



A Tropical Feast

Tropical lands are home to a multitude of foods and spices. Some are familiar to us, some are not. We invite you to sample these exotic treasures as you learn about them. All of the items in the list below are available at supermarkets or ethnic food markets. The plants pictured in this book all can be found growing in the Tropics. Some are native to the Tropics or Subtropics and grow only there. Others originated in the Tropics, but now are grown in many regions of the world. Still others originated in subtropical areas, but are adapted to growing in rain forests. As you become acquainted with these plants, you will want to learn more about them and the Tropics.



Fruits

Avocado

Common name: avocado, alligator pear

Scientific name: *Persea americana* Mill.

Family: Lauraceae (Laurel family)

Plant part used: fruit

Where grown: throughout the Tropics

Native to: Central America

Use: The fruits are peeled and eaten fresh in salads and in sauces. They may contain up to 30 percent oil. Avocado is the main ingredient in guacamole.

Avocados are known only in cultivation. They were probably selected from small-fruited ancestors. They were grown in southern Mexico 7,000 years ago.

Avocados were first planted as a commercial venture in the United States in 1893. Acceptance by U.S. consumers was slow, and avocados did not become popular until the 1920s. Their growth in popularity is attributed to an advertising campaign denying that avocados were an aphrodisiac!



Banana

Common name: banana, banane

Scientific name: *Musa X paradisiaca* L.

Family: Musaceae (Banana family)

Plant part used: fruit

Where grown: throughout the Tropics and part of the Subtropics

Native to: Southeast Asia

Use: Bananas are eaten raw or cooked. The leaves are used for wrapping food and making ornaments. Fibers can also be extracted from the stem.

Banana "trees" are in fact the largest herbaceous plants in the world. They are not true trees because they do not develop woody stems. Their "trunks" are actually the overlapping bases (petioles) of the leaves.

Large-scale importation of bananas into the U.S. began in the 1920s. Large areas of tropical rainforest have been felled to create banana plantations.



Citrus

Common name: orange, lime, lemon, citron, grapefruit, tangerine

Scientific name: *Citrus* spp.

Family: Rutaceae (Rue family or Citrus family)

Plant part used: fruit

Where grown: throughout the Tropics and Subtropics

Native to: Southeast Asia

Use: Citrus is consumed mostly as fresh fruit or as juice. It is also made into preserves such as marmalade and used as a flavoring.

Oranges are the most important fruit to humans and have long been prized. They were carried by seafaring explorers, who needed to ensure a good source of vitamin C in their diets as a protection against scurvy during long voyages. Throughout the 18th and 19th Centuries, sweet oranges were a delicacy reserved for the affluent. The maintenance of orangeries became a status symbol soon after it was discovered that oranges could be grown in glasshouses. Cool temperatures, not ripening, cause oranges to develop an orange-colored skin.



Guava

Common name: guava, goyave, guayaba

Scientific name: *Psidium guajava* L.

Family: Myrtaceae (Myrtle family)

Plant part used: fruit

Where grown: throughout the humid Tropics

Native to: Tropical America

Use: Guavas can be eaten raw or made into juice, but because of their pungent taste they are most commonly stewed or made into jams, jellies, or pastes. In Thailand, crisp green (unripe) guavas are dipped in a mixture of sugar, salt, and dried hot peppers and eaten. The fruit is high in vitamin C. There are over 100 species of *Psidium*, many with edible fruit. They are related to cloves, eucalyptus and allspice.



Fruits

Jackfruit

Common name: jackfruit, jacquier, po-lo-tan

Scientific name: *Artocarpus heterophyllus* Lam.

Family: Moraceae (Fig family)

Plant part used: aril (fleshy covering surrounding each seed)

Where grown: mainly Indian and Southeast Asia, but also in Africa and South America

Native to: Western Ghats (India)

Use: Within the fruit, the seeds are surrounded by a yellow aril (fleshy covering) which is juicy and tastes like pineapple and bananas. The immature fruits are starchy like potatoes, and can be sliced and fried, baked, boiled, or steamed. Temples in Bali and Macassar were built of wood from the jackfruit tree, and the wood provides a yellow dye used to color the clothes of Buddhist monks in these countries..

