

Tomatoes – Tips for success

Tomatoes are a great plant for the home gardener. Fresh tomatoes are delicious and can be enjoyed for weeks during the summer. Here are some tips for getting the best tomatoes from your plants.

Prevention can be a gardener's best friend and includes making sure the soil is healthy and well-drained, practicing crop rotation, choosing disease resistant varieties, and using preventive disease and pest practices.

Healthy soil is a must for healthy plants. Make sure the area is free of previous crops' debris, has the right pH and nutrients, and has good drainage. Avoid using an area that was covered in sod during the previous 2 years. If not previously done for the garden in the past 3 years, a soil test is beneficial in determining what additions are needed well before planting to ensure a good crop. Proper fertilizing is also important for healthy soil. The right amount of fertilizer at the right time during the growing season helps these hungry plants produce the best crop. Too much nitrogen before fruit sets will result in increased leafing and reduced or lack of fruit.

Avoid the same place tomatoes and other plants in the same family were planted within the previous 3 years, such as, eggplant, Irish potatoes, and peppers. Also avoid the same spot that was planted with okra. Plant rotation can help avoid disease and pests living in the soil from the previous year's crop.

Look for disease resistant varieties. A letter code after the variety name tells you what the plants are tolerant or resistant to. For example, Better Boy will have codes F, SRKN, V after its name. A few other codes include ASC or A for Alternaria Stem Canker, GLS or St for Gray Leaf Spot (*Stemphylium*), EB for Early Blight, TMV or T for Tobacco Mosaic Virus, SWV for Spotted Wilt Virus, and N for nematode.

Choose a warm, sunny spot for the plants. Tomatoes love the sun and need at least 8 hours of sunlight. Consider companion plants. Basil and tomatoes love each other's company. And, even better, basil planted with tomatoes may improve tomato flavor, health, or yield.

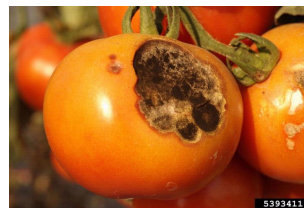
Space plants appropriately ensure good air flow around the plants. Plant deeply enough so that much of the stalk is underground and just 2 or 3 true leaf sets are aboveground. Stake or cage the plants for good support and air flow. Good air flow helps reduce the possibility of fungal disease.

Tomatoes are thirsty! Consistent watering is critical for developing good fruit and avoiding blossom-end rot. More water is also needed at the time of transplanting, during flowering, and during fruit development. Conversely, decrease watering a bit when fruit is ripening. Avoid waterlogging the plants. Mulching can help. It suppresses weeds, helps keep roots cooler during hot weather, reduces water evaporation, and biodegradable mulches will break down into the soil over time.

During the growing season, pinch out suckers/side shoots at the branch/stalk junction. Also remove lower, older branches. This practice improves air flow, helps avoid disease development in the older branches, and, just as importantly, provides more nutrients to the ripening fruit. Be sure to take away any debris from around the plants to prevent development of disease.

Some problems that may arise throughout the growing season include diseases and pest invasion, including early blight, late blight, leaf spot, wilts, viruses, bacterial diseases. Pests include hornworm, Colorado potato beetle, aphids, mites, Japanese beetles, nematodes. This article will review early and late blight and a few of the common pests. Additional resources are provided below for those with curious minds.

Early blight: Weather conditions that favor development of early blight include temperatures above 80 deg. F and frequent rain. University of Tennessee Extension and North Carolina State Extension services have excellent articles on early blight, a fungal disease. See resources at the end for more information. Photos below depict typical early blight.



From: UT Extension Publication W1027

Cultural methods to control blight include choosing disease resistant plants, ensuring plants are vigorous and healthy, removing weeds, volunteer plants and debris, and rotating crops every 2 to 3 years. Chemical control involves preventative use of a fungicide.

Late blight: In contrast to early blight, late blight develops in cooler, cloudy, and wet weather. The lesions are also different. See photos below from NCS Extension service.



From: NC State Extension Publications

To prevent late blight, plant early to avoid late season weather conditions, keep water off leaves as much as possible, monitor closely remove infected plants and debris, choose resistant varieties, and proactively use fungicides to prevent disease.

Non-chemical control of pests includes rotating crops, fertilizing appropriately, planting as early as possible, using physical barriers (aluminum foil around the lower stem of the tomato plant

can prevent cutworm damage), handpicking horned worms and Colorado potato beetles, choosing pest tolerant or resistant plants, encouraging predator insects, such as lady beetles, and lacewings. UT Extension Publication PB595, "You Can Control Garden Insects 2020," has a wealth of information about controlling pests in the garden and can be found at <https://extension.tennessee.edu/publications/Documents/PB595.pdf>

If insecticides are necessary, properly identify the pest, choose the least toxic product for the target insect, and carefully follow directions for use. Information on insecticides may be found in: UT Extension publication W661, "Conventional and Organic Product Overview for Home Vegetable Gardeners in Tennessee," <https://extension.tennessee.edu/publications/Documents/W661.pdf>.

For more information:

Virginia Cooperative Extension, Virginia Tech, Virginia State University, Publication 426-418 "Tomatoes" available at:

<https://digitalpubs.ext.vt.edu/vcedigitalpubs/4183189132728711/MobilePagedReplica.action?pm=2&folio=1#pg1>

UT Extension publication W346-H "Backyard Vegetables: The Tennessee Vegetable Garden - Growing Tomatoes" <https://extension.tennessee.edu/publications/Documents/W346-H.pdf>

UT Extension publication SP 291-K, "Vegetables – Tomatoes for the Home Garden" <https://extension.tennessee.edu/publications/Documents/SP291-K.pdf>

University of Missouri Extension publication G6461, "Growing Home Garden Tomatoes" <https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pub/pdf/agguides/hort/g06461.pdf>

UT Extension publication W235-F, "Trap Crops, Intercropping and Companion Planting" <https://extension.tennessee.edu/publications/Documents/W235-F.pdf>

UT Agricultural Extension publication SP277-K, "Plant Diseases - Disease Resistance in Recommended Vegetable Varieties for Home Gardens" <https://extension.tennessee.edu/publications/Documents/SP277-K.pdf>

UT Extension publication W1027, "Managing Early Blight of Tomato in Tennessee" <https://extension.tennessee.edu/publications/Documents/W1027.pdf>

NCS Extension publication, "Early Blight of Tomato", <https://content.ces.ncsu.edu/early-blight-of-tomato>

NCS Extension publication, "Tomato Late Blight;" <https://content.ces.ncsu.edu/tomato-late-blight#>