



# Garlic

***Allium sativum* var. *sativum*** (common softneck garlic)

***Allium sativum* var. *ophioscorodon*** (hardneck garlic, rocambole) pictured left

***Allium sativum* var. *pekinense*** (Peking garlic)

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## Description

Formerly classified in the lily (Liliaceae) family, garlic, *Allium sativum*, is now a member of the family Alliaceae and includes two basic types (hardneck and softneck) and three recognized varieties. Hardneck garlics, which include *A. sativum* var. *ophioscorodon* and *A. sativum* var. *pekinense*, are characterized by hard, woody central stalks that extend down to the basal plate at the bottom of the bulb. They send up a flower stalk (scape) and umbel covered by a pointed spathe. In the *A. sativum* var. *ophioscorodon* variety, the scape curls or loops. The umbel contains a cluster of greenish-white or pink flowers from which aerial cloves called bulbils develop. Bulbils are generally smaller than cloves but, like cloves, can vary in size and number.

Softneck garlics have a non-woody pseudostem formed from overlapping leaf sheaths and rarely send up a flower stalk, unless stressed by climatic conditions. If you've purchased garlic at the grocery store it was probably a softneck cultivar, since softnecks make up the majority of the U.S. commercial crop.

Garlic plants have 6-12 flat, narrow leaves and can reach from just under 10 inches to over 6 feet in height. Bulbs can range in size from 1.5 to 3 inches in diameter depending on variety and cultivar and can have from 4-60 cloves of various shapes and sizes.

## Culture

Garlic is a perennial that is usually grown as an annual and is hardy from zones 4-9. Since garlic does not produce fertile seed, it is propagated using the cloves. Garlic can be grown in a variety of garden soils but prefers light, well-drained loam high in organic content.

Garlic can be planted in spring or fall but requires about 9 months gestation and will be more robust with a fall planting. Plant cloves 3-8 weeks before the ground freezes, pointed side up, 1-2 inches deep in zones 5-10 and 3-4 inches deep in colder areas. Larger cloves may also require a deeper planting.

Garlic is not a picky plant when it comes to watering. Depending on where you live and how much rainfall you get, proper drainage may be a bigger concern than watering. Stop watering several weeks to a month before harvest so that the papery skins surrounding the bulbs stay dry. Garlic is ready to harvest when leaves begin to yellow or brown and fall over, but there are still about 3-4 or 50% green leaves on the plant.

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## Uses

Garlic is central to the cuisines of Mexico, the Caribbean, South America, the Middle East, India and China and can impart a robust flavor to many different types of dishes, from more traditional meat and vegetable dishes to dressings, beverages and desserts. The bulbs aren't the only portion of the plant that is edible. Leaves and flowers can be added to salads, scapes can be steamed and sautéed, and bulbils can add an extra crunch and flavor to omelets.

Garlic also has a long history of medicinal use for a wide variety of conditions and was once known as poor-man's treacle (or cure-all). In folk medicine, garlic has been used to treat bronchitis and respiratory problems, gastrointestinal problems, flatulence, leprosy, menstrual cramps, high blood pressure, diabetes and has been used externally for warts, corns, arthritis, muscle pain, neuralgia and sciatica. Recently, science has begun to confirm some of garlic's long-standing medicinal uses. Garlic has been shown to lower blood cholesterol, blood pressure and blood sugar in studies and clinical trials and has also demonstrated anti-cancer, antibacterial, anti-fungal and anti-oxidant effects.

Although garlic is best known for its culinary and medicinal uses it can also be used in homemade cosmetics and crafts like garlic braids and wreaths. Diallyl disulfide and diallyl trisulfide, two compounds in garlic oil, are insecticidal and make garlic a good ingredient for insect repellents.

*This fact sheet was excerpted from Garlic: An Herb Society of America Guide. Kirtland, OH: The Herb Society of America, 2004, 2006. See the full guide for literature citations and references as well as in-depth information on garlic chemistry, nutrition, history, folklore, cultivation, pests/diseases, pruning, harvesting, preserving, uses, recipes and cultivars.*

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