, chopped
- 1 clove garlic, crushed
- 1 cup (250 mL) fresh whole wheat bread crumbs
- 1 cup (250 mL) red grapes, quartered
- ½ cup (125 mL) kalamata olives, pitted
- ½ cup (125 mL) chickpeas, cooked and mashed
- 2 tsp (10 mL) finely chopped fresh rosemary
(or 1 tsp/5 mL good-quality dried rubbed rosemary)
- ½ tsp (2 mL) ground cumin seeds
- 1 boneless leg of lamb (about 4 lbs/2 kg)
- olive oil, for rubbing
- salt and freshly ground black pepper to taste
- 1 ½ lbs (750 g) potatoes, peeled and cut into 2-inch (5 cm) cubes
- 8 cloves garlic, crushed
- 4 sprigs fresh rosemary
- ¼ cup (50 mL) olive oil

Preheat oven to 425°F (220°C). Combine all stuffing ingredients and place on inside of lamb, then roll up and use oven-proof string to tie leg together, encasing stuffing well. Rub olive oil over the outside and season with salt and pepper. Roast for 20 minutes, then turn oven down to 375°F (190°C) and roast for 1 hour and 50 minutes, until a meat thermometer inserted in the thickest part of the lamb registers 150°F (65°C) for medium-rare, or until desired doneness.

Meanwhile, ensure potatoes are dry and place in a roasting pan, along with garlic and rosemary. Coat with olive oil and season with salt and pepper. Add to the oven 40 minutes before the lamb is done and roast, shaking pan 2 or 3 times.

Let lamb rest, covered, for 10 minutes before carving. Serve with roasted potatoes on the side. Serves 4–6.



Safflower

OTHER COMMON NAMES

- American saffron
- bastard saffron
- dyer's saffron
- fake saffron
- false saffron
- flores carthami
- saffron thistle
- Mexican saffron

BOTANICAL NAME

- *Carthamus tinctorius*

FAMILY

- Asteraceae (formerly Compositae)

NAMES IN OTHER LANGUAGES

- Arabic: asfour
- Chinese (C): daaih huhng faa
- Chinese (M): da hong hua
- Czech: svetlice barvirská
- Danish: farvetidsel, safflor
- Dutch: saffloer
- Filipino: casubha
- Finnish: varisaflori, saflori
- French: carthame, safran bâtard
- German: farberdistel, saflor
- Greek: knikos
- Hungarian: magyar pirosito
- Indian: kasubha

INFAMOUS FOR its history of being passed off as saffron, safflower is a stiff, thistle-like, upright plant with a whitish stem branching near the top. The serrated-looking leaves are oval, spiny, sharp-pointed and about 5 inches (12 cm) long. The $\frac{1}{2}$ -inch (1 cm) long, tubular flowers may be bright yellow, orange or red, depending on variety. They are made up of many spiky florets, which are followed by small, light gray seeds that produce the increasingly popular, polyunsaturated, golden-colored safflower cooking oil. Dried safflower petals are $\frac{1}{4}$ - $\frac{1}{3}$ inch (5–6 mm) long and generally range from yellowish brown and rust red to bright yellow, flaming orange and brick red. The imaginative could say they resemble a saffron stigma because of their feathery look. The aroma is sweet and leathery, possessing a somewhat bitter taste that does not linger.

Origin and History

The origins of safflower are not known for sure, but some researchers believe it is native to Egypt and Afghanistan, while others say India. The botanical name derives from *kurthum*, the Arabic word for dye, and *tinctor*, meaning “dyer.” In many languages, the names for safflower make some reference to color or dyeing. The majority of cultivation has been undertaken for the oilseed, and it is grown principally for this purpose in the Middle East, China, India, Australia, South Africa and southern Europe, among other places. The flowers are used extensively as a substitute for saffron. The spice traders in the markets of Istanbul look you in the eye as they say, “Yes, it’s real Turkish saffron!” It has been a dye for silk and cotton and when mixed with French chalk (talcum powder) is known as rouge.

Processing

Safflower petals contain two coloring agents: carthamin, a red dye extracted by treating the flowers with an alkaline solution; and safflor-yellow, a yellow pigment removed by repeated soaking in water. Flowers are gathered twice a week, and for oilseed collection the plants are cut when the seeds are ripe, followed by threshing and winnowing to remove the seeds.

Buying and Storage

SAFFLOWER

When it comes to buying saffron there is no creature more gullible than the enthusiastic tourist, haggling over piles of golden yellow strands in the spice markets of Istanbul, or for that matter in any other exotic location. I was most amused (and proud) when Liz fixed on the eye of one such trader hawking his “real Turkish saffron” that was actually safflower. She said to him with an icy gaze, “That’s not saffron,” to which he replied, “Of course it’s not” and continued shouting to the unaware, “Real saffron, real Turkish saffron!” Unfortunately, in most countries, Australia, England and the United States included, it is a rare spice trader indeed who will sell safflower petals as “safflower.” The Indians call it *kasubha*, and in the Philippines it is known as *casubha*, names that should appear somewhere on a packet of safflower. Store in the same way as other spices, in an airtight pack, in a cool, dark place.

Use

Safflower florets are used to color food in the same way as saffron, the incentive being that safflower is about one-hundredth of the cost of real saffron stigmas, although it has none of the flavor of saffron. Safflower does color food effectively in Spain, where it is added to soups and rice dishes. In Poland, safflower colors confectionery and bread. Because the florets can range from $\frac{1}{3}$ inch (8 mm) pieces to bits of dust, it is advisable to first infuse them in a little warm water for five minutes, then drain off the orange-colored liquid and add it to the dish.

Safflower petals



NAMES IN OTHER LANGUAGES

- Italian: cartamo, falso zafferano
- Japanese: benibana
- Portuguese: cartamo, acafrao-bastardo
- Russian: saflor
- Spanish: cartamo
- Swedish: safflor
- Thai: kham nhong
- Turkish: aspur, yalanci safran
- Vietnamese: cay rum, hong hoa

FLAVOR GROUP

- mild

WEIGHT PER TEASPOON (5 ML)

- whole: 0.6 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 12 florets
- white meats: 12 florets
- vegetables: 12 florets
- carbohydrates: 12 florets

COMPLEMENTS

- soups
- rice dishes
- confectionery
- breads

USED IN

- not commonly used in spice blends

COMBINES WITH

- all herbs and spices when used as a coloring agent



Saffron

THE SAFFRON crocus is an autumn-flowering ornamental perennial that belongs to the lily family and only grows to about 6 inches (15 cm) tall. The true saffron crocus must not be confused with an extremely poisonous plant, which grows wild in Britain and is an ornamental garden flower in Australia, called autumn crocus or meadow saffron (*Colchicum autumnale*). The real saffron has purple flowers, six stamens and three styles, a distinguishing feature being its leafless, solitary flower stalks — it bears no leaves until after blooming in autumn.

A saffron crocus's below-ground corms (bulbs, which by the way are poisonous) resemble an onion in appearance. These corms send up long gray-green, chive-like leaves that surround the striking, lily-like, blue to violet flower with its protruding, vividly contrasting, bright orange stigmas and fluffy yellow, pollen-bearing stamen. The sterile stigmas (the pollen-collecting female organs of a flower) are sometimes incorrectly called stamens, the male organs of a flower that produce pollen. Each flower has three stigmas that are connected into the base of the bloom by a fine, pale yellow thread called the style. Dried saffron stigmas separated from the style are $\frac{1}{3}$ – $\frac{2}{3}$ inch (6–12 mm) long, dark red, thin and needle-like at one end, broadening slightly until they fan out at the tip in a buisine (straight trumpet) shape. While the bouquet, flavor strength and color of saffron will vary depending upon origin and quality, saffron may be described as having a woody, honey-like, oaked-wine, tenacious aroma and bitter, lingering, appetite-stimulating taste. The pungent aroma in saffron comes from safranal and the earthy, bittersweet flavor from picrocrocin. Some grades of saffron can contain a percentage of pale yellow style, which although lacking the coloring strength of the stigmas still manages to impart a classic saffron taste. The most treasured component of saffron is its powerful, water-soluble dye crocin, a natural colorant, held within the blood red stigmas. When released, saffron tints like nothing else; it is as if pure sunshine had been magically infused to create the orange-yellow of first light over a crocus-colored sea.

OTHER COMMON NAMES

- azafran
- Asian saffron
- Greek saffron
- Italian saffron
- Persian saffron
- true saffron

BOTANICAL NAME

- *Crocus sativus*

FAMILY

- Iridaceae



Kashmiri saffron stigmas

Origin and History

Opinions differ on the precise origins of saffron, a spice whose history stretches back to the dawn of civilization. An intriguing fact about saffron is that although around 90 varieties of crocuses have been identified, all cultivated saffron crocuses (*C. sativus*) around the world are identical, suggesting they came from a common source. This was most probably Greece or Asia Minor, where forms of *C. sativus* are known in the wild state. The first reference to its cultivation dates back to 2300 BC, its cosmetic applications were described in the Ebers Papyrus (1550 BC), and Alexander the Great discovered it growing in Kashmir in 326 BC (although it was not indigenous to the region). In ancient Greece and Rome, saffron was scattered on the floors of theaters and public halls, where its pervading fragrance must have sweetened the air.

When one first hears of saffron being used in these ways, it is natural to wonder if this is a romanticized notion of saffron's redolence. The power of its bouquet was dramatically demonstrated to me on the day our first shipment of saffron arrived from Kashmir. I had spent about 30 minutes carefully packing 1-gram lots of saffron from a beautifully decorated bulk 2-pound (1 kg) tin. As soon as I came into the shop from the packing room, a separate building, Liz said, "Have you been packing saffron?" The semi-sweet, woody aroma was so strong that it had permeated my clothes in that short time.

The smell of saffron always reminds me of when I was working in Singapore. Because it is so valuable I used to keep

NAMES IN OTHER LANGUAGES

- Arabic: za'faran, zafran
- Chinese (C): faan huhng faa
- Chinese (M): fan hong hua
- Czech: safran
- Danish: safran
- Dutch: saffraan
- Finnish: saframmi
- French: safran
- German: safran
- Greek: krokos, safrani
- Indian: zafran, zafran, kesar, kesari
- Indonesian: kunyit kering
- Italian: zafferano
- Japanese: safran
- Malay: koma-koma
- Norwegian: safran
- Portuguese: acafrao
- Russian: shafran
- Spanish: azafran
- Swedish: safran
- Thai: ya faran
- Turkish: safran, zagferan
- Vietnamese: mau vang nghe

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole: 0.7 g
- ground: 1.5 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 8–12 stigmas
- white meats:
8–12 stigmas
- vegetables: 8–12
stigmas
- carbohydrates:
8–12 stigmas

COMPLEMENTS

- Indian rice dishes
- Italian risotto and
Spanish paella
- seafood and chicken
dishes
- breads
- couscous

USED IN

- ras el hanout

COMBINES WITH

- all herbs and spices
when used in
moderation

about 4 pounds (2 kg) locked in the top drawer of my desk. As a result, all the papers in it had the distinctive smell of saffron, and the aroma always seemed to permeate my office. Much more pleasant (and costly) than room freshener! I'm glad smelling saffron daily did not have any of the side-effects the famous herbalist Nicholas Culpepper wrote of: "for when the dose is too large, it produces a heaviness in the head, a sleepiness; some have fallen into an immoderate convulsive laughter, which ended in death."

Saffron was valued as a spice, as a dye and for its medicinal properties by the ancient Greeks, Romans, Persians and Indians. It is referred to as *karcom*, a name used by the Romans, in the Song of Solomon in the Old Testament, written 1,000 years before the birth of Christ. The Greeks called it *krokos*, from the word *croci*, which means "the weft" — a thread used for weaving on a loom. The name "saffron," bequeathed by the Moorish traders who introduced it to Spain in AD 900, derives from the Arabic *sahafarn*, "thread," and *za'faran*, meaning "yellow." In the first century AD, Apicius described sauces infused with saffron for fish and fowl, as well as the use of saffron to enhance wine-based aperitifs, and in a statement that borders on the obvious, Pliny warned that saffron was "the most frequently falsified commodity." Even in a time when labor was relatively cheap, the fact that the stigmas of around 200,000 flowers are required to produce about 2 pounds (1 kg) of saffron was not lost on anyone, and as a consequence its value has often been compared to that of gold. In AD 220, the extravagant Roman emperor Heliogabalus was said to have bathed in saffron-scented water, and in a less wasteful application, Cleopatra enhanced her beauty and prevented blemishes with a face wash of saffron.

The Phoenicians were great saffron traders and supplied the Romans with saffron from Corycus (now Korghoz), in the Turkish region of Cilicia. In fact, the Romans considered saffron from Cilicia to be the best quality. Following the introduction of saffron to Spain between the eighth and ninth centuries by the Moors, the La Mancha region, in the high searing summer and freezing winter geographic center of Spain, became one of the world's most famous areas for saffron production. Although Spain now produces less than 1% of the world's saffron, tradition is so entrenched in the village of Conseugra, not far from Toledo, that an annual saffron



festival is held there in the last weekend of October to celebrate the year's saffron harvest. I will never forget standing in a field of deep purple saffron flowers on the plains of La Mancha, looking over the picturesque village nestled in front of a ridge topped by "Don Quixote" windmills.

Saffron is believed to have been introduced to Italy, France and Germany during the 13th century by the Crusaders, who, having developed a liking for saffr  n, brought corms back with them from Asia Minor. Cultivation of saffron commenced in England in Essex in the 14th century, and such was its success that by the 16th century the town of Chypping Walden had been renamed Saffron Walden and its coat of arms bore three saffron crocuses. As possibly the only true spice that has ever been exported to the East from England, saffron production from Essex thrived for some 400 years, spurred on by the global fascination with this exotic spice and the domestic fabric and dyeing industries that developed in the area. By the 18th century, commercial cultivation of English saffron had all but ceased; according to historians, its decline was hastened by greater availability of lower-cost imports and the invention of chemical dyes. Though English saffron loyalists may disagree, from my observations of other culinary herbs and spices, I suspect that saffron grown in the harsher climates of Spain, Kashmir, Iran and the Greek prefecture of Kozani probably had a greater strength of color and pungency of aroma than did saffron from Essex.

Consumer protection laws are nothing new and it seems that offences relating to the adulteration of saffron have earned the perpetrators some of the most severe punishments for transgression ever witnessed. Because of its high value, saffron is the most adulterated, copied and misrepresented spice known. In Germany in the 15th century, the adulteration of saffron was taken so seriously that there was a committee called the *Safranschau*, a group of inquisitors who punished "adulterers" and dispensed justice by burning offenders at the stake or burying them alive with their impure spice. Such harsh penalties only acted as a minor deterrent, as human nature is difficult to change when it comes to maximizing profits. Although the adulteration of saffron is not as much an art form today as it was in the 15th century, there are still instances of safflower petals, turmeric, cornsilk, dyed coconut fiber, red-colored extruded strands and dark red gelatin strips all being passed off as saffron, especially to unsuspecting tourists.



Processing

The processing of saffron is a centuries-old tradition, all the more revered because of saffron's high value and importance to the economies of the regions in which it is grown. As the saffron crocus is sterile, propagation is achieved by dividing the cormlets that form around the plant's main corm (bulb). In some countries, saffron will be left in the field for five years or more to keep producing; in others, the previous season's corms will be dug up in spring and replanted at the height of summer.

The saffron harvest takes place over a short period, often less than three weeks, during which time nearly every inhabitant of the town, including all generations, will work around the clock to bring in the harvest. Each plant produces up to three flowers on consecutive mornings. The backbreaking work of gathering blooms commences at dawn, before the sun becomes too hot. The next stage of removing the precious stigmas is generally carried out indoors, where nimble-fingered womenfolk, including grandmothers and great-grandmothers, work deep into the night to keep pace with the baskets full of blue, shell-like flowers coming in from the fields. The finger-staining, wet red stigmas are dexterously plucked by squeezing the style between thumb and forefinger and gently pulling it out of the base of the flower with its three stigmas. One of the highlights of the Conseugra saffron festival, in addition to the plowing competition and the crowning of the "Dulcinea," was the saffron grading (plucking) competition. About a dozen contestants were seated at a long table on a stage in the village square. The first heats began with the children, and by mid-afternoon it was the adults' turn, grandmothers who had been doing this for years locked in the competitive battle for supremacy, tempered by huge smiles and great hilarity. Each contestant was given 30 blooms and a white plate. The start signal went after a "*tres, dos, uno*" countdown, and a dozen dexterous pairs of hands went to work. The first contestant to complete grading her 30 blooms leapt up, waving her arms in the air like a world championship wrestler. Then the judges scrutinized the results. For each stigma left in a flower one point would be lost, and for each stamen accidentally plucked and sitting with the blood red stigmas on the white plate another point was forfeited. The saffron festival in Conseugra was one of our most enjoyable and memorable spice experiences, made all the more so by the good humor and hospitality of the locals.

There is no flavor or aroma when the stigmas are fresh because these attributes only develop when the spice is cured (dried) to a moisture level of 12%. While exact methods of drying will vary somewhat from region to region, the plucked saffron stigmas and their connecting pale styles will tend to be dried in a sieve over hot charcoal embers. In the case of Greek saffron from Kozani, the wet stigmas are dried on silk-lined trays at room temperature, yielding a good-quality, very dark red saffron. Whatever the process, care needs to be taken to ensure the moisture is removed without any overheating or scorching that would cause a loss of aroma and flavor. Fresh saffron stigmas lose about 80% of their weight in the drying process, which means a region producing 11 tons of saffron in a year has harvested at least 55 tons of fresh saffron!



Buying and Storage

The most basic principle to bear in mind when buying saffron is the same one you would apply to purchasing diamonds, gold or any other precious commodity — only buy from a reputable source. The unscrupulous and (perhaps) the ignorant have sold turmeric as Indian ground saffron and safflower petals as saffron threads. Saffron is arguably the world's most adulterated spice, and I have been astounded by the ingenious methods used to falsify saffron stigmas. Dyed lengths of corn silk and coir are not uncommon, but the most creative counterfeit version I've seen was made from dark red gelatin shaved into saffron-sized threads. The giveaway was that they dissolved after 10 minutes in hot water. I was recently given a sample of saffron that had almost no aroma and looked quite similar to the real thing. When I infused it in a glass of hot water for 10 minutes and held it up to a fluorescent light, I could see that over 50% of the "saffron" was made up of pale mauve shreds. These were saffron petals that had been dyed; when the dye leached out, the original crocus-petal color was revealed.

True saffron stigmas may be referred to as filaments, threads, strands, silks, fronds, stems, blades, chives or pistils. Like the purveyors of many valuable commodities, saffron producers have established recognizable standards to help traders know what they are buying. The two most common grades are filaments with the pale style attached and pure stigmas separated from the style. Saffron with style attached (you will notice the wiry, pale yellow, cotton-thread-thick strands) should be about

20% cheaper than pure stigmas. Spanish and Kashmiri saffron with the style attached is referred to as Mancha grade, and in Iran it is called poshal. Pure stigmas cut from the style are named coupe for Spanish and Kashmiri, stigmata for Greek and sargoal in the case of Iranian saffron. Within these main grades there will be a number of sub-grades, each determined by a detailed analysis to establish key characteristics such as picrocrocin and safranal content, crocin (color) and percentages of floral waste and extraneous matter.

Saffron is also available in powdered form, but unless you are absolutely confident as to its grade and purity, I would recommend grinding your own when confronted with a recipe that specifically calls for saffron powder. Saffron is easily ground by lightly toasting the stigmas in a hot, dry pan, then crushing them in a mortar and pestle or between two spoons.

Every producer of saffron will tell you theirs is the best; however, beauty being in the eye of the beholder, I would prefer to say they tend to have different attributes relating to their aroma, flavor, color and relative cost. From my observations, the following characteristics seem to be prevalent in these types of saffron.

The Spanish have undoubtedly implemented the most effective marketing job on saffron over the last half of the 20th century, with many food pundits committed to it and some even believing it to have its origins in Spain. The best Spanish saffron is very good, but it must be remembered that in any industry the incidence of variation in quality can be significant. For instance, I have seen saffron on sale in Toledo, obviously aimed at tourists, that has much more than the acceptable 20% of style in a pack of Mancha grade.

Kashmiri coupe saffron is similar to the premium-grade Spanish, with a distinct, somewhat exotic “woody” odor that is lingering and dry in the nose after smelling. Color infusion into warm water is rapid enough (5–10 minutes) to be convenient, but not so fast as to raise suspicion of artificial dyes being added.

Greek saffron sold by the Saffron Producers Cooperative of Kozani, based in the town of Krokos, is strictly controlled and claims to have the highest crocin content of any saffron. It is dark red, with an aroma and taste profile like saffron from Spain and Kashmir. Most noticeable is the stigma’s tendency to retain its dark red color, even after some hours of infusion.



Iran produces in excess of 90% of the world's annual production of 185 to 220 tons of saffron. Southern Khorasan, where largely traditional farming practices are used, is one of the principal areas for saffron production. Traditional and subsistence methods of agriculture benefit from centuries of cultural and biological evolution that has adapted to local conditions. In notes from the proceedings of the First International Symposium on Saffron Biology, held in 2004, reference was made to animal manure used to fertilize crops. Apparently, in central Iran they used to construct pigeon towers with thousands of pigeonholes arranged in such a way that the bird droppings would fall into the middle of the floor to facilitate collection and use. Sadly, traditional farming without the use of chemicals still has to be certified for its produce to be sold as organic. Although regulations have their role, many traditional and subsistence farmers do not have the resources to pay for such certification and are therefore unable to benefit from their genuine point of difference. Iranian *sargol* saffron has a distinct floral note unlike that of the other varieties, and it goes well in Middle Eastern recipes. Iranian saffron stigmas are usually one-half to two-thirds the cost of the others and seem somewhat shorter in length and more brittle in texture, although their color strength is comparable. The brittleness of Iranian saffron makes it relatively easy to crush to a powder.

Limited supplies of saffron from Tasmania are becoming available, unfortunately at a very high price thanks to the high cost of labor. Tasmanian saffron rates highly on color strength but lacks the lingering pungency of saffron from harsher, more extreme climates. Time will tell if sustained cultivation can produce a more robust product.

Because of its high cost and the efficacy of such a small quantity, saffron is usually sold in ½-gram or 1-gram packs. The price does fluctuate to some degree as a result of supply, which can be affected by climatic conditions and world demand. At the beginning of the 21st century, 1 gram of pure saffron stigma costs about the same as ½ gram of gold. When one considers the magical hue and unique flavor saffron adds to a dish, this is still a small investment for so much pleasure. Store saffron in the same way as other spices, in an airtight container kept away from extremes of heat, light and humidity. Do not store saffron stigmas in the refrigerator or freezer.

Use

Saffron's greatest hallmark is the phenomenon of its golden yellow dye being water-soluble. The saffron robes of Buddhist monks are dyed with saffron, and although some writers have stated that saffron is unsuitable as a dye for cloth because it washes out, this is not the case when a mordant (color fixative) such as alum (salts of aluminum and potassium) is used. Saffron is a spice that needs to be infused in a liquid for most applications, then the sunlight-colored tincture is added to the dish to perform its magic. A pinch of saffron (depending upon the cook's interpretation, this can be anything from 10 to 30 stigmas; I would say 10) will deeply color 2–3 tablespoons (25–30 mL) of warm water, milk, alcohol (for instance vodka or gin), orange blossom water or rosewater. The color will start to leech out of these strands within seconds of being immersed, and over a period that may range from five minutes to several hours each stigma will swell and become pale as it yields its precious pigment. Once I tried to make saffron oil by infusing saffron strands in warm oil, in the same way that you make a rosemary or chili oil. It didn't work: the oil served as a sealant on the stigmas of saffron, locking in the water-soluble color and their flavor.

As more than two-thirds of the color of saffron will infuse in the first 10 minutes, it is not essential to let it stand for many hours. For those who use saffron regularly, a quantity may be left to stand in liquid overnight. Drain off the solution the next day and pour the saffron water into an ice-cube tray, then freeze until you need a little instant saffron.

Saffron is used traditionally to color Indian rice dishes, Italian risotto and Spanish paella. Its unique flavor and radiant color go well with fish, seafood and chicken. The famous Cornish saffron cake, a spicy yeast cake containing dried fruit, is colored with saffron, as is the French seafood soup bouillabaisse. The exotic Moroccan spice blend ras el hanout contains whole saffron stigmas that impart their flavor to chicken and lamb tagines and color spiced couscous. Rich, creamy Moghul dishes often contain saffron, as do pilaus and biryani, some sweets and ice creams. In these applications I like to infuse the stigmas in rosewater. Be careful not to add too much saffron to a dish, as an excessive amount will create a bitter, medicinal taste.

When cooking rice by the absorption method, an interesting way to use saffron is to add it after the water has begun to be absorbed (about 10 minutes in). Infuse a dozen

stigmas in warm water when you put the rice on, then drizzle the infusion in a figure eight over the surface of the rice, add the strands of saffron, replace the lid and cook without stirring until the rice is cooked. The moisture and steam will release the color from the saffron, and golden veins will bleed down into the white rice, creating an attractive mottled effect when it is served.

Once you start to use saffron, it's easy to appreciate its subtlety and how little is needed to achieve a rewarding result. It's fun to experiment with different infusions, observing how long it takes for various types of saffron to tint selected mediums and how they, in turn, affect the aroma and taste.



Saffron's ability to enhance both the color and flavor of a seafood dish is shown in this light golden pie.

- ¼ tsp (1 mL) saffron threads
- 2 tbsp (25 mL) warm water
- 1½ cups (400 mL) milk
- 1 lb (500 g) blue-eye cod
- 1 dried bay leaf
- 3 tbsp (45 mL) butter, divided
- 1 leek, white part only, sliced
- 1 tbsp (15 mL) freshly squeezed lemon juice
- 3 tbsp (45 mL) all-purpose flour
- pinch dry mustard
- 1 tbsp (15 mL) chopped fresh parsley
- salt and freshly ground black pepper to taste
- 1 sheet (12 inches/30 cm square) puff pastry
- 1 egg, beaten and strained, for egg wash

Preheat oven to 350°F (180°C). Soak saffron in warm water for 20 minutes, then mix into milk. Place fish, skin side up, in a roasting pan, add bay leaf and cover with milk. Cover pan with foil or parchment paper and roast for 20 minutes. Remove from oven, leaving oven on.

Meanwhile, in a frying pan, melt 2 tsp (10 mL) of the butter over low heat and sweat the leek until soft, then add lemon juice. Transfer to a bowl and set aside.

Remove fish from milk, reserving milk, and let cool slightly before removing skin and gently flaking flesh into a bowl.

In the same frying pan, melt the remaining butter over medium heat. Add flour and mustard; cook, stirring constantly, for 1 minute, until golden. Remove from heat and gradually whisk in reserved milk to form a sauce. Return to heat and cook, stirring constantly, until sauce thickens, about 5 minutes. Turn off heat and carefully stir in flaked fish, leeks and parsley. Season with salt and pepper.

Pour fish mixture into 2 individual pie dishes or one 12-inch (30 cm) shallow casserole. Place pastry on top (cut sheet in half if using individual pie dishes), trim edges and brush with egg wash. Bake for 10–15 minutes, or until pastry has risen and is golden. Serves 2.

Sage

OTHER COMMON NAMES

- garden sage
- true sage
- salvia

BOTANICAL NAMES

- garden sage: *Salvia officinalis*
- clary sage: *S. sclarea*
- pineapple sage: *S. rutilans*

FAMILY NAME

- Lamiaceae (formerly Labiatae)

NAMES IN OTHER LANGUAGES

- Arabic: mariyamiya
- Chinese (C): louh meih chou
- Chinese (M): shu wei cao
- Czech: salvej
- Danish: salvie
- Dutch: salie, tuinsalie
- Finnish: rohtosalvia, salvia
- French: sauge
- German: salbei
- Greek: alisfakia, faskomilo
- Hungarian: zsalya
- Italian: salvia
- Japanese: sage, sezi
- Portuguese: salva
- Russian: shalfey
- Spanish: salvia
- Swedish: salvia
- Turkish: adacayi

SAGE IS a hardy erect perennial that grows to around 35 inches (90 cm) tall with wiry, green- and purple-hued stems and a base that becomes woody over two or three years. Sage leaves are about $3\frac{1}{4}$ inches (8 cm) long and $\frac{1}{2}$ inch (1 cm) wide, gray-green, rough yet downy and pebbly-textured on top. The underneath is deeply veined and filigreed like an opaque cicada's wing. As the leaves mature and harden, their greenness turns to a soft silvery gray. Long stems bear the purple-lipped flowers in spring, a natural attraction to bees, which produce a much-valued sage honey in sage's native Dalmatia, on the shores of the Adriatic Sea. Sage has a high pungency level similar to that of rosemary and thyme with an aroma that is fresh, head-clearing and balsamic. The flavor is herbaceous, savoury and astringent with hints of peppermint.

There are around 750 varieties of *Salvia*, but it is garden sage that is of primary culinary importance. Clary sage is a sparser variety, little used these days, with foliage that is more rust-colored and bluish white to white flowers. Purple-leaf sage is grown more for decorative purposes, as is a red-flowering variety. Another red-flowered sage is the aptly named pineapple sage, which is indigenous to Central

Fresh sage



FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole dried and rubbed leaves: 1.2 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tbsp (15 mL) fresh cut leaves, 1 tsp (5 mL) dry rubbed leaves
- white meats: 2 tsp (10 mL) fresh cut leaves, $\frac{3}{4}$ tsp (4 mL) dry rubbed leaves
- vegetables: 1 $\frac{1}{2}$ tsp (7 mL) fresh cut leaves, $\frac{1}{2}$ tsp (2 mL) dry rubbed leaves
- carbohydrates: 1 $\frac{1}{2}$ tsp (7 mL) fresh cut leaves, $\frac{1}{2}$ tsp (2 mL) dry rubbed leaves

COMPLEMENTS

- rich and fatty foods such as pork, goose and duck
- bread stuffings
- dumplings
- savory scones
- soups
- casseroles
- roast meats

USED IN

- Italian herbs
- mixed herbs
- stuffing mixes

America. Pineapple sage has delicate, 1-inch (2.5 cm) long, thin, nectar-filled flowers that can be picked and added to salads — or you can just suck the delicious sweet nectar straight from the flower. There is even a garlic sage, with tall, yellow-white flower clusters and a rank, garlicky aroma. Dried sage leaves retain the characteristic aroma and flavor of fresh sage so well, they seem just like a concentrated version. These are most often seen as “rubbed” leaves, which are light gray in color with a fluffy, springy texture.

Origin and History

Sage is native to the northern Mediterranean coastal areas of southern Europe and still grows wild on hills in Dalmatia, the region of the former Yugoslavia on the Adriatic Sea famed for the quality of its sage. Sage has been cultivated for millennia, its therapeutic virtues being mentioned by Theophrastus, Pliny and Dioscorides, who called it *elelisphakon*, one of sage’s many ancient names, along with *elifagus*, *lingua humana*, *selba* and *salvia*. The botanical name for its genus, *Salvia*, is derived from the Latin *salvere*, which means “to save” or “to heal,” so given to sage because of its medicinal properties.

In the ninth century the emperor Charlemagne had it grown on the imperial farms in central Europe and during the Middle Ages sage was considered to be an indispensable medicine. In 16th-century England sage tea was a popular beverage before conventional black tea became commonplace, and for those desiring something a little stronger, a brew called sage ale was made. The Chinese were so fond of European sage tea that in the 17th century Dutch traders could command in payment for sage leaves three to four times their weight in China tea. By the 19th century, the benefits of including sage with rich and fatty foods were being fully appreciated, and although some believed the flavor to be harsh, crude and only fit for peasants, it found its way in varying proportions into most Western cuisines.