Jackfruit is the largest of all tree-type fruits. Fruits can weigh between 10 and 110 lbs.! Breadfruit, *Artocarpus altilis*, is closely related to jackfruit. Its fruit is starchy, like the immature jackfruit. Breadfruit, too, can be sliced and fried, baked, boiled, or steamed. When cooked it tastes similar to white potatoes.



Lychee

Common name: lychee, litchi, lichee, leechee

Scientific name: *Litchi chinensis* Sonn.

Family: Sapindaceae (Soapberry family)

Plant part used: aril (fleshy seed covering)

Where grown: mainly southern China, but on a small scale elsewhere in the Tropics and Subtropics

Native to: southern China

Use: The sweet lychee "fruit" are eaten fresh, canned, or dried.

The edible portion of the lychee is the aril, a juicy, fleshy covering that surrounds the seed. The aril is covered with a rough, leathery covering that is easily peeled off. The consistency of the fruit is similar to a peeled grape with a taste and smell like muscat grapes and roses, but sweeter. The lychee has been enjoyed for over 2,000 years in the Orient.



Mango

Common name: mango

Scientific name: *Mangifera indica* L.

Family: Anacardiaceae (Cashew family)

Plant part used: fruit

Where grown: throughout the Tropics and Subtropics

Native to: Southeast Asia (Indo-Burmese region)

Use: Mango is best eaten fresh. It is also used in preserves like chutney and in desserts. The ground seeds can also be used as flour.

Mangoes belong to the same family as poison ivy; the skin produces a sap that is irritating to some people. About 15 percent of our mangoes are grown in Florida; the rest are imported from Haiti and Mexico.



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Papaya

Common name: papaya, tree-melon, lechosa

Scientific name: *Carica papaya* L.

Family: Caricaceae (Papaya family)

Plant part used: fruit

Where grown: throughout the Tropics and Subtropics

Native to: Central America

Use: Papaya is eaten fresh or cooked, green or ripe. The ripe seeds are also edible. Fruit range in size from 8 oz. to 20 lbs.! Papain, an enzyme in the sap exuded from the skin of the fruit, is effective in breaking down proteins and is used in commercial meat tenderizers. The sap is also chewed like gum, used in cosmetics, and administered medicinally for digestive ailments.



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Fruits

Passion Fruit

Common name: passion fruit, marcuya, grenadilla

Scientific name: *Passiflora* spp.

Family: Passifloraceae (Passionflower family)

Plant part used: aril (fleshy seed covering)

Where grown: throughout the Tropics and Subtropics

Native to: American Tropics and Subtropics

Use: The fruits are sliced open to reveal the seeds and juicy pulp. The aromatic pulp is used as a flavoring for sauces, fruit salads, drinks, and sorbets. The seeds can be eaten or removed by sieving.

There are about 50 edible species. *Passiflora edulis* is now grown on the largest scale and is an important ingredient in many tropical punches.



Pineapple

Common name: pineapple, ananas

Scientific name: *Ananas comosus* (L.) Merr.

Family: Bromeliaceae (Pineapple family)

Plant part used: multiple fruit

Where grown: throughout the Tropics and Subtropics

Native to: Tropical South America

Use: Pineapple fruit is peeled and eaten raw as a fresh fruit or made into juice. The juice can be used in marinades.

Wild pineapples are pollinated by hummingbirds, but cultivated ones produce fruit without the flowers being pollinated. The fruit contains a protein-degrading enzyme, bromelain, which can be used as a meat tenderizer. The enzyme will also break down the protein in gelatin and consequently, fresh pineapple added to gelatin desserts prevents them from setting. Cooking or canning deactivates the enzyme. Pineapple is in the same family as Spanish moss.



Plantain

Common name: plantain, vegetable-banana

Scientific name: *Musa X paradisiaca* L.

Family: Musaceae (Banana family)

Plant part used: fruit

Where grown: throughout the Tropics and Subtropics

Native to: Southeast Asia

Use: Plantains resemble bananas and are eaten cooked.

