

TOMATO LEAF SPOT DISEASES

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Gardeners may start to see spots appearing on the lower leaves of their tomato plants. The two common fungal diseases of tomatoes, early blight (*Alternaria solani*) and Septoria leafspot (*Septoria lycopersici*), typically show up every summer around the first week in July. Early blight symptoms appear as small brown leafspots with target-shaped concentric rings and are often surrounded by a yellow margin. As the season progresses, these spots enlarge and can coalesce. The pathogen can attack leaves, fruit and stems and when the weather is favorable (doesn't get much more favorable for diseases than the last few weeks!) extensive defoliation can occur. When defoliation occurs, yields can be affected, and the remaining tomato fruits are more susceptible to sunburn.



Early blight leafspots caused by *Alternaria solani*. Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org

Septoria leafspot appears as smaller dark leafspots up to 1/8 inch with gray centers. The pathogen can infect petioles, stems and foliage, but not the fruit. Both leafspot pathogens overwinter on dead infected tomato refuse. Spores of the fungus splash up to the lower leaves and cause infections when the weather is wet or the plants have been watered with a sprinkler. These leafspots will produce more spores that will advance up the plant with each rain. Depending on the weather, the plants may be inundated with the disease as the summer progresses, or the pathogen may move up the plant very slowly or not at all in dry years. To

avoid these two tomato pathogens, the majority of our commercial growers in the state have moved their tomato production into high tunnels where they are protected from rain and the plants are not prone to infection.



Septoria leaf spots caused by *Septoria lycopersici*. Nancy Gregory, University of Delaware, Bugwood.org

To manage the diseases, rotate tomato growing areas in the garden and clean up debris or till under at the end of the season to reduce the overwintering inoculum or spores. Provide adequate spacing between plants and mulch in the summer to prevent rain from splashing up. Avoid overhead watering. Prune suckers and lower branches to improve air circulation. There may be cultivars that have some resistance to these pathogens. Once the disease appears, gardeners can use organic or conventional protectant fungicides on a weekly basis to protect new foliage from becoming infected.

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