



Kevin Milaeager

### Common Tomato Diseases Made Simple

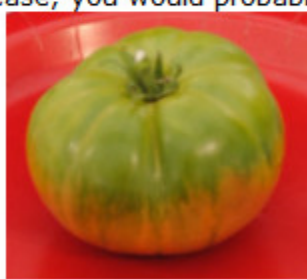
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If you suspected your tomato plants had a disease, you would probably start looking for answers on the internet, or perhaps in gardening books. You would see many photographs of unpleasant diseases and you might wind up convincing yourself that you have several conditions that have nearly unpronounceable names.



Black Cherry

Instead, let's make it simple. The two most common serious tomato diseases in southeast Wisconsin are early blight and verticillium wilt. If your leaves look "funny"---and by that I don't mean a minor blemish, or a yellow leaf or two, I mean a bunch of brown spots on the leaves or total wilting of the plant---you probably have one or both of these diseases.



Green Zebra

Early blight (EB) is the most common foliage disease. It generally presents itself before the first fruit set ripens, which is usually mid to late July. Warm, humid weather oftentimes precedes the development of this disease. The initial primary indicator of the disease is spots on the lower leaves---roundish, brown spots that are marked with concentric rings. Sometimes the rings have ridges, so you will need your hand lens (what, you don't have one?) EB causes defoliation from the bottom up, but since it progresses slowly, a harvest is often possible. EB most commonly starts in the soil. This is why garden cleanup is so important. Plant debris should be cleaned up and discarded at the end of the season---and don't put it on the compost heap. EB can be also brought in to the garden on infected plants. Since the disease is more common in the southern part of the country and some southern growers send plants to Wisconsin resellers it would be wise to buy directly from a local grower. If you want to treat your garden as an additional preventative measure, the University of

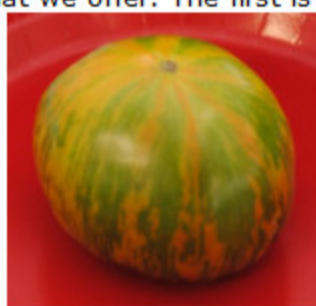


Anna Russian



Golden Sweet

Wisconsin Extension recommends using a garden fungicide in their pamphlet entitled "Home-Grown Tomatoes for Wisconsin." Bonide Liquid Copper Fungicide and Bonide Fung-onil are two that we offer. The first is listed as "for organic gardening," but both are listed as safe for vegetables. When choosing your plants, keep in mind that tomatoes that are known as "early" varieties are often more susceptible to early blight. Also, bush (determinate) varieties are also known to be more problematic. Tomatoes that have thicker leaves tend to be more resistant to foliar disease. EB is sometimes confused with another common problem known as Septoria leaf spot---this disease shows up as roundish gray spots; each spot has a darker border. Sometimes you will see a few pin hole sized black spots within the gray spot. Septoria is brought on by the same conditions as EB, so again the importance of cleanliness is emphasized. Weeds can also harbor disease, so their eradication is also important. Control of Septoria is also done with the same fungicides.



Berkeley Tie Dye

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Striped Roma

Verticillium Wilt (VW) is the other serious problem that is found in our area. It is a systemic disease---it lives inside the plant, but usually originates in the soil. If your plants abruptly wilt, and you also have lower leaves that turn yellow, and then brown, VW is likely the culprit. The plant stem turns brown as the disease progresses. Unlike a wilting plant that needs water, a plant with VW will not rejuvenate with water. Once this disease is present, it can stay in the ground for several years, so crop rotation is recommended. If you are growing in containers, use fresh soil every year. There is no way to cure VW---it is not always fatal, but it may as well be---the plant ends up being so stressed out that it's usually not worth keeping.

PREVENTION. How do we prevent plant disease in the first place? There is not a lot you can do, but there are a few things. Plants benefit from maximum air circulation. The circulating air inhibits germination of spores and bacterial growth, especially during rainy spells. Space your plants out so they don't touch each other. After my plants are established, I prune off the lower branches so there are no leaves touching the soil. Throughout the season, I make sure there is no plant debris or fallen fruit on the soil---this can be the source of future problems. Since moisture can be a problem, make sure you water only in the morning, and make sure the leaves don't get wet. Watering early helps ensure that there will be less damp conditions in the evening. I know---what about rain? you ask. Well, we can't control the rain, but we can control the watering, so that is the best we can do. You can use a fungicide as a preventative. As stated earlier, this is the recommendation of the UW-Extension Horticultural service. At season's end, make sure you do a thorough job of cleaning up the garden. Disposal of all garden debris is a must, particularly if you have had problems.



Paul Robeson



Green Grape

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