

Reviewed June 2010

# Garlic in the Garden

*Dan Drost*, Vegetable Specialist

## Summary

Garlic is a hardy perennial that prefers full sun and fertile, well drained soils with plenty of organic matter. Apply a complete fertilizer to the area before planting. Plant garlic from late September to November. Plant cloves 1-3 inches deep, 6-10 inches between rows, and 3-4 inches apart in the row. Sidedress with nitrogen in May to ensure good growth and high yields. Maintain soils near field capacity. Mulches help conserve water, supply extra nutrients and reduce weeding. Harvest garlic when the tops have fallen over but before they are dry. Check with local garden centers and seed catalogs for variety availability.



## Recommended Varieties

Two types of garlic commonly grown in home gardens; the hardneck and soft-neck (*Allium sativum*) types and elephant (*Allium ampeloprasum*) garlic. Hardneck types have short to medium store life, while softneck types store very well and are preferred for braiding. Elephant garlic is very mild, stores poorly and is more closely related to leek than garlic. Check with local garden centers or seed catalogs for specific varieties.

## How to Grow

**Soils:** Garlic will grow in all soil types provided they are rich, well drained, moist, and fertile.

**Soil Preparation:** Before planting, incorporate 4-6 inches of well-composted organic matter and 1-2 lb of all-purpose fertilizer (16-16-8) per 100 square feet. Work compost and fertilizer into the soil to a depth of 6-8 inches. Garlic has high nutrient requirements for good growth and size.

**Plants:** Garlic can be planted anytime from mid September through November. During the fall and winter, the root system develops even though little top growth occurs. Tops will grow rapidly the following spring. Large tops are required to produce large bulbs. Bulb growth is poor and yields low if planted in the spring. Garlic is grown from clean, well-developed, dry bulbs. Carefully break bulbs apart into individual cloves. Plant the largest unpeeled cloves with the pointed end up 1-3 inches deep. Some garlic types produce a flowering stem during the year which robs the plant of energy. Cutting off the stalk helps redirect more energy to the bulb.

**Planting and spacing:** Plants should be spaced 3-4 inches apart in the row, and 6-10 inches between rows in a location that will receive full sunlight. High-density plantings will reduce bulb size unless adequate water and nutrients are supplied.

**Water:** Garlic requires regular watering throughout growth for best production. Moisten the soil thoroughly to a depth of 18 inches every 7 days. Water needs are critical since rooting depth in garlic is shallow. Drought stress during growth will decrease yield and reduce bulb size. Stop watering when the plants start to mature (tops fall over). Excess water as the crop matures causes bulb splitting, delays curing and may cause storage problems.

**Fertilization:** In addition to the fertilizer used at planting, garlic needs additional nitrogen fertilizer to produce optimum yields. Sidedress with 1/2 lb nitrogen fertilizer (21-0-0) per 100 square feet in late April or early May for best growth.

**Mulches:** Organic mulches help conserve water, supply extra nutrients, and reduce weeding.

## PROBLEMS

**Weeds:** Use shallow cultivation to control weeds and avoid root damage, which slows plant growth and reduces yield. Weed control is particularly important during the first 2 months of growth when plants are growing slowly and compete poorly. Mulching with compost, grass clippings or leaves will help smother weeds..

### Insects and Diseases:

Insect	Identification	Control
Thrips	Tiny, slender insects that feed on leaves. Leaves turn silver or gray, may twist and die. Thrips hide near where the leaf and bulb meet.	Spray with registered chemicals
Onion Maggot	White worm that feeds on seedlings, roots or bulbs.	Use crop rotation, avoid excessive amounts of organic matter, and apply appropriate insecticide at planting if maggots have been a problem in the past.
Disease	Identification	Control
Neck Rot	Fungal disease that occurs during storage. Watery Decay inside the bulb.	Avoid excess moisture near harvest. Cure bulbs well before storing.

## Harvest and Storage

Harvest garlic when the tops begin to yellow and fall over, before they are completely dry. Carefully lift the bulbs with a spade or garden fork. Over mature bulbs do not store well. Place the entire plant in a shady warm spot to dry for 1-2 weeks. When fully cured the garlic skins should be papery and the roots dry. Carefully remove any excess soil from the roots and bulbs. Bruising the bulbs leads to rapid deterioration. Mature bulbs may be braided into garlic ropes or stored in open meshed sacks. For those bulbs stored in sacks, cut off the leaves about 1-2 inches above the bulb. Store garlic in cool (40F), dry conditions. Avoid freezing. The largest, best-formed bulbs may be used for the next fall planting.

## Productivity

Each planted clove will produce one bulb. Each bulb will yield 10-15 usable cloves at harvest..

## Nutrition

Garlic is very low in Saturated Fat, Cholesterol and Sodium. It is also a good source of Calcium and Phosphorus, and a very good source of Vitamin C and Vitamin B6.

## Frequently Asked Questions

**Q. Can you plant garlic in the spring?** Yes. While fall planting is preferred in northern portions of the country (garlic is a bulb, like a tulip), you can get good results with spring planting. This is especially true in the more southerly parts of the U.S. where February and March planting is common. In our part of the country spring plantings will produce small garlic bulbs. Plant the cloves as soon as the soil can be worked and the threat of very hard freezes has ended. !

**Q. How can you remove garlic odor from your breath?** Perhaps the best way of handling the "breath scare" is to be sure everyone is eating garlic and then no one will care. But short of that, try chewing on a sprig or two of fresh parsley. It takes a lot of edge off garlic breath, and it is good for you, too. Great source of iron.- Does garlic really keep bloodsuckers away?

Utah State University is committed to providing an environment free from harassment and other forms of illegal discrimination based on race, color, religion, sex, national origin, age (40 and older), disability, and veteran's status. USU's policy also prohibits discrimination on the basis of sexual orientation in employment and academic related practices and decisions.

Utah State University employees and students cannot, because of race, color, religion, sex, national origin, age, disability, or veteran's status, refuse to hire; discharge; promote; demote; terminate; discriminate in compensation; or discriminate regarding terms, privileges, or conditions of employment, against any person otherwise qualified. Employees and students also cannot discriminate in the classroom, residence halls, or in on/off campus, USU-sponsored events and activities.

This publication is issued in furtherance of Cooperative Extension work. Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Noelle E. Cockett, Vice President for Extension and Agriculture, Utah State University. (HG/2004-02pr)