Processing

Because sage plants become extremely woody after a few years, even with regular cutting back, they need to be replanted every three years. Layering is an efficient method of propagating sage. A section of long lateral stem, still growing from the plant, is bent down and buried 1 inch (2.5 cm) deep in the soil.

When roots have formed, it is cut from the main plant and replanted. In Dalmatia, sage is gathered before flowering and hung to dry in dark, well-aired places. The stems are then rubbed to remove the leaves. Due to their high oil content and the fluffy structure of the leaf, even when properly dry to less than 12% moisture, rubbed sage leaves will not feel as crisp as many other dried herbs. An essential oil is extracted from freshly harvested leaves by steam distillation and this is used in seasonings for pork sausages, processed foods, perfumes, confectionery, mouthwashes and gargles.

Buying and Storage

Bunches of fresh sage are readily available from produce retailers and when bought should not look wilted. A bunch standing in a glass of water will last for at least a week, provided the old water is tipped out and replaced with fresh every second day. Sage leaves can be chopped and put in an ice cube tray, just covered with water, and frozen until required (use within about three months). When buying dried, try to purchase Dalmatian sage, as this is undisputedly the best for culinary purposes. If rubbed, it should be gray and woolly with a greenish tinge and have the characteristic balsamic aroma and savory taste of fresh sage. Store dried sage in airtight packaging and keep it in a cool, dark place.

Use

While some people may find the pungency of sage overpowering, its astringent, “grease-cutting” attributes make it a perfect accompaniment to fatty foods such as pork, goose and duck. Sage often gives the best result when used in moderation and in dishes that are being cooked for a long time. Such is the power of sage that its flavor is rarely diminished by exposure to extended cooking times. Sage goes well with carbohydrates and for this reason it is an important ingredient in bread stuffings, dumplings and savory scones. Pea, bean and vegetable soups benefit from sage, as does a mash of potatoes or butter beans. Sage and onions are a well-known combination and moderate amounts of sage are excellent with eggplant and tomatoes. Sage is a traditional element of mixed herbs along with thyme and marjoram. Sage will complement any full-bodied soup, stew, meat loaf or roast meat dish. Deep-fried sage leaves make a fashionable garnish.

COMBINES WITH

- basil
- bay leaves
- chives
- garlic
- marjoram
- mint
- oregano
- paprika
- parsley
- pepper
- rosemary
- savory
- tarragon
- thyme



Sage Shortbread with Goat Cheese

These tasty shortbreads are also an excellent platform for rich, soft, smelly cheeses, as the astringency of sage balances rich, fatty flavors. For an impressive, festive canapé, you could add a dollop of cranberry sauce, a small piece of pecan and top with a small piece of deep-fried sage leaf. The dough can be frozen for up to 3 months, and the shortbread will keep in an airtight container for up to 1 month.

- 3½ oz (100 g) blue cheese
- 1½ cups (375 mL) all-purpose flour, sifted
- ⅔ cup (150 mL) butter
- 3 tbsp (45 mL) finely chopped fresh sage
(or 4 tsp/20 mL dried)
- 2 oz (60 g) pecans, shelled and chopped
- 3½ oz (100 g) soft spreadable goat cheese (chèvre)

Blend blue cheese, flour, butter and sage in a food processor until a sticky dough forms. Turn out and work pecans into dough. Divide dough in half and roll into logs about 2 inches (5 cm) in diameter. Wrap tightly in plastic wrap and refrigerate for 30 minutes. The rolls must be very firm before baking. Meanwhile, preheat oven to 350°F (180°C).

Remove plastic wrap and cut rolls into ¼-inch (0.5 cm) slices. Place slices 1 inch (2.5 cm) apart on a baking sheet. Bake for 10–15 minutes, or until golden. Let cool on a wire rack. To serve, top each shortbread with a small amount of goat cheese. Makes about 25 shortbreads.

Salad Burnet

OTHER COMMON NAMES

- lesser burnet
- garden burnet

BOTANICAL NAMES

- salad burnet:
Sanguisorba minor
(formerly *Poterium sanguisorba*)
- garden burnet:
S. officinalis

FAMILY

- Rosaceae

FLAVOR GROUP

- mild

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: $\frac{3}{4}$ cup
(175 mL) fresh leaves
- white meats: $\frac{3}{4}$ cup
(175 mL) fresh leaves
- vegetables: $\frac{1}{2}$ cup
(125 mL) fresh leaves
- carbohydrates: $\frac{1}{2}$ cup
(125 mL) fresh leaves

SALAD BURNET is a delicate perennial herb that grows to around 12 inches (30 cm) in height. It has deep green, small, round, serrated leaves that look as though they have been cut out with pinking scissors. These leaves are borne in pairs about 1 inch (2.5 cm) apart, on slender stems that droop evenly when long and heavy, giving a fern-like appearance. In summer, tall stalks rise from the center of the plant and are crowned with reddish pink, berry-like flowers with long, purple stamens. The aroma and flavor of salad burnet is like that of cucumber: cool, light and refreshing.

Salad burnet



COMPLEMENTS

- salads
- chilled soups
- herb sandwiches
- scrambled eggs and omelets
- fruit drinks

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- chervil
- coriander leaf
- cress
- lovage
- oregano
- parsley
- Vietnamese mint

Origin and History

Although the mountainous areas of Europe and the chalk downs of the southern counties of England have been the native habitat of salad burnet for many centuries, it is thought to have originated in the Mediterranean. Its medicinal properties were appreciated by Pliny, and the leaves were added to wine cups and beverages. The old botanic name of *Poterium* was derived from the Greek word *poterion*, which means “drinking cup.” The rest of the name, *sanguisorba*, comes from *sanguis* (blood) and *sorbere*, meaning “to staunch,” alluding to the styptic (stopping of bleeding) properties that it was used for. The early settlers took salad burnet to America and it is also a familiar sight in herb gardens in Australia.

Processing

Salad burnet is only used fresh, as it does not dehydrate satisfactorily.

Buying and Storage

Fresh bunches of salad burnet can be purchased occasionally from produce retailers; however, they are prone to wilting, so are best bought the day they are to be used. After washing, store in the same manner as lettuce, preferably in a crisper in the bottom of the refrigerator. To ensure a ready supply for dropping into beverages, pull the small leaves from the stalks and put them whole into ice cube trays, top up with water and freeze.

Use

Salad burnet is always best used raw and, as the name suggests, the cucumber-like taste and delicate appearance go well in salads, chilled soups and herb sandwiches with ricotta or cream cheese. Scrambled eggs serve well with a garnish of salad burnet and chervil, and like borage, salad burnet leaves enhance the cooling appearance of summer fruit punches.

Salt

OTHER COMMON NAMES

- common salt
- halite

CHEMICAL NAME

- sodium chloride (NaCl)

WEIGHT PER TEASPOON (5 ML)

- Celtic gray salt: 6.8 g
- Maldon flaky salt: 4.6 g
- table salt: 7.2 g

ALTHOUGH IT is not a spice, salt was undoubtedly the first seasoning, and it has a history that dates back to the dawn of humanity. Salt is one of the fundamental tastes along with sweet, sour and bitter. Salt performs the essential function of maintaining the equilibrium of body fluids, a balance so critical that one can be at greater risk of dehydration from the lack of salt than from a shortage of water. It must be said here that healthy adults only need about 6–8 grams of salt a day, an amount largely provided by the food we eat. Thus, it has been only too well documented how the excessive use of

Clockwise from top left: Celtic sea salt; Maldon sea salt; powdered black salt; coarse sea salt (often called rock salt for mills)



SUGGESTED QUANTITY PER POUND (500 G)

- red meats: $\frac{1}{2}$ tsp (2 mL)
- white meats: $\frac{1}{2}$ tsp (2 mL)
- vegetables: $\frac{1}{2}$ tsp (2 mL)
- carbohydrates: $\frac{1}{2}$ tsp (2 mL)

COMPLEMENTS

- all savory dishes and some sweet ones

nature's humblest taste enhancer can lead to health problems.

Salt is a mineral that may or may not contain a number of impurities. The component responsible for the salty taste is sodium chloride (NaCl), and the various other minerals, such as salts of iron, soda or Epsom salts, contribute to the flavor characteristics of salts from different parts of the world. The main types of salt either come from underground deposits or are harvested in various methods from the sea. Whether fine or coarse, salt is always crystalline and dissolves readily upon coming into contact with moisture, making it easy to add even to dry foods that are only moistened at the point of final consumption, in the mouth.

Seasoned salts, such as celery salt, garlic salt and onion salt, are simply blends of herbs and spices that contain a large amount of salt. Salt is relatively cheap and it is heavy; therefore, it has become the dry food manufacturer's answer to water, often becoming a bulking agent at the expense of other, more subtle flavors.

Origin and History

In the classic “what came first, the chicken or the egg?” scenario, no one knows for sure exactly where the salt in the sea came from. Was it in rocks that were eroded over millions of years and carried down to the sea, or was it already in ancient seas that left huge underground deposits like the 3,300-foot (1,000 m) deep layer of salt that lies under the mud and sand on the bed of the Mediterranean? Highly valued for its taste and preserving capabilities, there is evidence of salt gathering (winning) that dates back to Neolithic times. Plutarch described salt as “the noblest of foods, the finest condiment of all,” and Jesus referred to his Apostles as “the salt of the earth.” One of the first major Roman roads was called Via Salaria (Salt Street), and Roman troops abroad received a salt ration as part of their remuneration. This eventually developed into a cash payment and became “salary.” Traders understood the value of salt to communities remote from underground salt deposits or the sea and rulers quickly appreciated the power of taxing the trade in salt. In the first century AD, Pliny wrote that the rulers of India and China earned more revenue from their salt taxes than they did from their goldmines.

Salt has been regarded as pivotal to the existence of humanity. It is seen as a commodity that is essentially pure and never

deteriorates (damp salt can always be dried out again with no loss of flavor); consequently, numerous superstitions about salt have become entrenched in our psyche. When salt is spilled, it is not unusual to throw a pinch over one's left shoulder to smite the devil in the eye. Lot's wife was turned into a pillar of salt for looking back, and in Leonardo da Vinci's painting of the Last Supper, a spilled saltcellar is under Judas's elbow. A classic tale that I like to "take with a pinch of salt" is of the courageous Marquis de Montreval, who died of fright in 1716 after the contents of a saltcellar had been accidentally spilled over him. To this day, numerous religious rites involve the symbolism of salt. However, in all its history, it seems salt has never suffered such criticism as has been leveled at it in recent years, perhaps as a consequence of its abuse. Nonetheless, salt remains one of the four fundamental tastes and without it, in balance, our diets would indeed be bland in the extreme.

Processing

The process of gathering salt is called "winning," the same term used for the mining of coal or the extraction of ore. Salt is processed in three main ways, the precise details of which vary depending upon the countries and regions in which it is produced.

The agricultural technique refers to methods involving the diversion of seawater into evaporative ponds, salt marshes or salt pans. This will often involve a few stages where, after initial evaporation and resulting concentration of the salt content, the strong brine is moved to "crystallizers," where final evaporation takes place during the hottest period of the year, leaving a deposit of salt up to 4 inches (10 cm) thick.

Rock salt, which is found in large halite deposits formed as a result of the evaporation of ancient seas, is mined from huge underground galleries like the one in Wieliczka, Poland, which is 1,300 feet (400 m) below the surface; the main gallery is the size of a cathedral.

The industrial technique involves injecting water into rock salt deposits, dissolving the salt, which is then filtered and evaporated by boiling.

USED IN

the majority of herb and spice blends designed to be sprinkled onto meats before cooking. Examples include:

- barbecue seasonings
- steak, fish and poultry sprinkles
- seasoned salts

COMBINES WITH

- all herbs and spices in the appropriate context

Buying and Storage

There are many different kinds of salt, the distinguishing features being: taste characteristics that underpin their basic saltiness; the textures, which affect mouth-feel and how they dissolve or react in cooking; and the color, which can help identify one kind of salt from another. There is an expectation of purity when it comes to salt. The most popular forms are pure white and even a microscopic amount of foreign matter or discoloration is not tolerated. Curiously, even fashionable salts that are perceived as more natural because they are varying shades of off-white would never be seen with different colors speckling their uniformity.

Common salt, cooking salt, kitchen salt or ordinary household salt is refined salt from mines or the ocean that has had the majority of impurities removed, thus delivering an uncomplicated, standard salt taste. It may be coarse or fine and sometimes has magnesium carbonate or sodium aluminosilicate added to make it free-flowing.

Table salt is a more refined version of the above; it is finely ground and has some form of anti-caking agent added. This also has only the taste of salt. Iodized salt was produced to supplement iodine-deficient diets and reduce the incidence of thyroid problems. Iodine naturally occurs in sea salt but diminishes during storage.

“Rock salt” is the name given more often than not to coarse sea salt, a reference to its chunky shape. Strictly speaking, rock salt is halite, the salt mined from underground salt deposits.

Black salt is a true rock salt that is sold in either large 1½–2-inch (4–5 cm) dark purple to red chunks or ground into a fine pink powder, which is infinitely easier to use. Black salt has a particularly sulphurous aroma, much of which dissipates during cooking, and is in my opinion the best salt for seasoning any Indian recipes. Black salt complements seafood and combines well with asafetida, cumin, garam masala and amchur powder in that deliciously spiced salt blend, chaat masala.

There are a few different types of well-known special sea salts. Each is distinguished by its origins and the traditional methods of winning that are used, which generally involve hand-raking. The saltpan areas within Brittany in France have produced salt for over 1,500 years, and it is from these regions that fleur de sel, an expensive, almost sweet, floral-tasting salt, has been harvested from natural salt pans on the islands of Ré and Noirmoutier and

in parts of Brittany. Celtic sea salt, or gray salt, as it is sometimes called, comes from the same vicinity, is hand-raked and has a coarse look and moist texture. Not as convenient to sprinkle over food as fleur de sel, the flavor is just like the ocean and it goes wonderfully in most cooking applications.

Maldon sea salt is from Maldon in Essex, England. Its characteristic flaky texture is achieved by spreading the concentrated solution, after initial evaporation, over flat surfaces where it is finally dried before being scraped up. It has become fashionable to put Maldon sea salt in china crucibles on tables in restaurants, as the texture and slightly sweet taste is best suited to adding at the end of cooking or at the table. South African caviar salt is produced in a similar way to Maldon sea salt, except that instead of being flat and flaky, the pieces are tiny, caviar-shaped balls.

Australian Murray River salt, in various forms including flakes and pink salt, is produced by extracting salt from groundwater with high salinity and is then marketed as a gourmet product. In an area where salinity is an environmental issue, with land lost to agricultural production at the rate of a football field an hour, this process has enabled the revegetation of previously useless land, with positive ecological results.

Herb and vegetable salts are formulated using plants or extracts of plants and seaweed that have high levels of mineral salts occurring within them naturally. Unfortunately, many consumers think they are buying something produced solely from vegetable matter, when the majority of these salts may actually contain substantial amounts of common salt. In the 1980s, when the salt scare was at its peak, substitutes made from potassium chloride came on the market. These salt imitations were bitter and imparted an unpleasant taste if too much was added to a meal. They had the additional complication of causing adverse physiological reactions for some people. Therefore, those on a low-salt diet should check with their physician the appropriateness of any salt substitute they plan to use.

Use

When it comes to adding the right amount of salt, everyone's an expert. We have control over salt; we can add it at the table and we can pour, sprinkle, grind or shake on just as much as we like. The paradox with salt is that there is no point in being



timid with it, but if you've put too much in, you can't take it out. Have you ever seen a chef carefully measure out the amount of salt? More often than not, a hand will reach into the salt canister and broadcast a seemingly indiscriminate quantity into the dish; it's called experience.

Salt should be added toward the end of cooking, because if you taste a dish and think the salt is just right at the beginning, any reduction taking place during the cooking time will concentrate the salt content in ratio to the volume of ingredients in the dish being prepared. The only way to reduce saltiness is to add more ingredients, thus diluting the salt content. Adding sugar will not counteract the application of too much salt.

Salt enhances the flavor of vegetables when it's put in the cooking water, because it raises the saline level and consequently less of their natural mineral salts will be leached out. Salt sprinkled over slices of zucchini, eggplant and similar vegetables prior to cooking will draw out the bitter juices. The salting of vegetables before pickling leaches out excess moisture and toughens them to create a crisp texture. Salt is an important element in the preservation process. The effective drying of salted fish is aided by salt's ability to draw out moisture and inhibit microbial activity, while numerous pickles rely on the antiseptic and enzyme deactivating attributes of salt.

Saltmills look attractive on the table, and for those of us who like to freshly grind pepper over food, the meal set before one is perfected with a twist of the saltmill and the crystalline rain of our favorite style of crunchy salt. Take care, though, when selecting a salt grinder. Because salt is highly corrosive, most metals (even stainless steel) have enough impurities in them to oxidize. Wood and plastic mechanisms work well, although they do wear out quickly. The best types of salt grinder have ceramic parts that do not rust or succumb to salt's abrasive nature.

Salt-Baked Snapper

Salt

When Liz and I were in Turkey to research sumac, we walked a few blocks from our hotel in Izmir to an old street that had escaped the disastrous fires that razed many of the city's wooden structures in 1924. Charming balconies and vine-covered trellises flanked each side. At night, the cobbled roadway was closed to traffic and filled with tables and chairs from the street-front restaurants. When we sat down at one of these restaurants, our hosts suggested the fish baked in salt, an impressive dish because the salt sets hard like a shell during baking. With much theatrical fanfare, the waiter brought the complete encrusted fish to the table and, like a mason breaking stones in an ancient quarry, bashed it, breaking away the salt crust and sending shards of salt and brittle fins flying across the table and onto the cobblestones. What was revealed was a beautifully cooked delicate fish, seasoned only with lemon juice and freshly ground black pepper, that flaked easily from the bone. We washed it down with a light, dry Turkish red wine. This dish was inspired by that experience.

- 2 whole snappers (each about 12 oz/375 g)
- 1 lemon, sliced
- 1 bunch fresh coriander (about 3 oz/90 g), roots, stems and leaves, roughly chopped
- salt and freshly ground black pepper to taste
- 3 lbs (1.5 kg) coarse sea salt
- 2 egg whites, beaten
- 2 stalks lemongrass, roughly chopped

Preheat oven to 400°F (200°C). Clean snappers and put lemon slices and 1 tbsp (15 mL) coriander in each cavity. Season with salt and pepper. In a large bowl, mix sea salt, egg whites, lemongrass and the remaining coriander. Spread a layer of salt mixture in a baking pan and top with snappers. Then completely cover fish with the remaining salt mixture. You shouldn't be able to see the fish at all. Bake for 40 minutes. The salt will turn into a hard crust that you can crack open with the back of a knife. (This is fun for guests to do at the table.) Once the crust is cracked open, remove the steaming fish, brushing off any excess salt. Serves 2–4.



Savory

THE ANNUAL herb summer savory is the variety preferred by cooks, while the perennial winter savory is a favorite with gardeners. Summer savory is a small, slender herbaceous plant with hairy, branching stems that grow to 18 inches (45 cm) high. The leaves are $\frac{1}{4}$ – $\frac{1}{2}$ inch (0.5–1 cm) long and range from green to bronze-green and look a little like small, soft, oval tarragon leaves. Summer savory bears small lavender, pink or white flowers in late summer that are often harvested with the leaves. The bouquet is fragrant, piquant and thyme-like with a hint of marjoram. Savory's peppery taste, reminiscent of ajowan, adds an appetizing bite to this relatively pungent herb.

OTHER COMMON NAMES

- summer savory
- garden savory
- sweet savory

BOTANICAL NAMES

- summer savory:
Satureja hortensis
- winter savory:
S. montana
- lemon-scented winter
savory: *S. montana*
citriodora

FAMILY

- Lamiaceae (formerly
Labiatae)

Winter savory is a hardy, woody perennial with a stiff appearance like thyme. The lemon-scented subspecies popular in Slovenia tastes like lemon thyme. Its narrow leaves are green and glossy, averaging $\frac{1}{2}$ inch (1 cm) long. Small, lipped white flowers bloom in late summer and early autumn. It is smaller than summer savory, growing to around 12 inches (30 cm) tall, and makes an attractive border in gardens, but its foliage has less flavor than summer savory.

Dried summer savory, which includes the leaves and flowering tops, is gray-green in color and looks quite scruffy. The non-uniform appearance is due to the inclusion of small and large leaves, petals, buds and a relatively high amount of fine leaf particles. The flavor is strong and characteristic of fresh summer savory. In Spain, a wild variety (*S. thymbra*) with a flavor strongly reminiscent of thyme is used in cooking. There is also a perennial, small-leaved, compact, prostrate type of savory (*S. repandra*) that is grown for decorative purposes where soft, cushiony mounds of it are an ideal fill-in for rustic stone paving.

Origin and History

Savory is native to the Mediterranean and has been an important culinary herb for thousands of years. The ancient Romans valued it as a potherb and as a seasoning, and at their feasts they served a sauce made of vinegar steeped with savory. Savory's peppery taste was appreciated, as early records attest, before the



Fresh summer savory; fresh winter savory

Romans imported pepper from India; Virgil noted it as “among the most fragrant of herbs.” The botanical name, *Satureja*, is believed to have sprung from the belief that savory was a plant chosen by the satyrs; this explains why aphrodisiac properties have been attributed to it. *Banckes’ Herbal* states of savory, “It is forbidden to use it much in meats since it stirreth him to use lechery.”

The Romans introduced savory to England 2,000 years ago, after which it grew abundantly in herb gardens throughout the countryside. Savory was sometimes used as a substitute for black pepper, which explains why its name in some languages suggests that it is a kind of pepper. The Germans and Dutch took to savory, enjoying it particularly in bean dishes for its reputation for reducing flatulence, which gave rise to the names *Bohnenkraut* and *bonenkruid*, respectively. Savory was one of the first herbs taken to the New World by the Pilgrims, and to this day savory is a traditional ingredient in the stuffing made for turkey on Thanksgiving Day. In Turkey, savory and other herbs such as thyme, oregano and marjoram are often loosely referred to as *zatar*, not to be confused with the blend of thyme, sesame, sumac and salt called *za’atar*.

NAMES IN OTHER LANGUAGES

- Arabic: nadgh
- Chinese (C): fung leuhn choi, heung bohk hoh
- Chinese (M): feng lun cai, xiang bao he
- Czech: saturejka
- Danish: bonneurt
- Dutch: bonenkruid, kunne
- Finnish: kesakynteli
- French: sarriette, poivrette
- German: bohnenkraut, pfefferkraut, saturei
- Greek: throubi, tragorigani
- Hungarian: csombord
- Indian: salvia-sefakups
- Italian: santoreggia
- Japanese: seibari
- Norwegian: sar, bonneurt
- Portuguese: segurelha
- Russian: chabyor
- Spanish: sabroso
- Swedish: kyndel
- Turkish: dag reyhani, zatar

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- whole dry rubbed leaves: 1.3 g
- ground: 1.1 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 5 tsp (25 mL) fresh leaves, 2 tsp (10 mL) dry rubbed leaves
- white meats: 4 tsp (10 mL) fresh leaves, 1½ tsp (7 mL) dry rubbed leaves
- vegetables: 2 tsp (10 mL) fresh leaves, ¾ tsp (4 mL) dry rubbed leaves
- carbohydrates: 2 tsp (10 mL) fresh leaves, ¾ tsp (4 mL) dry rubbed leaves

COMPLEMENTS

- beans
- peas
- lentils
- egg dishes
- soups and casseroles
- bread stuffing
- pork
- veal
- poultry
- fish

USED IN

- bouquet garni
- fines herbes

COMBINES WITH

- ajowan
- basil
- bay leaves
- coriander seed
- garlic
- marjoram
- nutmeg
- oregano
- paprika
- rosemary
- sage
- tarragon
- thyme

Processing

Savory is one herb that retains its distinctive flavor when dried, and as is the case with many strong-tasting herbs, the dry form is preferred in numerous cooking applications. The commercial harvesting of summer savory takes place 75–120 days after sowing and sometimes before flowering has commenced, as the flavor is reputed to be somewhat stronger at that stage. The cut leafy stalks, and flowering tops if applicable, are tied into bunches and hung in a dark, well-aired environment to dry. After a few days the leaves become crisp and are removed from the stems by threshing, followed by winnowing to remove any remaining hard pieces of stalk.

Buying and Storage

Fresh summer savory is seasonally available from specialty produce retailers. It keeps quite well, so bunches of fresh savory should never appear wilted. Savory maintains its freshness if the bunch is stood in a glass of water in the refrigerator. Change the water every few days and your fresh savory will last for over a week. Alternatively, the sprays can be wrapped in foil and frozen, or the leaves picked off, put into ice cube trays and just covered with water before freezing. Dried savory can be purchased all year round, and good-quality savory kept in a cool, dark place in an airtight pack will last for nearly two years.

Use

Savory's wonderfully distinct piquancy brings an agreeable tasty element to relatively mild foods without overpowering them. The classic blend fines herbes and the traditional bunch of herbs for casseroles, bouquet garni, will often contain savory. Savory complements egg dishes, whether chopped finely and added to scrambled eggs and omelets or treated as a garnish with parsley. Beans, lentils and peas all benefit from the addition of savory in almost any situation. Its robust flavor holds up well in long, slow-cooked dishes such as soups and stews. Savory combines well with bread crumbs for stuffings and is an ideal seasoning when making coatings for veal and fish. Sprinkle savory on roast poultry and pork before cooking and include it in meat loaf and homemade sausages.

This is a great way to use up leftover ham.

- 10 oz (300 g) ham leg, finely chopped
- ¼ cup (50 mL) shelled fresh green peas
- 3 tbsp (45 mL) pine nuts, toasted
- 1 tsp (5 mL) Dijon mustard
- 1 ½ tsp (7 mL) dried savory
- 1 ½ tsp (7 mL) dried lemon thyme
- ½ tsp (2 mL) garlic powder
- 2 eggs, lightly beaten
- salt and freshly ground black pepper
- 4 sheets phyllo pastry
- 4 tsp (20 mL) butter, melted
- 1 tsp (5 mL) sesame seeds

Preheat oven to 400°F (200°C). In a bowl, combine ham, peas, pine nuts, mustard, savory, lemon thyme and garlic powder. Stir in beaten eggs and season with salt and pepper.

Roll out phyllo pastry and brush sheets with melted butter. Working with one sheet at a time, place one-quarter of the filling at one end and firmly roll, tucking the ends in after one roll. Repeat with remaining pastry and filling. Place rolls seal side down on a greased baking sheet and brush with the remaining melted butter. Sprinkle with sesame seeds. Bake for 15 minutes or until golden. Serve hot. Serves 4.



Sesame

THE SESAME plant is an erect annual that grows 3–6 feet (1–2 m) high, and may have either bushy growth or slender, unbranched stems. Its irregular, oval, long leaves are hairy on both sides and exude a surprisingly unpleasant smell. White, lilac or pink flowers are borne along its stems from quite low down, and are followed by the fruits, or capsules. Sesame seeds are contained within these four-sided, oblong, 1-inch (2.5 cm) long capsules, which shatter and spread their contents when fully ripe. Unhulled sesame seeds are mostly black or golden brown, the latter being easily confused with toasted sesame seeds. Sesame seeds are flat, tear-shaped and no more than $\frac{1}{8}$ inch (3 mm) long. White sesame seeds have had the husks removed and are actually off-white in color. They look and feel waxy from their high oil content and give off a faint, nutty aroma. I remember the oiliness of sesame from when my father first started buying white sesame seeds in burlap bags in the 1960s, because even after a couple of weeks the timber floorboards in our storeroom bore great oil stains from where the bags of sesame seeds had been stacked. Black and brown unhulled sesame seeds have almost no aroma, but when chewed, their texture is more crunchy than white sesame and their flavor is equally nutty but with an extra hint of sharpness.

OTHER COMMON NAMES

- black sesame
- white sesame
- benne
- gingelly
- semsem
- teel
- til

BOTANICAL NAME

- *Sesamum indicum*

FAMILY

- Pedaliaceae

Origin and History

Sesame is native to Indonesia and tropical Africa, and some experts contend that it is also indigenous to India, where even today it is regarded as an oilseed crop rather than a spice. Sesame is possibly the oldest crop grown for edible oil extraction and there are many ancient records of its use. A 4,000-year-old drawing on an Egyptian tomb depicts a baker adding sesame seeds to dough. It is mentioned in the Ebers Papyrus of around 1550 BC and an archaeological dig indicated sesame was grown in Armenia between 900 and 700 BC and pressed to extract oil. The remains of sesame seeds were found in a chamber of the excavated ruins of the Old Testament kingdom of Ararat. Sesame was valued by the ancient Greeks, Egyptians and Romans and there are records of its production in the



Clockwise from top: black sesame seeds; white sesame seeds; unhulled golden sesame seeds

Tigris and Euphrates valleys that date back to 1600 BC. In the tale “Ali Baba and the 40 Thieves,” the magic password was “Open sesame,” an easily remembered phrase for those “in the know,” as a fully ripe sesame pod dramatically shatters open at the slightest touch. The use of sesame became widespread in Africa, and in the 17th and 18th centuries African slaves took sesame to America; benne, their name for it, still means sesame in parts of America’s South. Nutritionally beneficial, sesame became an important food in the Middle East, where it remains a primary ingredient in halva and tahini and is used in the manufacture of the delicious ground chickpea paste, hummus.

Processing

Most of the world’s production of sesame seeds is for the extraction of sesame oil (sometimes referred to as gingelly oil), a cooking medium with a distinct aroma and flavor that goes well in Asian stir-fries. Sesame oil is relatively stable in hot climates and is not as prone to rancidity as some other vegetable oils. Sesame seeds have to be harvested before they’re fully ripe; otherwise, the pods will burst open and the contents will be wasted. To aid in the now widespread practice of machine harvesting, hybrids have been developed with pods that do not shatter so easily. Traditional methods involve cutting the stems and hanging them upside down over mats to dry and drop their

NAMES IN OTHER LANGUAGES

- Arabic: simsim, tahina
- Burmese: hnan si
- Chinese (C): ji mah (white), hak ji mah (black)
- Chinese (M): zhi ma
- Czech: sezam
- Dutch: sesamzaad
- Filipino: linga
- Finnish: seesami
- French: sésame, teel
- German: sesam, vanglo
- Greek: sousami
- Hungarian: szezamfu
- Indian: til (seed), gingelly (oil)
- Indonesian: wijen
- Italian: sesamo
- Japanese: muki goma (white), kuro gomah (black)
- Korean: keh
- Malay: bene, bijan
- Portuguese: gergelim
- Russian: kunzhut
- Spanish: ajonjoli
- Sri Lankan: thala
- Swedish: sesam
- Thai: nga dee la
- Turkish: susam
- Vietnamese: cay vung, me

FLAVOR GROUP

- amalgamating

WEIGHT PER TEASPOON (5 ML)

- whole: 4.0 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 4–6 tsp (20–30 mL)
- white meats: 4–6 tsp (20–30 mL)
- vegetables: 4–6 tsp (20–30 mL)
- carbohydrates: 4–6 tsp (20–30 mL)

COMPLEMENTS

- breads
- biscuits
- salads, when lightly toasted

USED IN

- Middle Eastern za'atar
- key ingredient in halva

COMBINES WITH

- allspice
- cardamom
- cinnamon and cassia
- cloves
- coriander seed
- ginger
- nutmeg
- paprika
- sumac
- thyme

seeds. The seeds are then decorticated (hulled) either mechanically or by using chemicals to dissolve and remove the husks. Because so much sesame seed is consumed in North America, organically grown sesame that has been hulled without the use of chemicals is experiencing an increase in demand. Toasted sesame seeds are white sesame seeds that have been lightly roasted (in the same way nuts are roasted) to accentuate their nutty flavor. Along with peanuts, sesame is classed as a known allergen that can harm some sensitive individuals. Thus, when buying some prepared food products, you may see a statement on the label that reads something like “Manufactured on equipment used to process nuts and sesame seeds.”

