



Kevin Milaeger

Milaeger's

Trouble in Tomatoland!

Kevin Milaeger

As much as I'd rather be writing about new plants or other fun topics, it's time to discuss disease. Tomato growers have asked me about blight, both the early and late types, and Septoria leaf spot (also a type of blight). When trying to figure out if your plants have a serious problem, keep in mind that they may have more than one problem. Early blight is a fungal disease, common on tomatoes, but also found on eggplant, peppers, and potatoes, all of which are botanically related. The first signs of early blight are at the base of the plant; small, roundish brown spots appear on the lower leaves, with concentric rings in the spots. Sometimes the rings have a yellow edge, or "halo." As the rings get larger, they merge into each other, and eventually the entire leaf is brown, and falls off. It often spreads to the stem of the plant as the condition worsens. This disease is usually harbored in old plant debris. This is why we stress tidiness in the garden.

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early blight



septoria

then brown, and then fall off. After many leaves fall, the plant dies.

Late blight is probably the most aggressive, and also the most debilitating of these fungal diseases. Rather than small spots, it is evidenced by larger blotches of gray brown, either on the leaves or the stems, or both. In a very short time, the plant drastically wilts and collapses. It's not a pretty site. If there is fruit present, it also turns ugly and is inedible.

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late blight

A rainy season will increase the likelihood of these diseases. We can't control the rain, but you can control your irrigation practices. Do not water the leaves; apply water at the base of the plants, and only when necessary. Plants that are in the

ground don't need as much hand watering as those in containers.

If you have had blight in the past, you should consider applying a preventive fungicide. This is usually applied as a foliar spray. The copper based spray is organic, but I am not sure which one is the more effective. You can do some experimenting. Apply the spray *before* symptoms appear, and reapply during the season, as the label suggests. Once the plants are established and have put on some growth, I remove the lower leaves so that less water will be splashed onto them. Mulch around the base of the plant would also help with splashing. When locating your plants, try to find a spot with good ventilation, so if they do get wet, they dry out as quickly as possible. Once the disease is confirmed, remove any infected leaves and destroy them. Wash your tools before using



them on other plants.

Of course, you can always grow blight resistant varieties. (At least for late blight and Septoria---there don't seem to be any varieties that are definitely resistant to early blight.) No, these aren't genetically modified plants. A given variety is repeatedly exposed to a certain disease, and if the plant is not affected by the disease, it is declared resistant. It doesn't mean disease proof, mind you. Some disease resistant tomato varieties we are currently growing are Mountain Fresh, Legend, Wapsipinicon Peach, Juliet, Golden Sweet, Wisconsin 55, Better Boy, Sun Sugar, Green Zebra, Roma, Brandywine, and Defiant. There is some discussion in the tomato world about leaf thickness, and its relation to foliar diseases. Some experts feel that varieties with thicker leaves (such as potato leaved tomatoes) are more disease resistant. At Milaeger's, we offer a number of potato leaved varieties such as Bloody Butcher, Brandy Boy, and Hillbilly Potato Leaf. You might want to give them a try.



Tomato Bloody Butcher

growingsmallfarms.ces.ncsu.edu/



Another problem that we often see is just called "wilt." There are two kinds of wilt, fusarium and verticillium, but which kind you have really doesn't matter. There is no cure for either, and both are fatal. Wilt occurs very quickly, and the entire plant is affected. Leaves turn yellow-green and are severely wilted. If this disease is likely for you, then choose resistant varieties. They are often indicated by the letters VF on the label. (These letters are not always on the label, and there may be additional letters.) Wilt disease is held in the soil. If you have had

tomato wilt

this problem in the past, move your tomatoes (and related crops) to another area, or grow them in containers.

At season's end, burn the garden refuse that may have been affected, including the related plants that can carry the disease---peppers, eggplant, and potatoes. The tiniest scrap of a diseased plant can cause problems in following years.

On a more pleasant topic, I have begun harvesting some of the spinach and lettuces that I planted around April 1st. I could have picked them much earlier, but I wanted to watch them grow some more, to see their overall performance. They love the cool weather we have been having, even if we don't much like it. The largest spinach, 'Kookaburra', is about 24" across. The green lettuce 'Salanova Premier' is very attractive, as is 'Fossey.' In the garden, they all look great together, just like in a salad.(scroll down for additional image)



lettuce garden

Please email me (kevin@milaegers.com) if you have any questions or comments.



Spinach Kookaburra



Lettuce Navarra Red





Lettuce Salanova Premier



Lettuce Ruby Red



Lettuce Truchas



Lettuce Fossey