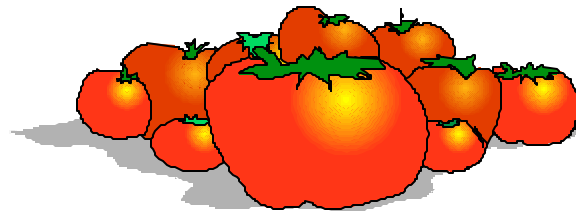


## TOMATO INSECTS

*Hornworms* are green with diagonal white stripes. They are hawkmoth caterpillars, up to five inches long, with a single hornlike tail process. They are the larval stage of the grayish brown sphinx moth with a four to five inch wingspan. The caterpillars are often hard to see at first because they cling to the undersides of leaves and stems. Their green color is great camouflage.

*Whiteflies* suddenly appear in hordes, sucking sap from plants. The immature form is a nearly transparent wingless nymph. When feeding, it excretes a sticky sweet substance that attracts ants. Adults look like tiny white moths. They typically feed together and fly up in a cloud when disturbed.

*Fruit worms* in the larval stage are 1" to 2" long, light yellow, green, or brown with white and dark stripes along the sides with yellow heads and black legs. Adults are tan moths with 1 ½" to 2" wingspans. Larvae burrow into ripe tomatoes, eat buds, and chew large holes in the leaves. Infested tomatoes are wormy, rotten, and ruined for home use.



## TOMATO DISEASES

The best way to avoid problems with tomatoes is to select the disease resistant varieties. Always check the label for the letters VFN which mean they are resistant to Verticillium wilt, Fusarium wilt and Nematodes.

*Verticillium wilt* is caused by a fungus. Plants will wilt in the heat of the day, lose their leaves and eventually die. There are no chemical controls available. As with fusarium wilt, the best control is to plant disease-resistant varieties. Avoid planting in soil where this disease has been a problem.

*Fusarium wilt* is a fungus. Usually the lower leaves on the stem turn yellow and die then gradually the whole stem. There are no chemical controls available for this disease. The best control is to plant disease resistant varieties and avoid planting where the disease has been a problem.

*Nematodes* are round worms or eelworms too small to see with the naked eye. They live in the soil, in decaying organic matter or as parasites. Examine the roots for swollen, knotty galls which indicate plant injury. Crop rotation is perhaps one of the most inexpensive yet effective measures in controlling nematodes.

### **For more information:**

**Master Gardener Help Line**

**702-257-5555 or**

**702-222-3130 or**

[www.unce.unr.edu/southern/or](http://www.unce.unr.edu/southern/or)

**University of Nevada Cooperative Extension**

**2345 Red Rock Street, Suite 100**

**Las Vegas, NV 89146**

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# COOPERATIVE EXTENSION

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**SP-99-11**

## GROWING TOMATOES IN SOUTHERN NEVADA

**Aggie Roberts**

**Community Based Instructor**

The month of March is usually the time for gardeners in Southern Nevada to be planting tomatoes. The last frost date for the area is March 15. Planting a few days or several weeks earlier is better because tomatoes need a number of days before they will bloom and produce fruit. It is best to get a head start planting tomatoes because temperatures may get hot earlier than usual. Once temperatures climb above 90°F during the day and fall under 55°F at night, most varieties will not set fruit.

### SELECTING VARIETIES

A wide choice of sizes, shapes and colors are available for the backyard tomato grower. They range in size from the cherry type, like Sweet 100, to the one – two pound giants, such as Big Boy. In between are medium-sized tomatoes such as Early Girl. In addition to round, red tomatoes, there are yellow types shaped like pears and plums. Even paste tomatoes, such as Romano Hybrid, do well in the home garden. Flavors and sweetness vary greatly among tomatoes. With a little experimentation, one can find a favorite.

Selecting tomato varieties adapted to Southern Nevada determines both the quality and quantity of tomatoes grown in the yard. Some varieties have the ability to set fruit early in the season before hot weather arrives. Some varieties are less prone to sunburning, cat facing, and other problems. This is very important to the tomato grower. Some varieties that grow well in this area are:

**Early**

Early Girl  
Garden Delight

**Medium**

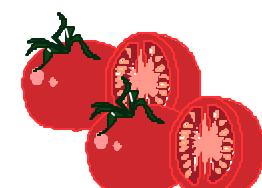
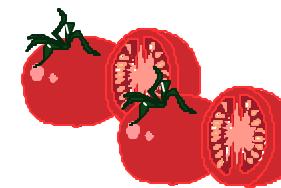
Patio  
Spring Giant  
Heartland  
Champion  
Celebrity

**Late**

Floramerica  
Ace 55

**Cherry**

Sweet 100  
Large Cherry



## TYPES OF TOMATOES

Early types produce a harvest in 50 to 60 days. Main season cultivars may take up to 80 days or more. To extend the harvest season, plant some of each type. Tomatoes are often classified by their uses. Most standard cultivars are adapted for a variety of uses which include slicing, canning and serving in salad. The large meaty types of tomatoes are especially popular for slicing. The pear-shaped or thick skinned types are nearly seedless and are a favorite for cooking, canning and juicing. Try the small-fruited cherry tomatoes in salads or as snacks.

