

Growing Onions

Commonly grown onions are the mild types such as, White and Yellow Sweet Spanish, or the more pungent globe types. The pungent onions are better suited to long-term storage. The common onion (*Allium cepa*), the most popular and widely grown in Ohio home gardens, is grown from either seed, plants, or sets for use as both green onions and dry bulbs. The home gardener will usually have more success with sets. Any standard onion variety or hybrid can be used for green bunching onions if harvested at the proper stage of maturity. Onions can be used as green onions within 30 days if grown from plants or sets; or 40 to 50 days if grown from seed. There are, however, bunching varieties that produce a true bunching onion or scallion with either small or no bulbs. For dry onions from sets or plants, 100 or more days are required from planting, depending on the variety grown.

The potato or multiplier onion, and the Egyptian onion *are* grown from vegetative parts rather than seed. In the case of the multiplier or potato onion (*Allium cepa* var. *solanium*), the underground portion is a compound bulb formed from the segregation of a large mother bulb. Each bulb in the compound bulb produces 6 to 12 plants. Their principal use is the production of early green bunching onions.

The Egyptian onion (*Allium cepa* var. *viviparum*) produces clusters of small bulbs called bulbils at the top of the seed stalk in late summer. The bulbils are used to produce very early green onions. Both multiplier and Egyptian onions are planted in the fall, overwintered with some mulch protection, and brought into production in the early spring. Due to this method of culture, the onions are referred to as "winter onions."

Climatic Requirements

The onion is adapted to a wide range of temperatures and is frost-tolerant. Best production is obtained when cool temperatures (55°F to 75°F) prevail over an extended period of time, permitting considerable foliage and root development before bulbing starts. After bulbing begins, high temperature and low relative humidity extending into the harvest and curing period are desirable. A constant supply of adequate moisture is necessary for best results. For onions started from plants, light mulch will help conserve moisture for uniform growth.

An important aspect of onion development is the length of day or photoperiod. Photoperiod, along with temperature, controls when the onions form bulbs. Some onion varieties are short-day in response, and form bulbs when the days are 12 hours or less in length. Other varieties are long-day plants, forming bulbs when there are 15 or more hours of daylight. This effect of day length makes some onion varieties unsuitable for northern climates because they begin to bulb when the plants are too small. The influence of day length also requires Sweet Spanish and Bermuda onions be grown from plants rather than seed in Ohio.

Unfavorable growing conditions may result in onions bolting or sending up flower stalks. If flower stalks develop, carefully cut them from the plant immediately or bulbing will be reduced.

Soil Requirements

Onions grow best in a loose, well-drained soil of high fertility and plenty of organic matter. Avoid heavier soils such as clay and silt loams unless modified with organic matter to improve aeration and drainage. Onions are sensitive to highly acid soils and grow best when the pH is between 6.2 and 6.8.

Fertilizers

As for most vegetables, lime and fertilizers are best applied using the results of a soil test as a guide. Arrangements for soil testing can be made through your local County Extension office. Fertilizers of a 1-2-2 ratio (5-10-10, for example) are good for onion production. As the onion plant's root system is very limited, high soil fertility is essential for good production.

Establishing the Planting

Onions should be planted early in the spring as soon as the soil can be worked. Onion seed is sown ½ inch deep, while sets are planted 1 to 2 inches deep. A 3-inch plant spacing is desirable. Rows should be 12 to 18 inches or more apart depending on the method of cultivation. For wide row planting, plants or sets are placed on 3-inch centers. Onions are ideal for wide row planting, but keep in mind that weeding must then be done by hand.

Suggested Varieties for Ohio Gardens

- Green (bunching) - White Portugal, Tokyo Long White, Beltsville Bunching, White Spear, Ebenezer, Yellow Globe strains.
- Dry (storage) - Ebenezer, Yellow Globe strains, Elite, Stuttgarter (from sets).
- Sweet (from plants) - White or Yellow Sweet Spanish, Bermuda.

Cultural Practices

After the plants are well-established, mulch will conserve soil moisture, prevent soil compaction, and help suppress weed growth. In windy areas, small plants must be protected with a windbreak of some type to prevent serious damage or loss of plants. Weeds, insects, and diseases must be controlled. Thrips, onion maggots, downy mildew, neck rot, pink root, and smut are problems that can occur in onion planting.

Harvesting, Curing, and Storing

Harvest onions when the tops have fallen over and dried. On sunny, breezy days, onions may be pulled and left in the garden for a day or two to dry before they are taken to a curing area. Curing must take place for the onions to be stored for any length of time. Cure onions by placing them in a warm, well-ventilated area until the necks are thoroughly dry. With warm temperatures, good air circulation, and low humidity, curing should be completed within two weeks after harvest. Onions are best stored in a cool, moderately dry area in ventilated containers.

Source: OSU Ext., Marianne Riofrio, E.C. Wittmeyer