

# The Tomato Troubleshooter

There is truly nothing like eating a homegrown tomato, with such rich flavors and vibrant colors! Unfortunately, many gardeners have walked out their door one day to find a garden full of sick tomatoes.

If this has happened to you, don't despair! This tomato troubleshooting guide is designed to help you grow the healthiest tomatoes possible. In this site, we explain how to avoid sick tomatoes in the first place and how to identify and treat tomato problems when something does go wrong. We also stress the use of organic treatments, for a healthier garden, family, and planet.

**"How to Grow Trouble Free Tomatoes"** The Basics: If you're new to tomato gardening, you should note that the key to avoiding problems with your tomatoes is to grow them under the healthiest conditions possible. This involves proper watering, sunlight, air circulation, and good quality soil with plenty of organic material mixed in. There are also a variety of organic fertilizers out there to give your tomatoes an extra advantage.

Check out all the organic soils, composts & fertilizers at the ["Natural Gardener"](#) in Oak Hill. Our **"Golden Rule"** of tomato gardening is as follows: **"Compost, Compost, Compost!"** If you don't have a compost pile already, start one. Don't know how? Find out with this great site: [Compost Guide.com](#).



The **"Tomato Troubleshooting Cheat Sheet"** can help to quickly identify problems. When in doubt, call or bring a sample of your sick plant your local nurseryperson or extension agent for more through analysis.

**"WHY DO TOMATOES GET SICK"?** Tomatoes can suffer attacks by bugs, fungi, viruses, or bacteria. Tomatoes also suffer stress due to environmental conditions such as excessive heat, cold, sunlight or moisture. Some problems are associated with deficiencies in certain minerals or nutrients.

Tomatoes can pick up **"diseases"** through *contaminated soil*, the air, through rain or irrigation water that carry fungal spores, or *through insects that carry a disease*. Examples of insects that carry disease are the *beet leafhopper*, which transports the **"curly top"** virus, and *thrips*, which are responsible for spreading the tomato *spotted wilt virus*.

Tomato problems and their severity can vary depending on where you live. You may have to focus more on preventing and treating some diseases than others. Check with your local extension agent for information, and see the **Tomato Troubleshooting Cheat Sheet for more details**. It is important to note that identifying and treating problems with your tomatoes can also *save other plants in your garden*, as common garden plants such *potatoes, chiles, peppers, and eggplant are susceptible to the same diseases*.

## **EXPERT TIPS TO AVOID TOMATO PROBLEMS:**

As mentioned before, the most important way to avoid problems with your tomatoes is to provide them a healthy environment. Composting, proper amounts of water and sunlight, and fertilizing are all important ways to keep your tomatoes healthy and resistant to pests and diseases.

**"Companion planting"** is another way to benefit your tomatoes by either distracting harmful insects away from your crops, or by fortifying the plants themselves. For example, *planting sweet corn nearby can draw the tomato fruitworm away from your tomatoes. Carrots, nasturtiums and marigolds planted in close proximity to your*

**tomatoes will actually make your tomatoes more resistant to pests.** Be aware that companion planting goes both ways, with some plants growing near your tomatoes actually putting them at risk. **Weedy nightshades** such as **jimsonweed** and **bull nettle** may increase problems with **flea beetles and tobacco mosaic virus**. Keep an eye out for these plants and weed frequently. You should also **avoid growing any form of tobacco anywhere near your tomatoes**.

It's also important to practice cleanliness in your garden. Sterilizing garden stakes and cleaning tools frequently with disinfectant are important tomato gardening practices. Keeping your garden clean by removing garden debris and leaf litter is a fundamental way to avoid spreading diseases. **Remember that many harmful critters make their homes in weeds and leaf litter.**

**To further prevent pests and disease**, you may want to consider growing your tomatoes using alternative techniques such as **raised beds or hanging planters**. These kinds of planters can help keep your **tomato foliage dry, and allow you to change out soil to avoid soil-borne diseases**.

You can also use a technique called "**solarization**," which is used to heat up the soil before you transplant your tomatoes. Soil solarization can **kill certain fungi that live in superficial layers of the soil, such as Southern Blight**. Clear plastic sheets are the most common form of solarization. If you have a large plot, solarization may not be the most cost-effective way to prevent tomato problems, so you should consider other options. See this site for more info on soil solarization from: [Clemson University Agriculture Dept.](#)

**Here are some other important tips to help your tomatoes avoid common problems:**

Plant your tomatoes when outside temperatures are stable to avoid problems like poor fruit set and flower drop.

