

Garlic (*Allium sativum*) Amaryllidaceae family

Spanish: *ajo*

O'odham: *ahshos*

Yoeme: *aasos*

Chinese: *suàn*



In Mission Garden

During the cool season, garlic can be found in almost all the garden areas that demonstrate local agriculture following the arrival of Europeans: the post-contact O'odham, Spanish, Mexican, Chinese, Yoeme and Africa in the Americas gardens.

We grow both weakly bolting hardneck (*ophio*) garlic and softneck (*sativum*) garlic. The hardnecks are half-wild, producing a flower stalk (an edible scape). Softnecks have lost these wild characteristics.

"I have lived in Asia, the Middle East and Spain. In each place, garlic is a bridge between cultures, as it is here at Mission Garden."

-Gardener Jerome West (pictured here alongside intern Paloma Dominguez and Garden Supervisor Emily Rockey). Photo by Roger Pfeuffer

In Your Garden

Garlic is typically grown by cloning. Farmers traditionally select and save "seed" heads of garlic from the previous year's crop. You can also purchase seed garlic from a specialty grower. The commodity garlic found in most grocery stores is usually stabilized to extend shelf-life, and grown for quantity, not culinary diversity. Before you plant, "vernalize" the garlic to break its dormancy by placing it in a paper or breathable cloth bag and refrigerating for a few weeks. This mimics the winter cold season and will trigger the garlic to start growing—this is why you don't want to put your kitchen garlic in the fridge: It will sprout.

In this region, it is best to plant from October to December and harvest from May to June. The cloves can be planted in raised furrows or beds, about 6 inches apart. Plant them with the pointed tip up, 1 to 2 inches deep. Withhold irrigation 2 or 3 weeks before harvest.

Text by Jerome West. Photos by Dena Cowan unless indicated otherwise



Harvest

Opinions vary as to when to harvest garlic. It's a matter of balance between leaves still being green and all being brown. Ron Engeland of Filaree Farms recommends harvesting softneck garlic when at least five green leaves remain. Another recommendation is to harvest it when the top third of the leaves have turned brown. Spanish farmers know to harvest garlic when the stalks dry out and lie on the ground. Nevertheless, the objective is to gather the garlic when the papery covers of the bulb-heads are tight and firm so they will have longer storage lives and be better protected from disease.



It is important to avoid sunburn. After harvest avoid leaving garlic in direct sunlight. Do not separate the bulbs from the stalks at this time. First, hang them in a cool, dry, well-ventilated place to dry slowly. This maturing process takes a couple of months. Like wine, the taste will develop and improve over time.

Many garlic lovers have by now consumed the remainder of last year's harvest and can't wait for the new crop. Growers can eat immature garlic, called "green garlic." It looks like an overgrown scallion and has a milder taste than mature garlic. Hardneck garlic also sends out a flower stalk (scape), and most gardeners remove it so that all the energy will go toward bulb production. These scapes are also edible.

Braided Italian Lorz garlic

When sorting garlic to eat and for next year's seed, save the biggest and tightest bulbs for next season's planting. One pound of softneck seed garlic, about eight bulbs, should produce between 60 and 80 plants.

Garlic, the "pungent panacea," is one of the earliest known medicinal plants used to treat disease and promote health. It's one of the few herbs that was, and still is, used by three of the great healing systems of the world: Ayurveda, Chinese, and European. As early as 4,000 years ago they were used therapeutically in similar ways in China, India, Greece, Egypt, and

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Rome. The *Codex Ebers*, an Egyptian medical text from 1550 BCE, recommends garlic for treating abnormal growths, abscesses, circulatory ailments, and parasites. Hippocrates recommended it for pulmonary problems, as a purgative, and for abdominal growths. The Roman medical authority Dioscorides advocated it be used to “clean the arteries” and for gastrointestinal issues and animal bites. In China, it was part of the daily diet and eaten with meat, and used as a preservative, as well as an aid to respiration and digestion. In ancient India, garlic was used for heart disease and arthritis, parasites, and digestive diseases.