Green plantains are very hard and starchy. They have little banana flavor and no sweetness. They are generally cooked in the same ways as potatoes. Plantains allowed to ripen to yellow and soften develop more banana flavor. They can be boiled, added to soups, stews, and vegetable mixes, or grilled. Fully ripe, black plantains are superb cooked like ripe bananas. They hold their shape better than bananas and absorb more flavor.



Vegetables

Bamboo

Common name: bamboo

Scientific name: *Bambusa* spp.,
Phyllostachys spp.

Family: Poaceae (Grass family)

Plant part used: stem, young shoots

Where grown: throughout the Tropics, Subtropics, and some temperate areas

Native to: Tropical Asia

Use: Various bamboos are used for construction, weaving, papermaking, and for food. It is one of the most versatile of materials, combining light weight with strength and flexibility. In the Tropics an entire house can be built using only bamboo. Young shoots are harvested just as they come out of the ground (similar to harvesting asparagus). The coarse outer layer is removed to expose the tender, edible center. These young shoots are usually cooked, then sliced or shredded before being added to other dishes. Bamboo has come to symbolize resistance to hardship because the plant stays green all year and will bend under the weight of snow without breaking.



Eggplant

Common name: eggplant, aubergine, eggfruit

Scientific name: *Solanum melongena* L.

Family: Solanaceae (Nightshade family)

Plant part used: fruit

Where grown: throughout the world

Native to: India, or perhaps southern China

Use: Eggplants can be grilled, fried, baked, or steamed. They need not be peeled unless the skin has been waxed, or causes a bitter taste.

Eggplants are known only as cultivated species. They spread to Europe in the 15th Century and reached the New World later.

Eggplant got its name a few hundred years ago, when varieties commonly grown produced small, white fruits resembling eggs.



Hot Pepper and Sweet Pepper

Common name: hot pepper, chili pepper, sweet bell pepper

Scientific name: *Capsicum annum* L. (hot and sweet); *C. frutescens* L. (hot)

Family: Solanaceae (Nightshade family)

Plant part used: fruit

Where grown: throughout the world

Native to: New World Tropics

Use: Hot peppers are used fresh or dried to add a hot, spicy flavor to dishes. Sweet peppers are used as a vegetable.

Hot peppers belong to the same botanical family as the tomato, potato, eggplant, and tobacco. They are thought to have been used first in Mexico around 7,000 B.C. Columbus brought them to Europe in the 15th Century. Peppers made their way around the world and were brought to North America with European colonists.



Tomato

Common name: tomato

Scientific name: *Lycopersicon esculentum* L.

Family: Solanaceae (Nightshade family)

Plant part used: fruit

Where grown: throughout the world

Native to: western South America

Use: Tomatoes are eaten fresh, canned, and dried. They are also used to make pastes and catsup.



Although the tomato is often called a vegetable, botanically it is a fruit. The Latin name for tomato means "juicy wolf peach" and comes from the belief that the fruits could be used to evoke werewolves! Tomatoes were long believed to be poisonous. They did not become popular in the U.S. until after 1820, when Colonel Robert Gibbon Johnson ate a bushel in public to prove they were not poisonous. Their popularity increased, but it was not until the 1920s that the huge commercial production of tomatoes began. Today, the tomato is the favorite of home vegetable gardeners.

Vegetables

Winged Bean

Common name: winged bean

Scientific name: *Psophocarpus tetragonolobus* (L.) DC.

Family: Fabaceae (Pea family)

Plant part used: tubers, leaves, shoots, flowers, pods, and seeds

Where grown: mainly Southeast Asia

Native to: Papua New Guinea, Southeast Asia

Use: Almost all parts of the winged bean plant are edible. The tubers taste like nut-flavored, early-season potatoes and are traditionally prepared in Papua New Guinea by roasting in hot embers. Young bean pods, flowers, leaves, and shoot tips can be eaten as a green vegetable. Winged bean tubers can contain up to 20 percent protein. Some scientists believe that the winged bean could become an important tropical crop of the future, equivalent to the soybean.

