

UNL Extension: Acreage Insights

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Growing Garlic- Get Ready to Plant in Early to Mid October

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Garlic is a very popular vegetable, and is very easy to grow in Nebraska. Without garlic, many of our popular dishes would lack the flavor and character that make them favorites. Fortunately, garlic is relatively easy to grow in the home garden. The most difficult decision may be deciding what kind of garlic to plant since there are over 100 cultivars available from specialty suppliers!

According to University of Minnesota Extension, in their publication “Growing Garlic in Minnesota”, garlic can be a profitable crop for vegetable growers with average yields of 8,000-10,000 pounds per acre, and prices ranging from \$5.00 to \$10.00 per pound at farmer’s markets.

Garlic produces well in Nebraska when planted in October or very early spring, using individual cloves or the small bulbils found on topsetting types. Fall or very early spring planting is required because dormant cloves and young garlic plants must be exposed to cold temperatures of 32 to 50 degrees F. for one to two months to induce bulb formation.



Softneck vs. Hardneck Garlic

Choosing which type of garlic to grow may be your most difficult decision! But the most important thing to keep in mind, is not to plant garlic you purchased at the grocery store.

There are two main types of garlic—soft neck and hardneck. Each has several distinct groups and cultivars. Hardneck garlic, *Allium sativum* subsp. *ophioscorodon*, produces a woody flower stalk and also is known as “top-setting” garlic because it produces clusters of bulbils after the mostly sterile flowers bloom. Many hardneck types tend to produce large underground bulbs made up of a few large cloves and yield best when planted in the fall. Research has shown that yields will increase if the flower heads are removed before the bulbils form. When removed, the young, tender flowerstems can be harvested and used for stir-frying or other dishes. If left to

grow, the bulbils, which are about the size of a popcorn kernel, can be eaten or planted. If bulbils are used for propagation, it will take 2 to 3 years to produce a full-sized bulb. Bulbils can also be planted for garlic greens.

Softneck garlic, *A. s. subsp. sativum*, does not form a woody stalk but has flexible leaves that can be braided. Bulbs of softneck types usually have more individual cloves and yield higher than hardneck types. Softneck types also are generally better adapted to a wide range of climates. They can be spring-planted with more success than spring-planted hardneck cultivars. However, garlic connoisseurs say that softneck cultivars lack the subtle flavor differences found in hardneck cultivars.

Elephant garlic, *Allium ampeloprasum*, is not a true garlic, but is actually a bulbing leek.

Garlic Types & Cultivars

- Rocambole- hardneck. Bulbs off white with purple stripes. Clove skins brown and easy to peel. Stores about 4 to 5 months. Cultivars include Kilarney Red, German Red, Spanish Roja, and Capathian.
- Porcelian- hardneck. Smooth white skins. Cloves more difficult to peel than rocamboles. Stores about 5 to 7 months. Cultivars include German Extra Hardy, Georgian Crystal and Music.
- Purple stripe- hardneck. Bulbs white with purple streaks. Clove skins brown and more difficult to peel than rocamboles. Stores 5 to 7 months. Cultivars include Persian Star and Metechi.
- Silverskins- softneck. White bulbs and clove skins. Best adapted to warm climates with mild winters. Stores for up to one year. Cultivars include Silver White, Idaho Silverskin, and California Select.
- Artichoke- usually a softneck, but may flower following a cold winter. Bulbs white or purple blushed. Named for their layers of overlapping cloves. Difficult to peel. Stores 6 to 9 months. Cultivars include Inchelium Red, Kettle River Giant, and Early Red Italian.

Garden Preparation

Garlic grows best in well-drained, friable loam soils that are fertile and high in organic matter. If your soil is high in clay, add organic matter to break up clay particles for better drainage. Organic matter also will help a sandy soil hold more water. Like onions, garlic needs a steady and fairly high level of nutrients in the soil while actively growing, but they have shallow, coarse roots that are not as efficient at nutrient uptake as other crops.

So when preparing the soil for planting, apply 3 to 4 pounds of 10-10-10 fertilizer per 100 square feet (or follow soil test recommendations) and spread one to three inches of organic matter such as chopped leaves, dry grass clippings, compost or sphagnum peat over the soil surface. Use a

spading fork to turn over and break up the soil and begin mixing in the organic matter. A rototiller also can be used to prepare the soil, but remember that over-tilling can destroy the soil structure.

When incorporating organic matter that must be decayed, such as dry leaves and grass clippings, it is best to do it a few weeks before planting so soil microbes will have a chance to start breaking it down.

Planting

Just before planting, separate bulbs into their individual cloves and sort by size. Do not divide the bulbs more than a few days before planting because early separation results in decreased yields. Reserve the largest cloves for planting and use the smaller cloves for cooking.

For best yields, garlic should be planted in early- to mid- October. Planting before mid-September is not recommended. Garlic cloves should begin growing and then go dormant when cold weather arrives.

Plant the cloves 3 to 5 inches apart in an upright position (pointed end up) to ensure good emergence and straight necks. Cover cloves to a depth of about 2 to 3 inches. Allow 12 to 24 inches between rows. Garlic also lends itself well to wide-row planting; space cloves five inches apart in all directions in foot-wide rows or raised beds. This requires considerably less garden space for the same yield, but weeding must be done by hand.

Water thoroughly after planting to stimulate growth. The soil must be kept evenly moist during active growth. Garlic is quite drought-sensitive, so a weekly application of one inch of water will increase yields if rainfall is lacking. Dry soil will result in irregularly shaped bulbs.

A light application of mulch (1 to 2 inches) after the ground freezes will help prevent frost heaving throughout the winter.

Harvesting

Fall-planted garlic is ready to harvest from late June to mid-July so reduce watering and let plants dry down a week or so before harvest. The outer bulb covering disintegrates fairly quickly and the bulbs will shatter if they are not harvested at their peak, so carefully monitor their development. When the lower 1/3 of the leaves are yellow, dig or pull a few plants to check the development of the bulbs. If the bulbs have segmented into cloves that can be separated, it is time to harvest. If the bulbs haven't yet segmented, leave the remaining plants for a week or two and then check them again. When mature, each bulb should be fully segmented and covered by a tight outer skin.

After pulling, lay the bulbs on screens in the shade or in a well-ventilated room to cure, protecting them from moisture. Bulbs should be cured for 2 to 4 weeks at 75 to 90°F and low humidity. If you want to braid your softneck crop, allow the tops to wilt for 2 to 3 days and then braid them tightly and allow them to finish curing. Tight braids are necessary since the stems will continue to shrink as they dry.

If not braided, trim the tops to about 1/2" long and roots to 1/4" after the bulbs have cured. If there is moisture in the stem when you trim the tops, continue to cure the bulbs for a few more days, then check again. Softneck garlic usually takes longer to cure because there are more layers of cloves in each bulb. Leave the outer covering on to reduce moisture loss and mechanical damage. Store garlic in mesh bags so there is good air circulation around the bulbs.

Additional information on growing garlic:

[Garlic Production in the Home Garden](#), University of Nebraska

[Growing Garlic in Minnesota](#), University of Minnesota Extension