Today, scientific studies are being conducted to determine whether garlic can reduce blood pressure, lower cholesterol, and have other beneficial outcomes such as reducing blood sugar, functioning as an anti-inflammatory, and being used to prevent cancer.

Garlic is rich in vitamin C, B6, and manganese. It is used to lower cholesterol, and it is rich in antioxidants. It may even be effective in preventing dementia. Another application is as an aid to the respiratory system. Perhaps it is no coincidence that there was an increase in consumption during the Covid19 pandemic.

Origins

Garlic originated from Central Asia. Author Ron Engeland describes garlic’s origin as the Garlic Crescent: the area from the Tien Shan Mountains (Celestial Mountains) of northwest China into Tajikistan, on the northern border of Afghanistan, Pakistan, and India and then continuing along the Silk Route into the Caucasus mountains, south of which lie Iran, Armenia, and Eastern Turkey.

It is believed that the wild variety was collected by hunters and gatherers as early as 10,000 years ago and carried by them as they traveled, dispersing this garlic widely along what became the many Silk Roads. Clay figures of garlic were found in Egyptian tombs 6,000 years ago, Sanskrit writings about garlic were found in India 5,000 years ago, in Babylon 4,500 years ago, and in China as early as 4,000 years ago.

There are as many as 150 garlic cultivars from Central Asia, making this the area of greatest cultural diversity. *Allium sativum* is the botanical name for all garlic and includes both the wild and the cultivated. The earliest plants (hardnecks) had fertile



Garlic growing in a snowy field.
Photo Roger Pfeuffer





flowers, and in the next phase, the plants had both flowers and bulbils, the small genetically identical garlic cloves at the top of the flower stalk. Finally, the plants became asexual, without flowers or a flower stalk. These softneck garlic reproduce entirely as clones of the parent plant.

The genus *Allium* constitutes more than 600 species, but only six are cultivated crops: onions, garlic, leeks, scallions, shallots, and chives, with garlic ranking second to onions in cultivation. All modern garlic is one of two subspecies, hardneck (*ophio*) and softneck (*sativum*).



Children connected to the group Ironwood Tree Experience planting garlic at Mission Garden.

Garlic was introduced to the Americas shortly after the arrival of Columbus, and by the 1530s, the Franciscan friar Toribio Motolinía wrote of its use in Mexico's Puebla region. Jesuit missionaries introduced garlic into this region in the early 1700s. The O'odham selectively embraced some crops introduced by the Spanish, including bunching onions and garlic.

Mexico is currently the ninth-largest exporter of commercial garlic in the world, and the state of Sonora is the fifth-largest producer of garlic in Mexico. While most of the commercially grown garlic is imported to the United States from China—producer of almost 90% of the world's supply—small family farmers have long been growing local heirloom varieties that are

increasingly becoming high value specialty crops.

Fun Facts

In ancient times and across cultures, garlic was used to promote strength. Garlic was part of the daily diet of the working class involved in heavy labor, like those building the pyramids in Egypt. In the Bible, Jewish slaves were fed garlic, presumably to increase their strength and productivity. In Greece, Rome, and India, laborers and soldiers were fed garlic to increase their strength and endurance. In antiquity, the upper classes did not consume or consider it food. However, in Europe, by the Renaissance, garlic was used as a medicine by all classes, and the

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upper classes of continental Europe began to accept and consume garlic. English nobility, however, never did accept the culinary aspect of garlic.

Garlic has been a magic talisman and a forbidden fruit. In Europe, garlic had magical importance and was used to protect humans and animals from witchcraft, vampires, and disease. Sailors ate garlic to protect themselves while at sea. Some Buddhists and Hindus don't eat garlic or onions lest they increase sexual desire. Greeks and Romans proscribed garlic in their temples, as did Muslims in their mosques.

"The stinking rose" has a long and rich past, and its popularity in the United States has grown since the 1950s. The next time you visit San Francisco, go to the Sticking Rose Restaurant in North Beach, where "the garlic is flavored with food."



Further Reading

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