Second only to the grass family, the pea family is extremely important economically. Many other members of the family, including peanuts, soybeans, snap, and dry beans, are widely cultivated.



Cassava

Common name: cassava, manioc, manihot, yuca

Scientific name: *Manihot esculenta* Crantz

Family: Euphorbiaceae (Spurge family)

Plant part used: storage root, leaves

Where grown: throughout the Tropics

Native to: Tropical America

Use: Cassava roots are almost pure starch. They can be eaten fresh, boiled, roasted, baked, made into flatbread or powdered and toasted. Tapioca is made from heated, purified cassava starch. It is an excellent thickening agent often used in fruit pies and puddings. Wild, bitter cassava releases cyanide when cut, chewed, or mashed. Cultivated cassava is not harmful when cooked (unlike wild cassava), but some people may develop an upset stomach from it. Cassava leaves are edible after boiling.

Cassava is the staple food for over 500 million people, mainly in Africa and Latin America. It is often the only food available for subsistence-level farmers.



Rice

Common name: rice, arroz, riz

Scientific name: *Oryza sativa* L.

Family: Poaceae (Grass family)

Plant part used: grain

Where grown: throughout the world

Native to: Asia

Use: Rice is polished with brushes to remove the brown husk and then cooked, usually boiled or steamed, and perhaps then fried. Polishing removes much of the protein and vitamins, leaving a nearly pure starch grain.

Rice is the world's most important crop. It is estimated that 1.6 billion people depend on rice as a staple food. It has been an integral part of eastern cultures for thousands of years. China is now the world's largest producer of rice. Large acreages of humid tropical rain forest have been cleared and planted to rice. Unfortunately, many tropical soils are nutrient poor and can support rice crops for only a year or two. These areas may then be turned into pasture for cattle, contributing to further nutrient depletion in the soil.



Starches and Roots

Sweet Potato

Common name: sweet potato, yam (although not a true yam)

Scientific name: *Ipomoea batatas* (L.) Poir.

Family: Convolvulaceae (Morning-glory family)

Plant part used: storage root

Where grown: throughout the world

Native to: South American Andes

Use: Sweet potatoes can be boiled, baked, or roasted. Although mostly starch, they contain vitamin A and two percent protein. The young vine tips also can be eaten.

Sweet potatoes are often labeled "yams," but true yams are in the genus *Dioscorea* of the family Dioscoreaceae and are unrelated to sweet potatoes. Fossilized sweet potatoes from the Andes have been dated to 8,000-10,000 B.C. Cultivation of sweet potatoes by native people in Malaysia and Polynesia is evidence of the ancient trade across the Pacific between the Old and New Worlds. China is the leading producer of sweet potatoes.



Taro

Common name: taro, eddoe, dasheen, "old" cocoyam

Scientific name: *Colocasia esculenta* (L.) Schott

Family: Araceae (Arum family)

Plant part used: tuber (thickened underground stem)

Where grown: throughout the Tropics and Subtropics

Native to: Polynesia and East Asia

Use: Taro can be prepared in many ways, but should not be eaten raw, as it contains calcium oxalate crystals that can cause throat and esophagus swelling. It can be grated and "hash-browned," made into a pureed soup, added to stew, or deep fat fried and eaten as crunchy chips.

Taro is a staple, starchy food of the tropical Pacific and West Africa. Poi is a paste made of cooked taro that is pounded and thinned with water. It is often slightly fermented. It was a staple of the native people of Hawaii, but has never been much of a hit with most tourists!



Starches and Roots

Water Chestnut

Common name: water chestnut

Scientific name: *Eleocharis dulcis* (Burm. f.) Trin.
ex Henschel

Family: Cyperaceae (Sedge family)

Plant part used: corm (swollen underground stem)

Where grown: China, Asia

Native to: believed to be China or West Africa

Use: Water chestnuts can be eaten peeled, raw or cooked. They are added to salads, stir-fried dishes or eaten as is.

