Tomato Care

Prior to planting, fertilize with a complete fertilizer at the rate of 3 pounds per 100 feet of row. Apply 8 ounces of a starter fertilizer solution (1 tablespoon of 20-20-20 per gallon) when transplanting. Hoe or cultivate shallowly to keep down weeds without damaging roots. (Your local County Extension Service will send soil to the lab to be tested for fertilizer recommendations. They will need 1 pint of dry soil to send in.) If you wish to maintain your plants for full-season harvest, consider mulching with black plastic or organic materials.

Water the plants thoroughly every two to four days during dry periods. Plants in containers need daily watering. Side-dress with nitrogen fertilizer (ammonium nitrate) at the rate of one pound per 100 feet of row or one tablespoon per plant after the first tomatoes have grown to the size of golf balls. Make two more applications three and six weeks later. If the weather is dry following these applications, water the plants thoroughly. Do not get fertilizer on the leaves.
Many gardeners train their tomato plants to stakes, trellises or cages with great success. Wire cages placed over small tomato plants hold the vines and fruit off the ground. Short cages (3 feet high) usually support themselves when the wire-prongs at the bottom are pushed into the ground. Taller cages require a stake, post or wire for support. Large mesh (6 x 6 inch) wire permits easy harvesting. Tomato plants must be tied to supporting stakes or to a trellis because, unlike cucumber plants, they do not support themselves with tendrils. Loop ordinary soft twine, cord or cloth loosely around the main stem and tie it tightly to the stake. Tying the stems too tightly injures them. All varieties are not equally suitable for staking and pruning.

Staking involves pruning the plant to either one or two main stems. Tomatoes grown without support develop a bush shape. The small suckers that develop between the axil of the leaf and the stem are removed to develop a vine structure rather than a bush. Drive a wooden stake, 1-inch diameter and 6 feet long, into the ground beside the plant and allow it to be loosely attached to the stake as it grows. Do not damage the root system when inserting the stake in the ground. Attach the plant to the stake with twist-ties, soft string, strips of cloth or nylon hosiery. The plant is sufficiently supported if it is attached to the stake at 12- to 14-inch intervals. Continue to remove suckers to prevent the plant from developing more than one or two central stems.

Prune staked or caged tomato plants to stimulate early fruit maturity. Be sure your cultivar is suitable for pruning. To prune the plant properly, remove the shoots (suckers) when they are 1 to 2 inches long. The shoots develop in the axil of each leaf (the angle between the leaf petiole and the stem above it). Pinch the shoots off by hand rather than cut them.

Staking and Pruning Tomatoes

Prune the plants every five to seven days. Be careful not to prune the developing flower clusters that grow from the main stem or to pinch off the growing tip (terminal) of the plant. Remember, the more severely you prune the foliage, the more you limit plant growth (including root development). Double-stem or multiple-stem pruning systems sacrifice some earliness and fruit size for less risk of cracking, blossom-end rot and sunburn.

Harvesting Tomatoes

Tomatoes should be harvested when they are firm and changing color. They are of highest quality when they ripen on healthy vines and daily temperatures are about 80 degrees F. When temperatures are higher (90 degrees F or more), the softening process is accelerated and color development is retarded.

During hot summer weather, pick tomatoes every day or every other day. Harvest the fruit when it has a healthy pink color and ripen it further indoors (at 70 to 75 degrees F). Harvest all green, mature fruit in the fall on the day before a killing frost is expected. Wrap the tomatoes individually in paper and store at 55 to 65 degrees F. They will ripen slowly during the next several weeks. Immature green tomatoes may be harvested and used for frying or processed for relish, pickles, etc.

Physiological Disorders

Blossom-end rot, a dry, leathery rot on the blossom end of the fruit, is common in homegrown tomatoes. It is caused by a combination of calcium deficiency and wide fluctuations in soil moisture. Severe pruning stresses the plants and increases the incidence of blossom-end rot. Some tomatoes are much more susceptible to this condition than others. Liming the soil, mulching and uniform watering help to prevent blossom-end rot.

Poor fruit set of large-fruited tomatoes occurs when night temperatures remain warm, above 72 degrees F for 6 hours or more. Cherry tomatoes will continue to set fruit during these warm periods.