Buying and Storage

Sesame seeds are best purchased regularly and should not be kept for too long before using, as the high oil content can lead to rancidity if they have been exposed to consistently hot conditions during storage. White sesame seeds are readily available in supermarkets, health food stores and spice shops. Black sesame seeds are rarer and can be found in spice shops and Asian food stores. Because of the similarity in appearance, black sesame seeds are often confused with nigella seeds; however, the flavor is quite different. Store both white and black sesame in an airtight pack and keep away from extremes of heat, light and humidity.

Use

White sesame seeds are sprinkled on breads and biscuits in much the same way as poppy seeds. During baking, their pleasing, nutty taste develops. Sesame seeds are ground and compressed with sweet syrups and honey to make the wonderfully indulgent Middle Eastern halva. When ground to a paste, they are called tahini. Toasted sesame seeds are delicious sprinkled over salads and, believe it or not, ice cream. To toast sesame seeds, heat a pan as you would to dry-roast any spice and shake the seeds around while heating them so they don't stick and burn. When they begin to hop about and show signs of tanning, tip them out of the pan, let cool, then store in an airtight container. Sesame oil goes well in Asian stir-fries. It has quite a strong flavor, so only a little is required. Salad dressings with Asian flavors (lemongrass, lime, chili and ginger) are enhanced by a little sesame oil.

Black sesame seeds are popular in Asian cooking. As well as their use in Chinese desserts such as toffee bananas, the Japanese mix them with salt and MSG as a sprinkle-on condiment. Black sesame seeds do not toast well, as this tends to make them bitter. I have seen black sesame seeds on Turkish bread as some makers interchange them with nigella seeds.

Sesame Tuna

Sesame

This recipe is a good example of using both black and white sesame seeds and sesame oil.

- 2 tbsp (25 mL) black sesame seeds
- 2 tbsp (25 mL) white sesame seeds
- 1 ¼ lbs (625 g) sushi-grade tuna
- 12 shiso leaves (optional)*

Dressing

- 6 tbsp (90 mL) light soy sauce
- 6 tbsp (90 mL) freshly squeezed lemon juice
- ¼ cup (50 mL) freshly squeezed lime juice
- 2 tbsp (25 mL) soy sauce
- 2 tsp (10 mL) sesame oil

Combine black and white sesame seeds and roll tuna in seeds, coating completely. In a nonstick pan, cook tuna over high heat for 2 minutes on each of the 4 sides; it should be just seared on all sides and rare inside. Slice into ¼-inch (3 mm) thick pieces.

Combine dressing ingredients and divide among 4 individual bowls. Place 3 shiso leaves, if using, on each of 4 plates, arrange tuna slices on top and serve with dressing. Serves 4.

*Shiso leaves are available from summer to fall at Asian markets.



Sorrel

OTHER COMMON NAMES

- French sorrel
- round-leaved sorrel

BOTANICAL NAMES

- French sorrel: *Rumex scutatus*
- common, English or garden sorrel: *R. acetosa*
- sheep's sorrel: *R. acetosella*
- spinach dock, herb patience: *R. patienta*
- curly or yellow dock: *R. crispus*
- broad-leaved dock: *R. obtusifolius*
- great water dock: *R. hydrolapathum*

FAMILY

- Polygonaceae

NAMES IN OTHER LANGUAGES

- French: oseille
- German: sauerampfer
- Hebrew: hamtzitz
- Italian: acetosa
- Spanish: acedera

FLAVOR GROUP

- medium

FRENCH SORREL is a leafy perennial that grows in thick spinach-like clumps 4–6 inches (10–15 cm) tall. The 6-inch (15 cm) long leaves are dark green, broad, smooth, somewhat crinkly and oval, about 3¼ inches (8 cm) wide and joined to reddish stems that resemble a thin version of rhubarb. In late spring, long, tough, red-streaked stalks bear masses of small greenish flowers that, if not cut, will go to seed. There are several wild species of sorrel and dock, all of which have a common feature, and that is the presence of vitamin C, oxalic acid and oxalate salts, which conspire to produce a distinct sourness and acidity. For culinary purposes, French sorrel (*R. scutatus*) is most valued for its mildly acidic, appetite-stimulating and rich-food-balancing properties. The other varieties listed are quite sour or bitter, making them less agreeable for eating, but they do have their medicinal applications.

Origin and History

The sorrels are native to Europe and Asia, and French sorrel, though now highly cultivated, is believed to have its origins in the south of France, Switzerland, Italy and Germany. The name “sorrel” is derived from an ancient Germanic word for sour, and it is this refreshing, lemon-like sharpness that has made sorrel an appropriate accompaniment to many dishes. Sorrel was eaten in ancient Egypt and by the Romans, who liked the way its tartness offset the flavors of rich foods. It was popular in England in the Middle Ages, more often than not for its medicinal attributes. The herbalist John Evelyn wrote of sorrel in the 18th century that it imparted “so grateful a quickness to the salad that it should never be left out.” The rebirth of salads in the latter decades of the 20th century, and the consequent search for interesting leaves and flowers to adorn them, has rekindled an appreciation for herbs such as sorrel that for many years were almost forgotten.



Garden sorrel; profusion sorrel

Processing

This hardy perennial is rarely processed, as it does not keep its flavor well when dried, and fresh sorrel is available all year round in many of the moderate climates. Sorrel is easy to grow and a few plants will keep a family supplied with this tangy salad addition for most of the year. Remember to cut off the flower stalks and stop the plant from going to seed; this way the new, young foliage will be at its best.

Buying and Storage

Sorrel can be bought in bunches from specialist fresh produce retailers. Make sure the leaves do not look wilted, just as when buying its cousins, rhubarb and spinach. After washing they can be stored in the vegetable crisper of the refrigerator for up to a week; if carefully wrapped flat in foil with the edges sealed down, the leaves can be frozen.

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 1 cup (250 mL)
- vegetables: 1 cup (250 mL)
- carbohydrates: 1 cup (250 mL)

COMPLEMENTS

- salads
- scrambled eggs
- omelets
- may be made into a sauce

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- chicory
- chives
- coriander leaf
- cress
- dill
- garlic
- lovage
- parsley
- tarragon
- thyme



Use

Because sorrel contains oxalic acid it should be consumed in moderation with other foods. Consider it as an accompaniment rather than the main item. Also, like spinach and rhubarb, sorrel must not be cooked in iron or aluminum pots as it will react with them and cause unpleasant flavors. Always use stainless steel utensils for cutting and cooking sorrel. Sorrel should not be cooked for too long and in most applications should only be blanched. The young, tender leaves have the best flavor.

The appetizing tang of fresh, torn sorrel leaves can make salad dressing superfluous and liven up the most basic of scrambled eggs or an omelet. Sorrel sauce is a traditional use for sorrel and is made by gently cooking a bunch of finely cut young leaves, melting a little butter with them, thickening with flour and adding some chicken stock to achieve the desired consistency. Sorrel sauce goes well with fish in the same way as a lemon sauce does and it complements veal and pork, making an interesting departure from apple sauce. Sorrel sauce is delicious with cold poultry, on hot boiled potatoes or in potato salads, and when drizzled over lamb cutlets. Chilled sorrel soup is quintessentially French and is deliciously refreshing on a hot summer's day.



Sorrel and Walnut Pesto

Sorrel

This pesto is lovely stirred through farfalle pasta with sautéed wild mushrooms and a dash of cream. The pesto keeps, covered, in the fridge for up to 2 weeks.

- 4 cloves garlic, roughly chopped
- 1 cup (250 mL) firmly packed sorrel leaves
- ½ cup (125 mL) firmly packed fresh flat-leaf parsley
- ½ cup (125 mL) grated Parmesan cheese
- ¼ cup (50 mL) walnut pieces
- ¼ cup (50 mL) pine nuts
- 6 tbsp (90 mL) extra-virgin olive oil
- salt and freshly ground black pepper to taste

In a food processor, pulse garlic, sorrel leaves, parsley, Parmesan, walnut pieces and pine nuts until broken down. With the motor running, slowly add oil through the feed tube to form pesto. Season with salt and pepper. Makes 1½ cups (375 mL).

Star Anise

OTHER COMMON NAMES

- anise stars
- badian
- Chinese anise
- Chinese star anise

BOTANICAL NAMES

- star anise: *Illicium verum*, *I. anisatum*
- Japanese star anise — poisonous: *I. religiosum*

FAMILY

- *Illiciaceae* (formerly *Magnoliaceae*)

STAR ANISE is the dried, star-shaped fruit of a small Asian evergreen tree that grows to about 16 feet (5 m) tall. The star anise tree, a member of the magnolia family, has shiny, aromatic leaves approximately 3 inches (7.5 cm) long and narcissus-like, greenish yellow unscented flowers that are followed by rayed fruits composed of eight seed-holding segments. Whenever I see a bowl full of star anise it looks to me like it's full of funnel web spiders! You don't have to count the eight rough, dark brown, arched pods of an upside-down star; instinct tells you there are eight. When viewed carefully from the top, it is noticeable that each section has split, some more than others, creating a canoe shape and revealing within a light brown, tick-shaped, extremely shiny seed. The aroma of

Star anise, whole and ground



the whole star anise spice is distinctly anise-like. Although it is not related to the herb that aniseed is collected from, star anise and aniseed both contain essential oils of similar chemical composition. Star anise has a strong, sweet, licorice character and deep, warm spice notes that are reminiscent of clove and cassia. The flavor is similarly licorice-like, pungent, lingering and numbing, leaving the palate fresh and stimulated. The seeds, if consumed separately, have less flavor than the woody boat-shaped spokes of the star, but they do convey an interesting nuttiness. A closely related species with poisonous leaves and fruits (due to their content of sikimixotoxin) is Japanese star anise. This has been used as an adulterant of true star anise in the past and is called “mad herb” in China. It is a Japanese funeral herb with religious significance and can be identified by its lack of anise smell and turpentine-like flavor. I have seen stars that fit this description; they are generally smaller than true star anise and may have up to 12 segments.

Origin and History

Star anise is indigenous to the south and southwest of China and North Vietnam and is grown in India, Japan and the Philippines. The trees do not bear fruit until they are about six years old, after which they are reputed to be able to keep producing for up to 100 years. Centuries of trade brought star anise to India from the Orient and I have experienced many delectable dishes in Kerala, in southern India, that have been spiced with star anise. It was not until the 16th century that it was seen in Europe. It is astounding to think that it took until 1588 for a sample to be brought to London, and that was from the Philippines. Once discovered by the West, the essential oil of star anise, extracted by steam distillation, found its way into confectionery and liqueurs, most notably anisette.

Processing

In a process very similar to those used to harvest cloves, allspice, pepper and even vanilla, star anise fruits are harvested when green (before they have ripened) and are dried in the sun. During drying they turn a deep, reddish brown and their characteristic aroma and flavor fully develops. Ground star anise is made by grinding the complete dried stars, including seeds, to a fine, dark, smooth-textured powder.

NAMES IN OTHER LANGUAGES

- Arabic: raziyanjekhatai
- Chinese (C): baat gok, pak kok
- Chinese (M): ba jiao
- Czech: badyan, cinsky anyz
- Danish: stjerne anis
- Dutch: steranijs
- French: anis de Chine, anise étoilé, badiane
- German: sternanis, badian
- Greek: anison asteroeides
- Indian: badian, anasphal
- Indonesian: bunga lawang, adas cina
- Italian: anice stellato
- Japanese: daiuikyo, hakkaku
- Malay: bunga lawang
- Norwegian: stjerneanis
- Polish: anyz gwiazdkowaty
- Portuguese: anis estrelado
- Russian: badyan, zvezdchaty anis
- Spanish: anis estrellado, badian
- Swedish: stjarnanis
- Thai: poy kak bua
- Turkish: cin anasonu
- Vietnamese: bat giac huong, cay hoy, hoi

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- average whole star: 1.7 g
- ground: 2.7 g

**SUGGESTED
QUANTITY
PER POUND (500 G)**

- red meats: 2 whole stars, 1 ¼ tsp (6 mL) ground
- white meats: 2 whole stars, 1 ¼ tsp (6 mL) ground
- vegetables: 1 ½ whole stars, 1 tsp (5 mL) ground
- carbohydrates: 1 whole star, ½ tsp (2 mL) ground

COMPLEMENTS

many savory Chinese dishes including:

- Peking duck
- pork
- soups
- stir-fries

USED IN

- Chinese five-spice
- Chinese master stock spices
- curry powders

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander seed
- cumin
- fennel seed
- ginger
- mace
- nutmeg
- pepper
- Sichuan pepper

Buying and Storage

Never refer to star anise as star aniseed — it only causes confusion, because aniseed is gathered from an annual herb and the seeds of the anise plant have a different flavor than star anise. Whole star anise can be bought from some supermarkets and the majority of specialty food stores. It is best to buy both whole and ground star anise when required, as home grinders and using a mortar and pestle are not as effective as industrial grinding machines for this spice. While intact, eight-segment stars are attractive, the presence of some broken stars is not necessarily a sign of low quality, but rather one of less fastidious packing, rough handling or both. The freshness of whole star anise can be determined by breaking off one segment, squeezing it between thumb and forefinger until the brittle seed pops, then sniffing for the distinct aroma. If you don't experience it immediately, it's probably past its optimum storage life, which is three to five years if kept in an airtight container away from extremes of heat, light and humidity. Ground star anise should be purchased in small quantities and when stored under the same optimum conditions will last for a little more than a year.

Use

Star anise is to me one of the key signature flavors of Chinese savory cooking. It combines particularly well with pork and duck and is one, albeit important, ingredient in a Chinese master stock, that ball of spice-filled muslin that looks like a giant bouquet garni. It is cooked and added to, over and over again, sometimes for years, developing a unique character that is particular to the cook who uses it. Star anise is the dominant spice in a Chinese five-spice mixture. Because star anise is pungent, only a very small quantity is required to achieve a pleasing result. A pinch of the powder is sufficient to flavor a wok of stir-fried vegetables and a single star will flavor a soup or hot-pot. We cook delicious pork spareribs (marinated in water, thick soy sauce, a little sugar and a couple of whole star anise), which are subjected to a long, slow bake until the liquid has reduced. The sweet, spicy, licorice-like notes of star anise also go well in sweet dishes such as compotes of fruit and spiced fruit jams. See Pork Spareribs in Chinese Master Stock (p. 321) in the chapter on licorice root.

Summer Berries in Vodka and Star Anise with Spiced Chocolate Brownies

Star Anise

The berries freeze well for up to 3 months and are lovely eaten on their own or warmed up and poured over pancakes, waffles or French toast.

- 2 lbs (1 kg) mixed blueberries, raspberries and strawberries
- $\frac{1}{2}$ cup (125 mL) good-quality vodka
- $\frac{1}{2}$ cup (125 mL) freshly squeezed lime juice
- $\frac{1}{3}$ cup (75 mL) superfine (caster) sugar
- 4 whole star anise
- $\frac{1}{4}$ tsp (1 mL) ground star anise
- 6–8 Spiced Chocolate Brownies (see recipe, page 478)
- whipped cream

In a large bowl, combine berries, vodka, lime juice, sugar and whole and ground star anise. Refrigerate for at least 2 hours or for up to 24 hours. Stir berries a few times to distribute flavors evenly.

Serve each brownie with a generous scoop of berries and a dollop of whipped cream. Serves 6–8.

- $\frac{2}{3}$ cup (150 mL) unsalted butter
- 8 oz (225 g) dark chocolate, broken into chunks, divided
- 1 cup (250 mL) superfine (caster) sugar
- 3 tbsp (45 mL) pine nuts
- 1 tsp (5 mL) vanilla
- $\frac{1}{2}$ tsp (2 mL) ground star anise
- $\frac{1}{4}$ tsp (1 mL) chili powder
- 2 whole eggs
- 1 egg yolk
- $\frac{2}{3}$ cup (150 mL) all-purpose flour

Preheat oven to 350°F (180°C) and line an 8-inch (20 cm) square baking pan with parchment paper. Melt butter and 7 oz (200 g) of the chocolate chunks in a glass bowl placed over a pan of simmering water. Stir occasionally until melted, then remove from heat. Stir in sugar, pine nuts, vanilla, star anise, chili powder and the remaining 1 oz (25 g) chocolate chunks until combined. Add whole eggs and egg yolk and sift in flour, combining well.

Pour batter into prepared baking pan and bake for 35 minutes. Let cool completely in pan on a wire rack before turning out and cutting into squares. Makes about 2 dozen squares.

Stevia

OTHER COMMON NAMES

- candy leaf
- sugar leaf
- sweet herb of Paraguay
- sweet honey leaf

BOTANICAL NAME

- *Stevia rebaudiana* Bertoni

FAMILY

- Asteraceae (formerly Compositae)

STEVIA IS one of those herbs that on critical analysis seems to have a lot going for it; however, for a variety of reasons, it is not a herb that the average consumer is aware of. Stevia is a humble, spindly, soft green plant with lightly serrated wide leaves, borne in simple pairs off the soft main stem. It looks like a small weed and grows on average to less than 1½ feet (0.5 m) in height. Stevia leaf powder, which is about 30 times sweeter than sugar by volume, is deep green and has a slightly grassy aroma. The taste is intensely sweet, and the flavor has a background bitterness that can be lingering if too much is eaten. I find it interesting that stevia, which is natural, should taste so distinctly of artificial sweetener. Most of the sweetness in stevia comes from two compounds: stevioside, which can be up to 10% of the dry leaf weight, and rebaudioside, at up to 3%.

Stevia



FLAVOUR GROUP

- sweet

WEIGHT PER
TEASPOON (5 ML)

- ground: 2.5 g

SUGGESTED
QUANTITY PER
POUND (500 G)

- vegetables: 1 tsp
(5 mL) ground
leaves
- carbohydrates: 1 tsp
(5 mL) ground
leaves

Origin and History

Native to Paraguay, Brazil and Argentina, stevia leaves appear to have been used by Indians of the Guaraní tribe long before Europeans came to the Americas. The so-called discovery of stevia has been attributed to a South American natural scientist named Dr. Moises Santiago Bertoni, who identified it in 1887. In 1931, two French chemists isolated the constituent they named stevioside and found it to be 300 times sweeter than sugar. In the 1950s, Japan banned the use of artificial sweeteners, no doubt as an incentive to develop its production of stevia to sweeten beverages, pickles, meat and fish products, baked items, soy sauce and low-calorie foods. Stevioside, extracted from stevia leaves, is widely used as a sweetener in manufactured products in Japan, Korea, China, Taiwan, Malaysia, Brazil and Paraguay. Proponents of stevia claim that it regulates high blood pressure and inhibits tooth decay by slowing the production of plaque. In an interesting turn of events, the United States Food and Drug Administration (FDA) issued a controversial import ban on stevia in 1991 on the basis that a derivative of stevioside may be harmful to humans. Pharmacological tests to date have been inconclusive with respect to both the efficacy and the harmfulness of stevia, and the FDA lifted the ban in 1995, allowing stevia to be sold in the U.S. as a dietary supplement. It still cannot be sold as a food or sweetener. Stevia's supporters have suggested that the ban and subsequent restrictions had more to do with the powerful sugar producers and artificial sweetener manufacturers lobby than with public safety. As stevia is a natural product and therefore cannot be patented for commercial branded use in chewing gum, soft drinks and diet foods, they may have a valid point.

Processing

Dry stevia leaves in a dark, dry, well-aired place until the leaves are quite crisp to the touch, indicating a moisture level of around 10%. Stevioside is extracted by proprietary processes that yield a product 300 times sweeter than sugar. A quarter of a teaspoon (1 mL) of stevioside extract replaces 1 cup (250 mL) of sugar. A simple, less potent and therefore easier to use extract may be made at home by putting ½ teaspoon (2 mL) of stevia leaf powder in ½ cup (125 mL) of warm water. Let steep overnight, then strain through a coffee filter to produce a liquid free of particulate. Store in the refrigerator for no more than one month.

Buying and Storage

Stevia plants are available from some herb nurseries and can be grown in semi-humid subtropical conditions with temperatures ranging from approximately 70°F to 100°F (20°C to 40°C). Dried stevia leaves and stevia leaf powder can be found in health food stores and some specialty spice shops. Stevioside extract is usually sold as white stevia powder and may vary considerably depending on the quality of the plants used for extraction. The presence of additives such as maltodextrin to dilute the intensity and make the powder more user-friendly will also affect the flavor strength.

Use

The first and most important thing to remember about stevia is that, although its sweetness is heat stable and won't deteriorate during cooking, it does not caramelize like sugar and so cannot be used to make meringues or other recipes that depend on large quantities of sugar. But using homemade stevia extract to sweeten beverages, sauces, muffins, ice cream, cheesecakes and rice puddings is quite feasible. By experimenting with small quantities of stevia in familiar foods and drinks, you will soon identify the quantity that suits your taste.

COMPLEMENTS

- beverages
- cream and cream cheese
- desserts
- stewed fruit
- ice cream
- rice pudding

USED IN

- not commonly used in spice blends

COMBINES WITH

- allspice
- caraway
- cardamom
- chili
- cloves
- coriander seed
- ginger
- licorice
- nutmeg
- star anise



Sumac

OTHER COMMON NAMES

- elm-leaved sumac
- Sicilian sumac
- sumach
- sumak
- tanner's sumac

BOTANICAL NAME

- *Rhus coriaria*

FAMILY

- Anacardiaceae

NAMES IN OTHER LANGUAGES

- Arabic: summak
- Czech: sumah, koreni sumac
- Danish: sumak
- Dutch: sumak
- French: sumac
- German: farberbaum, sumach
- Greek: roudi, soumaki
- Hungarian: szomorce
- Indian: kankrasing
- Italian: sommacco
- Japanese: sumakku
- Russian: sumakh
- Spanish: zumaque
- Turkish: sumak, somak

FLAVOR GROUP

- tangy

WEIGHT PER TEASPOON (5 ML)

- ground: 3.1 g

THE SUMAC tree that bears berries for culinary use is only one among a species of at least 150 varieties of rhus tree, many of which are recorded as causing severe and painful skin irritation and cases of poisoning. For this reason I would not recommend trying to identify and use sumac in its growing state. Instead, purchase it from a reputable spice shop or Middle Eastern food specialist.

My first encounter with the edible sumac tree (a member of the same family as the mango) was on a hot summer's day near a scented, football-sized field of mint on the outskirts of the small town of Nizip in southeastern Turkey. Growing in what looked like barren, rocky soil and flanked by gnarled olive trees and prolific pistachio and walnut groves, the sumac trees were 6–10 feet (2–3 m) tall with reasonably dense, dark green, frond-like foliage that looked similar to the surrounding olive trees. Although sumac trees are deciduous, Ibrihim, the farmer, assured us that the leaves never turn bright scarlet like other rhus trees and he has never known anyone to suffer an allergic reaction from contact with the leaves or fruits. There were a few male trees among the grove (they do not bear fruit), but the leaves are harvested and added to ground sumac spice or mixed with thyme and oregano to make a kind of za'atar.

Sumac berries stand out from the foliage like optimistic Christmas decorations. They are tightly bunched in conical clusters $3\frac{1}{4}$ –4 inches (8–10 cm) long and about $\frac{3}{4}$ inch (2 cm) across at the widest point near the base. Each berry — which develops from a similarly dense bunch of small, white flowers — is a little larger than a peppercorn and when fully formed is green and covered with a hairy down like a kiwifruit. Most of the non-poisonous varieties of rhus have hairy berries, whereas the fruits on decorative types are smooth. The berries then ripen to a pinkish red and are finally deep crimson when harvested. Sumac berries have a very thin outer skin and flesh surrounding an extremely hard, tick-shaped seed.

Sumac powder is a deep burgundy color, coarse-textured and moist. The aroma is fruity, like a cross between red grapes and apple, with a lingering freshness. The taste is initially salty (from the salt added after processing), tangy (from malic acid



Ground sumac

contained in the downy covering on the berries — also found in sour apples) and pleasantly fruity with no sharpness. Although there are many delectable souring spices such as tamarind and pomegranate, the refreshing fruity sourness of sumac is unique and one often wonders why it is not more commonly known in Western cooking.

Origin and History

Sumac trees grow wild in the Mediterranean region and are found in southern Italy and much of the Middle East, especially southeastern Turkey and Iran. Sumac berries were used by the Romans, who referred to them as Syrian sumac. Lemons being unknown in Europe at that time, sumac was a pleasing souring agent, less sharp than vinegar and more agreeable than tamarind. All parts of the tree yield tannins and dyes that have been used for centuries in the leather industry. It is said that most of the leather in Turkey, for which it is famous, is dyed black from a powder made with sumac shoots and containing large amounts of gallic acid. The American Indians used to make a sour drink from the berries of scarlet sumac (*Rhus glabra*). Other poisonous varieties are used to make varnish, particularly the well-known Japanese lacquerware, and for this reason it is sometimes known as the “varnish tree.” In more recent times, we have been introduced to sumac by migrants from the Middle East who have opened doner kebab shops, where this tangy burgundy powder is sprinkled over freshly sliced onion rings.

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: up to 6 tsp (30 mL)
- white meats: up to 6 tsp (30 mL)
- vegetables: up to 6 tsp (30 mL)
- carbohydrates: up to 6 tsp (30 mL)

COMPLEMENTS

- tomatoes
- avocado sandwiches
- salads as a garnish
- broiled and roasted meats, when sprinkled on before cooking
- fish and chicken

USED IN

- za'atar
- seasoning rubs for meat

COMBINES WITH

- chili
- garlic
- ginger
- oregano
- paprika
- parsley
- pepper
- rosemary
- sesame seed
- thyme

Processing

Clusters of ripe, crimson sumac berries are harvested by hand and put in the sun to dry and further ripen for two to three days. Berries from the second harvest of the season are said to have the strongest flavor. These bunches of fruits are then put through a stone mill that pulverizes the berries and separates their acid-containing outer skin and the thin, deep crimson underlayer of flesh from the hard, stony seed and pieces of stem and remaining flowers. What first comes out of the mill is sieved to yield the darkest, most uniform and sweetest-tasting powder. Salt is added to act as a preservative and it also has the effect of enhancing sumac's natural flavor. Sometimes cottonseed oil is mixed in as well to create a darker color and desirable moist texture. Remaining material is then put through the stone mill again and sieved to further extract any useful sumac and separate the hard seeds. These seeds are ground separately in a conventional grinder to yield a light brown powder. Different grades of sumac are made by taking the first sieving and mixing varying proportions of second and third sievings with different amounts of powdered seeds. The best quality has the highest ratio of outer flesh to pulverized stem and seed and can be recognized by its deep color and coarse uniform texture.

Buying and Storage

As already mentioned, sumac should only be purchased in its powdered form from reputable merchants, and attempts to identify it, grow it and pick it yourself are definitely not recommended. Sumac powder will vary in color, texture and moistness. Color and texture are good indications of quality; the darker, more uniform material has less stem and pulverized seed than lighter-colored grades. It is worth noting that some buyers prefer the lighter-colored sumac, this possibly being more a function of what they are used to rather than an indication of actual flavor strength. Moistness sometimes causes lumps to form; however, this soft "feel" is due to the added cottonseed oil, not water activity, so there should be no risk of mold forming, even in fairly lumpy powder. Sumac is best stored in the same way as other spices, in airtight packs and away from extremes of heat, light and humidity.

Use

In the Middle East sumac is used extensively as a souring agent instead of lemon juice or vinegar. It is sprinkled on kebabs before cooking and garnishes salads, particularly those with tomatoes, parsley and onions. In fact the flavor of sumac complements tomatoes and avocados so well, we hardly ever consume either without it. Sumac is delicious on roast meats, especially lamb, mixed with paprika, pepper and oregano. Grilled fish and chicken are greatly enhanced by a light dusting of sumac prior to cooking. A half-and-half mixture of sumac and coarsely ground black pepper makes an excellent substitute for lemon pepper at the table. The Middle Eastern equivalent of mixed herbs, za'atar, is made by blending thyme, toasted sesame seeds, sumac and salt. Traditionally, za'atar is sprinkled on flatbread that has been brushed with olive oil and then lightly toasted.

Slow-Roasted Tomatoes

Sumac

Always a favorite at our spice appreciation classes, this recipe showcases sumac at its best. Slow-roasted tomatoes seem to taste more “tomatoey” with the addition of sumac, and this dish is easy to make. These can be served hot or at room temperature as cocktail finger foods or used as part of a salad.

- 12 Roma (plum) tomatoes, fully ripe
- a sprinkling each of salt, granulated sugar and freshly ground black pepper
- 1–2 tbsp (15–25 mL) sumac
- 2 tbsp (25 mL) olive oil

Halve the tomatoes lengthwise and place cut side up in a baking tray. Sprinkle with salt, sugar and pepper, then cover with a good sprinkling of sumac. Drizzle the oil over the tomatoes and roast at 210°F (100°C) for 3 hours.

Sumac Lamb Cutlets with Red Onion Relish

One of my favorite Greek restaurants served a delicious rack of lamb that was seasoned only with sumac and black pepper. Since then, I rarely cook lamb without sumac somewhere in the recipe.

- 12 lamb cutlets, trimmed of fat and bones cleaned
- 2 tsp (10 mL) sumac
- 1 tsp (5 mL) salt
- 1 tsp (5 mL) freshly cracked black pepper

Relish

- 1 red bell pepper, very finely diced
- 1 small red onion, very finely diced
- $\frac{1}{2}$ cup (125 mL) white wine vinegar
- 2 tsp (10 mL) sumac
- 2 tsp (10 mL) very finely chopped fresh mint
- 1 tsp (5 mL) superfine (caster) sugar

Coat lamb cutlets with sumac, salt and pepper. For the relish, combine red pepper, red onion, vinegar, sumac, mint and sugar; stir well.

Heat barbecue to high and cook cutlets for 3 minutes on each side. The lamb should still be very pink and tender inside. Top each cutlet with $\frac{1}{2}$ tsp (2 mL) relish to serve as an appetizer, or serve 3 cutlets per serving on top of Wild Arugula Mash (see recipe, p. 106) with 3 Slow-Roasted Tomatoes (see recipe, p. 485) and a drizzle of relish. Serves 4 as a main course.

Sweet Cicely

OTHER COMMON NAMES

- anise chervil
- British myrrh
- Spanish chervil
- fern-leaved chervil
- giant sweet chervil

BOTANICAL NAME

- *Myrrhis odorata*

FAMILY

- Apiaceae (formerly Umbelliferae)

NAMES IN OTHER LANGUAGES

- Czech: cechrice
- Danish: spansk korvel
- Dutch: roomse kervel
- Finnish: saksankirveli
- French: cerfeuil d'Espagne
- German: spanischer kerbel, myrrhenkerbel
- Hungarian: spanyol turbolya
- Italian: cerfoglio di spagna
- Japanese: mirisu, siseri
- Norwegian: spansk kjorvel
- Polish: marchewnik anyzowy
- Russian: mirris dushistaya
- Swedish: spansk korvel, aniskal

FLAVOR GROUP

- mild

SWEET CICELY is a relatively tall, particularly attractive perennial herb that grows 2–5 feet (0.6–1.5 m) in height in cool climates and mountain regions. Thick, hollow and branching stems, similar to those of angelica, bear the dense foliage of green, fern-like leaves that have a soft texture from their silky down covering. The leaves are about 12 inches (30 cm) long and are paler on the underside. The plant is highly ornamental when in bloom, as the $\frac{1}{2}$ –2-inch (1–5 cm) umbels of white flowers make a dramatic display, covering it like flecks of ocean foam among the upright green seed heads that, from a distance, look like a type of lavender. When mature and ripe, the seeds are ridged, elongated and dark brown like large grains of wild rice. The leaves of sweet cicely have an agreeable, warm, anise aroma reminiscent of myrrh and a pleasing sweet taste.