Use "[Drip Irrigation Systems](#)" to avoid water borne fungal spores:

Mulch to reduce water splashing onto fruits.

Properly space your tomatoes to give them plenty of air.

Stake, cage or trellis your tomatoes to improve air circulation.

Use disease resistant varieties. "**Purchasing Disease Resistant**"

Using "**Heat Resistant Tomato Varieties**"

Occasional application of organic liquid fertilizer or organic solid fertilizer.

Crop rotation with other plants over time can also help keep your soil healthy.

" **Crop Rotation** " article from Doctor Bob of [Montana State University](#) "

" Don't leave ripe fruit on the vine for too long as it may open them up for disease ".

**Move your tomatoes around in your garden from year to year.**

A **wax paper shield** around the base of your plant can help avoid problems with certain insects, such as **cutworms**.

Click on this link for more: **Tomato Growing Information:** "[Growing Tomatoes](#)"

Make sure you use high quality compost that is fully decomposed. : "[Compost Guide](#) "

Look out for "**beneficial insects**", such as lady bugs and certain parasitic wasps. Parasitic wasps such as **Chrysocharis parksi** will help keep away leafminers. If beneficial bugs are present, don't kill them! Wash the fruit to avoid certain fungi appearing after the harvest. Keep careful track of your soil conditions with an Electronic Soil Tester.

**ORGANIC TREATMENTS FOR COMMON TOMATO PROBLEMS:**

Basic Techniques:

While compost is one of the best ways to avoid problems with tomatoes, it turns out that organic products extracted from compost, such as *compost teas*, are effective in treating disease like *late and early blight*.

" [Compost Teas](#) " for Plant Disease Control

" [Sustainable Agriculture](#) Comprehensive organic gardening & land management information database "

In addition to *compost teas*, *sodium bicarbonate*, *hydrogen peroxide*, and *foliar fertilizers* are excellent options for *treating tomato problems*.

*Plant extracts from nettles, comfrey, and equisetum* are looking promising as well. Try *hydrogen peroxide* diluted with water and sprayed over the foliage for problems with *blights*.

" *Organic pest control and fertilizer products* "

*Microbial pesticides* are part of the beneficial bacteria and fungi are also part of the organic gardener's arsenal to treat pests and diseases.

[Integrated Pest Management](#) has more information on microbial pesticides

If you're having trouble *maintaining soil moisture* and keeping your *leaves dry* or your *roots from rotting*, *drip irrigation* may be the key. Many *problems* with *tomatoes* are caused by *over watering* or *water splashing onto the leaves*, *transmitting fungal spores*. *Drip irrigation* systems also use water more *efficiently than sprinkler systems*. See this site from Washington State University for more information on installing [Drip Irrigation Systems](#)

### ***Recommended Products:***

You can check out a variety of useful products for organic tomato growing here at: "[Natural Gardener](#)".

For treating *fungus*, *copper* and *sulfur-based* products are most commonly used for organic gardeners. Copper-based products are useful for *treating bacterial spot, early and late blights, septoria leaf molds, septoria leaf spot, anthracnose, and gray leaf mold*.

*Sulfur-based* products work well for *powdery mildew, early and late blight, and Psyllids*. However, *sulfur used late* in the growing season when *temperatures are highest can cause your plants to burn*, so be careful. Apply *copper sprays* when the *temperatures are cool*, such as in the evening.

*Commercially* available products such as *Bonide Copper Fungicide* is used both by *organic and conventional gardeners* to treat *problems with bacterial spot and speck, anthracnose, septoria leaf spot, and early blight*. If you have a bad case of *early blight*, *it may be too late* to use these kinds of products.

"*Green Light Lawn & Garden Spray* with *Spinosad 2*" is an superior organic method of *controlling various kinds of insects*, including *thrips, lepidoptera larvae (such as horn worm), and leafminers*. "*Fertilome Borer, Bagworm, Tent Caterpillar & Leafminer Spray* " (a mixture of *spinosyn A and spinosyn D*) is another identical great product that *treats similar problems*.

The [University of Maryland](#) Posts reviews of newer insecticides including products for organic gardening.