Water chestnuts are most commonly associated with Chinese food. Most of the water chestnuts in our supermarkets are grown in China.



Yam

Common name: yam

Scientific name: *Dioscorea* spp.

Family: Dioscoreaceae (Yam family)

Plant part used: tuber (swollen underground stem)

Where grown: throughout the Tropics

Native to: Africa, Asia, Tropical America

Use: Yams are eaten boiled, baked, fried as chips or fritters, grated and fried, and grated and steamed for bread and cakes. Because of their bland flavor they are rarely eaten alone, but are usually mixed with strongly-flavored, salty, fatty, or spicy foods. Yams should not be eaten raw, as they may contain calcium oxalate crystals. The crystals are contained in the peel and so are eliminated by peeling and cooking.

Yams are one of the most important food crops in the world: 25 million tons are produced annually. Domestication of the many species of yams seems to have occurred independently on each continent. In many parts of Africa and Asia yams are important in all aspects of the culture. In New Guinea and Melanesia yams are planted in ceremonial gardens. The yams, which can weigh over 100 pounds each, are used as



Nuts

Brazil Nut

Common name: Brazil nut

Scientific name: *Bertholletia excelsa* Humb. et Bonpl.

Family: Lecythidaceae (Lecythis family)

Plant part used: seed

Where grown: South American Tropics

Native to: South American Tropics

Use: Brazil nuts are eaten raw or roasted and salted. The nuts are also used in ice cream as well as in bakery and confectionary products.

The Brazil nut tree is a tall rain forest tree that can produce up to 300 fruits a year. Each fruit is a hard woody sphere weighing two to five pounds. Inside the hard case, 12 to 24 seeds (nuts) are arranged in a ring fitting together like the sections of an orange. After the fruits fall, rodents may gnaw through the hard fruit to get to the nuts inside. Once the fruit is open, seeds missed by the rodents can germinate and grow into a new tree. Almost all the world's supply is collected from wild trees. Native Brazilians rarely eat Brazil nuts!



Cashew

Common name: cashew, caju, maranon

Scientific name: *Anacardium occidentale*

Family: Anacardiaceae (Cashew family)

Plant part used: embryo

Where grown: throughout the Tropics

Native to: Brazil to Mexico

Use: Cashew nuts are eaten salted and unsalted and added to cooked dishes.

Cashews are in the same family as mangoes and poison ivy. The "nut" is the embryo, which is borne inside a hard, oil-containing seed coat. Ninety-seven percent of the world's cashew crop is collected by peasant farmers from naturalized trees.



Coconut

Common name: coconut

Scientific name: *Cocos nucifera* L.

Family: Arecaceae (Palm family)

Plant part used: endosperm (food reserves in the seed)

Where grown: throughout the Tropics

Native to: Indo-Pacific region

Use: Coconut is used for oil, food, fiber, and drink. Coconut oil is also an ingredient in many cosmetics, shampoos, and suntan products.

Because coconut oil is resistant to spoilage and low in price, it has been commonly used in packaged baked goods, nondairy creamers, and artificial whipped toppings. It is a highly saturated fat, and for that reason, many nutritionists recommend consuming it in moderation.

Because of its versatility in providing food, utensils, building materials and many other uses, coconut is one of the most important natural resources in the Tropics.



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Oil Palm

Common name: oil palm

Scientific name: *Elaeis guineensis* Jacq.

Family: Arecaceae (Palm family)

Plant part used: fruit pulp and seed

Where grown: throughout the Tropics--major areas are in Malaysia, Nigeria, Brazil, and Indonesia

Native to: West Africa

Use: As an oil in cooking and baking; also for soap and candles.

Two chemically different oils are obtained from the oil palm. One is extracted from the oily fruit and the other is pressed from the seed. The oil obtained from the fruit has a characteristic orange-red color because of the presence of carotenes (orange pigments also found in carrots and sweet potatoes).

Palm oils have primarily been used for soap and candles, but they have also been used in margarine and solid shortenings. The oil is very similar to coconut oil in composition and should be consumed in moderation. Many cakes, cookies, and other baked goods may contain palm or coconut oil.