Origin and History

Native to Europe, where it was once cultivated as a pot shrub, sweet cicely was called *seseli* (the way it is pronounced) by the Greek physician Dioscorides. The botanical name comes from *myrrhis*, which means “perfume,” and *odorata*, “fragrance.” Its common name is prefixed by “sweet” because the taste has a

Sweet cicely, leaf and seeds



SUGGESTED QUANTITY PER POUND (500 G)

- red meats 5 tsp
(25 mL) chopped
fresh leaves and seed
heads
- white meats: 5 tsp
(25 mL) chopped
fresh leaves and seed
heads
- vegetables: 5 tsp
(25 mL) chopped
fresh leaves and seed
heads
- carbohydrates: 5 tsp
(25 mL) chopped
fresh leaves and seed
heads

COMPLEMENTS

- salads
- tart vegetables such as
rhubarb

USED IN

- not commonly used in
spice blends

COMBINES WITH

- allspice
- cardamom
- chervil
- cinnamon and cassia
- mint
- nutmeg
- parsley
- vanilla

distinct sugar-like sweetness. The old-fashioned names, which incorrectly imply it is a type of chervil, were attributed to sweet cicely because of the similar anise-like finish and ferny leaf structure, suggestive of a giant version of chervil. The ripe, oil-rich seeds were once gathered and crushed to a powder for polishing wooden floors and furniture, giving them a high gloss and agreeable scent.

Processing

Sweet cicely is nearly always used fresh; therefore, it is rarely dehydrated.

Buying and Storage

Although easily grown from seed in cool, moderate climates that are not humid, sweet cicely is not readily available from fresh produce retailers.

Use

The roots of sweet cicely, when cut up and boiled like carrots and turnips, were a popular vegetable, and the hollow stems have been candied in the same manner as angelica. But it is the leaves and finely chopped unripe seed heads that have the greatest culinary significance, as they are delicious in salads. And when a few sweet cicely leaves are added to the cooking water of sharp fruits such as rhubarb and acidic berries, their natural sweetness counters the tartness. It is a safe sweetener for diabetics and goes well with cream and yogurt and in cooling summer drinks.



Tamarind

OTHER COMMON NAMES

- assam
- Indian date

BOTANICAL NAME

- *Tamarindus indica*

FAMILY

- Fabaceae (formerly Leguminosae)

THE TAMARIND tree is huge and spreading, rising up on a thick trunk covered in gray bark. Growing up to 6 feet (20 m) high, its pale green foliage sections of 10–15 curry-leaf-shaped leaflets provide a wonderful canopy of shade, punctuated by small clusters of red-striped yellow flowers when in bloom. My most vivid recollection of the majesty of the tamarind tree was when Liz and I led a spice tour to India in 1991. After a few hours' hot and dusty drive one day, we lunched outside Hyderabad, spreading our picnic on an enormous handmade rug beneath the cooling shade of a tamarind tree. There is a belief that tamarind trees emit harmful, acrid vapors, making it unsafe to sleep under them, and that plants will not grow there because of the acidity exhaled from the tree overnight. This may be why there is usually little vegetation around their bases, creating an ideal picnic spot in the middle of a hot Indian March day.

The 4-inch (10 cm) long fruits of the tamarind tree are knobbly, light brown pods containing an acidic pulp that surrounds about 10 shiny, smooth, dark brown, angular seeds,

Taramind block (Indian and Thai)



NAMES IN OTHER LANGUAGES

- Arabic: sbar, tamr al-hindi
- Burmese: ma-gyi-thi
- Chinese (C): daaih mah lahm, loh fong ji
- Chinese (M): da ma lin, luo huang zi
- Czech: tamarind
- Danish: tamarind
- Dutch: tamarinde, indische dadel, assem
- Finnish: tamarindi
- French: tamarin
- German: tamarinde, indische dattel
- Greek: tamarin
- Hungarian: tamarindusz gyumolcs
- Indian: pulee, amyli, chinch, imlee, imli
- Indonesian: assam, assam jawa, asam kuning
- Italian: tamarindo
- Japanese: tamarindo
- Laotian: mal kham
- Malay: assam, assam djawa
- Philippino: sampalok
- Portuguese: tamarindo
- Russian: finik indiskiy
- Spanish: tamarindo
- Sri Lankan: pulee, siyambala
- Swedish: tamarind
- Thai: makahm, som ma kham, mak kham peak
- Vietnamese: cay me, me chua, trai me

FLAVOR GROUP

- tangy

measuring roughly 1⁄8 x 1⁄3 inch (3 x 8 mm). The bulbous, knuckle-like pod has a brittle shell, which when broken away reveals a pale tan, sticky mass with longitudinal strings and fibrous veins attached. Upon coming into contact with the air, the pulp begins to oxidize and turns dark brown and almost black. Its aroma is vaguely fruity and sharp, while the flavor is intensely acidic, tingling, refreshing and reminiscent of dried stone fruit.

Origin and History

Tamarind trees are indigenous to tropical East Africa and possibly South Asia. They grow wild in India, where they flourish as if it were their native habitat. Tamarind was used by the Arabs and in Europe in the Middle Ages. The common name for it in Asia, “assam,” simply means “acid,” in recognition of its high tartaric acid content. Such is the cleaning effect of their acid, in India tamarind pods have been used to polish brass and copper, and we have found soaking Thai brass cutlery in a tub of tamarind water to be an effective method of cleaning.

In the past, tamarind leaves have been used to make red and yellow dyes, mostly for fabric. Tamarind trees were a popular decorative tree in colonial gardens, especially on the west coast of India. There was a local belief that evil spirits lived in tamarind pods. Taking advantage of this superstition, the British living in Goa in the 19th century would wear a tamarind pod on one ear (like a carpenter’s pencil) when going out into the marketplace so they would not be bothered by the locals. As a result the British in Goa were nicknamed “Lugimlee” (which means tamarind heads) by the locals, and I believe the name has remained as a vernacular reference to foreigners in that region to this day.

Tamarind has been appreciated for its medicinal properties in Arabic countries, India and Asia. It is said to cool and cleanse the system, particularly one’s liver and kidneys. The Indians make a refreshing drink from it called imli panni, and in the Middle East a version with added sugar is sold in attractive cordial bottles. A delicious confection is made in Asia from sweetened balls of tamarind, rolled in sugar and sometimes spiced with chili. Although a surprising number of Westerners are not aware of tamarind, many consume it regularly without realizing, as it is one of the key ingredients in Worcestershire sauce.

Processing

When one stands beneath these grand, spreading trees that are so high, it is difficult to imagine how the long, curved pods containing the sticky, acidic mass of tamarind pulp and black shiny seeds could possibly be picked. We soon learned when visiting the Sediypu family's organic spice gardens near Mangalore, in the south of India, and should have realized there would be a simple answer. Our hosts told us to look up, as all of a sudden the upper foliage of a majestic tamarind tree began to quiver furiously. High up in the branches there was a little Indian shaking them to dislodge the fully developed tamarind pods, which were falling to the ground in a veritable, clattering hailstorm. He looked just like a monkey, worrying the branches and bounding from limb to limb, so far above the ground and joyous at the harvest raining down at our feet.

The pods were then gathered up and taken to the house, where we partook of a delicious lunch with the family. Mrs. Sediypu showed us how they peel off the outer skin of the pod to reveal the soft, light brown, sticky tamarind pulp laced with fine, string-like strands. She then proceeded to remove the seeds in a wonderfully dexterous and medieval manner. Using the hard, dried-out scoop from the base of a coconut frond as a dish, she took the mass of tamarind pulp in one hand and pressed it against a fierce-looking sickle held upturned. The shiny black seeds dropped like marbles into the "palm frond" dish, and a growing ball of deseeded tamarind pulp filled her left hand. The bulk of commercially produced tamarind is still hand-peeled; however, it would be rare to find this degree of care being taken to remove the seeds. Tamarind concentrate is a thick, black, molasses-type liquid, and is made by boiling down an extract of oxidized tamarind paste that has been strained to remove the seeds and fiber. Tamarind paste is made from the fresh, unoxidized pulp, mixed with salt and some food acid to prevent oxidation.

Buying and Storage

Tamarind can be bought from spice shops and Asian and Indian grocery stores. A sweetened tamarind cordial is sold in Middle Eastern food stores alongside the bottles of grenadine (made from pomegranate). Tamarind will be found in what is called "block" form, a sticky, plastic-wrapped slab of oxidized

WEIGHT PER TEASPOON (5 ML)

- a walnut-sized piece: 12 g

SUGGESTED QUANTITY PER POUND (500 G)

made by soaking one walnut-sized piece in $\frac{1}{2}$ cup (125 mL) of hot water:

- red meats: $\frac{1}{2}$ cup (125 mL) tamarind water
- white meats: $\frac{1}{2}$ cup (125 mL) tamarind water
- vegetables: $\frac{1}{2}$ cup (125 mL) tamarind water
- carbohydrates: $\frac{1}{2}$ cup (125 mL) tamarind water

COMPLEMENTS

- Asian soups
- curries and any dish requiring an acidic lemon-like tang
- Indian pickles
- chutneys
- curry pastes

USED IN

- not commonly used in spice blends

COMBINES WITH

- ajowan
- allspice
- asafetida
- caraway seed
- cardamom
- coriander seed
- chili
- cinnamon and cassia
- cloves
- fennel seed
- fenugreek seed
- ginger
- mustard
- nigella
- paprika
- turmeric

pulp and varying proportions of rock-hard seeds. Tamarind block from India has a fairly dry texture interspersed with papery, thumbnail-sized flakes of inner pod skin. The type from Asia, most often Thailand, is cleaner-looking and very sticky. There is not a huge difference in flavor between the two, and while some cooks prefer the aesthetics of Thai tamarind, others find the Indian material easier to handle.

Tamarind concentrate is convenient to use and can be bought in jars that range from about 3½ oz (100 g) to 18 oz (500 g). Tamarind paste is pale brown, has a salty taste and comes in similar-sized containers as the concentrate. Another, less common form of tamarind is a powder called cream of tamarind or assam powder. This is made by mixing tamarind extract with a carrier such as dextrose to form a free-flowing powder. Due to the amount of acid in tamarind, it is quite stable and requires no special storage conditions; just keep the block in an airtight pack to prevent it from drying out. A member of the kokam family known as assam gelugor, although acidic in taste, is sometimes incorrectly referred to as tamarind slices.

Use

Because of its high tartaric acid content, tamarind is one of the most popular souring agents for foods in the majority of tropical countries. Recipes will generally call for a quantity (typically 2 tbsp/25 mL to ½ cup/125 mL) of tamarind water to be added during cooking. To make tamarind water from the block, break off a walnut-sized piece (a ¾-inch/2 cm diameter ball) and put into ½ cup (125 mL) of hot water. Stir it around and worry it a bit with a spoon and leave for about 15 minutes. Strain the liquid off, squeezing the remaining pulp as dry as possible before discarding it. Tamarind water can be made in large batches and frozen as ice cubes to drop into recipes whenever required. Tamarind water can also be made from the concentrated liquid by dissolving 2 tsp (10 mL) in ½ cup (125 mL) of water. If you think of tamarind water as another form of lemon juice, and use it in roughly the same proportions, the flavor strength should be just about right in any cooking application. Tamarind paste is used in Asian stir-fries and should be used sparingly due to its high salt content. It is not a substitute for tamarind water, as the unoxidized paste has a different, less acidic flavor.

Sweet Tamarind Prawns

Tamarind

This is based on the North Indian dish prawn patia, which has Persian origins.

- 1 cup (250 mL) tamarind pulp
- 1½ cups (375 mL) hot water
- 8 green chilies, chopped
- 5 cloves garlic, chopped
- 2 tsp (10 mL) cumin seeds
- ¼ cup (50 mL) vegetable oil
- 3 onions, chopped
- 2 tsp (10 mL) ground cumin
- 2 tsp (10 mL) ground coriander seed
- 2 tsp (10 mL) Garam Masala (see p. 560)
- 1½ tsp (7 mL) medium-heat chili powder
- 1 tsp (5 mL) ground turmeric
- 4 tomatoes, diced
- 4 tsp (20 mL) palm sugar (jaggery) or dark brown sugar
- 20 curry leaves
- salt to taste
- 12 oz (375 g) green medium prawns (shrimp), shelled
- ½ cup (125 mL) fresh coriander leaves

Soak tamarind pulp in hot water for 15 minutes. Strain water into a bowl and discard pulp.

In a mortar and pestle, grind chilies, garlic and cumin seeds. In a large frying pan, heat oil over medium heat and fry onions for 5 minutes. Add chili mixture and fry for 2 minutes. Stir in ground cumin, ground coriander, garam masala, chili powder and turmeric; cook, stirring, for 1 minute. Add tomatoes and cook, stirring, for 5 minutes, then add tamarind water, palm sugar and curry leaves. Season with salt. Bring to a boil, then reduce heat, add prawns and simmer until prawns are cooked through. Remove from heat and garnish with coriander leaves. Serves 4–6.



Tarragon

FRENCH TARRAGON is a small herbaceous perennial with smooth, glossy, dark green, long, narrow leaves shooting from opposite sides of wiry stalks that form a tangle of stems 35 inches (90 cm) high. The small, yellowish buds rarely develop into flowers, and it is said that even in the unusual circumstance of setting seed, they are often sterile. For this reason what is referred to as true tarragon can only be propagated by root division or the taking of cuttings. It must be grown in well-drained soil, protected from hard frost and positioned where it gets plenty of sunshine and only partial shade. French tarragon is worshipped by cooks for its characteristic licorice-anise aroma and tart, lingering, appetite-appealing flavor.

Russian tarragon has neither the pungency nor fragrance of French tarragon and can be easily recognized as it grows twice as tall and has paler, larger, indented leaves and seed-bearing flowers. There is another plant of the same family known as winter, Spanish or Mexican tarragon, which bears bright yellow flowers, is sturdy and neat-looking, with firm, dark green leaves and has a reasonably strong, spicy aroma similar to French tarragon. Winter tarragon grows from seed and is more often than not incorrectly sold to the unsuspecting as French tarragon.

OTHER COMMON NAMES

- French tarragon
- true tarragon

BOTANICAL NAMES

- French tarragon:
Artemisia dracunculus
- Russian tarragon:
A. dracunculus
dracunculoides
- winter tarragon,
Mexican tarragon,
Spanish tarragon:
Tagetes lucida

FAMILY

- Asteraceae (formerly
Compositae)

Origin and History

French tarragon is native to the Mediterranean region, while Russian tarragon is indigenous to Siberia. Few references to tarragon have been found that predate the 13th century, when Ibn Baithar, a respected Arabian physician living in Spain, described its virtues and called it *tarkhun* (Arabic for “dragon”). It was not until the 16th century that it became more widely known as a condiment and was cultivated by the French, who named it *estragon*, meaning “little dragon.” The dragon reference in its nomenclature is believed to come from either the appearance of its coiled serpent-like root system or the belief that tarragon was an antidote to the venom of serpents. Tarragon was introduced to England in 1548 and Gerard’s *Herball* (1597) mentions it. Nowhere is the popularity of



Tarragon, fresh and dried

tarragon more evident in cooking than in France, where it is found in many traditional recipes. Tarragon was brought to the United States by 1806, and its commercial cultivation in California meant that when the Western world had its mid-20th-century love affair with French cuisine, good-quality dried French tarragon was readily available.

Processing

When growing French tarragon, remember that it needs to be replanted at least every third year, preferably from tip cuttings. This is because after three years the fragrance and flavor of the foliage on a French tarragon plant deteriorates until it is akin to the inferior Russian variety. French tarragon dries surprisingly well, which is fortunate when one considers how this perennial contrarily withers away in winter. As with parsley, it is possible to dry the herb at home, but a carefully dried commercial product is generally superior. We visited a herb farm in New Zealand just outside Canterbury, on the South Island, where the grower had his field of French tarragon adjacent to the dehydration facility. This meant that his fresh chopped leaves were in the dryer within half an hour of being harvested, helping them to retain their characteristic flavor.

To dry tarragon from your own garden, cut the stems when they are in abundance (preferably before the flower buds appear) and continue to harvest until the first sign of yellowing of the leaves begins to show in autumn. Hang these stems

NAMES IN OTHER LANGUAGES

- Arabic: tarkhun
- Chinese (C): ngaai hou, luhng ngaai, yan chahn hou
- Chinese (M): ai hao, long ai, yin chen hao, long hao
- Czech: estragon, pelynek kozalec
- Danish: esdragon
- Dutch: dragon, drakebloed
- Finnish: rakuuna
- French: estragon, herbe dragonne
- German: dragon, estragon
- Greek: estrangon, drakos, tarankon
- Hungarian: tarkony
- Italian: dragoncello, estragone
- Japanese: esutoragon
- Norwegian: estragon
- Portuguese: estragao
- Russian: estragon
- Spanish: estragon, tarragona
- Swedish: dragon
- Thai: taeragon
- Turkish: tarhun, tuzla otu

FLAVOR GROUP

- strong

WEIGHT PER TEASPOON (5 ML)

- whole dry and cut leaves: 0.8 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL) dried, 4 tsp (20 mL) fresh chopped
- white meats: $\frac{3}{4}$ tsp (4 mL) dried, 1 tbsp (15 mL) fresh chopped
- vegetables: $\frac{1}{2}$ tsp (2 mL) dried, 2 tsp (10 mL) fresh chopped
- carbohydrates: $\frac{1}{2}$ tsp (2 mL) dried, 2 tsp (10 mL) fresh chopped

COMPLEMENTS

- tartare and béarnaise sauces
- salad dressings and vinegars
- fish and shellfish
- chicken
- turkey
- game
- veal
- egg dishes

USED IN

- fines herbes

COMBINES WITH

- basil
- bay leaves
- chervil
- dill
- garlic
- lovage
- marjoram
- paprika
- parsley
- savory

in small, separate bunches that will allow the air to freely circulate, in a dark, warm, dry, well-aired place. Within a few days the leaves should be quite crisp to the touch, have turned dark green and show no signs of blackening. Remove the leaves by running your thumb and forefinger down the stem and store in an airtight container.

Oil of tarragon, which is extracted by steam distillation, is used in perfumes, beverages, confections, commercially produced mustards and salad dressings.

Buying and Storage

As French tarragon is not always easy to come by, one is justified in being a tad cautious when buying it fresh. When there is no distinct anise aroma or tangy taste, it is probably Russian tarragon, while masses of delightful yellow blooms are a dead giveaway that it is winter tarragon. Fresh tarragon will last for a few days when placed in water that is changed every day and the leaves may be frozen in ice cube trays when finely chopped and covered with a little water. Dried tarragon leaves are readily available and should always be suitably aromatic and tangy in taste. Look for a dark green color, never dark brown or khaki. Store in the same manner as other dried herbs, in airtight packaging, shielded from light and extremes of heat and humidity.

Use

French tarragon lends its unique flavor profile to French sauces such as tartare and Béarnaise and is an essential component along with chives, chervil and parsley in the subtle blend of herbs known as fines herbes. Tarragon has a particular ability to flavor vinegar, achieved by placing a complete, washed stem with leaves in a bottle of good-quality white wine vinegar for a few weeks. Tarragon vinegar then becomes a useful ingredient for salad dressings and when making homemade mustards. Tarragon complements fish and shellfish. I recall my mother garnishing a fish-shaped seafood mold with gills and fins of tarragon leaves. It goes well with chicken, turkey, game and veal and most egg dishes. The chopped leaves (or rehydrated dry ones) are attractive and tasty in mayonnaise, melted butter sauce and French dressing.

Avocado, Cream Cheese and Tarragon Spread

Tarragon

To serve as a canapé, brush some ciabatta slices with olive oil and bake until crisp, then top with spread. For afternoon tea, make sandwiches using a fresh grainy loaf of bread, cut off the crusts and cut into fingers. For lunch, serve with warm or cold poached chicken breast and a tomato salad. Or simply use as a dip with tortilla chips, breadsticks or crudités.

- 2 large ripe avocados, skinned and pitted
- ¼ cup (50 mL) chopped fresh tarragon
- 3 tbsp (45 mL) soft cream cheese
- 2 tsp (10 mL) freshly squeezed lemon juice
- salt and freshly ground black pepper to taste

Put avocados in a bowl and mash with a fork, then work in tarragon, cream cheese and lemon juice until smooth. Season with salt and pepper. Makes about 1 cup (250 mL).



Thyme

ALTHOUGH THERE are over 100 varieties of thyme, including many hybrids, it is really only common garden thyme and lemon thyme that are of culinary significance. Ornamental types that are rarely used in cooking include Westmoreland thyme, golden thyme, silver posy thyme, gray woolly thyme, variegated lemon thyme and caraway thyme.

Garden thyme is a small perennial shrub that may vary widely in appearance depending upon the soil and climatic conditions it is growing under. Generally this variety of thyme is stiff and bushy in appearance with many thin erect stalks no higher than 12 inches (30 cm) that are covered by pairs of small, narrow, elliptical gray-green leaves, sometimes reddish rust-colored on the underside, $\frac{1}{4}$ – $\frac{1}{3}$ inch (5–6 mm) long. Pinkish white-lipped flowers are particularly attractive to bees and are borne in whorls at the tips of the branches. The aroma of thyme is pungent, warming, spicy and agreeable. Its flavor is similarly pungent and warming with a lingering, medicinal, mouth-freshening sharpness that comes from the presence of an important volatile oil, thymol.

Lemon thyme is a cross between garden thyme and the large wild thyme and is a smaller plant of similar structure that only grows to 6 inches (15 cm) tall. Its leaves are greener than those of garden thyme, and although less pungent in flavor, have a particularly appealing lemon tang.

Wild thyme is arguably the best known of the low-growing, ground cover thymes seen in abundance in rockeries and filling gaps in sandstone flagging.

OTHER COMMON NAMES

- common thyme
- garden thyme

BOTANICAL NAMES

- garden thyme: *Thymus vulgaris*
- lemon thyme: *T. citriodorus*
- wild thyme: *T. serpyllum*
- larger wild thyme: *T. pulegioides*

FAMILY

- Lamiaceae (formerly Labiatae)

Origin and History

Thyme is indigenous to the Mediterranean, and many species come from an area that encompasses southern Europe, western Asia and North Africa. The Egyptians (who used it in the embalming process) and the ancient Greeks (who employed it as a fumigant) both appreciated the antiseptic properties of thyme. Dioscorides mentioned its value as an expectorant and Pliny recommended it for fumigating. The name “thyme” derives from the Greek *thymon*, meaning “to fumigate,” although various interpretations have been made from similar



Fresh thyme

words that mean “courage” and “sacrifice,” other attributes that thyme was traditionally associated with. Among the Greeks, the phrase “to smell of thyme” was a sincere compliment implying gracefulness and having none of the double entendre of the modern expression “come up smelling of roses”! The botanical suffix for wild thyme, *serpyllum*, derives from a Greek word for “to creep,” in reference to the low-growing, entwined, snake-like habit of the ground-cover thymes. The ancient Romans found the palate-pleasing taste of thyme a useful complement to fatty cheeses and they used it to flavor their alcoholic beverages. One legend has it that thyme was included among the hay used to make a bed for the Virgin Mary and the Christ child.



NAMES IN OTHER LANGUAGES

- Arabic: alkil, satar, zatar
- Chinese (C): baak leih heung
- Chinese (M): bai li xiang
- Czèch: materidouska, tymian
- Danish: timian
- Dutch: tijm
- Finnish: tarha-ajuruoho
- French: thym
- German: thymian
- Greek: thimari
- Hungarian: timian,
- Indonesian: timi
- Italian: taimu
- Japanese: jakoso
- Norwegian: timian, hagetimian
- Portuguese: tomilho
- Russian: timyan
- Spanish: tomillo
- Swedish: timjan
- Thai: taymat
- Turkish: zatar, dag kekigi
- Vietnamese: hung tay

FLAVOR GROUP

- pungent

Thyme was introduced to England by the Romans and was common in the Middle Ages. By the 16th century, thyme had become naturalized in England (Gerard mentions it in his *Herball*), although its flavor never achieved the pungency of thyme grown in hot Mediterranean climates. The famous Hymettus honey of Greece has a characteristic flavor achieved by bees gathering pollen from the abundance of wild thyme flowering on Mount Hymettus, near Athens.

When we visited thyme farms in Provence, we were introduced to a group of farmers who grow thyme, savory and rosemary and have made a concerted effort to propagate the wild thyme of Provence. When exploring old villages and ruins such as Vaison-la-Romaine (northeast of Avignon) and driving through some of the wilder parts of the countryside in spring, you will see brave little outcrops of pink-flowered wild thyme (*Thymus vulgaris*). The unique characteristic of this wild thyme is that it has a much higher volatile oil content than other strains of *T. vulgaris*. Due to the former lack of commercial cultivation, wild thyme was at risk of dying out. This has occurred over the centuries with many plants that have been harvested only from the wild, as gatherers pick the flower heads and seeds as well as the leaves, with the result that the plants are not able to self-sow and continue multiplying. For several years the farmers’ co-operative had been collecting the seeds of wild thyme and cultivating it for commercial production. Although cultivating wild species sounds like an oxymoron, organic farmers and heritage seed collectors are doing just that. The intensity of taste is so sought-after that each year’s harvest, which exceeds 16 tons, is exported, with orders still waiting to be filled. When I asked one of the farmers why we had not seen any fresh thyme for sale in the markets, her reply — “But of course, we only ever use dried thyme because the fresh is no good in cooking” — confirmed my view that *some* herbs are better used in their dry form.

In 1725 the German apothecary Neumann isolated the essential oil of thyme (thymol). However, it is worth noting that, up until the early 20th century, the majority of the world’s thymol was actually extracted from ajowan seeds, not the herb thyme.

Processing

When grown under what many believe to be the most suitable conditions, thyme is already close to being dry when it is picked. I remember, when we were shown some thyme growing in dry, arid-looking conditions among sumac trees in southeastern Turkey, how small and desiccated the tiny plants seemed, yet their flavor (concentrated by the lack of moisture and abundance of sunshine) was incredibly powerful. Thyme is dried in the same way as other firm-leaved herbs such as sage, oregano and rosemary — in the shade, where it is warm and the humidity low. The leaves are then easily removed from the stems by rubbing them over a large sieve. This lets the tiny leaves through while keeping out the pieces of woody stalk. Some years ago I was told of one ingeniously simple method that involved placing dried thyme bushes on a slab of concrete and rolling a tennis court roller over them. The bushes sprang up again, making them easy to pick up, and then the leaves were swept into a pile for collection. The best-quality dried thyme leaves are often winnowed to remove the last remaining pieces of stem.

Buying and Storage

Fresh garden thyme and lemon thyme can generally be bought in bunches from fresh produce retailers. The robustness of this plant makes the prospect of buying wilted thyme almost inconceivable, the reverse being more likely. If thyme is kept too moist, the leaves will start to blacken and lose their flavor. Sprays of thyme will keep for over a week in the refrigerator. The leaves can be stripped off and frozen with a little water in ice cube trays and sprigs wrapped in foil will freeze and keep for a few months.

Garden thyme is the variety that is commercially dried and it is readily available in supermarkets and specialty food stores. Lemon thyme is rarely seen in its dry form, and this is due more to the lack of demand for it than its ability to keep its flavor when dried. Good-quality dried garden thyme leaves are gray-green in color and should not have any pieces of stem among them, as these will not soften in cooking and can be most uncomfortable when eaten.

In the Middle East, their quite green, tantalizingly pungent thyme is referred to as za'atar, the term that is also used to describe a mix of thyme, toasted sesame seeds, sumac and salt.

WEIGHT PER TEASPOON (5 mL)

- whole dried and rubbed leaves: 1.5 g
- ground: 1.3 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tsp (5 mL) dried, 1 tbs (15 mL) fresh leaves
- white meats: $\frac{3}{4}$ tsp (4 mL) dried, 2 tsp (10 mL) fresh leaves
- vegetables: $\frac{1}{2}$ tsp (2 mL) dried, 1 $\frac{1}{2}$ tsp (7 mL) fresh leaves
- carbohydrates: $\frac{1}{2}$ tsp (2 mL) dried, 1 $\frac{1}{2}$ tsp (7 mL) fresh leaves

COMPLEMENTS

- soups
- casseroles
- meat loaf
- pâtés
- terrines
- sausages
- potato salad
- stuffing for poultry
- rich sauces and gravies

THYME

USED IN

- bouquet garni
- Cajun spice mixes
- herbes de Provence
- Italian herbs
- Jamaican jerk seasoning
- mixed herbs

COMBINES WITH

- ajowan
- basil
- bay leaves
- coriander seed
- garlic
- marjoram
- mint
- nutmeg
- oregano
- paprika
- rosemary
- sage
- savory
- tarragon

When buying thyme from a Middle Eastern store, call it “za’atar herb,” and for the blend with sumac, say “za’atar mix.”

Thyme should be stored in the same way as other dried herbs, in an airtight pack and protected from extremes of heat, light and humidity. Thyme, when stored correctly, will last for longer than most dried herbs; that is, from 18 months to two years.

Use

It would be false to say that it is easier to list the dishes thyme is not used in than the ones that it is. However, in Western and Middle Eastern cuisine, thyme finds its way into the greater proportion of traditional dishes. This is because thyme’s distinct savory pungency brings an agreeable depth of flavor to soups, stews and casseroles and almost any dish containing meat. Thyme is traditional in bouquet garni (along with marjoram, parsley and bay leaves) and mixed herbs, which most often contain thyme, sage and marjoram. Thyme complements the flavor of chicken, one of our favorite ways being to coat chicken pieces with za’atar mix prior to grilling, pan-frying or baking. Thyme is excellent in pâtés and terrines, and adds a delicious savory flavor to meat loaf, ground beef and sausages. Thyme has an affinity for tomatoes and potatoes, being especially effective in potato salad, and complements the flavor of corn and green beans. Thyme goes well in rich sauces and is an important ingredient when making pickles and for flavoring spiced olives.



Dried thyme

Chorizo and Thyme Cassoulet

Thyme

This is the ultimate comfort food on a cold winter evening. A glass of Cabernet Sauvignon makes an excellent complement.

- 2 tsp (10 mL) olive oil
- 1 red onion, chopped
- 2 cloves garlic, chopped
- 1 red bell pepper, chopped
- 4 chorizo sausages, sliced
- 2 anchovy fillets, chopped
- 1 can (14 oz/398 mL) chopped tomatoes
- 4 oz (125 g) lima beans, cooked and drained
- 4 oz (125 g) black-eyed peas, cooked and drained
- 1 cup (250 mL) dry red wine
- 4½ tsp (22 mL) dried thyme
- 1 tsp (5 mL) dried rosemary
- 1 tsp (5 mL) mild Spanish paprika
- 1 tsp (5 mL) smoked sweet paprika
- 1 tsp (5 mL) medium-heat chili powder (or to taste, depending on heat of chorizo)
- 1 recipe Crunchy Crumbs (see p. 504)

Heat olive oil in a frying pan over medium heat. Sauté onion until translucent, then add garlic and red pepper; sauté for 2 minutes. Add chorizo and sauté until browned. Add anchovies, tomatoes, lima beans, black-eyed peas, wine, thyme, rosemary, Spanish paprika, smoked paprika and chili powder. Reduce heat and simmer, uncovered, for 25 minutes.