Tomatoes come in determinate and indeterminate types. The vines of determinate or bush tomatoes are usually bushy and grow 1 - 3 feet long. The main stem and suckers produce about three flower clusters each. Once flowers form at the tip of the branches, the plant stops growing. They set fruit once and stop. They may be staked and pruned, though pruning back suckers will cut down on fruit production.

Indeterminate tomatoes have sprawling vines that grow six feet and longer. This type makes up three fourths of all tomato cultivars and most produce about three flower clusters at every second leaf. They keep growing and producing unless stopped by frost or disease. This allows picking fresh tomatoes for several months.

## ROTATION OF CROPS

Alternating or rotating crops improves the soil fertility and helps control insects or diseases. It is one of the best ways of controlling tomato diseases caused by bacteria or fungi living in the soil. It also "starves out" the disease producing organism by keeping susceptible crop plants off the area for a number of years.

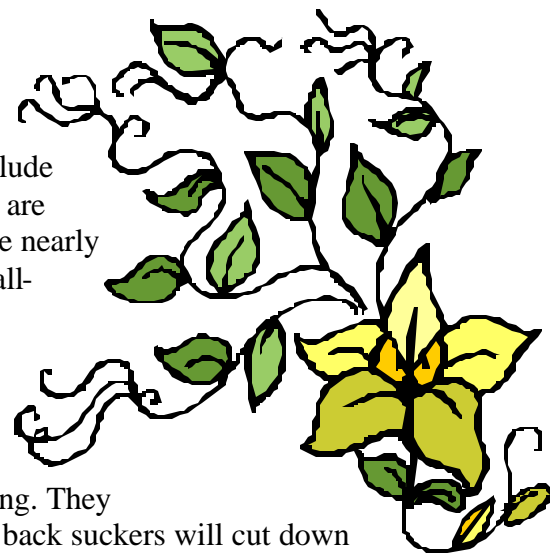
## PLANTING FROM SEEDS AND TRANSPLANTS

Most tomato transplants purchased at nurseries are dependable and good varieties. But to take advantage of the full range of available cultivars, some must be grown from seed. Unused seeds are usually good for three years if properly stored.

Six to eight weeks before the average last frost in Southern Nevada, which is March 15, sow seeds ¼ " deep and 1" apart in well drained flats or any large containers. Use a sterile potting mix to avoid disease problems. Pat the soil lightly to firm seeds. Do not dislodge seed by direct watering. Moisten thoroughly using a spray bottle.

After planting, place a large transparent plastic bag around the flat or container to seal in the moisture and heat for quick germination. Keep the seeding mixture moist but not wet. Seeds will germinate in 7 – 14 days. As soon as the seedlings begin to appear, remove the covering, then give these plants full light but not direct sunlight. Keep the temperature at 70° and water regularly. Once a week, fertilize with fish emulsion and discard any weak or sick looking seedlings.

When the second set of leaves appears, transplant to individual four inch peat pots, burying the stems slightly deeper than they stood previously. Unless nursery purchased transplants are going directly into the ground, they should be transplanted in individual pots. Otherwise they are likely to get root bound and produce flowers but a minimum of fruit.



After the initial transplanting, give seedlings less water and more morning sun. As the weather gets warmer, harden off the plants before planting them in the garden by watering them less. Transplant them into an area where they will receive only morning sun and shade in the afternoon.

When planting transplants into the soil, remove the lower leaves. Leave the center stem with its leaves on each side. Dig a hole at least one foot deep, if possible. Fill the hole full of water and let it drain. This will give the plant the moisture necessary for its growth. Mix organic matter with the soil that will be used to fill the hole. Plant the tomato so only the tip of the tomato plant with its leaves are above the surface. Bury the remainder of the stem in the soil. Extra roots will form from where you removed the lower leaves. This will give the tomato a better root system and make it a stronger plant.

## GROWING GUIDELINES

Do not overdo watering. A deep soaking is better than several light waterings. Tomato roots can be extensive in the soil profile. They will not seek out water, but grow where water and oxygen are. Using organic matter in the soil provides good aeration and excellent water retention.

Apply a mulch one to two inches deep to smother weeds and conserve moisture. Cultivate lightly or pull weeds that grow through the mulch before they set seeds. Weeds are controlled best when they are less than a dime across.

Fertilize plants every month until the fruits are developing. Stop fertilizing when the tomatoes are mature size. Use 2-1-1 early and 1-2-1 later.

The tomato is self-pollinating. However, it needs insects or wind to cause pollination to take place. Tapping the open flower clusters every few days discharges the pollen to pollinate the flower.

Use a fruit set hormone, available at most nurseries, to improve fruit set and increase production. The hormone is important when temperatures hover around 55°F at night and 90°F during the day

## TOMATOES IN CONTAINERS

Tomatoes are well adapted to growing in containers. Many varieties such as Patio, cherry tomatoes, and even some of the larger varieties do well if given proper care.

The container may be a half-barrel, a five gallon can, a plastic bag, or whatever you have available. Be sure to provide good drainage.

The material in the container must be kept moist. Fertilize with a diluted liquid fertilizer.