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Spices

Allspice

Common name: allspice, pimento

Scientific name: *Pimenta dioica* (L.) Merr.

Family: Myrtaceae (Myrtle family)

Plant part used: fruit

Where grown: Jamaica, Guatemala, Honduras, Mexico

Native to: West Indies and tropical America

Use: Allspice is used as a spice in baking, fruit desserts, and pies. In Scandinavia and Jamaica allspice is often used in meat and fish dishes. Allspice is also used in medicine as an antiseptic.

Allspice is not a mixture of spices, but a single spice that contains the flavors of nutmeg, cinnamon, and cloves. In the 17th Century it was used to preserve meat on long sea voyages. Today it is used extensively in pickling, especially in Norway, Finland, and Sweden. The Maya used allspice to embalm the bodies of their leaders.



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Black Pepper

Common name: black pepper, white pepper

Scientific name: *Piper nigrum* L.

Family: Piperaceae (Pepper family)

Plant part used: fruit

Where grown: Indonesia, India, Brazil, Sri Lanka, Malaysia, Madagascar

Native to: India and Cambodia

Use: Dried black and fresh green pepper are used as spice in many dishes, including some desserts.

Black pepper comes from harvesting the green fruits (berries) of the pepper vine before they are ripe and then drying them. White pepper is obtained after the fruits have ripened. The outer covering, which is red, is removed, leaving the inner, straw-colored "kernel."

From its origins in India, pepper spread to the Mediterranean in ancient times and then around the world. At one time, peppercorns were so costly they were used in trade as a substitute for money. Called the "master spice," the history of pepper is, above all, the



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Cacao

Common name: cacao, cocoa

Scientific name: *Theobroma cacao* L.

Family: Sterculiaceae (Sterculia family)

Plant part used: seed

Where grown: West Africa (Ghana), Tropical America

Native to: eastern Andes

Use: Cacao seeds are used to make a hot or cold beverage and chocolate. Cacao refers to the plant, while cocoa is the name for the beverage.

Cocoa was a stimulating drink for native inhabitants of the New World long before Europeans arrived. The Mayans thought that it had a divine origin. The Aztecs added red pepper and spices to their cocoa and then dissolved tablets of it in hot water. The generic name *Theobroma* means "food of the gods."

Cocoa became popular in Europe after the discovery of adding sugar. When the addition of milk became common, its popularity soared. It was all the rage by the mid-17th Century.



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Cardamom

Common name: cardamom

Scientific name: *Elettaria cardamomum* (L.)

Maton, *E. major* Sm., and
Amomum subulatum Roxb.

Family: Zingiberaceae (Ginger family)

Plant part used: seed

Where grown: India, Guatemala, Sri Lanka, Thailand

Native to: Indo-Malaysia

Use: Cardamom is used as a spice.



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Dried fruit of cardamom, known as "the queen of spices," is used in curries and to season pastries. Several similar species provide the cardamon of trade. In India the seeds are chewed as a breath freshener. Cardamom is the third most expensive spice; only saffron and vanilla are more costly. It adds a distinctive flavor to Arabian coffee. Oil extracted from the seeds is widely used in perfumes, confections, and liqueurs.

Spices

Cinnamon

Common name: cinnamon

Scientific name: *Cinnamomum zeylanicum*
Blume

Family: Lauraceae (Laurel family)

Plant part used: bark

Where grown: Indonesia, Sri Lanka, Madagascar, Seychelles, and Brazil

Native to: South India, Sri Lanka

Use: Cinnamon is used as a spice in curries, candies, and hot beverages.

Cinnamon is one of the few spices made from bark and is one of the oldest spices used by humans. The bark is peeled off young shoots and dried. The dried, curled bark forms the familiar stick cinnamon. The dried bark is ground to make powdered cinnamon. Most of what Americans eat that is labeled cinnamon is probably cassia (*C. cassia*). Cassia has a stronger, sharper flavor that is preferred by most Americans. True cinnamon has a milder, more delicate flavor. Cinnamon was among the first commodities regularly traded from the East to the Mediterranean.