Spoon cassoulet into deep bowls and top with crumbs.
Serves 4.

Crunchy Crumbs

- 1 cup (250 mL) fresh bread crumbs (made from day-old bread)
- 1 clove garlic, very finely chopped
- ½ small red onion, very finely chopped
- 1 tbsp (15 mL) fresh thyme leaves
- 1 tbsp (15 mL) chopped fresh flat-leaf parsley
- 1 tsp (5 mL) grated lemon zest
- 2 tbsp (25 mL) olive oil

Preheat oven to 400°F (200°C). Spread bread crumbs on a baking sheet, sprinkle with garlic, onion, thyme, parsley and lemon zest and drizzle with olive oil. (The crumbs need to be fairly drenched in oil to become crunchy.) Bake for 5 minutes, until crisp and starting to brown. Makes about 1 cup (250 mL).

Turmeric

OTHER COMMON NAMES

- Madras turmeric
- Alleppey turmeric
- Indian saffron
- yellow ginger

BOTANICAL NAMES

- *Curcuma longa*
- *C. domestica*

FAMILY

- Zingiberaceae

TURMERIC is the rhizome (the part of the root system that grows off the primary tuber) of a tropical perennial plant that, for harvesting purposes, is grown as an annual. Turmeric has long, flat, bright green leaves growing up from the base to 3 feet (1 m) high and looks similar to ginger and some lilies with its pale yellow flowers. The rhizomes, which are commonly referred to as fingers, are ginger-like in appearance and 2–3¼ inches (5–8 cm) long. They are rounder in cross-section than ginger, measure ½ inch (1.5 cm) thick and are deep orange-yellow in color. Powdered turmeric is bright yellow, has a distinct earthy aroma and surprisingly pleasing, sharp, bitter, spicy, lingering depth of flavor.

When referring to turmeric, I can't help recalling one visit

Clockwise from top: fresh turmeric root; ground Alleppey turmeric; ground Madras turmeric



NAMES IN OTHER LANGUAGES

- Arabic: kurkum, kharkoum
- Burmese: sa-nwin
- Chinese (C): wohng geung, wat gam
- Chinese (M): yu jin, huang jiang
- Czech: kurkuma, indicky safran
- Danish: gurkemeje
- Dutch: geelwortel, kurkuma, tarmeriek
- Filipino: dilaw, dilao
- Finnish: kurkuma, kurkum
- French: curcuma, saffran des Indes
- German: curcuma, kurkuma, indischer safran, gelbwurz
- Greek: kitrinoriza, kourkoumi
- Hungarian: kurkuma
- Indian: haldee, halad, haldi, kaha, manjal
- Indonesian: kunjit, kunyit, daun kunyit (leaves)
- Italian: curcuma
- Japanese: ukon, tamerikku
- Malay: kunyit, kunyit basah
- Norwegian: gurkemeie
- Portuguese: acafrao-da-terra
- Russian: zholty lmbir
- Spanish: curcuma
- Sri Lankan: munjal, kaha
- Swedish: gurkmeja
- Thai: khamin
- Turkish: sari boya,
- Vietnamese: nghe

to Kerala, in the south of India, when we particularly wanted to see a large turmeric plantation. Up until that time we had only seen plots of turmeric growing among pepper vines and nutmeg and clove trees in small-holding spice gardens. One day, after seeing ginger drying on a massive scale, we were informed of the existence of large turmeric plantations in the same area, which is logical because ginger and turmeric plants are similar and grow well in the same conditions. We had traveled for hours over rough roads to find the ginger being dried on the hillsides; that was only the beginning. The chap who was with us said the turmeric plantation was not far away, so off we headed down a narrow track, the wheels of the Ambassador barely straddling the hump in the middle of the “road.” We had to get out and walk a few times because the car was bottoming out on ground that would have been more regularly traversed by bullock cart. The sun began to go down and we wondered if we would see the turmeric plantation before dark.

Upon finally arriving at an open area, the driver pointed out a biblical-looking mud brick shed that housed the harvested turmeric waiting to be cleaned and sent to market. As we surveyed the freshly dug field in the warm fading afternoon light, lit more now by a tropical full moon shining through gray and light pink, fine atmospheric moisture, we asked where the turmeric plantation was. To which we received the reply that this was the plantation and all the turmeric had just been harvested!

I am sure few people have traveled as far and as long as we did that day to gaze upon a turmeric plantation with no turmeric growing. We at least have a timeless image in our minds (it was too dark to take photos) of the undulating landscape studded with coconut palms at the end of an almost inaccessible track some hours’ drive outside Cochin. I was fascinated by the experience of inhaling the aromas of sharp earthiness and pungency given off by the stored turmeric. At first I thought it was the smell of the turned soil and dirt clinging to the rhizomes; now, whenever I smell good-quality turmeric, it takes me back to the earthy smell of that storage shed.

Origin and History

Turmeric is not known in a truly wild state and is believed to have evolved from wild curcuma through a process of continual selection and cultivation by vegetative propagation of the fingers. Curcuma is indigenous to southern Asia, where it was

domesticated and featured prominently in both medicinal and religious applications there. Turmeric was listed in an Assyrian herbal in 600 BC as a coloring and had reached China by the seventh century AD. Marco Polo described it as occurring at Koncha in China in 1280, noting its similarity to saffron. One wonders whether the young Marco had been sampling some more interesting substances to come up with such a deduction, for besides color, there is little saffron and turmeric have in common. Even the bright yellow of turmeric is quite different to the golden orange-yellow of infused saffron.

Turmeric was known in the Malagasy Republic (Madagascar) in the eighth century and by the 13th century was being used as a dye in West Africa. Turmeric is a spice that features in ayurvedic medicine, the traditional “natural” medicine of India, and is said to be a mild digestive. Ointments based on turmeric are applied as an antiseptic and turmeric water is an Asian cosmetic that is said to be good for one’s skin. Turmeric is used extensively as a coloring in foods (including confectionery and pharmaceuticals) in response to the increasing consumer demand for natural colors. Yellow turmeric paper can be used as a test for alkalinity, which turns it brown. The textile industry has also used turmeric for many years as a dye, even though by today’s standards it is not at all fast. It is likely that as the price of turmeric is pushed up with greater culinary use, longer-lasting synthetic dyes will replace it.

Processing

After the turmeric rhizomes have been lifted, they are put into boiling water for about an hour. This has the effect of speeding up the drying time and denaturing them so they will not sprout. It also aids even distribution of color in the rhizome; when fresh turmeric is cut, one will notice the orange-yellow color is not evenly distributed in the cross-section. The fingers are then dried in the sun (a gelatinization of the starches during boiling makes them rock hard, which is why they are almost impossible to grind domestically).

Once dry, the fingers are polished to remove the outer skin, rootlets and any remaining soil particles. The traditional way to polish turmeric fingers was for workers to wrap their hands or feet in several layers of gunnysack to provide abrasion (as well as protection for the worker) and to then rub the turmeric vigorously. Another method was to put the turmeric fingers in a long gunnysack with some stones. Two workers

FLAVOR GROUP

- amalgamating

WEIGHT PER TEASPOON (5 ML)

- ground: 3 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 tbsp (15 mL) ground
- white meats: 1 tbsp (15 mL) ground
- vegetables: 2 tsp (10 mL) ground
- carbohydrates: 1 tsp (5 mL) ground

COMPLEMENTS

- Asian and Indian curries
- Moroccan tagines
- stir-fried chicken
- seafood and vegetables
- pickles
- sauces
- rice dishes

USED IN

- curry powders
- chermoula spice mix
- ras el hanout
- tandoori spice blends

COMBINES WITH

- allspice
- caraway
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander leaves and seeds
- fennel seed
- fenugreek seed
- galangal
- garlic
- ginger
- kaffir lime leaves
- lemongrass
- lemon myrtle
- mustard
- nigella
- paprika
- parsley
- tamarind
- Vietnamese mint

would then shake the bag between them (in the same way you would wave a beach towel to get the sand out of it) transforming the dirty brown rhizomes into smooth, dark yellow fingers ready for market. Nowadays, polishing is performed in large wire or perforated metal drums that are rotated on an axle so the rubbish falls out through the holes and the polished fingers are left behind in the drum.

Ground turmeric is made by first crushing the slate-hard fingers in a hammermill, then transferring them to a grinder set up to produce the familiar bright yellow powder. Turmeric oleoresin is extracted for use as a natural color (E100) in the food and pharmaceutical industries, where it is sometimes referred to as curcuma oleoresin.

Buying and Storage

An increase in the popularity of Asian foods in North America, which began in the 1980s, helped cooks to become aware of the virtue of using fresh turmeric rhizome for its color and flavor. Fresh turmeric is often available from specialty produce merchants, particularly those that cater to the Asian market. The rhizomes should be plump, firm and clean. Store fresh turmeric in an open container in the cupboard in the same way as you keep your fresh onions and garlic, where it will last for up to two weeks. Turmeric leaves (used in Malay and Indonesian cooking) and the young tender shoots for Thai dishes are also available from Asian produce stores.

There are two main types of turmeric powder: Madras and Alleppey. It is interesting to note that many spices have prefixes derived from geographic regions; however, this does not necessarily mean that is where they are grown. The name may have been given because a certain grade or type of the spice was always available from traders in a particular area or perhaps because the district the spice was named after had become better known than other areas for producing it. Madras turmeric is grown in Tamil Nadu (in India) and traded mostly in Madras. Alleppey turmeric is produced in Kerala and takes its name from the beautiful, waterway-laced Alleppey district near Cochin, where much of this turmeric is traded.

Madras turmeric is light yellow and has been the most commonly available variety for culinary use. The English regarded it as the superior grade (probably because it colors without contributing much flavor) and Madras turmeric has been used primarily to color curries, mustards and pickles.

Madras turmeric has a curcumin (the coloring agent) content of around 3.5%.

Alleppey turmeric is much darker in color. Its curcumin content may be as high as 6.5%, making it a more effective coloring with superior fresh turmeric flavor notes. Alleppey turmeric more closely resembles the flavor of fresh turmeric and has a somewhat earthy aroma with surprisingly delicate top notes of lemon and mint, reminiscent of its cousin ginger. The texture is oily due to the higher curcumin content, and when you're blending it with other spices I suggest sieving it through a small strainer to prevent clumping.

Turmeric powder should be stored in the same way as other ground spices, in airtight packs protected from light and extremes of heat and humidity. Under these conditions, both the Alleppey and Madras varieties will keep their color and full flavor for 12–15 months.

Use

Once one gets over the notion of turmeric being mainly used to color food, it is remarkable how versatile its flavor becomes in a wide variety of dishes. It is, of course, most often associated with curries, where the right amount, especially of Alleppey turmeric, makes a significant contribution to the flavor. A Moroccan chermoula spice blend is dependent upon the warm earthiness of turmeric to amalgamate spices such as cumin, paprika, chili and pepper with onion, garlic, parsley and coriander leaf. Our Kuwaiti Fish Stew with Black Limes (p. 135) relies on the inclusion of turmeric for the harmonization of its cardamom, pepper, cumin and chili notes with coriander leaves and fresh dill. I have found turmeric goes well in stir-fries with lime leaves, galangal, chili and native Australian lemon myrtle. Kapitan chicken, a delicious dish that European colonials enjoyed in Malaya, has onions, garlic, chili and turmeric as the prime constituents of its flavor.

Although often called Indian saffron, turmeric should never be used in a recipe as a substitute for true saffron, as the flavor is quite different. One can make an attractive and tasty yellow rice dish, though, with turmeric. When cooking by absorption, for every cup (250 mL) of rice covered with water add $\frac{1}{2}$ tsp (2 mL) of turmeric powder, a $1\frac{1}{2}$ -inch (4 cm) cinnamon stick, 3 whole cloves and 4 green cardamom pods. Always be very careful not to spill turmeric on your clothes, as it will leave stains that are almost impossible to remove.



Orzo and Lentil Stew with Turmeric and Bacon

The earthy flavors of turmeric and cumin add to the full-bodied nature of this dish, without making it taste like curry.

10 slices bacon
1 tbsp (15 mL) olive oil
1 onion, chopped
1 clove garlic, chopped
1 tsp (1 mL) ground turmeric
 $\frac{1}{4}$ tsp (1 mL) ground cumin
 $\frac{1}{4}$ tsp (1 mL) salt
Pinch medium-heat chili powder
4 cups (1 L) chicken stock (approx.)
 $\frac{3}{4}$ cup (175 mL) French green lentils, rinsed
 $\frac{1}{2}$ cup (125 mL) orzo, stellini or other tiny pasta
5 oz (150 g) spinach, chopped
salt and freshly ground black pepper to taste

Fry bacon for 5 minutes, until brown. Set aside. In a large saucepan, heat oil over medium heat. Add onion and garlic; cook, stirring, for 5 minutes, without browning. Add turmeric, cumin, salt and chili powder; cook for 2 minutes. Add stock and lentils; bring to a boil, then reduce heat and simmer, uncovered, for 10 minutes. Stir in orzo, spinach and bacon and season with salt and pepper. Simmer, stirring frequently, until lentils and pasta are cooked. (If you want a soupier consistency, add more stock.) Serve in shallow bowls with a good grind of black pepper on top. Serves 4.

Vanilla

OTHER COMMON NAMES

- vanilla bean
- vanilla pod
- vanilla extract
- vanilla essence

BOTANICAL NAMES

- vanilla: *Vanilla planifolia*,
V. fragrans
- West Indian vanilla:
V. pompona
- Tahitian vanilla:
V. tahitensis

FAMILY

- Orchidaceae

VANILLA IS a member of the orchid genus, which forms part of the largest family of flowering plants in the world, encompassing some 20,000 species. Vanilla, of which there are about 100 varieties, is one of the only species of Orchidaceae of any culinary significance, the other being the obscure and hard-to-find salep. The most important variety, *V. planifolia*, is a tropical climbing orchid, its succulent $\frac{1}{3}$ – $\frac{3}{4}$ -inch (1–2 cm) diameter stems reach 33–49 feet (10–15 m) high by clinging to host trees with long aerial roots. The leaves are flat, fleshy and large, $3\frac{1}{4}$ –10 inches (8–25 cm) long and $\frac{3}{4}$ – $3\frac{1}{4}$ inches (2–8 cm) wide. They are rounded at the base and taper abruptly to a “cowlick” pointed tip. The slightly fragrant, pale greenish flower is yellow-lipped and averages $3\frac{1}{4}$ –4 inches (8–10 cm) in diameter. The almost cylindrical, angled, 4–10-inch (10–25 cm) long capsules that follow hang in clusters and are referred to as pods or beans. When fresh they have no aroma or taste; it is the cured vanilla beans that are the source of true vanilla flavor.

Vanilla beans (Mexican gourmet); vanilla extract



**NAMES IN OTHER
LANGUAGES**

- Arabic: wanila, fanilya
- Chinese (C): wahn nei
la
- Chinese (M): xiang jia
làn
- Czech: vanilka
- Danish: vanilje
- Dutch: vanille
- French: vanille
- German: vanille
- Greek: vanillia
- Hungarian: vanilia
- Indian: vanilla,
vanikkodo
- Indonesian: paneli
- Italian: vaniglia
- Japanese: banira
- Malay: waneela
- Norwegian: vanilje
- Portuguese: baunilha
- Russian: vanil'
- Spanish: vainilla
- Swedish: vanilj
- Thai: waneela
- Turkish: vanilya

FLAVOR GROUP

- sweet

There are two other varieties of vanilla, but their flavor is generally considered inferior to that of *V. planifolia* due to their lower vanillin content. West Indian vanilla (*V. pompona*) resembles *V. planifolia* but has larger leaves and flowers and shorter, thicker pods. Tahitian vanilla (*V. tahitensis*) is a hybrid, produced by cross-breeding *V. pompona* with *V. planifolia*. It was introduced to Tahiti in 1848 by Admiral Ferdinand Alphonse-Hamelin and is now cultivated in Hawaii and many tropical countries. Tahitian vanilla has slender stems, narrow leaves and small pods that taper at either end. Although lower in vanillin content than *V. planifolia*, Tahitian vanilla has a unique aroma and flavor profile that make it highly sought-after these days by many chefs.

A cured vanilla bean is dark brown to black in color, averages 7–8 inches (18–20 cm) in length, has a shriveled appearance with many longitudinal ridges and indentations and is as flexible as a strip of well-oiled bridle leather. A dusting of white, sugary powder known as givre sometimes appears on the surface; this is vanillin (the active ingredient responsible for vanilla's flavor) that has crystallized. When split lengthwise, a black sticky mass of millions of minute seeds is revealed, each one being no larger than a speck of ground black pepper. The aroma of a vanilla bean is fragrant, floral, sweet and highly agreeable. Similarly, its taste is rich, smooth and appealing, although the flavor can only be fully appreciated in tandem with its seductive smell.

Salep is a powder made from the tubers of orchids (*Orchis latifolia*, *O. mascula*, *O. maculata* and *O. anatolica*) unique to the Anatolian plateau of Turkey. It gives an amazing elasticity to ice cream (*salepi dondurma*), which we were lucky enough to sample when we visited Turkey, and it is also used to make a salep drink. Because of the unbelievable politics of the world orchid trade (I recommend Eric Hansen's book *Orchid Fever* and Susan Orlean's *The Orchid Thief*) and salep's uniqueness to Turkey, the export of salep is illegal. A friend in Australia gave me a contraband pouch of salep flour (for personal use only) and his recipe for the salep drink. While I made it up and drank the steaming brew, I pondered its reputed aphrodisiac qualities. According to Eric Hansen, the paired ovoid spheres of the tubers bear a striking likeness to certain male reproductive anatomy. The word "salep," in fact, comes from the Arabic *sahlab*, which means "testicles of the fox." The Greek physician Dioscorides in the first century AD and Linnaeus in the 18th century both mentioned the use of

salep as an aphrodisiac. If you ever get your hands on some salep, here is my (anonymous) friend's recipe: To 2 cups (500 mL) whole milk, add 1 teaspoon (5 mL) each salep flour, sugar and cornstarch. Sprinkle the mixed powder into simmering milk while stirring, and keep it simmering gently. Keep stirring until it thickens, pour into a cup, sprinkle with ground nutmeg and crushed pistachio nuts and drink while hot. The consistency is thick and comforting and clings to the palate, while the flavor is junket-like, sweetly spiced and sexy.

Origin and History

Vanilla is indigenous to the southeast of Mexico and parts of Central America, where it grows in well-drained soils that are high in humus from the surrounding tropical vegetation. Although it is not known when the Aztecs started using vanilla, its production had reached a degree of sophistication by the time the Spanish were introduced to it in a drink of chocolate and vanilla sweetened with honey that was given to Cortés by the Aztec emperor Montezuma in 1520. So impressed were the Spanish with this discovery that they imported vanilla beans and established factories in Spain to manufacture chocolate flavored with vanilla. Quite apart from its flavor, vanilla apparently earned a reputation as a nerve stimulant and an aphrodisiac and was used to scent tobacco. Although plants were taken to England as early as 1733 and were reintroduced at the beginning of the 19th century, all serious attempts to have them produce pods outside their natural habitat failed. In the middle of the 19th century the reason for this barrenness was found to be the absence of natural pollinators; thereafter, a satisfactory method of hand pollination was devised. By the early 20th century, vanilla was cultivated in Réunion, Tahiti and parts of Africa and Madagascar.

Sadly, the invention of artificial vanilla from the waste sulphite liqueur of paper mills, coal tar extracts or eugenol (the oil from cloves) nearly ruined the natural vanilla industry. Imitation vanilla was about one-tenth of the price of real vanilla and although inferior in flavor profile accounted for the lion's share of vanilla flavoring used in the burgeoning global market for ice cream, confectionery and beverages. By the end of the 20th century, consumer demand for natural flavors and an appreciation of the superior nuances in the flavor of real vanilla had created some resurgence in the Mexican industry, as well as opportunities for new producers such as India and Indonesia.

WEIGHT PER TEASPOON (5 ML)

- whole average bean: 3–4 g each

SUGGESTED QUANTITY PER POUND (500 G)

- white meats: 1 bean
- carbohydrates: 1 bean or ½ to 1 tsp (2–5 mL) extract

COMPLEMENTS

- ice cream
- dessert creams and sauces
- cakes
- cookies
- sweets
- liqueurs

USED IN

- vanilla sugar



COMBINES WITH

- allspice
- angelica (crystallized)
- cardamom
- cinnamon and cassia
- cloves
- ginger
- lavender
- lemon myrtle
- lemon verbena
- licorice
- mint
- nutmeg
- pandan leaf
- poppy seeds
- sesame seeds
- wattleseed

Processing

The production of vanilla is an extraordinarily labor-intensive process, beginning with fertilizing the flowers, which has to be done by hand to ensure a good crop. This is because the flowers are pollinated in their natural habitat by little bees of the genus *Melipona*, and there are either not enough of these bees around to pollinate the vanilla flowers or the vines may be growing in regions where the bees do not exist. To complicate things further, there is a small membrane in the vanilla flower that prevents the stigma and stamen from touching and pollinating. Consequently, the painstaking process of bending the two filaments to touch (generally done with a small implement like a toothpick) has to be done to every flower in the plantation to ensure it produces a vanilla bean.

The successfully fertilized flowers produce pods in about six weeks, and six to nine months after pollination the green pods begin to turn yellow at the bottom tip, indicating they are ready for harvest. However, the high price of vanilla beans makes them vulnerable to theft. When we visited a vanilla plantation in Papantla, in southeastern Mexico, we were intrigued to learn that their pods were often stolen by bandits just before the harvest. A new, albeit labor-intensive, process was helping to make the problem a thing of the past; the farmers now brand each vanilla bean, using a cork embedded with pins to scratch in a pattern that remains even after curing. Apparently, this measure has resulted in bandits being caught out.

You may have noticed that most vanilla beans are uniform in length and look quite straight. On the plantation we visited, the farmer removes any curved pods, leaving only the good straight ones to mature. As the vanilla pods don't all mature at the same time the harvest can take place over a period of about three months. The pods are picked and then taken into town, where they are cured. The harvested green beans, which at this stage are tasteless, are laid in boxes and placed in a wood-fired kiln to start the drying and curing process, in which enzymes naturally occurring in vanilla create vanillin. After about 24 hours in the kiln the vanilla beans are spread out in the sun to absorb heat, becoming so hot you would almost burn your fingers if you picked one up. At the end of the day the pods are gathered up and wrapped in blankets or straw mats and laid out to sweat on multi-tiered racks in a large shed that is protected from the weather. The vanilla beans go through this process on a rotational basis and are

then stored for up to six months until they have turned a very dark brown or black and the head curer is satisfied that the curing process is complete. During this time a vanilla bean may have been handled 100 times or more, and what began as 10 pounds (5 kg) of green uncured beans becomes 2 pounds (1 kg) of properly cured vanilla beans. The beans are then graded according to quality and strung together in tight bundles of 60–100 pods ready for export. One might think no job could be more pleasant than working with vanilla all day long, but vanilla workers have been known to suffer from a side-effect called vanillism, caused by overexposure to vanilla. Its symptoms are headaches, lassitude and allergic reactions.

The womenfolk of the village of Papantla cleverly and painstakingly plait the pliable beans into charming little figures and flower designs. Another local product is a delicious liqueur made from vanilla beans. It tastes a little like Tia Maria, only instead of a distinct coffee taste there is a strong, almost smoked, woody sweet vanilla flavor.

Natural vanilla extract is made when finely chopped cured vanilla beans are soaked in alcohol and water to extract the fragrance and flavor components. A proportion of the water is then distilled off, leaving an essence of soluble vanilla extractives in a solution that contains up to 35% alcohol. This is called single-fold extract, a standard based on approximately 3½ oz (100 g) of beans extracted in 4 cups (1 L) of alcohol. Two-folds extract is made with twice the amount of vanilla beans per 4 cups (1 L). Some so-called thick vanilla essences contain added sugar, glycerin, propylene glycol and dextrose or corn syrup. Work has also been done to produce vanilla pastes composed of ground vanilla beans, corn syrup and thickeners. These pastes are popular with restaurants, as their patrons are given the impression that the dish has been prepared using seeds scraped out from whole beans. These pastes tend to be less effective in cooking, as you are actually eating a certain amount of woody-tasting pod skin that would otherwise have been removed from the dish after it was infused with a whole bean in the traditional manner.

Buying and Storage

Vanilla beans are readily available from specialty food retailers; however, when buying whole vanilla beans, regardless of their country of origin, it is important to make sure they have not dried out and lost their flavor and aroma. There are five main

types of vanilla in the market, and it should be remembered that within each type there is a series of grades, as there is with most spices, that reflects overall quality. A good vanilla bean is dark brown or black, moist to the touch, as pliable as a piece of confectionery licorice and immediately fragrant. Size is no indication of flavor quality, though traders will always tell you that the longest beans (up to 7 inches/17 cm and longer) are the premium grade. We like to do our own little test of one attribute, the volume of sticky seed mass as a proportion of the total bean weight. Full, plump beans are sometimes shy on the contents (as we noticed in some very fat beans offered to us in Sri Lanka). When we tested this on batches of beans from different sources, we found that the black, sticky seed mass, when scraped out, could be as low as 6% of the total bean weight and as high as 20%. From my observations, the beans with the highest percentage also had the best flavor.

Vanilla beans should be stored in an airtight container and protected from extremes of heat, light and humidity. Under these conditions, a vanilla bean will keep for up to 18 months.

Mexican vanilla, with its long history and 300-year monopoly of the trade up until the 19th century, has long been regarded as possessing the finest aroma and flavor. Some cooks who have only experienced artificial vanilla may feel that Mexican vanilla lacks a certain depth of flavor and fail to appreciate the delicate top notes that are characteristic of this type.

Bourbon vanilla is from three main sources: Madagascar, the Comoro Islands and Réunion. Its depth of body is a little more pronounced than Mexican vanilla, making Bourbon a preferred variety for the extraction industry; however, it lacks the fine aroma of the best vanilla from Mexico.

Indonesian and Papua New Guinean vanilla carries a deep full-bodied flavor and has traditionally been of variable quality, something that is not as critical when it is employed for blending with synthetic vanillin and syrups, the most popular application for this type. Recently, greater care in curing and bean selection for their top grades has seen Indonesian Bourbon-grade vanilla become available, and it has met with some success on the whole-bean market.

West Indian vanilla is of a lower grade than Mexican or Bourbon and is produced principally on the formerly French island of Guadeloupe. It has a low vanillin content and is mostly used in making perfumes, as the flavor is considered too poor to be suitable for vanilla extract.

Tahitian vanilla was propagated in Tahiti, and is produced in Hawaii and other tropical countries. It has a low vanillin content. Some consider its taste to be rank, a stigma possibly promulgated by competitors, making it less popular for flavoring purposes than Mexican and Madagascar vanilla. Personally, I find the aroma and flavor of Tahitian vanilla exotic and pleasing. Not surprisingly, proponents of Tahitian vanilla claim the later harvesting of this hybrid delivers a superior vanilla. As with many flavors, you are the best judge of what you prefer.

When buying vanilla essence or extract, look closely at the label to determine what precisely what is in the bottle. As previously mentioned, there are many blended concoctions of vanilla, which may contain other flavors and artificial vanillin. Depending upon the packaging laws in the country concerned, true vanilla extract is most likely to be labeled “natural vanilla extract,” with some reference to the alcohol content, such as “less than 35% alcohol by volume.” I am often asked to explain the difference between an essence and an extract. An extract is made by literally extracting the desired attributes of a substance. Thus, soaking vanilla in alcohol extracts the vanilla flavor. An essence is either a distilled or concentrated extract or an artificial facsimile of the distinctive characteristic attribute of something. This explains why artificial vanilla is generally labeled “imitation vanilla essence.” Vanilla extract should be stored in a dark place away from extreme heat, and under these conditions it will keep for up to 18 months.

Under rare, very expensive circumstances, vanilla powder is made by scraping off the sugary, crystalline powder that naturally forms on the surface of some vanilla beans after curing. The product may also be a mixture of powdered vanilla and vanilla extract mixed with a food starch and sugar. Artificial vanillin powder is commonly blended with caster sugar to make the vanilla sugar seen in supermarkets.

Use

Vanilla essence is used to flavor ice cream, cookies, cakes, sweets and liqueurs and adds fragrance to perfumes. True vanilla has a pervading sweet fragrance, balanced by a slightly caramel-like taste and faint smoky back note. By comparison, artificial vanilla tends to have a sharp, bitter flavor and distinctly “chemical” overtones, so using too much artificial vanilla will



ruin a dish, whereas a slightly heavy hand with the real thing can be forgiven. All vanilla essences and extracts are quite strong; therefore, 1 tsp (5 mL) of vanilla extract will be sufficient to flavor a typical sponge cake.

When smelling and touching a soft, black, aromatic vanilla bean it is as if you can feel the hundreds of times this bean has been handled to get it to its perfect state. One can taste the sunshine and balmy nights of sweating that accelerated the enzyme reactions, creating its seductive flavor and true character. Whole vanilla beans can be put into a sugar canister; 1 bean to an average-size sugar jar (2 cups/500 mL) is sufficient to always have delicately flavored vanilla sugar in the house. Vanilla beans will flavor custards and fruit compotes (one of our family favorites is poached pears in sparkling wine). Simply put a whole bean into the pot during cooking; when cooked, take the bean out and wash and dry it carefully before returning it to the sugar canister until next time. This method may be followed a few times before the flavor from a bean is no longer effective. Vanilla is also delicious in savory cooking because without sugar it is not overtly sweet. There was an innovative Mauritian restaurant in Sydney that served a delicate vanilla chicken in a creamy sauce flavored with finely chopped vanilla beans. The experience was aromatic and delicate and, at the same time, distinctive and beautifully balanced.

Because people now like to experience the colors and textures of ingredients in a great many more recipes, the fashion of using essences in sauces, sorbets, ice creams and other homogeneous desserts is declining. Wonderful opportunities are being explored, such as adding finely chopped vanilla beans to recipes to make them infinitely more interesting. Some cooks like to slit the vanilla bean in half and scrape out the sticky pulp and microscopic seeds from inside the bean and then add this concentrate to their recipes. When adopting this approach, I still like to infuse the remnants of scraped-out bean with the wet ingredients whenever possible. This is because there are important taste attributes in the black, leathery skin of a vanilla bean that are worth retaining.



Yogurt Vanilla Cream

Vanilla

- 2 cups (500 mL) plain yogurt
- 2 tsp (10 mL) superfine (caster) sugar
- ½ cup (125 mL) whipping (35%) cream
- 2 vanilla beans

Line a colander with cheesecloth. Put the yogurt into the cloth-lined colander and sit it over a bowl. Leave it in the fridge overnight and next day pour away the whey that has collected in the bowl. Empty the drained yogurt into a bowl and add the sugar and whipping cream. Slit the vanilla beans lengthwise and scrape out the tiny black seeds, then add the seeds to the yogurt/cream mixture. Stir well to combine, then cover and store in the fridge. Use as a wonderful alternative to whipped cream.

Cauliflower and Vanilla Soup

This soup makes a delicate appetizer.

