

# Onions, Shallots, & Garlic

*Information from clemson.edu Factsheet HGIC 1314, adjusted for our area.*

Onions, shallots and garlic all grow best during cool weather and may be planted in the fall or early spring. Onion plants can also be planted in early spring for summer harvest. All onion relatives should be grown in full sun for best results.

Onions are grown either from seed, sets (tiny immature bulbs) or transplants. The different methods vary in the season and area that they are best suited for. Plant seed for bulb onions in the early fall. Onion sets can be planted in fall or early spring. Onions grown from transplants should be planted in the early spring for best results.

Plant onions in rows 1 to 2 feet apart in a moist seedbed. Sets should be planted 1½ inches deep and seeds ½ inch deep. Place seeds or sets 1 to 2 inches apart in the row for green onions and 3 inches for bulb onions.

Planting on raised beds will ensure better drainage and make pulling the soil away from the bulbs at maturity easier. Raised beds also allow efficient use of space and prevent soil compaction.

Irrigate immediately after setting to firm the soil around roots, reduce air pockets

that dry out young roots, and ensure good soil moisture for new root growth. Keep the beds moist until plants are established.

For green or bunching onions, use sets or transplants in the spring. Sets and plants will be ready to eat in six to eight weeks.

**Planting Onions from Sets:** Avoid sets more than an inch in diameter, as they are likely to bolt. Sets are excellent for green onions, and can be grown for bulb as well.

**Planting Onions from Transplants:** Set out transplants in early spring. Plants should be about 6 inches high and about half the thickness of a lead pencil at the time of transplanting. Set plants with the bottom of the plant about 1 to 1½-inches below the surface of the soil. Transplants should be spaced 3 to 4 inches apart in the row. Do not wet them or stick their roots in soil or water before planting. Unpack and store plants in a cool, dry place until ready to plant.

**Soil:** A fertile, well-drained, loamy soil with plenty of organic matter is best for growing quality onions. Clay soils often produce a hotter onion, while sandy soils require more fertilizer and water than loamy soils. The ideal [pH](#) is between 6.0 and 6.5.

**Fertilization:** It is best to base fertilizer application on the results of a [soil test](#). In the absence of a test, apply 4 to 5 pounds of 5-10-10 per 100 square feet before planting, and sidedress one to two weeks after bulb enlargement begins with 2

pounds per 100 square feet. More frequent sidedressing may be required if the garden is sandy or if leaching rains occur.

Avoid excessive application of fertilizer. High rates of nitrogen late in the fall may result in the plants being more susceptible to winter kill. Onions excessively fertilized with nitrogen do not store well. Excess nitrogen late in the growing season delays maturity and causes doubling.

**Watering:** Proper soil moisture is critical for continuous root growth and for supplying the needs of the foliage and bulb. During the growing season make sure onions have plenty of moisture, especially after bulbs begin enlarging to assure large bulbs and better yields. A week before harvest, discontinue watering to encourage the onion to form protective scales.

**Harvesting & Storage:** About a month before harvest, start working the soil gradually away from the bulbs. By about 7 to 10 days before harvest time, the bulb should be one-third above ground to hasten bulb and neck drying. Harvest bulb onions when about ¾ of the tops have fallen over. Remove tops by cutting 1 to 1½ inches above the top of the bulb. Thoroughly air-dry bulbs in a shaded area before storage.

Harvest green onions when tops are 6 to 8 inches tall. Store them in a plastic bag in the refrigerator for up to two weeks.

**Shallots** are often considered the gourmet member of the onion family. They have a mild, delicate but distinctive flavor and can either be grown for use as green onions, or for the clusters of small bulbs that are used like garlic or onions.

**Planting:** Space shallots about 6-8 inches apart within the row, and plant the individual sets 1-2 inches deep. Keep the soil moist to encourage sprouting.

**Culture:** Grow shallots as you would onions. During the growing season, some of the leaves may be cut at the ground level and used as green onions. Plants that are not heavily cut will proceed to form many bulbs attached together forming a clump. Shallot bulbs often develop on top of the ground. Do not cover them with soil

**Harvesting & Storage:** Shallots can be harvested in the late spring after the tops have died down completely for dry bulbs. Cure bulbs in a warm, dry place

#### **Garlic**

**Planting:** Garlic grows best in full sun on well-drained, fertile, loamy soils with a soil pH between 6 and 7. Plant early enough in the season because vegetative growth ceases when the bulb develops in response to longer days and warmer temperatures in the spring.

Garlic is started by planting cloves that are divisions of the large bulb. Larger cloves yield larger size mature bulbs at harvest. Also, the size of the harvested cluster is related to the amount of leafy growth produced prior to bulbing. Plant

the larger outer cloves 3 to 5 inches apart in an upright position to ensure a straight neck, and cover them to a depth of about 1 inch. Allow 12 to 24 inches between rows. Garlic grows well in a wide row system of planting, spacing cloves 3 to 4 inches apart in rows a foot wide.

**Fertilizing:** Apply 3 to 4 pounds of 5-10-10 fertilizer per 100 square feet when preparing soil for planting. Sidedress one to two weeks after bulb enlargement begins with 2 pounds of 5-10-10 over 100 square feet.

**Watering:** Consistent soil moisture is important and is especially critical during the bulbing period. However, when the crop is nearing maturity, somewhat dry soil is best.

**Harvesting & Storage:** Garlic will be ready to harvest when the leaves begin to yellow in early summer. Lift up the entire plant by hand or with a spading fork, being careful not to bruise the bulbs. Brush off the soil but do not wash the bulbs. Cure in a warm, shady place with good air movement. Hang in bundles or spread as a single layer on screens or drying racks. Allow bulbs to dry until the neck is dry and the outer skin is papery, approximately two to three weeks. Remove tops when dry. Most varieties will keep for six to eight months in a well-ventilated, cool, dry area.

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