PURCHASING DISEASE RESISTANT TOMATOES: *What to Look For in buying New Tomato Plants:*

No matter what tomato variety you buy, make sure you buy *plants that have nice green leaves without any yellow speckling. Starters with signs of discoloration may already have problems with disease.*

When *purchasing* your starter plants, buy *plants that haven't been in their containers too long. Ideal plants for transplanting are 5 to 7 weeks old with roots that just about fill a four-inch container.* If you see roots growing out of the drain holes of a four-inch container, *a plant has been in the container too long and may be stressed when transplanted.*

*Starter plants* appear with *certain codes* on the *name tags* that will help you *determine their resistance to many common diseases.*

- *F* for resistance to "*Fusarium wilt* " *FF* for Race 2, *FFF* for Race 3
- *TSWV* for resistance to "*Tomato Spotted Wilt Virus* "
- *L* for resistance to "*Septoria leaf spot* "
- *T* for resistance to "*Tobacco Mosaic Virus* "
- *N* for resistance to "*Nematodes* "
- *V* for resistance to "*Verticilium Wilt* "
- *A* for resistance to "*Alternaria Leaf Spot* "

*Common Disease Resistant Varieties:*

Here's a list of *common disease resistant varieties* that you may see in your local nursery.

*Varieties resistant* to both *Fusarium wilt* and *Tobacco mosaic virus* include:

- Suncherry • Golden Cherry

*Varieties resistant* to *Verticilium wilt*, *Fusarium wilt*, and *Nematodes* include:

- Abraham Lincoln Improved • Roma VFN • Better Boy • Lemon Boy • Enchantment

*Varieties resistant* to both *Verticilium wilt* and *Fusarium wilt* include:

- Mountain Pride • Sunmaster • Mountain Delight • Daybreak • Sunny • Maya • Floramerica • Mountain Spring

*Varieties resistant* to *Verticilium wilt*, *Fusarium wilt*, *Nematodes*, and *Tobacco mosaic virus* include:

- Celebrity • Miracle Sweet • Sweet Chelsea • Park's Whopper Improved

*Varieties resistant* to *general heat*, *high heat flower setting problems* and *cracking*:

- Sunmaster, Heatwave, Heatwave II, Sunpride, Solarfire and Phoenix

For more information on disease resistant tomato varieties and some great tomato gardening tips, see this site from "[Missouri University](#) "

### *Some of Our Favorite Tomato Varieties:*

Here, we've included a description of some of our favorite tomato varieties. We have listed both disease resistant varieties plus some tomatoes with unusual colors and flavors that we enjoy.

***Big Beef:*** This tomato has a number of disease resistance properties and is listed as "VFFNA." Fruits are medium to large and are a deep red.

***Celebrity:*** A great disease resistant variety that includes resistance to verticillium wilt, fusarium, nematodes, tobacco mosaic virus and alternaria leaf spot. As a determinant, staking is often not necessary. It produces large red fruits with harvest occurring around 70 days after transplanting.

***Cherokee Purple:*** This beautiful indeterminate bears tomatoes that vary in color from pinkish to purple. The tomatoes are large and the plant holds up to mild drought conditions and disease.

***Better Bush Tomato:*** This is a disease resistant variety classified as "VFN." We like this tomato for its flavor, which is very sweet. It will start producing fruit in about 68 days.

***Better Boy:*** Large and very red tomatoes. A very hearty variety with fruits appearing about 75 days after transplanting.

***Beefmaster:*** Similar to beefsteak and resistant to verticillium wilt, fusarium wilt, and nematodes. Extra large tomatoes which can reach 2 pounds. Expect fruits to appear about 80 days after production.

***Lemon Boy:*** Resistant to verticillium wilt, fusarium wilt, and nematodes, this is an unusual light yellow tomato. Tomatoes are small to medium in size.

***Roma VFN:*** Fruits are about 3" with a typical roma shape. They are great tomatoes for canning and sauces, as they have little seeds. The plant will start to produce about 75 days after transplanting. Resistant to verticillium wilt, fusarium wilt, and nematodes.

***Green Zebra:*** One of our favorites with a light citrus flavor. This indeterminate grows green with light-green stripes. It's not a big tomato, but it will definitely make an impression in a mixed salad. The plants will give you lots of tomatoes over the growing season so be prepared to share with friends.

***Yellow Pear:*** A delicious tomato that has a golden yellow skin and fruit. It can grow rather tall so it's best to plant with a stake or with a cage.

***Sunmaster Tomato:*** This is a heat resistant variety that will start producing about 72 days after transplanting. A great tomato for the hottest regions of the country, as it survives high temperatures and drought conditions.

More Heat Tolerant and Sun tolerant hybrids are coming to nurseries each season.