

# ONION PLANTING

## [Variety Selection \(onions.html\)](#)

The size of the onion bulb is dependent upon the number and size of the green leaves or tops at the time of bulb maturity. For each leaf there will be a ring of onion; the larger the leaf, the larger the ring will be. The onion will first form a top and then, depending on the onion variety and length of daylight, start to form the bulb.



Onions are characterized by day length; "long-day" onion

varieties will quit forming tops and begin to form bulbs when the daylength reaches 14 to 16 hours while "short-day" onions will start making bulbs much earlier in the year when there are only 10 to 12 hours of daylight. A general rule of them is that "long-day" onions do better in northern states (north of 36th parallel) while "short-day" onions do better in states south of that line. See the [onion information resource page \(onions.html\)](#) for more detailed variety descriptions and photos.

## Onions From Seed

Mid to late October is the best time to plant seed of the super sweet, short-to-intermediate daylength onion types in Texas zones III - V (USDA Zones 8 and 9). Seeds can be sown directly into the garden, covered with one-fourth inch of soil and should sprout within 7- 10 days. If planted thickly, plants can be pulled and utilized as green onions or scallions for salads or fresh eating in 8-10 weeks. However, most gardeners want to grow an onion bulb as large as a basketball. To do this, the onion plants must be thinned by next February until they are at least 2-3 inches apart to insure adequate bulb expansion. The removed plants can be used for scallions or for transplanting into another area of the garden so that these too will have adequate space in which to enlarge into large bulbs.

Fertilization of onion plants is vital to success. Texas A&M research findings indicate that onion growth and yield can be greatly enhanced by banding phosphorus 2-3 inches below seed at planting time. This phosphorus acts as a starter solution which invigorates the growth of young seedlings. Banding phosphorus, such as super phosphate (0-20-0), 2-3 inches below the seed involves making a trench 3 inches deep, distributing one-half cup of super phosphate per 10 row feet, covering the phosphate with soil, sowing seed and covering lightly with one-half inch or less of soil. Once established, onion plants should receive additional amounts of fertilizer (21-0-0 - Ammonium sulfate or Ammonium nitrate) as a side-dress application every month.

Gardeners who tend to procrastinate should be warned that planting later than October could mean failure. Failure in onion production comes in two forms - - complete annihilation of the young seedlings during a cold winter or an abundance of spring onion flowers which decrease bulb size, weight and storage ability. Onion plants which are small and rapidly growing when the cold temperatures of winter arrive will probably not survive. Yet, if you plant earlier and the stem of onion plants are larger than a pencil when exposed to cold temperatures, the onion will initiate and produce a flower during the following spring. This flowering is termed bolting.

Bolting requires low temperatures. Most rapid bolting is caused by temperatures of 40-45 degrees F. or below. Fall seeded crops are susceptible to bolting the following spring if warm fall temperatures, allowing excessive growth, are followed by low winter temperatures and slowed growth. Many gardeners believe that early removal of the onion flower stalk will cause onion bulb enlargement but this has not proven to be the case. Flowering causes a decrease in bulb size as well as a central flower stalk which enhances decay during storage. This is exactly what will happen to those who are planting onion transplants or sets in October or November with the hope of large onions next spring. The onion bulbs which produce a flower stalk may be large but they will be light-weight (one-half the weight of a comparable size, non-flowered onion bulb) and prone to decay. Obviously, what you see is not always what you get! The best way to insure success is to either plant the onion seed from October 1 until November 15 or plant transplants from January through February in Texas Zones III - V (USDA Zones 8 and 9).

### **Care Of Transplant Instructions**

When you receive live plants, they should be planted as soon as possible. Should conditions exist that make you unable to plant these plants right away, remove the onion plants from the box and spread them out in a cool, dry area. The roots and tops may begin to dry out but do not be alarmed, the onion is a member of the lily family and as such will live for approximately three weeks off the bulb. The first thing that the onion will do after planting will be to shoot new roots.

### **Preparing the Soil**

Onions are best grown on raised beds at least four inches high and 20 inches wide. Onion growth and yield can be greatly enhanced by banding a fertilizer rich in phosphorous (10-20-10) 2 to 3 inches below transplants at planting time. Make a trench in the top of the bed four inches deep, distribute one-half cup of the fertilizer per 10 linear feet of row, cover the fertilizer with two inches of soil and plant the transplants.

### **Planting**

Set plants out approximately one inch deep with a four inch spacing. On the raised bed, set two rows on each bed, four inches in from the side of the row. Should you want to harvest some of the onions during the growing season as green onions, you may plant the plants as close as two inches apart. Pull every other one, prior to them beginning to bulb, leaving some for larger onions. Transplants should be set out 4 to 6 weeks prior to the date of the last average spring freeze.

### **Fertilization and Growing Tips**

Onions require a high source of nitrogen. A nitrogen-based fertilizer (ammonium sulfate or ammonium nitrate) should be applied at the rate of one cup per twenty feet of row. The first application should be about three weeks after planting and then continue with applications every 2 to 3 weeks. Once the neck starts feeling soft do not apply any more fertilizer. This should occur approximately 4 weeks prior to harvest. Always water immediately after feeding and maintain moisture during the growing season. The closer to harvest the more water the onion will require.