Cloves

Common name: cloves

Scientific name: *Syzygium aromaticum* (L.)
Merr. et L. M. Perry

Family: Myrtaceae (Myrtle family)

Plant part used: flower bud

Where grown: Tanzania, Madagascar, Sri Lanka, Brazil, Zanzibar, West Indies, Indonesia

Native to: Moluccas (Spice Islands)

Use: Cloves is used to flavor hot beverages, in medicines, and as a spice. It is commonly added to desserts or added to curries and pork dishes.

Cloves are the unopened flower buds of a rain forest tree. The buds are collected just as they begin to turn pink, and then they are dried. Buds that have opened are considered inferior.

Records show that as early as 266 B.C. Chinese officers chewed cloves so that their breath would be pleasant when they spoke to the head of government. Clove oil is used for toothaches and was recommended for indigestion in early records.



Coffee

Common name: coffee

Scientific name: *Coffea arabica* L., *C. robusta* Linden, and others

Family: Rubiaceae (Madder family)

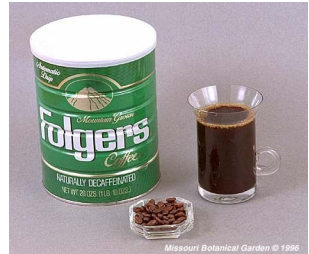
Plant part used: seed

Where grown: Central and South America, Africa, India, Indonesia

Native to: Ethiopia and Sudan

Use: Coffee seeds (often called "beans") are dried, roasted and ground. Coffee is also often used as a flavoring, especially in desserts.

Coffee trees produce bright red fruits that usually contain two seeds. The seeds are extracted from the fruits, dried, and later roasted and ground. Coffee is consumed more than any other beverage except tea, and occupies one percent of total world trade: over \$2 billion a year. The Dutch deserve recognition for fully appreciating the aromatic and stimulant qualities of coffee. They cultivate it extensively in their former colonies. Coffee is generally grown on hillsides in tropical and subtropical areas.



Ginger

Common name: ginger

Scientific name: *Zingiber officinale* Rosc.

Family: Zingiberaceae (Ginger family)

Plant part used: rhizome

Where grown: India, Malaysia, and Nigeria

Native to: Southern Asia

Use: Ginger is widely used in cooking, candies, beverages (ginger beer), preserves, and oriental cooking. In Great Britain it has been used to make a hot tea to relieve night time cold symptoms. Dried ground ginger tastes quite different from fresh ginger "root." Ginger is a rhizome or stem that grows along the surface of the ground, much like the familiar German bearded iris. Fresh rhizomes can be potted and grown indoors as a novelty indoor plant.



Spices

Kola or Cola

Common name: kola-nut, cola

Scientific name: *Cola nitida* (Vert.) Schott et Endl.,
C. acuminata (P. Beauv.) Schott et Endl.

Family: Sterculiaceae (Chocolate family)

Plant part used: seeds

Where grown: West Africa, Brazil, West Indies

Native to: West Africa

Use: Cola is a relative of cacao (the plant from which chocolate is made) and is best known for its use in cola soft drinks. The seeds are used after they are fermented, dried, and powdered.

Cola seeds, often called nuts, are rich in caffeine, and are chewed as a stimulant in Africa, much as coca leaves are chewed in Peru and Bolivia. In the original Coca-Cola, cola and coca (*Erythroxylum coca*, from which cocaine is extracted) were used.



Nutmeg and Mace

Common name: nutmeg, mace

Scientific name: *Myristica fragrans* Houtt.

Family: Myristicaceae (Nutmeg family)

Plant part used: nutmeg--seed; mace--arillus (fleshy seed covering)

Where grown: West Indies (Grenada), Southeast Asia (Indonesia), Sri Lanka

Native to: Moluccas (Spice Islands), New Guinea

Use: Nutmeg and mace are used as spices in sweet puddings, custards, and cakes, as well as in medicines. The flavor of mace is similar to that of nutmeg.

