



*Gardeners Helping Gardeners Succeed*

2450 S. Curry Street, Carson City, NV 89703

Tel:775-882-8600 Fax:775-882-7285

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# Planting Guide: Onions

Onion transplants may appear dry from shipping but do not be alarmed, as they are dormant. Don't worry if you cannot plant immediately, even if the roots and tips begin to dry out. The onion is a member of the lily family and as such, will live off the bulb for approximately three weeks. The first thing the onion will do after planting is establish new roots.

## Preparing the Soil

Onions are best grown in direct sunlight on raised beds at least 4" high and 20" wide. Spacing of rows should be 36" from the center of one row to the center of the next row. Onion growth and yield can be greatly enhanced by banding a fertilizer rich in phosphorous (10-20-10) 2-3" below transplants at planting time. Make a trench in the center of the bed 4" deep, distribute 1/2 cup of fertilizer per 10 linear feet of row. Cover the fertilizer with 2" of soil and plant the transplants 6" from the trench on each side of the bed. Do not plant the transplants in the trench!

## Planting

Set plants out approximately 1" deep with 4" spacing. On the raised bed, set two rows on each bed, 4" 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 2" apart. Pull every other onion during the growing season, leaving some to mature into larger onions.

## Fertilization

Three weeks after planting, the onions will need additional nitrogen. If your soil is alkaline use a sulphur-based nitrogen, such as ammonium sulfate (21-0-0), at the rate of 1 cup per 20 feet of row and spread down the center of the top of the bed. If your soil is acidic (below 6.5 pH), a calcium-based fertilizer, such as calcium nitrate, will provide nitrogen while raising the pH. Contact your local extension agent for soil testing and analysis. Repeat this procedure every 2 to 3 weeks. Stop fertilizing within 3 weeks of harvest when the necks begin to feel soft.

## Watering

Water the transplants immediately after planting. Because of the shallow root system, onions require frequent furrow irrigation. Avoid overhead irrigation which causes foliage diseases. If the foliage has an unhealthy, yellowish tint the plants are being over-irrigated. The soil will be overly dry around an under-watered crop and may become cracked. Onions generally require 30" of irrigation during a growing season and the closer to harvest, the greater the need for water. If the onion does not get enough water it will not make a large bulb. When the necks start falling over and the onions mature, watering should be discontinued and the soil allowed to dry.

## **Diseases, Insects, and Weeds**

The two major diseases that will affect onions are blight and purple blotch. The first symptoms begin as small white spots surrounded by a greenish halo. Eventually, leaf death results and bulbs from infected plants may be small because growth is reduced by leaf loss. A good preventative fungicide spray program is important. Orienting plant rows and spacing to maximize air movement helps reduce the time that leaves are wet and results in less disease incidence and severity.

Insects causing the most damage are the onion thrips. They are light brown in color and approximately 1mm long. They feed by rasping the surface of the leaves and sucking the liberated juices, causing deformed plants with silvery blotches. Thrips over-winter in weeds, so reduce pest populations by keeping the garden clean. Combat serious infestations with *Neem Oil*.

Weed control is very important early in the onion growing process. Be careful not to damage the onion bulbs when cultivating. Keep soil loose so onions can expand easily but do not push dirt on top of the onions since this prevents the onion from forming its natural bulb. A light organic mulch will help control weeds and preserve moisture; pull the dirt back from bulbs when they begin to bulb.

## **Harvest and Storage**

Onion tops turn yellow and fall over when the growing process is complete. Bending the tops over early will only expedite the process and decrease bulb size. Pull the onions out of the ground and let them dry in the sun for two days. Lay the tops of one row of bulbs over the bulbs of another to prevent sunscald. When onions are dry, clip roots and cut back tops to one inch or braid uncut tops together and hang onions in an airy spot.

The best way to store onions is in a mesh bag, or nylon stockings. Place an onion in the bag and tie a knot or put a plastic tie between the onions and continue the process until the netting is full. Loop the netting over rafter or nail in a cool, dry location 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 to 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 shorter the shelf life. A more pungent onion will store longer, so eat the sweet varieties first and save the more pungent onions for storage. Every few weeks, the onions should be sorted to throw out the bad onions since they will accelerate the decaying process with all the onions with which they come in contact.