For weed control a pre-emergent herbicide (DACTHAL) should be applied prior to planting. This will provide weed control for approximately one month after planting. Other products such as GOAL and BUCTRIL, can assist in weed control during the growing season. Always follow label instructions. For organic gardeners a rich compost high in Nitrogen should be incorporated into the soil. Unfortunately, there is not any product available to assist in weed control so the only method will be cultivation. While cultivating be careful not to damage the onion bulb. As the onion begins to bulb the soil around the bulb should be loose so the onion is free to expand. Do not move dirt on top of the onion since this will prevent the onion from forming its natural bulb. Start early with cultivation practices.

### **Disease and Insect Control**

The two major diseases that will affect onions are blight and purple blotch. Should the leaves turn pale-green, then yellow, blight has probably affected the plant. Purple blotch causes purple lesions on the leaves. Heavy dew and foggy weather favor their rapid spread, and when prolonged rainy spells occur in warm weather, these diseases can be very destructive. The best cure is prevention: use only well-drained soil, run the rows in the same direction as prevailing wind and avoid windbreaks or other protection. Should conditions persist, a spray with a multipurpose fungicide such as daconil can be applied on a 7 to 10 day schedule.

The insect that causes the most damage is the onion thrip. They feed by rasping the surface of the leaves and sucking the liberated juices. They are light-brown in color and are approximately 1mm long. The most available insecticides are Malathion or Diazinon, or an insecticidal soap or biological insecticide may be used. Do not apply any insecticide within seven days of harvest and always follow label instructions.

### **Flowering -- Abnormal For Onions; Normal For Garlic**

Most folks want to grow onion bulbs NOT onion flowers! What causes bulb onions to send up flower stalks? Flowering of onions can be caused by several things but usually the most prevalent is temperature fluctuation. An onion is classed as a biennial which means it normally takes 2 years to go from seed to seed. Temperature is the controlling or triggering factor in this process. If an onion plant is exposed to alternating cold and warm temperatures resulting in the onion plant going dormant, resuming growth, going dormant and then resuming growth again, the onion bulbs prematurely flower or bolt. The onion is deceived into believing it has completed two growth cycles or years of growth in its biennial life cycle so it finalizes the cycle by blooming. Flowering can be controlled by planting the right variety at the right time. Use only transplants that are pencil-sized or smaller in diameter when planting in early spring or always plant seed, NEVER transplants, in early fall in Texas Zones III - V (USDA Zones 8 and 9).

DON'T plant garlic in the spring! Bulb formation in garlic occurs in response to the lengthening days of spring, and bulbing and maturity are considerably hastened if temperatures are high. In addition to these requirements, the dormant cloves (divisions of the large bulb) or young growing plants must be exposed to cold temperatures between 32 and 50 degrees F. for one or two months in order to initiate bulbing. Plants that are never exposed to temperatures below 65 degrees F. may fail to form bulbs. With fall plantings, the cold treatment is accomplished quite naturally throughout the winter, but a spring planting spells disaster in Texas Zones III - V (USDA Zones 8 and 9)

## What To Do About Flowering?

What can one do if flower stalks appear? Should the flower stalks be removed from the onion plants? Suit yourself but once the onion plant has bolted, or sent up a flower stalk, there is nothing you can do to eliminate this problem. The onion bulbs will be edible but smaller. Use these onions as soon as possible because the green flower stalk which emerges through the center of the bulb will make storage almost impossible. Seedstalk formation (bolting) of garlic is not induced by exposure to fluctuating temperatures, as is the case with onions, which means that a wide range of fall planting dates is permissible for this crop. Seedstalk formation is also not damaging to garlic since the cloves are arranged around the seedstalk and will be removed from the dried seedstalk. Conversely, the edible onion bulb is penetrated by the seedstalk which is hard when the bulb is harvested, but prematurely decays causing loss of the entire bulb in storage. When the tops become yellowish and partly dry, garlic is ready for harvest.

## Harvesting And Storage

Onions are fully mature when their tops have fallen over. After pulling from the ground allow the onion to dry, clip the roots and cut the tops back to one inch. The key to preserving onions and to prevent bruising is to keep them cool, dry and separated. In the refrigerator, wrapped separately in foil, onions can be preserved for as long as a year. The best way to store onions is in a mesh bag or nylon stocking. Place an onion in the bag and tie a knot or put a plastic tie between the onions and continue until the stocking is full. Loop the stocking over a rafter or nail in a cool dry building and when an onion is desired, simply clip off the bottom onion with a pair of scissors or remove the plastic tie. Another suggestion is to spread the onions out on a screen which will allow adequate ventilation, but remember to keep them from touching each other. As a general rule, the sweeter the onion, the higher the water content, and therefore the less shelf life. A more pungent onion will store longer so eat the sweet varieties first and save the more pungent onions for storage.



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