- 4 tsp (20 mL) vegetable oil
- 1 small onion, chopped
- 1 lb (500 g) cauliflower, cut into florets
- 3¼ cups (800 mL) chicken stock
- ¼ cup (50 mL) table (18%) cream (or double cream)
- 1 tbsp (15 mL) vermouth
- 1 vanilla bean

In a saucepan, heat oil over medium heat. Add onion and sauté for 2 minutes. Add cauliflower and stock, reduce heat and simmer for 15 minutes, until cauliflower is very soft. Strain cauliflower and purée in a blender with 2 cups (500 mL) of cooking liquid. Pass through a sieve and return to clean pan. Add cream and vermouth, then scrape the seeds from the vanilla bean into the soup. Heat gently for 10 minutes. Ideally, leave soup to infuse for at least 2 hours before reheating and serving. Serves 6.

Vietnamese Mint

OTHER COMMON NAMES

- Asian mint
- Cambodian mint
- hot mint
- knotweed
- laksa leaf
- smartweed
- Vietnamese coriander
- water pepper

BOTANICAL NAMES

- *Polygonum odoratum*
- *Persicaria odorata*

FAMILY

- Polygonaceae

NAMES IN OTHER LANGUAGES

- Chinese (C): yuht
naahm heung choi
- Chinese (M): yue nan
xiang cai
- Czech: kokorik vonny
- Danish: vietnamesisk
koriander
- Hungarian: vietnami
menta
- Indonesian: duan
kesom, duan laksa
- Malay: duan laksa, duan
kesom
- Laotian: phak pheo
- Portuguese: hortela-
vietnamita
- Russian: kupiena
lekarstvennaya
- Thai: phak phai, phrik
maa, chan chom, hom
chan
- Vietnamese: rau ram

THIS HERBACEOUS perennial is not a member of the mint family at all but belongs to the same genus as sorrel, which is a Polygonaceae. Most commonly referred to as Vietnamese mint, it bears long pink or white flowers at the top of slender stems to 14 inches (35 cm) high with swollen-looking joints $\frac{1}{3}$ –2 inches (1–5 cm) apart. It is from these joints that its deep green, tapering, 2–3 $\frac{1}{4}$ -inch (5–8 cm) long leaves shoot out. The leaf color may appear dark thanks to random black smudging in their pigmentation, which seems less pronounced in plants growing in the shade. The aroma is fragrant, minty and insect-like, resembling coriander and basil, with an overtone of citrus zest. These attributes are apparent in the taste and are accompanied by a warming, biting, peppery sensation that is surprisingly hot.

Vietnamese mint



Origin and History

Polygonum literally means “many kneed” and is a direct reference to the jointed and angled appearance of the stems of this herb. There are over 200 species of *Polygonum*, some of which have been included in medical pharmacopoeias from Switzerland, France and Russia since Renaissance times. Although its early uses are unrecorded, it is interesting to note how its popularity in Asian cuisine is not dissimilar to the European application of sorrel. Similarly, fresh Vietnamese mint gives a biting, somewhat bitter taste that is appreciated for its appetite-enhancing properties.

Processing

Vietnamese mint does not dry satisfactorily. It tends to shrivel down to almost nothing and forfeit its characteristic flavor notes more dramatically than even coriander leaf.

Buying and Storage

Vietnamese mint can be grown easily, even in a pot or window box. Growing one's own is a certain way to ensure a steady supply for most of the year in temperate climates, as like its namesake it can be prolific and rampant. Vietnamese mint is readily available from specialty fresh produce and Asian stores, where it is most likely to be called laksa leaf or Cambodian mint. Bunches of Vietnamese mint will keep for a couple of days when stood in water and kept in the refrigerator. Alternatively, I have found a bunch put loosely into a large plastic bag and kept in the freezer will last for a few weeks. When required, simply break off the amount required and use in the same way as fresh.

Use

The aroma of Vietnamese mint always causes me to salivate with fond memories of a delicious Singapore laksa, the spicy fragrant soup with noodles and either chicken or seafood. As well as complementing Asian soups, Vietnamese mint flavors and garnishes fresh salads (see Crisped Belgian Endive with Tomato and Coriander Salsa on p. 178), goes well in dipping sauces with coriander, lime leaves, ginger and fish sauce and makes an interesting contribution to Malay curries when half a dozen leaves are added during cooking.

FLAVOR GROUP

- strong

SUGGESTED QUANTITY PER POUND (500 G)

- red meats:
6–8 fresh leaves
- white meats:
6–8 fresh leaves
- vegetables:
6–8 fresh leaves
- carbohydrates:
6–8 fresh leaves

COMPLEMENTS

- Asian soups such as laksa
- Asian curries and stir-fries
- fresh green salads
- dipping sauces

USED IN

- not commonly used in spice blends

COMBINES WITH

- basil
- cardamom
- chili
- coriander leaves and seeds
- cumin seed
- curry leaf
- galangal
- ginger
- pepper
- star anise
- tamarind
- turmeric

Vietnamese Prawn Laksa

Mint

There are as many versions of laksa as there are cooks, but in my opinion, the bulk of take-out laksa offerings are lacking in flavor. With a few fresh ingredients and a blend of laksa spices, you can whip up a laksa at home in the time it would take to order out.

Prawns

- 20 green prawns (shrimp), peeled and butterflied, tails on
- 1 tbsp (15 mL) tamari or dark soy sauce
- 1 tsp (5 mL) freshly squeezed lime juice
- 1 tsp (5 mL) rice wine (sake)
- $\frac{1}{2}$ tsp (2 mL) sesame oil

Laksa

- 1 tbsp (15 mL) peanut oil
- 1 onion, chopped
- $\frac{1}{4}$ cup (50 mL) Laksa Spices (see p. 566)
- $2\frac{1}{2}$ cups (625 mL) coconut milk
- $1\frac{1}{4}$ cups (300 mL) chicken, fish or vegetable stock
- 2 tsp (10 mL) fish sauce
- 10 oz (300 g) baby bok choy
- 5 oz (150 g) enoki or button mushrooms
- 10 oz (300 g) rice noodles, cooked and drained
- 5 oz (150 g) bean sprouts
- $1\frac{1}{2}$ tsp (7 mL) chopped Vietnamese mint (laksa leaf)
- $1\frac{1}{2}$ tsp (7 mL) chopped fresh coriander
- 1 lime, quartered

Combine prawns, tamari, lime juice, rice wine and sesame oil. Set aside.

For the laksa, heat oil in a saucepan over medium heat. Sauté onion until transparent, then add laksa spices and cook, stirring, for 2 minutes to make a paste. Add coconut milk, stock and fish sauce; reduce heat and simmer, uncovered, for 10 minutes. Add bok choy and mushrooms; simmer for 5 minutes.

In a small frying pan, fry prawns in marinade until opaque.

Divide rice noodles among 4 bowls and ladle in laksa. Top each bowl with prawns, bean sprouts, mint and coriander. Place a lime wedge on top and serve immediately. Serves 4.

Wattleseed

OTHER COMMON NAMES

- mulga
- coastal wattle
- Gundabluey wattle
- wirilda
- golden wattle

BOTANICAL NAMES

- mulga: *Acacia aneura*
- coastal wattle: *A. sophorae*
- Gundabluey wattle: *A. victoriae*
- Wirilda: *A. retinodes*
- golden wattle: *A. pycnantha*

FAMILY

- Fabaceae (formerly Leguminosae)

NAMES IN OTHER LANGUAGES

- Italian: semi di acacia
- australiano macinate

FLAVOR GROUP

- pungent

THE WATTLESEED of culinary importance comes from a relatively small number of acacia trees that bear edible leguminous seed pods. There are over 700 species of acacia, and the majority of them have poisonous seeds, so one must be absolutely sure the variety being eaten is not toxic. One kind considered a “food wattle” is mulga, whose seeds have high nutritional levels, including the presence of protein, much of which is contained in the tail-like connecting tissue attached to the seed. Mulga trees grow in outback Australia to heights of 20 feet (6 m) and are thoroughly unlikely-looking members of the pea family (Fabaceae) until one observes their pea-like pods that contain seeds typical of legumes. Many acacias do not have leaves at all, but stalks that are flattened to a leaf-like shape and act as leaves, their structure making them resistant to prolonged drought. A parasitic insect that attacks the mulga causes swollen lumps to appear on its branches.

Roasted ground wattleseed



WATTLESEED

WEIGHT PER TEASPOON (5 ML)

- ground: 4.2 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: ¾ tsp (4 mL) roasted and ground seeds
- white meats: ½ tsp (2 mL) roasted and ground seeds
- vegetables: ½ tsp (2 mL) roasted and ground seeds
- carbohydrates: ½ tsp (2 mL) roasted and ground seeds

COMPLEMENTS

- ice cream
- sorbet
- yogurt
- cheesecake
- whipped cream
- grilled salmon
- chicken
- kangaroo
- game

USED IN

- native Australian barbecue spice blends

COMBINES WITH

- akudjura
- allspice
- cardamom
- cinnamon and cassia
- coriander seed
- lemon myrtle
- mountain pepperleaf
- pepper
- thyme
- vanilla

These are sweet and juicy inside and are referred to as “mulga apples.” Although the Australian Aborigines ate cooked green wattleseed for sustenance, it is only the roasted and ground wattleseeds that are used as a spice to flavor food. The spice is a dark brown, grainy powder that resembles ground coffee in appearance and has a distinct, light, coffee-like aroma and pleasing, slightly bitter, nutty coffee taste.

Origin and History

My introduction to the wonders of *Acacia aneura* came from the unlikely source of a geologist, Frank Baarda, working in central Australia. Frank began by telling me how the root systems of acacia trees can go down to 100 feet (30 m) deep, an insurance against prolonged droughts. The geologist in him could not resist telling me how he knew this, and he launched into a fascinating explanation about gold prospecting and acacia trees.

Apparently, gold prospectors now have equipment that is so sensitive it can measure what is called a “gold value” in minute proportions, as low as some parts per billion. They discovered gold values at the surface that indicated there might be gold deposits; however, at 30 feet (10 m) down they found nothing. When an exploratory bore was put down, gold was discovered at 100 feet (30 m) below the ground and, interestingly, so were the fossilized roots of acacia trees. The puzzle was then solved. The roots of the acacia trees had transported minute amounts of gold to their leaves. The gold had accumulated in the leaves over centuries and had left a small but discernable gold value on the surface. Who says money doesn’t grow on trees? Another snippet of information I found equally interesting is that arsenic is found in high concentrations with gold and is one of the key indicators of the presence of gold. Why, then, was there no indication of arsenic along with the surface gold value? Because arsenic is poisonous, the acacia tree has the ability to resist taking up the arsenic present in the deposit.

Acacias have a special significance for Australians because the blossom of the golden wattle has been adopted as the nation’s floral emblem. Though acacias are indigenous to Australia, Africa, Asia and America, it is Australia’s acacias that are most decorative, bursting into various shapes of fluffy, glowing masses of blossoms ranging from creamy white to the most vibrant of yellows. Australian acacias were called “wattle” because the early colonists included their thin branches and

trunks with mud and clay in the construction of houses, a method known in Europe as “wattle and daub.” Wattle is sometimes referred to as mimosa; however, although related, it is not the true mimosa.

The Australian Aborigines have understood the nutritional benefits of wattleseed for thousands of years and have used the seeds, roots and bark of various types of acacia for medicinal purposes. Acacia gum, which oozes from cracks in the bark, can be sucked like a lollipop or soaked in water to make a kind of jelly. Dark gums are mostly astringent and unpalatable, while the paler, golden-hued resins have a quite agreeable taste. Wattle bark was recognized as an important source of tannin and by the end of the 19th century up to 22,000 tons of wattle bark was being exported from Australia for use in the leather tanning industry. By the late 20th century, Australia’s burgeoning bush food industry had created an awareness of the taste of roasted wattleseed in ice creams, pancakes and desserts.

Processing

While wattle trees grow and bear pods prolifically, the task of gathering and preparing the seeds for consumption is painstaking and labor-intensive. The seed-bearing pods are harvested when green and immature. The traditional method of processing is to simply throw the pods on an open grass fire where they will steam, producing something akin to an edible but almost tasteless pea. Steaming reduces a certain amount of background astringency and makes the seeds and attached membrane easier to remove from the pod.

Roasting of the whole, steamed seeds involves adding them to a dish filled with glowing hot embers from a fire and leaving them until some of the seed coat shows signs of cracking. Next, the roasted seeds are removed to cool and are then sieved to separate them from the ash, an extremely dusty, sooty task. The cleaned roasted seeds are milled to make “roasted and ground” wattleseed, ready to use in cooking.

Buying and Storage

Roasted and ground wattleseed is available from specialty spice shops, adventurous delicatessens and food outlets that sell native Australian foods. Wattleseed is relatively expensive when compared to the majority of spices (about five times the price



of ground nutmeg) because of the many steps involved in processing. In addition, it is mostly wild crafted (gathered from its wild state) and not commercially cultivated. Buy small amounts regularly, as even though the flavor profile is quite stable, it is always best if not stored for longer than two years. Keep roasted ground wattleseed in an airtight pack, just as for other ground spices, and avoid extremes of heat, light and humidity.

Use

Wattleseed flavors sweet dishes such as ice creams, sorbets, mousse, yogurt, cheesecakes and whipped cream. It is delicious in pancakes and goes well with breads. In these applications, roasted wattleseed grounds should be infused with the liquid ingredients (preferably boiling or at least heated) and either the strained infusion added on its own or, as they will have softened, the liquid including wattleseed grounds may be included for extra color and texture.

I have found wattleseed complements chicken, lamb and fish, especially when a small amount is blended with ground coriander seed, a pinch of lemon myrtle leaf and salt to taste. Sprinkle this over the food before cooking (it is particularly delicious with salmon steaks) and then pan-fry, grill or barbecue the meat. The wattleseed adds a subtle barbecued note that is far more appealing than the popular natural hickory–smoke flavor, which always tastes contrived and artificial by comparison.



Chocolate and Wattleseed Truffles

Wattleseed

Truffles aren't as hard as you'd think to make (although things can get a little messy), and they are an impressive way to end a dinner party. The wattleseed gives an added richness to the chocolate and matches perfectly with espresso.

- 8 oz (250 g) dark chocolate, broken into pieces
- 6 tbsp + 2 tsp (100 mL) whipping (35%) cream
(or double cream)
- 1 ¼ tsp (6 mL) ground roasted wattleseed, divided
- 2 tbsp (25 mL) unsalted butter
- ½ cup (75 mL) unsweetened cocoa powder

Melt chocolate, stirring frequently, in a glass bowl over a pan of simmering water. Remove from heat just as it is all melted and let cool.

Put whipping cream and 1 tsp (5 mL) of the wattleseed in a pan and scald (bring to just below boiling). Remove from heat and let cool.

With an electric hand beater, beat butter until very soft, then beat into chocolate. Stir in cream until combined. Refrigerate for at least 1 hour, until firm.

Sift cocoa powder into a shallow dish and add the remaining ¼ tsp (1 mL) wattleseed. Using a melon baller or a teaspoon, work quickly to scoop out one truffle from the chocolate mixture, roll it in your palms to make a ball, then coat it in cocoa and place it on a plate. Repeat until all of the chocolate mixture is used, then refrigerate truffles until ready to serve. Makes about 30 truffles.

Zedoary

OTHER COMMON NAMES

- shoti
- white turmeric
- wild turmeric

BOTANICAL NAME

- *Curcuma zedoaria*

FAMILY

- Zingiberaceae

NAMES IN OTHER LANGUAGES

- Arabic: zadwaar
- Chinese (C): ngoh seuht, wat gam
- Chinese (M): e zhu
- Czech: zedoar
- Dutch: zedoarwortel
- French: zédoaire
- German: zitwer
- Hungarian: feher kurkuma, zedoaria-gyoker
- Indian: kachur, amb halad
- Indonesian: kencur zadwar, kunir putih
- Italian: zedoaria
- Japanese: gajutsu
- Portuguese: zedoaria
- Russian: zedoari
- Spanish: cedoaria
- Swedish: zittverrot
- Thai: khamin khao
- Turkish: cedvar
- Vietnamese: nga truat

ZEDOARY is a member of the same family as galangal, turmeric and ginger, and its long, light green leaves sprout from a rhizome, the interior of which is yellow, and resembles lesser galangal. The large leaves reach up to about 3 feet (1 m) high, growing in clumps rather like a lily. The flowers are yellow, bursting from the bright red leaf sections. There are two kinds of zedoary: one is referred to as “long and round” and the other as “oval,” the only difference being the rhizome shape. Zedoary has a distinctive warm, aromatic, ginger-like smell with definite musky, camphorous overtones and a slightly bitter aftertaste. Dried zedoary rhizomes look like ginger, being a little grayer in color and somewhat larger and rougher in texture.

Chopped dried zedoary; fresh zedoary root



Origin and History

Zedoary is native to India, the Himalayas and China, and was first brought to Europe in the Middle Ages by Arab traders. It is now grown in Indonesia and thrives in tropical and subtropical regions. Although popular in the sixth century in Europe, the culinary use of zedoary has waned over the centuries. One explanation for its use being phased out is that it takes two years to be harvested after propagation from portions of the rhizome, making it less economic than its ginger and galangal cousins. Another plausible reason is that it has a flavor profile generally regarded as inferior to ginger and galangal, both popular and readily available spices these days.

Processing

In the same manner as ginger and turmeric, zedoary is harvested after flowering. The rhizomes are generally sliced and dried to facilitate storage and shipment. When ground, the powder is a yellow-gray color and fibrous.

Buying and Storage

Zedoary is usually only available in its dried and sliced form and can sometimes be bought from Chinese herbalists as a powder. The sliced rhizomes will store easily under the ideal conditions of being kept away from extremes of heat, light and humidity. The powder should be stored in the same conditions in an airtight container.

Use

Although the application of zedoary in cooking has been largely replaced by ginger and galangal, it is still used to flavor some Southeast Asian curries. A similar spice, known as *kenchur* (see *Galangal*, pp. 268–269) in Indonesia, is from a smaller rhizome and has a more camphorous aroma. Zedoary adds its mild flavor to seafood dishes and the leaves are sometimes found in Javanese cooking as a herb. The root is high in starch and is called *shoti* in India, where it is sometimes valued as a thickener and used as a substitute for arrowroot.

FLAVOR GROUP

- pungent

WEIGHT PER TEASPOON (5 ML)

- ground: 2.7 g

SUGGESTED QUANTITY PER POUND (500 G)

- red meats: 1 ½ tsp (7 mL) ground
- white meats: 1 tsp (5 mL) ground
- vegetables: 1 tsp (5 mL) ground
- carbohydrates: ½ tsp (2 mL) ground

COMPLEMENTS

- Southeast Asian curries
- Indonesian seafood dishes
- Indian curries as a thickener

USED IN

- some curry powders

COMBINES WITH

- allspice
- cardamom
- chili
- cinnamon and cassia
- cloves
- coriander seed
- cumin seed
- fenugreek seed
- ginger
- mustard
- nigella
- paprika
- tamarind
- turmeric

Serve as an accompaniment to an Indian meal.

- 6 tsp (30 mL) freshly squeezed lemon juice
- 4 tsp (20 mL) ground zedoary
- 2 tsp (10 mL) grated gingerroot
- 1 tsp (5 mL) crushed garlic
- $\frac{1}{2}$ tsp (2 mL) medium-heat chili powder

In a small bowl, combine lemon juice, zedoary, gingerroot, garlic and chili powder. Cover and refrigerate for at least 1 hour or until ready to use. Makes about $\frac{1}{4}$ cup (50 mL).

III

The Art of Combining Spices



The Principles of Making Spice Blends

OFTEN THE greatest pleasure in using spices is experienced when their individual flavor characteristics are combined with each other to create many completely different tastes. Spice blends are convenient and effective when cooking, and anyone can make his or her own combinations with even a basic understanding of how to mix a variety of spices together. Like any artist, the spice blender will bring a range of components together in a personal style that creates a homogeneous end result. That final work is the sum total of the various inputs, made into something unique by the artist's interpretation.

Spice blending is indeed an art as much as a science, and every spice blender will have his/her own approach to making a blend. The ultimate requirements may vary considerably depending upon whom the blend is being made for. A multinational food company wanting a spice blend to use in fast-food outlets will be concerned about cost, a flavor profile that does not offend anyone, and using readily available, consistent-quality ingredients. In the mid-20th century, the majority of these blends were high in salt, sugar and monosodium glutamate. By the 1990s they still tended to be high in salt (after all it is cheap and heavy, the dry food-maker's answer to water), wheat flour (used as a filler) and free-flow agents. However, the better spice blends used less of these ingredients and a higher proportion of herbs and spices. The free-flow agents are required to prevent clumping (the term we use in the spice trade to describe lumps), which occurs when spice blends contain hygroscopic (water-attracting) ingredients and are stored for long periods in less than ideal conditions.

As one grows familiar with all the different herbs and spices, it becomes apparent that most of the spices we use have quite distinct and often strikingly different characteristics. Some are strong and could even be described as unpleasant in isolation, others (like one of my favorite spices, cinnamon) are a delight to experience even on their own. When I make a spice blend, I seek to create a different taste that can only be achieved by putting together a combination of spices and herbs. Sometimes a spice blend bears little resemblance to any of the individual spices used; in other cases a few characteristic spice flavors may dominate — for example, in mixed spice, where cinnamon and cloves are often the first aromas one might detect. Although the following guidelines will help the reader make spice blends, there are really no rules as such, and you can use your own creativity and instinct to create a range of unique tastes.

The only time a spice blender needs to exercise caution is when incorporating ingredients other than herbs and spices, because in some instances adverse flavor reactions may occur over time. For instance black pepper used in mixes that contain fats such as coconut cream will, after a few months, produce off-flavors with unpleasant “soapy” notes to them. This kind of reaction is the exception rather than the rule and does not affect normal home cooking situations.

Another phenomenon to take into account when blending ingredients of varying textures is stratering. That is when, over a period of time, the different particle sizes form strata (they will look like a cross-section of sedimentary rock), ultimately separating to such a degree that one spoonful of spice blend will have a different flavor from the next. Should you encounter a blend that has stratered, shake or remix it before using to ensure uniformity of flavor.

The art of making a good spice blend is to bring together a range of different kinds of tastes and textures so they create an ideal balance that tantalizes the taste buds. Just as when cooking a meal we balance the sweet, salty, sour and bitter taste elements, when combining spices we balance their different attributes. For this purpose I group spices into five basic categories: sweet, pungent, tangy, hot and amalgamating.

The **sweet** spices are ones that have varying degrees of inherent sweetness and also tend to be associated mostly with sweet foods such as puddings, cakes and pastries. It is worth remembering, though, that these sweet spices have a role to

SWEET

(2 tsp/10 mL)

- allspice
- aniseed
- cassia
- cinnamon
- nutmeg
- rose
- vanilla

PUNGENT

(½ tsp/2 mL)

- akudjura
- ajowan
- asafetida
- calamus
- caraway
- cardamom
- celery seed
- cloves
- cumin
- dill seed
- fenugreek seed
- galangal
- ginger
- juniper
- licorice root
- mace
- nigella
- orris root
- pink (schinus) pepper
- star anise
- wattleseed
- zedoary

TANGY

(1 tsp/5 mL)

- amchur
- barberry
- black lime
- capers
- kokam
- pomegranate
- sumac
- tamarind

HOT

($\frac{1}{4}$ tsp/1 mL)

- chili
- horseradish
- mustard
- pepper

play in balancing savory foods as well. Among the sweet spices I include cinnamon, allspice, nutmeg and vanilla.

Next I refer to the **pungent** spices, which when smelled individually have very strong aromatic “top notes” that may be somewhat camphorous and astringent. Spices such as cloves, star anise and the cardamoms fall into this category. Native Australian herbs and spices such as bush tomato (akudjura) and wattleseed would be grouped here as well. The pungent spices are valuable because even in small proportions they contribute a freshness of flavor that may otherwise be lacking in food. Use all pungent spices sparingly; see the margin entries in this section, which give the proportions in teaspoons and milliliters in which each of these spices should be used in relationship to each other. This is an approximate guide only, as even within the pungent group ground star anise is stronger than ground caraway seed. Nevertheless, grouping still helps one gain an instinct for the relative strengths of the key spices.

Just as sourness is important in balancing meals (think of the number of times lemon juice is used, and what about that favorite of so many young palates, sweet and sour sauce) the astringency of the **tangy** spices makes an important contribution to the balance of a spice blend. Tamarind is usually added at the cooking stage, as it is a messy spice to handle and would not blend readily with dry spices. However, sumac, with its fruity lemon-like freshness, makes an excellent tangy addition to a dry spice blend, as does amchur powder.

The spice category that is added judiciously in the smallest proportions, yet the one that can “make or break” a dish, is the **hot** group. This collection of relatively few spices is essentially responsible for the overused reference people make to “spicy” food. In most cases, those who say, “I don’t like spicy food,” mean that they don’t like hot spices, yet there are dozens of spices used every day that are not hot at all. Hot spices such as pepper and chili provide necessary stimulation, which releases endorphins, giving us a sense of well-being. Spicy heat in food makes it appetizing and often only needs to be used in tiny amounts to have the desired effect. Meat pie manufacturers add quite a lot of white pepper, so even when a pie is cooling off, the pepper-heat fools the eater into thinking the pie is still high in temperature!

Because they have relatively mild flavors, many cooks over-

look the importance of the **amalgamating** spices. There are only a few regularly used amalgamating spices, but they are found in the majority (but not all) of the spice blends. I have already covered the detailed attributes of both coriander seed and fennel seed. It is worth keeping in mind that it is almost impossible to use too much coriander seed. Should you happen to be too heavy-handed with one of the other categories of spices, a little extra coriander can save a blend from ruin. Sweet paprika is similar to coriander in terms of the amount you can use; strangely, paprika is a member of the chili family but has no heat.

The information in the margins of pp. 533–535 is a basic guide showing the most commonly used spices and which of the five groups I have mentioned they fall into. The figure indicating quantity of teaspoons gives an approximate indication of the proportion (by volume, e.g. spoon or cup) that you would find in a typical blend. For example, a tasty meat seasoning to sprinkle on steak before grilling may contain 2 tsp (10 mL) ground cinnamon, $\frac{1}{2}$ tsp (2 mL) ground ginger, 1 tsp (5 mL) amchur powder, $\frac{1}{2}$ tsp (2 mL) ground black pepper, $\frac{1}{4}$ tsp (1 mL) ground chili, 5 tsp (25 mL) ground sweet paprika, plus salt to suit one's personal preference. Note that although pepper and chili are both hot spices, the relative differences in their flavor and heat strength mean that some variation in quantity is appropriate.

Remember that these proportions can be varied as you experiment and become familiar with the spices; however, treating the suggested quantities as a starting point will help you avoid disaster.

A note on measuring volumes as opposed to weights. When making a spice blend, always use the same method of measuring the various spices. Either measure by volume or by weight but not both in the one mix. Never use a recipe that has been given in weights and then make it up in the same proportions by volume, say making every $\frac{1}{3}$ oz (10 g) a teaspoon (5 mL). The reason for this is most spices have a different “bulk index.” Bulk index is the weight-to-volume relationship best illustrated by the old riddle “What weighs the most, a ton of sand or a ton of feathers?” Naturally, they both weigh the same; however, each would occupy vastly different volumes.

The same principle applies to using individual spices, so

AMALGAMATING

(5 tsp/25 mL)

- coriander seed
- fennel seed
- paprika
- poppy seed
- sesame seed
- turmeric

MILD

(5 tsp/25 mL)

- alexanders
- angelica
- borage
- chervil
- elderflower
- filé powder
- lovage
- parsley
- purslane
- salad burnet
- sweet cicely

MEDIUM

(2 tsp/10 mL)

- arugula
- balm
- bergamot
- chicory
- chives
- kaffir lime leaf
- pandan leaf
- sorrel

while a measure of ground coriander seed may weigh $\frac{1}{3}$ oz (10 g), the exact same measure of ground cloves may weigh $\frac{2}{3}$ oz (20 g) because its density is greater. That is why when one buys spices, the pack sizes may all appear the same but the weights can vary from a few grams to a hundred grams. These variables are compounded when some of the spices being used may be whole, chopped, sliced or ground, all factors that affect the weight per teaspoon (bulk index). When I make a blend, I start with volume, as we tend to relate more easily to a visible unit of measure than to weight. I weigh each quantity as it is added, so when completed there is an exact record of the weight of each ingredient used. I then calculate the percentage of each ingredient in the recipe, so every time it is made with equivalent-quality herbs and spices, it will be exactly the same.

A phenomenon that often goes unrecognized with spice blends is that they “round out” and become better balanced after about 24 hours. In other words, a blend of mixed spice or curry made one day may seem a little harsh in fragrance, but a day later all its complexities will have amalgamated, provided that its proportions of sweet, pungent, tangy, hot and amalgamating spices were in approximate balance.

Herbs can be incorporated into these blends as well, and I generally use them for color, texture and the savory notes they give to a mix. Some blends are made up of herbs only, such as mixed herbs and bouquet garni. When herbs are in a spice blend, I would tend to use a little more than a sweet spice, say about 1 tbsp (15 mL) in relation to the previous margin entries. Therefore, to give a herbaceous note to the steak spice mentioned earlier, add 1 tbsp (15 mL) of dried rubbed oregano leaves. The information in the margins of pp. 536–537 shows the proportions for using the various dried herbs. These are not grouped into the five spice categories, as I consider them all to be savory; however, each has been grouped based on its relative pungency and thus the best proportion to use.

A simple mixed-herbs blend to put into meat loaf, hamburger patties or one’s favorite cottage pie may contain $\frac{1}{2}$ tsp (2 mL) thyme, $\frac{1}{2}$ tsp (2 mL) sage and 1 tsp (5 mL) marjoram. And to make a blend suitable for casseroles, add to the above $\frac{1}{2}$ tsp (2 mL) crushed bay leaves and 5 tsp (25 mL) parsley leaves.

As you can imagine, there are hundreds of different combinations that may be made from various herbs and spices, but there are a number of so-called traditional blends. When

bought in the marketplace, these blends may vary depending upon the spice blender’s interpretation and the desired result sought in the dish. For this reason, no recipe for a spice mix is necessarily more “correct” than another; one may be more “traditional” or “authentic,” but that does not mean it does the job any better. When variations in cooking methods and the relative differences in the quality and flavor of other ingredients are taken into account, “traditional” spice blends are known to vary considerably.

