

# Fennel



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## QUICK FACTS

***Foeniculum vulgare subsp. vulgare*** (fennel, sweet fennel, wild fennel)

***Foeniculum vulgare subsp. vulgare*** 'Rubrum' (bronze fennel)

***Foeniculum vulgare subsp. vulgare var. azoricum*** (Florence fennel, bulb fennel, finocchio, anise)

***Foeniculum vulgare subsp. vulgare var. dulce*** (sweet fennel, Roman fennel)

***Foeniculum vulgare subsp. piperitum*** (wild pepper fennel)

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Fennel is a member of the *Apiaceae* (carrot or parsley family) and is related to cumin, dill, caraway and anise, all of which bear aromatic fruits that are commonly called seeds. It is native to southern Europe but is now naturalized in northern Europe, Australia and North America and is cultivated around the world. Most commercial fennel seed in the United States is imported from Egypt.

### Description

A biennial or perennial, fennel sends up four or five smooth stalks, hollow but containing a white pith, and bearing feathery, finely divided linear foliage on clasping leafstalks; blooming in large, flat umbels of golden yellow flowers in late summer, which ripen to gray-brown seed. Plants can reach just under 6 feet in height, although *F. vulgare subsp. vulgare var. azoricum*, the vegetable fennel with the bulbous stalk base, is shorter, growing to only 2 feet.

### Culture

Although fennel is a perennial or biennial to Zone 7, it may grow as an annual as far north as Zone 4, and *F. vulgare subsp. vulgare var. azoricum* is almost always grown as an annual. Sow fennel seed directly into the ground in spring when the ground is warm, and thin plants to 12-18 inches. Plants can also be propagated by division in spring. Fennel prefers moist but well-drained soil with a pH between 4.8 and 8.2. Florence fennel or finocchio (*F. vulgare subsp. vulgare var. azoricum*) can be hilled with soil as soon as the bottoms of the stalks have formed an egg-sized base; this will blanch the stalks as they grow. *F. vulgare subsp. vulgare var. dulce*, which is grown

# Fennel



## QUICK FACTS

for its oil, is sometimes confused with *F. vulgare subsp. vulgare var. azoricum* but does not have finocchio's thick leafstalk base. Do not plant fennel near dill, or hybrid plants of uncertain flavor will result. Fennel will self-seed and spread if seed heads are not cut after flowering. The leafstalk bases of the vegetable form finocchio, can be harvested in early autumn or spring. Leaves can be harvested throughout the growing season, and seeds should be gathered from the seed head when ripe, for drying.

### History & Uses

Fennel is another herb with a history of medicinal, magical and culinary uses. Fennel was used by the ancient Egyptians as a food and medicine, and was considered a snake bite remedy in ancient China. During the Middle Ages it was hung over doorways to drive away evil spirits. Fennel is also associated with the origin of the marathon. Ancient Athenian Pheidippides carried a fennel stalk on his 150 mile, 2 day run to Sparta to gather soldiers for the battle of Marathon with Persia in 490 B.C. The battle itself was also reportedly waged on a field of fennel.



*Foeniculum vulgare subsp. vulgare*

Fennel seeds are aromatic and sweet, with a flavor similar to anise. *Foeniculum vulgare subsp. vulgare var. azoricum*, the vegetable form of fennel, is sometimes confused with (and called) anise due to a similarity in flavor to the true anise (*Pimpinella anisum*).

All of the aerial portions of fennel are edible, including the flowers. Fennel seeds are baked into breads, biscuits, stuffing, and Italian sausages, and added to sweet pickles and sauerkraut. Seeds compliment asparagus, tomato and cucumber. Stems can be grilled with fish, meats and vegetables, and leaves can be added to salads, olives, fish, snails or used as a garnish. Bronze fennel, the cultivar '*Rubrum*,' makes an especially attractive garnish. The large leafstalk bases of *F. vulgare subsp. vulgare var. azoricum* are eaten as a vegetable, raw or cooked. Tea can be made from fennel seeds and leaves.

The essential oil from the seeds is added to perfumes, soaps, pharmaceuticals and cosmetics. Fennel oil, seeds or extracts are also used to flavor prepared foods including meats, ice cream, candy, baked goods and condiments as well as liqueurs like sambuca, non-alcoholic beverages and toothpaste. Fennel is GRAS (Generally Recognized as Safe) at 50-6500 ppm, and the essential oil is GRAS at 0.3-234 ppm. Oil can reportedly cause nausea, vomiting, seizures and other problems at amounts as small as 1 ml and should not be used by home cooks.

# Fennel



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## QUICK FACTS

Fennel has a long history of use as a carminative and weight-loss aid, and seeds have been eaten during Lent and fasts to stave off hunger. In traditional medicine, fennel was used as an aphrodisiac and to encourage menstruation and lactation, although some sources caution against the latter use due to possible toxicity to infants. Fennel seed and oil are approved by the German Commission E for short-term treatment of dyspepsia, flatulence and upper respiratory catarrh. Oil is reportedly antioxidant, antimicrobial, antispasmodic, and stimulates gastrointestinal motility. Allergic reactions to fennel are possible but rare. According to the German Commission E, certain preparations are not recommended for pregnant women and young children.

As a larval plant for the swallowtail butterfly, fennel can be grown in butterfly gardens. Swallowtail caterpillars will feed on the leaves without overtaking and destroying the plant. Fennel can also be planted in perennial or herb borders.



*Foeniculum vulgare* subsp. *vulgare* 'Rubrum'

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# Fennel



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