

Vegetable Growing Problems

By Earl Hockin, Master Gardener

During the growing season two of the most common problems with growing vegetables are tomato blight, and Septoria leaf spot on tomatoes. Other common problems are Japanese beetles, squash bugs, squash vine borers, flea beetles and downy mildew.

To deal with early and late blight, choose to grow blight resistant varieties. They are not immune to early or late blight, but have a stronger resilience than other types of tomatoes. Early blight is caused by a fungal infection. Early blight attacks leaves and stems, causing the plant to under-produce. The first signs of early blight are roundish, brown spots on the stem and lower leaves. The brown spots will later develop yellowish edges and darker interior rings. One strategy to control it is to remove the affected stems and burn them or throw them in the garbage. Do not compost them, as the fungus will survive in the compost. You can use copper-based fungicides to reduce the spread of early blight. Consistent, weekly or bi-weekly treatments will keep the disease at bay.

Late blight produces spots and mold on leaves and fruit and can overtake a plant within days if not treated. Once the disease starts you can't stop it. So, you have to try to control it long enough to harvest your tomatoes. As soon as you see it, treat your tomato plants with copper fungicide or a product containing the beneficial bacteria *Bacillus subtilis*.

Growers are increasingly producing blight resistant tomatoes. Some heirloom tomatoes are also resistant, such as Old Brooks tomato which is resistant to both early and late blight. For a low-risk tomato garden plant these varieties, Mountain Magic, Iron Lady, Jasper, Stellar and Defiant PhR which are resistant to both early and late blight.

Septoria leaf spot is caused by a fungus which can be treated if caught early enough. To help prevent it, water your plants from below. To prevent the fungus from splashing up from the soil, mulch the soil around the tomato with straw, leaves, grass clipping or shredded paper. Space the plants far enough apart to have good airflow. If you notice any infected leaves, prune, and put them in the trash. Organic fungicides with copper or potassium bicarbonate will help stop the spread of the disease. Resistant varieties include Iron Lady, Stellar and Jasper.

Japanese beetles, flea beetles, Mexican bean beetles, Colorado potato beetles and stink bugs can be crushed between the fingers or dropped in a bucket of soapy water. However, should they become numerous you can deter them by spraying the leaves on both sides with kaolin clay. Kaolin clay is the clay used to make porcelain. There are several online sites where you can buy it in different amounts. Mix three cups of the clay powder per gallon of water. Put the clay in a bucket and make it slurry using water. Stir till it doesn't stick to the bucket or your stirring instrument. Add enough water to make a gallon of spray. Pour it into a hand-pumped sprayer, and spray the plant leaves on both top and bottom. Insects don't like the sandy like texture. You probably won't completely eliminate the bugs but will greatly reduce the amount of damage. If you get a heavy rain you will have to do another spray. Other options are to use neem oil or spinosad. Note that neem oil and spinosad kill bees and other beneficial insects so only use it in the evening when bees are inactive.

Another common problem is downy mildew on cucumbers, beets, spinach, cabbage, broccoli, melons, summer and winter squash and beans. It is a fungus like microorganism which will affect both the top and underside of leaves. It is different from powdery mildew which is a true fungus. Once it has infected plants it is not possible to eliminate it. The best options are to rotate crops, use resistant varieties, mulch the soil between plants avoid overhead watering and use a biofungicide or copper fungicide before your plants get infected.

Powdery mildew is a true fungus. It affects the top of leaves of beets, cabbage family, cucumbers, eggplants, tomatoes, eggplant, and squash. Again, look for resistant varieties, and cleanup and dispose of infected plant debris. It is best to prevent it by using biofungicide or copper fungicide.

For in-depth information about the many options for controlling garden pests, see: “You Can Control Garden Insects,” <https://extension.tennessee.edu/publications/Documents/PB595.pdf>

Some sites with further detail

“Common Disease and Insect Pests of the Vegetable Garden”

<https://afac.org/wp-content/uploads/2018/03/AFAC-2018-Spring-Into-Gardening-Pest-Management.pdf>

“Tomato diseases”

https://www.youtube.com/watch?v=fuB_mSNZ6tg&list=PL1yNe3Yb9E36Qy_U52EOheGOCNgfHwR6z&index=6

“Squash vine borers”

<https://extension.umn.edu/yard-and-garden-insects/squash-vine-borers#chemical-controls-3091763>

“Outsmart Squash Vine Borers This Season”

<https://marylandgrows.umd.edu/2022/04/06/outsmart-squash-vine-borers-this-season-featured-video/>

How do I ask a question?

If you have a question for the Master Gardeners, submit them to us on our website at www.netmga.net. Click the link at the top of the page, “ASK A MASTER GARDENER” to send in your question. Questions that are not answered in this column will receive a response from a Master Gardener to the contact information you provide.

The Master Gardener Program is offered by the University of Tennessee Extension. The purpose of the Master Gardener program is to train people as horticultural-educated volunteers. These volunteers work in partnership with the local Extension office in their counties to expand educational outreach, providing home gardeners with researched-based information.