The Spice and Herb Combination Pyramid on p. 538 is a convenient “ready reckoner” of spice and herb proportions. The pyramid shows each category of herbs and spices, grouped by their approximate relative flavor strengths. At the top of the pyramid are the strongest ingredients, going down to the mildest at the base of the pyramid. The percentages shown are an indication of the approximate quantity by weight that may be combined to form a balanced blend. For instance, to make a tasty crusting mix to coat meat before roasting, you could blend:

- 1.5% chili, 1.5% pepper (3% hot spices)
- 2.5% cumin, 2% ginger, 0.5% rosemary
(5% pungent spices and herbs)
- 12% sumac (12% tangy spices)
- 13% cinnamon, 10% allspice (23% sweet spices)
- 30% coriander seed, 20% paprika, 7% parsley and
salt to taste (57% amalgamating spices and mild herbs)

Typically, a spice blend contains:

- 3% hot spices
- 5% pungent spices and herbs
- 12% tangy spices and strong herbs
- 23% sweet spices and medium herbs
- 57% amalgamating spices and mild herbs

The following recipes for spice blends are for volume measures; therefore, “1 tsp (5 mL) oregano” may be considered as one part oregano. You may use a teaspoon (5 mL), tablespoon (15 mL), cup (250 mL) or quart (1 L) jug of oregano; it all depends on how much you want to make at a time. I would suggest using a teaspoon (5 mL) as your standard measure. That way you will not make too much at first and can always make more later on if you are happy with the

STRONG

(1 tsp/5 mL)

- basil
- coriander leaf
- curry leaf
- dill
- fennel fronds
- fenugreek leaf
- lavender flowers
- lemon myrtle
- lemon verbena
- lemongrass
- mint
- marjoram
- myrtle
- olida
- tarragon
- Vietnamese mint

PUNGENT

(½ tsp/2 mL)

- bay leaf
- cress
- garlic
- oregano
- rosemary
- sage
- savory
- stevia
- thyme

Spice and Herb Combination Pyramid

**Hot
Spices
(3%)**

chili,
horseradish,
mustard, pepper

**Pungent Spices and Herbs
(5%)**

ajowan, akudjura, asafetida,
bay leaf, calamus, caraway,
cardamom, celery seed, cloves, cress,
cumin, dill seed, fenugreek seed, galangal,
garlic, ginger, juniper, licorice, mace, nigella,
olida, oregano, orris root, pink schinus pepper,
rosemary, sage, savory, star anise, stevia, thyme,
wattleseed, zedoary

**Tangy Spices and Strong Herbs
(12%)**

amchur, barberry, basil, black lime, caper, coriander leaf,
curry leaf, dill, fennel fronds, fenugreek leaf, kokam,
lavender flowers, lemon myrtle, lemon verbena, lemongrass,
mint, marjoram, myrtle, pomegranate, sumac, tamarind, tarragon,
Vietnamese mint

**Sweet Spices and Medium Herbs
(23%)**

allspice, aniseed, arugula, balm, bergamot, cassia, cinnamon, chicory, chives,
kaffir lime leaf, nutmeg, rose, pandan leaf, sorrel, vanilla

**Amalgamating Spices and Mild Herbs
(57%)**

alexanders, angelica, borage, chervil, coriander seed, elder flower, fennel seed,
filé powder, lovage, paprika, parsley, poppy seed, purslane, salad burnet,
sesame seed, sweet cicely, turmeric

result. When making any variations, make a note of these so the result, if pleasing, can be replicated. When spice blends call for ground spices, sieve them before adding to the mix so they blend uniformly without forming lumps. Always use the best-quality spices available, and when the mix is complete, store it in an airtight jar and keep away from direct light and extremes of heat and humidity.

Aussie Bush Pepper Mix

AUSTRALIAN NATIVE flavors have a unique profile that evoke the vast outback and the distinctive aromas of the Australian bush. This bush pepper mix is versatile enough to be used as a dry marinade on meat before broiling, roasting or barbecuing or to season potato wedges and vegetables such as eggplant before cooking. I like the flavor so much that I often sprinkle it, instead of salt and pepper, on tomato sandwiches. Make the mix by combining these ground ingredients:

- 4½ tsp (22 mL) ground coriander seed
- 2 tsp (10 mL) akudjura (ground bush tomato)
- 2 tsp (10 mL) salt, or to taste
- ½ tsp (2 mL) ground wattleseed
- ½ tsp (2 mL) ground mountain pepperleaf
- ½ tsp (2 mL) ground native pepperberry
- ½ tsp (2 mL) ground lemon myrtle leaf

Store in an airtight container.

Baharat

WHEN VISITING the spice markets in Istanbul, one may be puzzled to see large signs reading “baharat” above the traders’ stalls. To the locals, baharat simply means “flowers and seeds” or, loosely translated, “herbs and spices.” Baharat is, however, the name given to a typical blend of aromatic spices used widely in the recipes of the Gulf States and in Arabic and Iraqi cooking. Baharat may be best described as an exotic spice blend that fills your head with diverse aromas; is not hot, yet it conveys all the romantic fragrances of everything that is spice. A traditional mix, baharat is added to recipes in much the same way as the Indians would add garam masala.

While the proportions may vary depending upon one’s taste preferences, a typical baharat (also known as *advieh*) may be made by carefully blending the following ground spices:

- 6½ tsp (32 mL) mild paprika
- 2 tbsp (25 mL) freshly ground black pepper
- 4½ tsp (22 mL) ground cumin
- 1 tbsp (15 mL) ground coriander seed
- 1 tbsp (15 mL) ground cassia
- 1 tbsp (15 mL) ground cloves
- ½ tsp (2 mL) ground green cardamom seed
- ½ tsp (2 mL) ground nutmeg

The result is a beautifully balanced spice with a woody bouquet, aromatic bay rum notes, mellifluous cinnamon-cassia sweetness, deep pungency and an apple-like fruitiness. The flavor is round and full-bodied, sweet and astringent yet with a satisfying and appetite-stimulating pepper bite. While each spice makes its own distinctive contribution and may leave one with a lingering hint of its individuality, no single flavor should dominate.

Baharat adds a nuance of the exotic Middle East to winter-warming dishes and is delectable rubbed onto lamb shanks that are browned in a pot and made into a casserole. Baharat complements lamb so well that cutlets and even roasts are improved greatly when the meat is dusted with baharat and a little salt to taste, allowed to dry-marinade in the fridge for an hour and then cooked. Oxtail stew, or for that matter any beef casserole, gains a full-bodied taste and deep rich color by adding baharat in the same way. Baharat features in recipes for tomato sauces, soups, fish curries and barbecued fish.

Slow-Cooked Ox Cheeks in Spices and Red Wine

When Liz first asked the butcher for ox cheeks, he said they weren't available. She pointed out that he was selling oxtail, and if an cow had one tail it must have two cheeks. The following week our friendly butcher had our ox cheeks. This is a tender and tasty dish, excellent comfort food on winter evenings. Serve over creamy mashed potatoes with a good full-bodied red wine.

- 2 tbsp (25 mL) baharat
- 1 tbsp (25 mL) all-purpose flour
- 2½ lbs (1.25 kg) ox (beef) cheeks, trimmed
- 2 carrots
- 1 yellow turnip (rutabaga, or Swede)
- 1 parsnip
- 2 tbsp (25 mL) vegetable oil
- 5 or 6 pickling onions, peeled
- 1 cup (250 mL) dry red wine
- water
- salt to taste

Preheat oven to 200°F (100°C). Combine baharat and flour in a shallow bowl. Coat ox cheeks on all sides with baharat mixture and set aside.

Peel carrots and halve horizontally. Cut the narrow half in two and the thick end into four lengthwise. Peel turnip and parsnip and cut into a similar size as the carrots. Set aside.

Heat oil in a heavy-based, lidded ovenproof dish over high heat. Working in batches, add beef pieces and sear quickly on all sides. Using a slotted spoon, transfer to a plate lined with a paper towel and repeat with the remaining beef. If the pan becomes too dry, add 1–2 tbsp (15–25 mL) water. Return beef to pan and add carrots, turnip, parsnip, pickling onions, red wine and enough water to cover. Season with salt. Bring to a simmer, cover and transfer to the oven. Cook, covered, for 5 hours, until meat is so tender that it falls apart. Check once or twice during cooking time, and add boiling water if necessary to ensure that meat remains covered. Serves 6.

Barbecue Spices

THE POPULARITY of barbecues for cooking has enlisted a vast range of spice blends that are now considered appropriate barbecue spices, be they Indian, Moroccan, Thai or perhaps something dreamed up in a fertile spice blender's imagination. In the 1980s a barbecue spice was most likely a mix of salt, paprika and other spices designed for enhancing the color and flavor of red meats. These blends also became well known as coatings for rotisserie-cooked takeout chicken. Another boost to their demand came from cooks wanting to improve the flavor and appearance of meats cooked in the microwave oven, which without some spice help were bland in appearance and retained an unpleasant, uncooked, boiled-flesh smell.

I prefer to use spice blends as a dry rub on barbecued meats instead of the ubiquitous wet marinades. Contrary to common belief, a piece of meat that soaks in a sea of liquid marinade for hours does not necessarily become more tender or soak up a great deal of flavor. In some cases a marinade high in salt will actually leach out some of the meat's natural succulence. A barbecue spice is best sprinkled over the meat about 20 minutes before cooking and allowed to dry-marinate. The moisture on the surface of the meat is sufficient to make it stick. During barbecuing, one may squeeze a little lemon juice over the meat while it is cooking. This helps prevent the spices from burning and enhances the flavor. The following recipe is for a traditional modern barbecue spice. Mix together:

- ¼ cup (50 mL) sweet paprika
- 2 tbsp (25 mL) coarse sea salt
- 2 tbsp (25 mL) garlic powder
- 4 tsp (20 mL) superfine (caster) sugar
- 3½ tsp (17 mL) crushed dried parsley or chervil
- 1 tbsp (15 mL) freshly ground black pepper
- 1½ tsp (7 mL) ground cinnamon
- 1½ tsp (7 mL) ground ginger

This blend must be kept in an airtight container, as the salt content will attract moisture. Store away from light so the paprika is not bleached.

Berbere

PRONOUNCED “BER-BERAY,” this is an Ethiopian spice blend with a coarse, earthy texture that is also the basis of a paste (like a curry powder and curry paste). Berbere has pungent yet fragrant spice notes and can be extremely hot depending upon the amount of chili included. The dry spice mix is made by blending:

- 2 tsp (10 mL) whole cumin seeds
- 2 tsp (10 mL) whole coriander seeds
- 1 tsp (5 mL) whole ajowan seeds
- 1 tsp (5 mL) whole black peppercorns
- $\frac{3}{4}$ tsp (4 mL) whole fenugreek seeds
- $\frac{1}{2}$ tsp (2 mL) whole allspice

Lightly roast the whole spices, then grind coarsely with a mortar and pestle or in a coffee grinder before adding:

- 4 tsp (20 mL) salt
- 1 tsp (5 mL) ground ginger
- $\frac{1}{2}$ –1 tsp (2–5 mL) ground bird's eye chili (1 tsp/5 mL or more will be very hot)
- $\frac{1}{2}$ tsp (2 mL) ground cloves
- $\frac{1}{2}$ tsp (2 mL) ground nutmeg

Blend thoroughly and store in an airtight container.

To make berbere paste, fry a finely chopped onion in 1 tbsp (15 mL) oil. Add 1 tbsp (15 mL) mild paprika and 3 tbsp (45 mL) of the berbere dry spice mix; fry for 5 minutes. Take off the heat and allow to cool before storing in the refrigerator, where it will last for at least 2 weeks.

Berbere is traditionally used on baked fish and other meats. In Western cooking the dry mix adds a tantalizing spiciness when rubbed onto red and white meats before roasting, grilling, barbecuing or pan-frying. Berbere paste adds flavor to stews and casseroles when treated as a delicious curry-like base.

Bouquet Garni

BOUQUET GARNI has a familiar, balanced flavor like mixed herbs, made mellow by parsley and less pungent from the lack of sage. The name essentially means “a bunch of herbs,” and traditionally it consists of a sprig each of thyme, marjoram and parsley, plus a few bay leaves, tied together in a bunch that is put into a soup, stew or casserole. During cooking, the flavor of the bouquet garni infuses into the meal and the leaves soften and fall off, leaving the hard stems and large leaves, which are removed at the end of cooking. A blend of dried bouquet garni is more effective in slow-cooked dishes, though not necessarily as attractive as a fresh bunch. The dry herbs may be tied up in a square of cheesecloth for later removal or added to the dish so that the small, dried leaves soften and amalgamate with the rest of the ingredients. To make bouquet garni, blend together:

- 4 tsp (20 mL) dried thyme
- 2½ tsp (12 mL) dried marjoram
- 1½ tsp (7 mL) dried parsley
- 1 tsp (5 mL) crushed bay leaves

Add 2 tsp (10 mL) of this bouquet garni blend at the beginning of cooking to a dish made to serve 4.

Cajun Spice Mix

THIS HOT, peppery spice blend is a traditional New Orleans favorite for making Cajun blackened fish or chicken. A Cajun spice mix is an excellent example of bringing together spice profiles with herbs such as basil, which we are more likely to associate with Italian cooking. The distinctive flavor comes from the paprika, basil, garlic, onion, thyme, salt and cayenne pepper with varying degrees of black and white pepper depending on one's heat preferences. To make a Cajun spice mix from dry herbs and spices, combine:

- ¼ cup (50 mL) paprika
- ¼ cup (50 mL) dried basil
- 8 tsp (40 mL) onion flakes
- 2 tbsp (25 mL) garlic powder
- 4 tsp (20 mL) salt
- 4 tsp (20 mL) cracked black pepper
- 4 tsp (20 mL) ground fennel seeds
- 1 tbsp (15 mL) dried parsley
- 1 tbsp (15 mL) ground cinnamon
- 1 tbsp (15 mL) dried thyme
- 1 tsp (5 mL) freshly ground white pepper (or more to taste, depending on how hot you want it)
- 1 tsp (5 mL) cayenne pepper (or more to taste, depending on how hot you want it)

Sprinkle the blended spices onto chicken, fish or beef, allow to dry-marinate for up to 20 minutes and pan-fry, grill or barbecue. To achieve a traditional blackened look, fry the meat in butter. When the butter burns during cooking it creates the “blackening” effect.

Chaat Masala

CHAAT MASALA is quintessentially Indian to me and is my spice of choice for salting practically every Indian recipe. It also makes a good general seasoning on meat and vegetables, either before or after cooking. Masala simply means mix, and a chaat masala is made by blending:

- 1/3 cup (75 mL) ground cumin
- 2 tbsp (25 mL) sea salt
- 2 tbsp (25 mL) black salt
- 2 tbsp (25 mL) ground fennel seed
- 1 tbsp (15 mL) Garam Masala (see p. 560)
- pinch asafetida
- pinch mild chili powder

I call it an Indian all-purpose sprinkle. Because of its high salt content, it is used to season potatoes (chaats) and fried pulses (such as chickpeas). Used in curries in place of ordinary cooking salt, it adds a wonderfully authentic fragrance.

Chermoula

THE POPULARITY of Moroccan food has made chermoula a regular feature on urban restaurant menus. Regarded by many as being more user-friendly than some of the hotter spice blends, chermoula is a clever combination of robust flavors such as cumin, Spanish paprika and turmeric balanced by the freshness of onion, parsley and coriander leaves with hints of garlic and cayenne pepper. Chermoula is often made with fresh herbs (garlic and onion forming the bulk) like a salsa, then lightly spiced and applied as a dressing or used to marinate fish and chicken before lightly cooking. Typically, a chermoula would be made from:

- 1 clove garlic, crushed
- ½ onion, finely chopped
- 1 tbsp (15 mL) ground cumin
- 2 tsp (10 mL) chopped fresh parsley
- 2 tsp (10 mL) mild paprika
- 1 tsp (5 mL) chopped fresh coriander
- 1 tsp (5 mL) Alleppey turmeric
- pinch cayenne pepper
- pinch freshly ground black pepper
- pinch salt

Marinate meat or firm fish like tuna in chermoula for 20 minutes before pan-frying, grilling or barbecuing. Chermoula also goes well with lamb, on either roasts or barbecued cutlets.

Chinese Five-Spice

THIS DISTINCTIVE blend is redolent with the aroma of star anise, a spice found in many Chinese recipes, combined with the sweetness of cassia and cloves, the bite of pepper and plenty of ground fennel seeds to amalgamate the flavors. There are few spice blends that are so dominated by one spice as Chinese five-spice is by star anise. Chinese five-spice is in many Asian recipes, and its sweet tangy profile goes well with greasy meats like pork and duck. Chinese five-spice is made by blending the following ground spices:

- 2 tbsp (25 mL) ground star anise
- 2½ tsp (12 mL) ground fennel seeds
- 1½ tsp (7 mL) ground cassia
- ½ tsp (2 mL) ground Sichuan or black pepper
- ¼ tsp (1 mL) ground cloves

Stir-fried vegetables are greatly enhanced by the addition of about a teaspoon (5 mL) of Chinese five-spice, sprinkled over them during cooking. With a little salt, Chinese five-spice makes the ideal dry marinade for chicken, duck, pork and seafood.

Curry Powder

THE NOTION of a curry powder is believed to have originated in India. It is made into a powder because many spices are hard in texture and require pounding or breaking up to yield their flavors and aromas. A basic description of a curry could be a spicy casserole; however, I prefer to think of it as a blend of sweet, pungent, hot and amalgamating spices that can be mixed in literally hundreds of different proportions to make a curry to suit a particular taste preference. This may take into account complementing particular foods; for instance, beef might require a stronger-flavored curry than fish or lentils.

The versatility of curry powder can be surprising. For example, mayonnaise with curry powder blended in is a tasty salad dressing. An almost indiscernible amount of curry powder can lift a creamy vegetable soup. We often tend to think of curry only in relation to chopped-up meat and vegetables in a gravy, but one can easily combine the dry powder with a little salt and rub on meat surfaces as a dry marinade. The moisture in the meat makes the powder cling, and a squeeze of lemon juice before and during grilling or barbecuing gives a bit of added zing and stops the spice from burning.

When eating curry, I am often reminded of the time we were having a meal in Mangalore, in southern India, with the Sediypu family. They were pleased to see us eating with our fingers in the traditional way because, as they said, “How can you know what you are eating unless you feel the food first?” In the West we think we are civilized using knives and forks, when to the Indian way of thinking we are foolish putting food into our mouths that we have not felt to see how hot or cold, or how hard or soft it is. They even tell me that their senses are developed enough to feel the heat of chili in a dish, something that would have saved many of us from a searing experience in the past.

The principal components of a basic Madras style of Indian curry powder are the “sweet” spices, similar to what is found in a mixed spice: cinnamon, allspice and nutmeg. Pungent spices such as cloves, cardamom and cumin add depth of char-

acter, while hot spices such as chili, pepper, ginger and fenugreek give it bite. These all come together in harmony with the addition of amalgamating spices: fennel, coriander seed (very important) and turmeric.

A popular and interesting technique when making a curry is to roast the spices. This modifies the flavor and adds another fascinating spectrum to the art of making curry powder. The traditional method is to roast the whole spices and then grind them all together. Each spice is roasted for different lengths of time depending upon the flavor required. For example, over-roasting fenugreek can create extremely bitter, unpleasant notes.

The easy way to roast spices at home is to put whatever curry powder you prefer into a dry heated frying pan or the saucepan the curry is to be made in. The pan must be dry with no oil, as the natural oils in the spices will prevent them from sticking or burning. Keep the powder moving around so it toasts evenly, and as it starts to change color (probably in 30–60 seconds) and give off a toasted spice aroma, remove it from the heat. This may be then used as the base for making a curry or allowed to cool before storing it in a jar for later use.

To make a versatile Madras type of curry, blend these ground spices together in the following proportions:

- 1/3 cup (75 mL) ground coriander seed
- 2 tbsp (25 mL) ground cumin
- 1 tbsp (15 mL) ground turmeric
- 2 tsp (10 mL) ground ginger
- 1 tsp (5 mL) ground yellow mustard seed
- 1 tsp (5 mL) ground fenugreek seed
- 1 tsp (5 mL) ground cinnamon
- 1/2 tsp (2 mL) ground cloves
- 1/2 tsp (2 mL) ground cardamom seed
- 1/2 tsp (2 mL) ground chili (more or less to taste)
- 1 1/2 tsp (7 mL) freshly ground black pepper

For a Malay style of curry, omit the fenugreek seed, add 6 1/2 tsp (32 mL) fennel seed, decrease the coriander seed to 6 1/2 tsp (32 mL) and increase the cinnamon to 2 tsp (10 mL).

For a yellow curry, reduce both the coriander and cumin seeds by 1 tbsp (15 mL), omit the fenugreek seed, cloves and cardamom seed and increase the turmeric by 1 tbsp (15 mL). Madras turmeric is the preferred type to use in a yellow curry because of its pale color and less earthy taste in comparison to Alleppey turmeric.

Once mixed, store the curry powder in an airtight container for a couple of days before using, allowing time for the spice notes to amalgamate. Do not be concerned if the mixture has a harsh aroma when you first make it; it will mellow and become “rounder” after about 24 hours.

The following recipe is relatively simple and is a good basis for experimentation with different souring agents; try kokam, amchur or tamarind instead of lemon juice and compare the difference. After conducting weekly spice appreciation classes, we would be left with a bowl of curry powder I had made while demonstrating the principles of blending spices. Liz decided a productive Saturday task for me would be to make a curry for Sunday night’s dinner, thus the recipe is called Herbie’s Saturday Curry.

Herbie's Saturday Curry

- 2 tbsp (25 mL) curry powder
- 2 tbsp (25 mL) vegetable oil
- 1 tbsp (15 mL) Panch Phora (see p. 574)
- 1 onion, chopped
- 1 lb (500 g) beef, lamb or chicken, cut into $\frac{3}{4}$ -inch (2 cm) cubes
- 2 tsp (10 mL) lemon juice
- 1 can (14 oz/398 mL) whole peeled tomatoes
- 1–2 cups (250–500 mL) water (depending on desired consistency)
- 2 tsp (10 mL) Garam Masala (see p. 560)
- 2 tsp (10 mL) Chaat Masala (see p. 549)
- 3 long dried chilies
- 2 tbsp (25 mL) large dried garlic flakes
- 2 tbsp (25 mL) tomato paste
- 8 curry leaves
- 1 tsp (5 mL) methi (fenugreek leaves)

Heat a heavy-based pan on the stove, add curry powder and dry-roast, stirring continuously with a wooden spoon for around 2 minutes, being careful not to burn. Add oil and make into a paste. Add panch phora and stir until seeds start popping. Add onion and stir for 2 minutes; do not overcook. Add meat, about 6 pieces at a time, making sure each piece is browned and coated with spices. Add lemon juice, tomatoes and water, roughly chopping tomatoes while stirring. Sprinkle garam masala and chaat masala over surface and drop in whole chilies and garlic flakes. Add tomato paste, curry leaves and methi, stir and turn off heat. Place in an ovenproof pot, cover and cook in a 250°F (125°C) oven for 2 hours. Remove from oven, let cool and store in the refrigerator to heat and serve the next day.

Curry Powder

Sri Lankan Curry

To make a Sri Lankan curry, follow the method in the previous recipe, Herbie's Saturday Curry (leaving out the panch phora), and substitute the curry powder spices with the following ground spices to make a Sri Lankan curry powder.

- 1/3 cup (75 mL) ground coriander seed
- 4 tbsp (50 mL) ground cumin
- 2 tbsp (25 mL) ground fennel seed
- 4 tsp (20 mL) medium-heat chili powder, or to taste
- 1 tbsp (15 mL) ground turmeric
- 1 tbsp (15 mL) ground cinnamon
- 1 1/2 tsp (7 mL) ground cloves
- 1 tsp (5 mL) ground cardamom seed
- 1 tsp (5 mL) freshly ground black pepper

Vindaloo Curry

To make a vindaloo curry, follow the method in Herbie's Saturday Curry on the previous page (but leave out the panch phora and the lemon juice) and substitute the curry powder spices with the following ground spices (poppy seeds are included whole, not ground).

- 1/4 cup (50 mL) medium-heat chili powder (to make this even hotter, use ground bird's eye chilies)
- 2 1/3 tbsp (30 mL) white poppy seeds
- 2 tbsp (25 mL) ground cumin
- 4 tsp (20 mL) hot paprika
- 3 1/2 tsp (17 mL) ground cassia
- 1 tbsp (15 mL) ground ginger
- 2 tsp (10 mL) crushed bird's eye chilies
- 1 1/2 tsp (7 mL) amchur powder
- 1 1/2 tsp (7 mL) freshly ground black pepper
- 1 tsp (5 mL) ground cloves
- 1/2 tsp (2 mL) ground star anise

Dukkah

DUKKAH is an Egyptian specialty that is not strictly speaking a spice blend, but rather a blend of roasted nuts seasoned with spices. While many different nuts may be included in dukkah, the combination I have found to be most appealing contains hazelnuts and pistachios. The ingredients to make dukkah are:

- ¼ cup (50 mL) hazelnuts
- ¼ cup (50 mL) pistachio nuts
- ⅔ cup (150 mL) white sesame seeds
- ⅓ cup (75 mL) ground coriander seeds
- 2½ tbsp (32 mL) ground cumin
- 1 tsp (5 mL) salt, or to taste
- ½ tsp (2 mL) freshly ground black pepper

Roast the hazelnuts and pistachio nuts, then chop them into small pieces in a food processor. Toast the sesame seeds in a dry pan until golden brown. The coriander and cumin seeds may be roasted whole and then ground, but I find the flavor to be lighter when plain ground coriander and cumin are used. Blend all the ingredients together and store in an airtight container. The most popular way to consume dukkah is to take Turkish bread or crusty bread, break off a piece, dip it in olive oil, then dip the oiled piece of bread in the dukkah. This is a tasty snack and it goes well with drinks. Dukkah makes a crunchy coating for chicken and fish when put on before pan-frying, and it is tasty sprinkled over fresh salads, preferably with a little sumac. Tsire powder is a similar West African spice blend (see p. 588).

Fines Herbes

THIS EUROPEAN blend of herbs is quite different from the robust blends of mixed herbs (p. 569) and bouquet garni (p. 547). As the name suggests, this is a delicately balanced bouquet of finely flavored herbs found in French cuisine. Much of the bulk and fresh taste in fines herbes is contributed by herbs such as parsley, chervil and lovage, while distinct anise notes and an appetite-enhancing tang are imparted by dill and tarragon. A fines herbes blend, which may also be used as salad herbs, is made by mixing the following quantities of either fresh or dried finely chopped herbs:

- 2 tbsp (25 mL) parsley
- 1 tbsp (15 mL) chervil
- 1 tbsp (15 mL) lovage
- 2 tsp (10 mL) green dill tips
- 2 tsp (10 mL) French tarragon

Fines herbes go well in egg dishes such as omelets, scrambled eggs and quiche. They make a delicious creamy salad dressing when the above quantities are blended with $\frac{1}{2}$ cup (125 mL) each of cream and mayonnaise.

Game Spice

THE RICH taste of game is well balanced by the pine-like notes of juniper and the pungency of cloves in this blend of spices. When I make this blend, I place all the whole ingredients in a mortar and pestle and crush them roughly. That way, the oils from the juniper berries, which are quite moist, are absorbed by the other spices. The resulting coarse powder bears a pleasant amalgamation of flavors that will complement a stuffing, a casserole, homemade sausages or even a meat loaf.

- 2 whole cloves
- 1 whole dried bird's eye chili
- 1 dried bay leaf
- 2 tsp (10 mL) juniper berries
- 1 tsp (5 mL) whole allspice
- 1 tsp (5 mL) whole black peppercorns
- ½ tsp (2 mL) coriander seeds

Use 1 tsp (5 mL) or more of game spice blend to 1 lb (500 g) of meat, or the same quantity you would have used of juniper berries.

Garam Masala

GARAM MASALA is a traditional Indian blend of spices; some may go so far as to say it is the linchpin of a diverse range of dishes, including curries and butter chicken. *Masala* means “blend” or “mixture,” and *garam* means “spices”; however, a garam masala is a distinctive blend in its own right, and although there may be many interpretations, they should all have the same taste characteristics. I find it interesting how often Indian cooks add garam masala rather than the individual ingredients; this is, of course, for simplicity.

To make garam masala, blend the following ground spices:

- 4 tsp (20 mL) ground fennel seeds
- 2½ tsp (12 mL) ground cinnamon
- 2½ tsp (12 mL) ground caraway seeds
- ½ tsp (2 mL) freshly ground black pepper
- ½ tsp (2 mL) ground cloves
- ½ tsp (2 mL) ground green cardamom seeds

This balanced, almost sweet blend with a touch of pepper bite lacks the characteristic “curry” notes of cumin, coriander and turmeric, making it enormously versatile as a “spicing” agent across a wide cross-section of dishes. One of my favorite uses for garam masala is in the Prawns Masala recipe in the chapter on curry leaves (p. 240).

Harissa

WHEN THE harissa paste is passed around, use this traditional Tunisian blend with extreme caution, the key ingredient being an abundance of chili. Harissa is made with dried chilies, as their complexity of flavor is more appropriate than fresh ones. To make harissa paste, you'll need the following ingredients:

- ¼ cup (50 mL) dried chili flakes
- ¼ cup (50 mL) hot water
- 6 fresh spearmint leaves, finely chopped
- 2 tbsp (25 mL) crushed garlic
- 2 tbsp (25 mL) sweet paprika
- 2 tsp (10 mL) caraway seeds
- 2 tsp (10 mL) coriander seeds
- 1 tsp (5 mL) cumin seeds, dry-roasted, then ground
- 1 tsp (5 mL) salt
- 1 tbsp (15 mL) olive oil (approx.)

Soak chili flakes in hot water. (Do not drain off the water, as it helps form the paste and is absorbed by the dry spice ingredients). Mix in spearmint, garlic, paprika, caraway seed, coriander seed, cumin and salt, then crush in a mortar and pestle. Mix thoroughly, then add oil until a thick paste is formed (the amount of oil will depend on your desired consistency).

Another Tunisian blend, tabil, is made in the same way except it contains no paprika or cumin, making it relatively hotter. Traditionally, harissa is used with cooked meats such as kebabs and appears on the table as a ubiquitous sauce in a small dish in the same way chili sauce appears on the table in Singapore. As well as using it as an alternative to chili sauce, I love to use harissa on cold meat sandwiches as a spicy alternative to mustard. Harissa is delicious on crusty bread that has been spread with hummus. The Yemeni seasoning known as zhug is similar to harissa, and is made by adding ½ tsp (2 mL) each of cloves and green cardamom seeds to the above recipe.

Herb and Vegetable Salts

FLAVORED SALTS were among the world's first mass-marketed spice blends, combining the most common seasoning (salt) with a variety of agreeable flavors (onion, garlic and celery) that could be readily sprinkled into cooking or over food at the table. Next came seasoned salts with more complex tastes and distinct characteristics that were similar to the barbecue spices referred to earlier. In the second half of the 20th century, a trend toward reducing salt intake in the diet for health reasons fueled the popularity of vegetable salts and salt substitutes that had only experienced loyalty among relatively few health-conscious consumers up until that time. A vegetable salt aims to replace the concentration of sodium chloride with naturally occurring salts found in certain vegetables, herbs and seaweed. People on low-sodium diets should exercise caution when embracing these as a substitute for salt, as even a glance at the ingredient listing on the label will indicate that salt is still the major component. Vegetable salt applied in the same quantity as salt alone will lower one's salt intake and often the flavor-enhancing attributes of the herbs, spices and other ingredients create a satisfying taste that renders high volumes of salt unnecessary. Garlic salt and onion salt are generally made by mixing equal portions of salt with onion powder or garlic powder. More or less of each can be experimented with depending upon taste preferences.

Herbes de Provence

HERBES DE PROVENCE is a traditional blend of dried herbs found in French and European recipes. It has some of the pungency of mixed herbs and bouquet garni, but what might otherwise be overt is fine-tuned by the anise-freshness of tarragon, the lightness of celery and the floral notes of lavender. Make small amounts of herbes de Provence regularly from the best-quality ingredients available. My favorite combination is:

- 4 tsp (20 mL) dried thyme
- 2 tsp (10 mL) dried marjoram
- 2 tsp (10 mL) dried parsley
- 1 tsp (5 mL) dried tarragon
- $\frac{2}{3}$ tsp (3 mL) dried lavender flowers
- $\frac{1}{2}$ tsp (2 mL) celery seeds
- 1 crushed dried bay leaf

Herbes de Provence is used like mixed herbs in casseroles for game and poultry, 2–3 tsp (10–15 mL) being sufficient in a recipe to serve 3 to 4 people.