Poor color and sunscald occur when high temperatures retard the development of full color in tomatoes exposed directly to the sun. Sunscald appears on the fruit during hot, dry weather as a large, whitish area. It becomes a problem when foliage has been lost through other diseases, such as early blight.
A deep, well-drained, fertile sandy loam soil is the ideal soil type. The soil pH needs to be above pH 6.0. If the soil pH is too low, liming the soil will be necessary. Take 1 pint of dry soil to your local County Extension office to determine specific requirements. You should receive the results in about two weeks and the test is free. Corn benefits from deep plowing before planting and cultivation during the growth of the crop. This will promote a strong root system and help prevent lodging (falling over) of the cornstalks.

Care of Sweet Corn

Sweet corn will require about 1 to 1.250 pounds of nitrogen per 100 feet of row to produce a crop. Corn is moderately sensitive to salts and care must be taken to avoid salt injury. The most effective way of applying fertilizer is to band it 2 inches to the side and 2 inches below the seed. Half of the nitrogen should be applied pre-plant and the other half when four to five leaves are fully expanded. Sweet corn benefits from a split application of fertilizer. This is quite important on sandy soils with low organic matter content because nitrogen is easily leached from these soils.

Phosphorus and potassium should be applied before the crop is planted. The most effective way of applying phosphorus is banding it at the rate of 1.10 to 1.2 pounds per 100 feet of row. If soil potassium levels are high, excess application will not improve the crop.

Cultivate shallowly to control weeds. Although corn is a warm-season crop, lack of water at critical periods can seriously reduce quality and yield. If rainfall is low, irrigate thoroughly during emergence of the tassels, silking and maturation of the ears.

Hot dry conditions during pollination result in missing kernels, small ears and poor development of the tips of the ears. When the plants are 12 to 18 inches high, side-dress with nitrogen fertilizer. Some sweet corn varieties produce more side shoots or “suckers” than others. Removing these side shoots does not improve yields.

Harvesting Sweet Corn

Each cornstalk should produce at least one large ear. Under good growing conditions (correct spacing, freedom from weeds, insects and diseases, adequate moisture and fertility), many varieties will produce a second ear. This second ear is usually smaller and develops later than the first ear.

Sweet corn ears should be picked during the “milk stage” when the kernels are not fully mature. This stage occurs about 20 days after the appearance of the first silk strands. The kernels are smooth and plump, and the juice in the kernels appears milky when punctured with a thumbnail. Sweet corn remains in the milk stage less than a week. As harvest time approaches, check frequently to make sure the kernels do not become too mature and doughy. Other signs that suggest when the corn is ready for harvest are drying and browning of the silks, fullness of the tip kernels and firmness of the unhusked ears.

To harvest, snap off the ears by hand with a quick, firm, downward push; twist and pull. The ears should be eaten as soon as possible, processed or refrigerated. At summer temperatures, the sugar content in sweet corn quickly decreases and starch content increases.

Cut or pull out the cornstalks immediately after harvest and put in a compost pile. Cut the stalks in one-foot long lengths or shred them to hasten decay.

Common Sweet Corn Problems

Corn earworms are a problem in sweet corn every year. Early plantings are not badly infested, but later harvests will usually have severe earworm damage unless timely control measures are followed. Corn earworm moths deposit eggs on the developing silks or on the leaves near the ear. The tiny caterpillars follow the silk down into the ear, where they feed on the tip. Once the worm is inside the protective husk covering, there is no effective control. A suggested insecticide must be applied before the worms enter the silk channel. For good control in heavy infestations, make several applications two to three days apart from the time silks appear until they turn brown. To restrict worm infestation, tighten the tip of the husk with a rubber band or clothespin after the silk appears or insert mineral oil (1/2 medicine dropper full) in the silk tube to decrease damage.
Frequently Asked Questions About Corn

Q: What is the best way to grow early corn?
A: Choose an early maturing normal sugary (su) variety, plant early and shallow (about 1 1/2 inches deep) and cover the row with clear polyethylene film. Remove the film, or cut slits, and carefully pull the plants through before the weather becomes too hot. Floating row covers can also be used effectively for early corn production.

Q: Should garden corn be planted in several short rows rather than in one or two long rows?
A: Yes. Corn is a wind-pollinated plant. Planting corn in blocks rather than in long rows makes it easier for the plants to pollinate one another during tasseling.

For more information on gardening, contact the Sevier County Extension Service at (870) 584-3013 or visit the University of Arkansas, Cooperative Extension Service website at: http://www.uaex.edu/

We have many downloadable and printable fact sheets in the publications section.

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