Nutmeg and mace come from different parts of the same fruit. Mace is the fine, red, net-like fibers (arillus) that surround the nutmeg, which is a seed. Nutmeg was used in Indonesia for thousands of years before it was brought to the Mediterranean in the 12th Century by Arab traders. Later, nutmeg and cloves became lucrative monopolies for the Portuguese and then the Dutch. The Dutch, particularly ruthless in their efforts to eliminate the competition, massacred the inhabitants of one island and destroyed three-quarters of the clove and nutmeg trees to limit production.



Sugar Cane

Common name: sugar cane

Scientific name: *Saccharum officinarum* L.

Family: Poaceae (Grass family)

Plant part used: stem

Where grown: throughout the Tropics and Subtropics

Native to: Far East, probably New Guinea

Use: The cane can be peeled and chewed raw, but most of the harvested crop is processed to produce sugar.

Sugar cane played a central role in the North American slave trade. In the 18th Century, raw sugar or molasses produced in the West Indies was shipped to Connecticut to make rum. The rum was then sent to Africa to buy slaves to work the West Indies cane fields.

In 1764 Britain placed a tax on sugar. This led to sugar smuggling and the sinking of a British customs ship, the initial act of violence (predating the Boston Tea Party) that culminated in the American Revolution.



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Tamarind

Common name: tamarind, magyi, imli

Scientific name: *Tamarindus indica* L.

Family: Fabaceae (Pea family)

Plant part used: seed pod

Where grown: India, Indonesia, Africa

Native to: Africa

Use: Both unripe and ripe pods are used in various

Asiatic and African dishes. The dark brown pulp of the ripe pods is mixed with water, squeezed, and strained to produce a sour liquid. The liquid is used as a flavoring agent in curries, soups, chutneys, and drinks. The pods are also consumed fresh, and young pods and leaves are used as a vegetable. The seeds are eaten and can be chewed like gum.

Tamarind provides the distinctive flavor in Worcestershire sauce. Tamarind was used by sailors instead of limes as a source of vitamin C.



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Spices

Turmeric

Common name: turmeric

Scientific name: *Curcuma domestica* Loir. = *C. longa* L.

Family: Zingiberaceae (Ginger family)

Plant part used: rhizome

Where grown: India, Jamaica, Peru, Java, Sri Lanka, China, Africa, West Indies, Australia

Native to: possibly Southeast Asia or India

Use: Washed, peeled, and powdered rhizomes are used as a condiment in curried dishes, as an adulterant for mustard and ginger, and as a source of dye.

Throughout Asia turmeric has served as a dye, medicine, ceremonial color, and oriental charm to protect the wearer against evil. The dye for making the saffron colored (red-orange) robes of Buddhist monks is traditionally obtained from turmeric. Turmeric gives the characteristic yellow color to Indian and North African cuisine. In India the juice from the rhizome is used medicinally for treating stomach complaints and bruises; fumes from the burning rhizome are used to relieve colds, and a paste of the rhizome accelerates scab formation caused by smallpox and chicken pox.



Vanilla

Common name: vanilla

Scientific name: *Vanilla planifolia* Andr.

Family: Orchidaceae (Orchid family)

Plant part used: fruit

Where grown: throughout the Tropics, but principally in Madagascar, the Comoros, Reunion, Tahiti, and Mexico

Native to: Mexico, Central America

Use: Vanilla is used as a flavoring in confections, chocolate, and perfumes.

Vanilla was introduced into Europe in the mid-16th Century by the Spanish after the conquest of Mexico. The name vanilla comes from the Spanish word "vainilla," meaning "little sheath," which refers to the elongated fruit. The fruit is often called a "bean" because of its appearance, but vanilla is not related to legumes, the true beans. Outside its native Mexico, where pollination occurs naturally by bees and hummingbirds, vanilla flowers are pollinated by hand, and the processing of the harvested "beans" is labor-intensive, adding to its high cost. Real vanilla flavoring is extracted with alcohol from the fermented fruits. Imitation vanilla is produced synthetically and lacks the rich and subtle flavor of real vanilla extract.



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