Italian Herbs

SOME MAY assert that this blend has more similarity to what those living outside of Italy think of as Italian food than to what actually occurs in Italian cuisine. Despite its broad-brush generalization, an Italian herb blend will contain a combination of herbs that complement Bolognese sauces, pasta dishes and pizza with greater effectiveness than any other herb mix. Italian herbs can be made by blending these dried or rubbed herbs:

- 4 tsp (20 mL) dried basil
- 1 tbsp (15 mL) dried thyme
- 2 tsp (10 mL) dried marjoram
- 2 tsp (10 mL) dried oregano
- 1 tsp (5 mL) dried sage
- 1 tsp (5 mL) dried garlic flakes
- 1 tsp (5 mL) dried rosemary

Add 2–4 tsp (10–20 mL) of Italian herbs to 1 lb (500 g) of minced beef when making spaghetti Bolognese, sprinkle over pizza before cooking and include as a general seasoning in warming vegetable and meat soups, stews and casseroles.

Jerk Seasoning

THE MAROONS, Jamaican slaves who escaped from the British in the 17th century, hunted wild boar, which they marinated and slow-cooked. This technique became known as jerking and is a Jamaican tradition still used to season meat. Jerk seasoning may be used as a dry rub and should be stored in the same way as other spice blends. To season meat (ideally pork), combine these spices:

- 4 tsp (20 mL) ground allspice
- 2 tsp (10 mL) chili flakes
- 1 ½ tsp (7 mL) ground ginger
- 1 tsp (5 mL) freshly ground black pepper
- 1 tsp (5 mL) dried thyme

To make jerked pork, add just enough dark rum to the spice blend to moisten it into a paste. Coat the meat with the paste and refrigerate for about 1 hour to let the flavors develop before pan-frying, broiling, roasting or barbecuing.

Laksa Spices

ONE OF my favorite Asian dishes is laksa, a rich, spicy soup with noodles (see recipe, p. 522). To make a spice blend for it, combine:

- ¼ cup (50 mL) Madras curry powder (see p. 553)
- 1 tbsp (15 mL) ground fennel seed
- 1 ½ tsp (7 mL) salt
- 1 tsp (5 mL) ground galangal
- 1 tsp (5 mL) medium-heat chili flakes
- 1 tsp (5 mL) granulated sugar

Store in an airtight container for up to 12 months.

Mélange of Pepper

UNLIKE THE peppermill blend on page 575, which should be freshly ground over food, this blend is meant for cooking. We were captivated by a mélange of pepper we saw on sale in the Cavaillon markets in the south of France. Over many centuries, this part of France has been influenced by Marseilles traders, who had contact with North Africa and many spices from the Near and Far East. I could not resist replicating this highly fragrant pepper blend:

- 3 tbsp (45 mL) whole black peppercorns
- 2 tbsp (25 mL) whole white peppercorns
- 4½ tsp (22 mL) pink schinus pepper
- 1 tbsp (15 mL) green peppercorns
- 1 tbsp (15 mL) cubeb pepper
- 1 tbsp (15 mL) Sichuan pepper

The mélange goes well in most slow-cooked dishes when 1 tbsp (15 mL) is added for every 1 lb (500 g) of meat at the beginning of cooking. We love it in a chicken casserole with red wine, and winter-warming beef and lamb stews take on a new dimension with this fragrant pepper mix, one that transports us back to our Cavaillon market experience.

Mexican Chili Powder

THIS IS a simple yet effective blend of chili, cumin and paprika that many people find more agreeable than straight chili powder due to its mildness and earthy balance, created by the inclusion of ground cumin seeds. The paprika, which comes from the same family as chili, makes Mexican chili powder quite mild and sweet, while the cumin note is also fundamental to its characteristic “Mexican” flavor. I find it interesting but not surprising how cumin, which we immediately associate with curries and Indian and Moroccan food, when used with sweet paprika or with lots of tomatoes as in a salsa, gives a recognizable Mexican flavor. This highlights how subtle variations with spices can create completely different meanings; like art, music and literature, the outcome depends upon what you do with what you have available. A versatile Mexican chili powder is made by blending these ground spices:

- 2 tbsp (25 mL) mild, medium or hot chili powder
- 1 tbsp (15 mL) ground cumin
- 2 tsp (10 mL) sweet paprika
- 1 tsp (5 mL) dried oregano (optional)
- 1 tsp (5 mL) salt, or to taste

Mexican chili powder flavors chili con carne and provides the keynote to Mexican bean dishes and Tex-Mex recipes made with varying combinations of beans and minced beef. Taco seasonings are often made with Mexican chili powder that has been padded out with starchy fillers (to reduce the cost), monosodium glutamate and extra salt.

Mixed Herbs

THESE WOULD have to be the quintessential pre-1970s ingredient, and the then most commonly used herb item in Australia. I remember when I was young many of the people who came to my parents' herb shop had only ever cooked with mixed herbs and pepper. Those mixed herbs bought in supermarkets at the time were usually a low-grade blend of equal proportions of thyme, sage and marjoram with a generous helping of twigs, stones and dirt. My first encounter with herb and spice blending was when my parents developed a really high-quality mixed herbs. Mother experimented with them in a meat loaf, changing the proportions of the traditional triumvirate and adding parsley, oregano and mint. I will never forget how we had meat loaf every night for a fortnight until it was right! In my opinion her mixed herbs blend remains the best and I'd like to share the recipe with you. All these ingredients are dried rubbed herbs that can be gathered from your own herb garden:

- 4 tsp (20 mL) dried thyme
- 2½ tsp (12 mL) dried sage
- 1½ tsp (7 mL) dried oregano
- 1 tsp (5 mL) dried spearmint
- ¾ tsp (4 mL) dried marjoram
- ½ tsp (2 mL) dried parsley

The equivalent quantity of these special mixed herbs may be used in recipes in place of ordinary mixed herbs. Add approximately 2–3 tsp (10–15 mL) to 1 lb (500 g) of minced meat to serve 2 to 3 people. Hamburger patties benefit greatly from the addition of mixed herbs, as do the majority of soups, stews and casseroles.

Mixed Spice/Apple Pie Spice

THIS IS the popular sweet spice blend that is often confused with an individual spice, allspice. Mixed spice has its origins in European cooking and is the most popular way to flavor fruitcakes, shortbread, sweet pies and all kinds of delectable pastries. Some may be surprised to see the quantity of ground coriander seed in this recipe; however, as an amalgamating spice, it brings together the sweet and pungent spices with a fragrant delicacy that would not otherwise be achieved. To make mixed spice, blend these ground spices:

- 4 tsp (20 mL) ground coriander seed
- 2 tsp (10 mL) ground cinnamon
- 2 tsp (10 mL) ground cassia
- $\frac{1}{2}$ tsp (2 mL) ground nutmeg
- $\frac{1}{2}$ tsp (2 mL) ground allspice
- $\frac{1}{2}$ tsp (2 mL) ground ginger
- $\frac{1}{4}$ tsp (1 mL) ground cloves
- $\frac{1}{4}$ tsp (1 mL) ground green cardamom seed

To impart a delicious sweet spice flavor to cakes, biscuits, cookies and pastries, add 2 tsp (10 mL) of mixed spice per cup (250 mL) of flour to the dry ingredients. Fruitcakes, mince pies and rich or sweet foods require more — up to twice the amount if a distinct spiciness is desired.

Nasi Goreng Spice

NASI GORENG is an Indonesian fried rice dish with a distinct spiciness and chili heat. To make a spice blend for it, combine:

- 1 tbsp (15 mL) medium-heat chili powder
- 2 tsp (10 mL) garlic powder
- 2 tsp (10 mL) chili flakes
- 1 tsp (5 mL) granulated sugar
- 1 tsp (5 mL) salt
- $\frac{1}{2}$ tsp (2 mL) amchur powder
- $\frac{1}{2}$ tsp (2 mL) ground galangal
- $\frac{1}{4}$ tsp (1 mL) ground ginger

Store in an airtight container. For a quick nasi goreng, add 3–4 tsp (15–20 mL) spice mix and 1 tsp (5 mL) shrimp paste to fried rice while cooking. To make a sambal paste, mix 1 measure of nasi goreng spice, $\frac{1}{2}$ measure of shrimp paste and $1\frac{1}{2}$ measures of water. Add $\frac{1}{2}$ measure of vegetable oil and stir until blended. Use at once or refrigerate for up to 2 weeks. This paste can also be made with fresh chilies, garlic, galangal, tamarind water and fresh ginger in similar proportions.

Paella Seasoning

THIS PAELLA seasoning is a blend of paprikas lavishly spiked with saffron and garlic, with a hint of rosemary. The Spanish smoked sweet paprika from the La Vera region of Spain helps to re-create the smokiness traditionally developed by placing an iron paella pan on an open wood fire. To make the seasoning, combine:

- 50 whole saffron stigmas
- 2 tbsp (25 mL) mild Spanish paprika
- 2 tbsp (25 mL) sweet Hungarian paprika
- 1 tbsp (15 mL) sweet smoked paprika
- 2 tsp (10 mL) onion powder
- 2 tsp (10 mL) salt, or to taste
- 1 ½ tsp (7 mL) garlic powder
- 1 tsp (5 mL) dried rosemary
- 1 tsp (5 mL) coarsely ground black pepper

Paella

Paella Seasoning

This delicious paella is great for summer entertaining.

- 2 tsp (10 mL) paella seasoning
- 4 cups (1 L) chicken or fish stock, heated
- ½ cup (75 mL) olive oil
- 2 chicken breasts
- 2–3 cloves garlic, crushed
- 1 red bell pepper, sliced
- 1 ½ cups (375 mL) white rice
- 12 anchovy fillets
- 2 tomatoes, peeled and chopped*
- 1 cup (250 mL) shelled peas
- 8 baby octopus
- 1 swordfish steak, cut into pieces
- 12 green prawns (shrimp)

Add paella seasoning to hot stock and set aside. Heat oil in a frying pan and brown chicken on both sides. Remove chicken breasts from pan and cut each into 4 pieces. Add garlic and red pepper to pan and fry until soft, then add rice, stirring to coat. Add stock and decorate with chicken pieces, anchovies, tomatoes and peas. Cook, lightly covered, for 15 minutes. Add octopus, swordfish and prawns and cook, lightly covered, for 10 minutes. Serves 6–8.

* To peel tomatoes, place in a pot of boiling water for 30 to 60 seconds or until the skins start to crack. Immediately dip in cold water. The skins will slip off easily.

Panch Phora

PANCH PHORA, said to be of Bengali origin, is a special blend of five seed spices, but should not be confused with Chinese five-spice powder. The name comes from the Hindustani words for “five,” which is *panch*, and “seeds,” which is *phora*. In Indian shops it is sometimes named panch puran, panch phoron or panch pora. This clever blend of seed spices has a unique characteristic flavor profile that beautifully illustrates what can be achieved by judicious blending of diverse spice flavors. Panch phora traditionally combines the seeds of brown mustard, nigella, cumin, fenugreek and fennel and is encountered most often in the north of India, where the majority of seed spices are grown.

Seed spices complement carbohydrates well, so as we see poppy and sesame seeds on bread rolls, nigella and black sesame on Turkish bread and caraway and dill seeds in many Continental loaves, an appropriate use of panch phora is with that ubiquitous carbohydrate, the humble potato. When partially cooked, diced potato is browned in a pan with fried panch phora it makes a delicious accompaniment to almost any meal.

Panch phora is made by blending these five whole seeds in the following quantities:

- 1 tbsp (15 mL) brown mustard seeds
- 2½ tsp (12 mL) nigella seeds
- 2 tsp (10 mL) cumin seeds
- 1½ tsp (7 mL) fenugreek seeds
- 1 tsp (5 mL) fennel seeds

For the adventurous, I suggest experimenting by varying the ratios of each seed spice used to create subtle differences; for example, increase the nigella for more tang or the fennel for more sweetness. We know a chef who grinds panch phora coarsely and uses it as a coating on roast meats, liberally sprinkled over before cooking, and we like to put a tbsp (15 mL) of panch phora in minced beef when making meat loaf.

Peppermill Blend

THIS COMBINATION of various types of peppercorns and compatible whole spices is designed to be placed in a peppermill and freshly ground over food. Some blends are made with visual appeal as the primary objective, especially when they are displayed in an attractive glass grinder; however, I do not believe it is worth sacrificing either functionality or taste for appearance. This is worth keeping in mind as some whole berries (for example, pink schinus pepper) have friable outer husks that tend to clog the grinding mechanisms of most pepper grinders. When including a spice that comes in variable sizes (such as allspice) it is advisable to remove those larger than $\frac{1}{8}$ inch (3 mm) in diameter; otherwise, they will not go through the grinder. The following combination of whole spices makes a fragrant, delicately balanced blend that suits most occasions that call for a twist of freshly ground pepper:

- 2 tbsp (25 mL) black peppercorns
- 1 tbsp (25 mL) white peppercorns
- 1 tsp (5 mL) whole allspice
- 1 tsp (5 mL) green peppercorns
- 1 tsp (5 mL) cubeb pepper

Blend thoroughly to evenly distribute all ingredients. Variations may be made by increasing the proportion of white pepper or using a combination of Indian, Malaysian and Australian black peppercorns. Adding coriander seeds in the amount of 4 tsp (20 mL) to the above mix creates a blend that is tantalizingly fresh when ground over chicken and fish.

Persian Spice

FROM TIME to time, one comes across a spice blend that appears to break the rules. This aromatic combination includes unusually large proportions of pungent and hot spices, yet the marriage of flavors works so well that this exotic blend of ground spices can be used directly on seafood or meat before cooking. Alternatively, the mix may be blended with flour as a base for casseroles and stews. We like to coat pieces of swordfish with the spice mix and pan-fry them with a little olive oil to serve with vegetables. To prepare the blend, combine:

- 2 tsp (10 mL) freshly ground black pepper
- 2 tsp (10 mL) ground cumin
- 2 tsp (10 mL) ground turmeric
- 1 tsp (5 mL) ground green cardamom seeds
- 1 tsp (5 mL) amchur powder
- salt to taste

If not using immediately, store in an airtight container, away from direct light.

Pickling Spice

ALTHOUGH THE availability of a vast array of pickled vegetables in both supermarkets and specialty food stores has almost made home pickling obsolete, there is nothing quite like making a trip into the country to buy seasonal vegetables and then having the satisfaction of pickling them yourself. When pickling fruits and vegetables it is generally preferable to use whole spices, as the flavor cooks in without leaving any powdery residues that would spoil the visual appearance of the bottled finished product. A traditional pickling spice is made from a combination of the following spices:

- ¼ cup (50 mL) whole yellow mustard seeds
- 8 tsp (40 mL) whole black peppercorns
- 2 tbsp (25 mL) dill seeds
- 2 tbsp (25 mL) fennel seeds
- 2 tbsp (25 mL) whole allspice
- 4 tsp (20 mL) whole cloves
- 1 tbsp (15 mL) crushed bay leaves
- 1 cinnamon stick (about 3 inches/7.5 cm), broken
- 2 tsp (10 mL) diced dried bird's eye chilies, or to taste

Use approximately 1 tbsp (15 mL) of pickling spice to 2 pounds (1 kg) of vegetables to be pickled. Some cooks will tie the ingredients in a square of cheesecloth so all the pieces of spices can be removed at the end of cooking. Others prefer to leave them floating around with the pickled ingredients, where the flavor continues to infuse and the myriad colors and textures add aesthetic appeal to the presentation, especially when packed in attractive glass jars. Pickling spice can also be used to add zest to clear soups. When the whole spices have been infused in a decanter of dry sherry for a week or two, just add a few drops when serving. It imparts a particularly complementary flavor when added to the water when boiling crustaceans such as crab, and is very similar in composition to the American “crab boil” spice mix.

Quatre Épices

THIS MEANS “four spices,” but like many simply named spice blends it is made up of a traditional combination. The only complication is that there is a sweet version (most often associated with rich cakes and puddings) as well as the better-known savory quatre épices, with its high ratio of ground white pepper. Quatre épices is used in charcuterie, the term used to describe the process of curing meats (predominantly pork), and in making preserved sausages such as salami. I find it a pleasant alternative to plain ground white pepper in the pepper shaker, as the pungency of the other spices masks that “old socks” aroma that white pepper tends to have. Savory quatre épices is made by blending the following ground spices:

2 tbsp (25 mL) freshly ground white pepper
2½ tsp (12 mL) ground nutmeg
2 tsp (10 mL) ground ginger
½ tsp (2 mL) ground cloves

The sweet version of quatre épices is made to the above recipe, but substituting for ground white pepper the same amount of ground allspice (pimento) berries. Savory quatre épices goes well with rich meats such as game and adds full-bodied notes with peppery heat to rich, dark beef casseroles cooked in red wine. For 1 lb (500 g) of meat use 1 tsp (5 mL) savory quatre épices (or more if extra potency is desired).

Ras el Hanout

THIS TRADITIONAL Moroccan mix has the reputation of being the very pinnacle of all spice blends. The name “ras el hanout,” loosely translated, means “top of the shop” and is meant to represent the very best the spice merchant has to offer. Ras was the title given to an Ethiopian king. For the Moroccan souks (spice merchants), it is a point of honor to outdo one’s competitors by providing customers with the most sought-after version, his king of spices. What makes this blend so special is the number of ingredients, sometimes over 20, and the subtle manner in which all these unique spices merge to form a balanced, full-bodied blend with no sharp edges. A good ras el hanout is arguably the finest example of how well a collection of diverse spices can come together to form a complete ingredient that is immeasurably greater than any of the parts taken individually. Ras el hanout is subtly curry-like with a spicy yet floral fragrance and robust yet subtle flavor. The notable aspect of this blend is that, although it is by no means pungent, so pervasive is its effect on food that about half the amount is required in a dish as you would need of other spice blends such as curry powders.

The first step I took in developing a ras el hanout was to identify all the traditional ingredients used in Morocco. These include paprika, cumin, ginger, coriander, cassia, turmeric, fennel, allspice, green and brown cardamoms, dill seeds, galangal, nutmeg, orris root, bay leaves, caraway seeds, cloves, mace, cayenne pepper, black pepper, cubeb pepper, long pepper, lavender, rose buds, saffron stigmas, Spanish fly and hashish. The next step was to bring a selection of these ingredients together in harmony, minus the Spanish fly and hashish! Other considerations were that in modern Western countries, contrary to what is often believed, the quality of spices is often higher than those purchased from open sacks in colorful markets where storage conditions are anything but ideal. Thus, different proportions of these spices from the traditional amounts would be more appropriate. In Morocco, when you purchase lamb,

it will most often be mutton, with its associated flavor, so a ras el hanout for North America requires greater subtlety to compensate for this.

This ras el hanout recipe is made with ground spices unless otherwise stated:

- 30 whole saffron stigma
- ¼ cup (50 mL) mild paprika
- 8 tsp (40 mL) cumin
- 8 tsp (40 mL) ginger
- 4 tsp (20 mL) coriander seed
- 2 tsp (10 mL) cassia
- 2 tsp (10 mL) turmeric
- 1 ½ tsp (7 mL) fennel seed
- 1 ¼ tsp (6 mL) allspice
- 1 ¼ tsp (6 mL) green cardamom seed
- 1 ¼ tsp (6 mL) whole dill seed
- 1 ¼ tsp (6 mL) galangal
- 1 ¼ tsp (6 mL) nutmeg
- 1 ¼ tsp (6 mL) orris root
- ½ tsp (2 mL) bay leaves
- ½ tsp (2 mL) caraway seed
- ½ tsp (2 mL) cayenne pepper
- ½ tsp (2 mL) cloves
- ½ tsp (2 mL) mace
- ½ tsp (2 mL) cubeb pepper
- ½ tsp (2 mL) brown cardamom

Ras el hanout is extremely versatile, adding an aromatic and enticing flavor to chicken and vegetable tagines (casseroles). When sprinkled onto chicken and fish before pan-frying, grilling or baking it gives a golden color and mild, aromatic spiciness that is incredibly agreeable. The solution to all those recipes that blithely state “serve with spiced couscous” is as easy as adding ½ tsp (2 mL) ras el hanout to 1 cup (250 mL) rice or couscous while cooking. It will give radiant color and a lightly spiced taste that complements almost any dish.

Ras el Hanout Chicken

Ras el Hanout

This recipe is straightforward to make, once you have mixed the ras el hanout.

- 2 tbsp (25 mL) ras el hanout
- 4 chicken thighs, with bones
- 2 chicken breasts
- 1 tbsp (15 mL) olive oil
- 2 small onions, peeled and quartered
- 4 cloves garlic, peeled and halved
- 1 ½ cups (375 mL) water or chicken stock (approx.),
divided
- salt to taste (optional)
- 2 small carrots, sliced
- 1 cup (250 mL) frozen peas
- 12 small mushrooms, halved

Put the ras el hanout into a shallow dish and roll the chicken pieces to coat lightly. Heat the oil in a heavy-based saucepan, add chicken and turn until browned all over. Add onions, garlic and ¼ cup (50 mL) of the water and reduce heat to as low as possible. Cover and do not lift lid for at least 15 minutes, by which time the chicken will have released its juices. Add salt, if desired, and carrots; continue to cook very slowly until carrots are almost tender. Stir in peas and mushrooms; add enough water to cover chicken. Increase heat until heated through, then turn it back to very low again. When the mushrooms and peas are cooked, serve over plain rice or couscous. Serves 4.

Sambar Powder

SAMBAR IS a South Indian soup that can be a meal in itself (see p. 110) or can be served ladled over rice accompanying a curry. The basis for a good sambar is the spice mix, called sambar powder or sambar masala. This version is quite mild and tasty, but more chili can be added if so desired. To make sambar powder blend together:

- 8 curry leaves, dried and chopped
- 3 tbsp (45 mL) ground coriander seed
- 3 tbsp (45 mL) chickpea flour*
- 1 tbsp (15 mL) ground cumin
- 1 ½ tsp (7 mL) coarsely ground black pepper
- ¾ tsp (4 mL) salt
- ¾ tsp (4 mL) ground fenugreek
- ¾ tsp (4 mL) amchur powder
- ¾ tsp (4 mL) brown mustard seeds
- ¾ tsp (4 mL) mild chili powder
- ½ tsp (2 mL) ground cinnamon
- ½ tsp (2 mL) ground Alleppey turmeric
- ¼ tsp (1 mL) asafoetida powder

Fresh curry leaves can be substituted if the sambar is to be made straightaway. Otherwise, use dried curry leaves, as this will enable storage of the mix for up to 12 months. Sambar powder makes an excellent coating on chicken and seafood when dusted on before pan-frying.

* Also known as gram flour or besan flour, chickpea flour can be found in Asian and Indian markets and health food stores.

Shichimi-Togarashi

THIS JAPANESE blend of whole and generally coarsely ground spices is also known as seven-flavor seasoning. While there are many variations, a typical shichimi-togarashi may be made from the following spices in these proportions:

- 2 tbsp (25 mL) medium-heat chili flakes
- 1 tbsp (15 mL) powdered Sichuan pepper leaves (sansho)
- 2 tsp (10 mL) powdered tangerine peel
- 1 tsp (5 mL) black sesame seeds
- 1 tsp (5 mL) white sesame seeds
- $\frac{1}{2}$ tsp (2 mL) hemp seeds
- $\frac{1}{2}$ tsp (2 mL) white poppy seeds
- $\frac{1}{2}$ tsp (2 mL) brown mustard seeds

Various types of seaweed are sometimes added for taste variations. Shichimi-togarashi is used as a seasoning in cooking and as a condiment on the table for soups, noodle dishes, tempura and many other Japanese dishes. In Western cooking it is effective for seasoning barbecued, grilled or pan-fried seafood when mixed with a little salt and rubbed on before cooking.

Stuffing Mix

EXPERIMENTING WITH spice combinations never ceases to surprise. Cumin's ability to go well with distinctly uncurry-like flavors was borne out quite dramatically when we were developing a blend to season a stuffing mix for a roast chicken producer. We had all the basic elements one would expect to go with the bread crumbs, such as onion, garlic, thyme, sage, marjoram, parsley, oregano, bay leaves and sweet paprika. However, when we cooked it, the result still seemed a little sharp and lifeless until we added a pinch of cumin. This small addition, so small that very few people would identify cumin in the final dish, transformed the stuffing so that it was beautifully balanced and full-bodied. This is also an excellent example of a situation in which dried herbs give a more effective result than fresh. To make this stuffing mix, first combine the following ingredients:

- 5 tsp (25 mL) sweet Hungarian paprika
- 2 tsp (10 mL) ground coriander seed
- 1 tsp (5 mL) dried sage
- 1 tsp (5 mL) dried thyme
- $\frac{1}{2}$ tsp (2 mL) ground cumin
- $\frac{1}{2}$ tsp (2 mL) dried oregano
- $\frac{1}{4}$ tsp (1 mL) freshly ground black pepper
- salt to taste

Blend with 1 finely chopped onion and 4 tsp (20 mL) finely chopped fresh parsley. Add to 1 cup (250 mL) fresh bread crumbs that have been rubbed with a generous knob of butter. The consistency may be a bit crumbly, but the stuffing will be moistened by juices as it cooks in the cavity of the bird. It's delicious in turkey and game birds as well as chicken.

Tagine Spice Mix

EVEN THOUGH a tagine may be simply described as a Moroccan casserole, the highly aromatic blend of sweet and hot spices that bears its name has an uncanny similarity to baharat minus black pepper. The flavors in a typical tagine spice mix go particularly well with lamb, especially if it has a strong, almost gamey taste, which these spices help to neutralize. This tagine spice mix is made by blending the following ground spices:

- 2 tbsp (25 mL) mild paprika
- 2½ tsp (12 mL) ground coriander seed
- 1 tsp (5 mL) ground cassia
- 1 tsp (5 mL) medium-heat chili powder
- ½ tsp (2 mL) ground allspice
- ¼ tsp (1 mL) ground cloves
- ¼ tsp (1 mL) ground green cardamom seed

The best way to experience how well this unusual spice blend complements lamb is to try the recipe on p. 586.

Tagine Spice Mix

Lamb Shanks Tagine

Serve with couscous, or with cooked potato cubes and cauliflower florets quickly fried together in olive oil with whole cumin seeds and mustard seeds.

8 lamb shanks
¼ cup (50 mL) tagine spice mix
vegetable oil
6 prunes
4 carrots, chopped
3 onions, chopped finely
2 parsnips, peeled and cubed
1 can (14 oz/398 mL) peeled tomatoes
4 cups (1 L) water
2 cups (500 mL) orange juice
2 tbsp (25 mL) garlic purée
2 tbsp (25 mL) tomato paste
3–4 peppercorns, crushed
salt to taste

Preheat oven to 325°F (160°C). Coat shanks with tagine spice mixture and sear lightly in hot oil. Place in a large ovenproof pot and add prunes, carrots, onions, parsnips, tomatoes, water, orange juice, garlic purée, tomato paste and peppercorns. Cover with lid or foil and bake for 1½ to 2 hours, or until meat is very tender. Season with salt. Serves 4.

Tea and Coffee Masala

THE RECENT Western passion for Indian food not only created an interest in specific recipes, it made people aware of many tasty delights that are so much a part of Indian life. Travelers to India return with the desire to recreate some of their experiences, and one of those is drinking chai — sweet, milky spiced tea. The spices that flavor chai are often cinnamon, cloves and cardamom and as a special treat a few saffron stigmas will be occasionally included. To flavor 2 cups (500 mL) of chai, I suggest a 1-inch (2.5 cm) cinnamon stick, 2 green cardamom pods and 3 cloves. Add these to 2 cups (500 mL) of milk in a saucepan with 1 tbsp (15 mL) of Indian tea and 4 tsp (20 mL) of granulated sugar, or more if you want it to be very sweet. Bring the concoction to the boil and take it off the heat just as it begins to foam at the sides. Let it stand for a few minutes and then pour into cups through a strainer. These spices are equally complementary to coffee — that is why I call it a tea and coffee masāla — and will add a spicy fragrance to after-dinner coffee when the same quantities per cup are put in a coffee plunger with the grounds before hot water is added.

Tsire

TSIRE POWDER is a West African blend of crushed, roasted peanuts seasoned with salt and spices, including varying amounts of chili. To make it, combine:

- 3½ oz (100 g) crushed roasted unsalted peanuts
- 1 tsp (5 mL) salt
- 1 tsp (5 mL) ground cinnamon
- 1 tsp (5 mL) chili flakes
- ½ tsp (2 mL) ground allspice
- ½ tsp (2 mL) ground ginger
- ½ tsp (2 mL) ground nutmeg
- ¼ tsp (1 mL) ground cloves

The traditional way to use tsire is to dip meat into vegetable oil or beaten egg before coating it with the nut and spice blend — it's like extremely tasty breading. The most readily available meat in this part of the world is chicken, and just as the peanuttiness of satay goes well with chicken and lamb, so does tsire. Store in an airtight container for up to 2 weeks.

Za'atar

THE TERM “za’atar” tends to create some confusion in the marketplace, as this Arabic word is used in many Middle Eastern countries to describe both the herb thyme and a blend made of thyme, sesame, sumac and salt. Like many spice blends, za’atar will vary considerably from region to region; different areas prefer different proportions and may add ingredients, such as the leaves of sumac. To make a za’atar mix, blend:

1 tbsp (15 mL) dried thyme leaves, crushed but not powdered in a mortar and pestle

1 tsp (5 mL) sumac

½ tsp (2 mL) toasted sesame seeds

¼ tsp (1 mL) salt

Alternatively, a deliciously fresh-tasting version is made when finely chopped fresh garden thyme or lemon thyme is substituted for dry. When made with fresh thyme, za’atar should not be kept for more than a few days. Za’atar complements carbohydrates and is equally at home on breads and potatoes. Za’atar bread can be made in the same way as garlic bread by mixing a few teaspoons of the mix with butter and then spreading the za’atar butter into vertical slices of French bread before wrapping in foil and heating in the oven. The more traditional Middle Eastern method is to brush flatbread (such as Lebanese or pita bread) with olive oil, sprinkle it with za’atar and lightly toast. Za’atar goes well in mashed potato; it seasons baked potato wedges; and it is an attractive and tasty coating for roast chicken and pan-fried or grilled chicken pieces that are pan-fried or grilled.

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Herbs and spices have always been a part of **Ian Hemphill's** life. The younger son of John and Rosemary Hemphill, who pioneered Australia's love of herbs and spices in the 1950s, Ian would earn his pocket money picking herbs on the family farm, Somerset Cottage. He remembers many a season when their home was strewn with bunches of drying culinary produce. Ian worked with his parents for many years, managed a spice company in Singapore and was a senior manager for a multinational food company in Australia. In 1997, Ian and his wife, Elizabeth, opened a specialty spice shop in the Sydney suburb of Rozelle, which bears the nickname Ian has had since school days: Herbie. In 2000, Herbie's Spices was the winner of the Australian Gourmet Traveller Jaguar Award for Excellence for Innovation in Produce.

Kate Hemphill was born in 1974, grew up running around her grandparents' herb garden and from the age of five "helped" in their shop, Somerset Cottage. After finishing school, she had a successful career in advertising and marketing, while harboring love and affection for all things culinary. Kate moved to the UK in 2000 to work and travel. In 2003 she trained at Leith's School of Food and Wine, and since graduating she has worked as a chef, food writer and home economist. As the family business, Herbie's Spices, has grown, so has her interest in herbs and spices. She has represented Herbie's Spices in the UK since 2003, when they began exporting to that market. Kate's cooking revolves around herbs and spices and their many uses and applications to a variety of foods. Her inspiration is drawn from the two generations before her and their wonderful achievements in this field. She aims to bring her knowledge of and passion for herbs and spices into people's lives through writing and teaching, and her own cooking school in London.

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KATE HEMPHILL is a chef, food writer and home economist who runs her own cooking classes in London, England. She also represents Herbie's Spices in the UK.



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