

What Is The Cause of the Purple Spots on Pansy Leaves?

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What is the cause of the purple spots on pansy leaves? Most likely, the cause is the fungus *Cercospora violae*. This species of *Cercospora* is specific to pansy; it will not infect other greenhouse crops. Almost all growers of pansies will at some time see this disease.

Typically leaf spots caused by fungi can be characterized as having a tan to gray center that is surrounded by a darker colored border (brown, black, purple, reddish, etc.). Black fungal structures (spore producing structures) can be often seen within the center of the spot. *Cercospora* leaf spot of pansy does not look like the typical fungal leaf spot.

Developing *Cercospora* leaf spot are diagnosed by large, irregularly-shaped, spreading purple lesions on the lower leaves. The edges of the spot often look feathery, not solid. Tiny purple spots and flecks appear on the upper leaves as the disease progresses upward through the plant. As the spot matures, it will develop a tan center and a purple rim over time.

The fungus produces abundant spores within the center of the maturing spot. Initial infection is usually on the lower leaves. Every time the infected leaf is hit with water from irrigation or precipitation, spores are popped-up onto adjacent leaves or plants. It is important to monitor your plants for early infections before the disease spread through the crop.

Cercospora leaf spot is most often seen in the fall and late spring in outdoor plantings because its infection is favored by warmer conditions. Within greenhouse crops it can be found all the time. Once detected remove infected leaves or severely infected plants. Remaining plants can be treated with mancozeb-containing fungicides such as Dithane, Fore, Protect T/O, or Zyban. Thiophanate methyl containing fungicides such as Cleary 3336, Domain or Fungo Flo also can reduce disease, but some growers have had poor success when these fungicides were used alone. Always follow label directions for fungicide use and precautions.

There is another leaf spot on pansy that can be confused with *Cercospora* leaf spot. This leaf spot is caused by the fungus *Mycocentrospora acerina*. Initial symptoms of this disease are tiny, round black spots, up to 5 mm in diameter, that have a tan center and a black rim and may have a yellow halo. The spot looks greasy when viewed from the underside of the leaf. *Mycocentrospora* can infect other plants including petunia, lobelia, and columbine.

Infection by *Mycocentrospora* is favored by cold, wet conditions usually seen during the winter months in outdoor plantings. The disease can be introduced into production on pansy seed. A low percentage of pansy seed may carry the fungus, but under favorable environmental conditions infection can spread rapidly. Control can be difficult. Infected plants should be removed and discarded.

Avoidance of prolonged leaf wetness can reduce disease spread and development. Broad spectrum fungicides such as mancozeb, thiophanatemethyl, and chlorothalonil may provide some protection.

***Please note: Mention of fungicide trade names is for clarification purposes and does not constitute a recommendation of one product over another.

pH and E.C. Monitoring Workshop for Greenhouse and Nursery Crops

This is a hands-on workshop designed to cover the concepts of "What is pH and Electrical Conductivity (E.C.)", "How to take a root medium sample", and "How to interpret the testing results". Growers will conduct analysis on their own samples, calibrate pH and E.C. meters, and learn how to graphically track pH, and E.C. values in order to detect trends. This workshop will be offered at 3 locations in North Carolina. Registration is limited to 25 individuals at each location. Registration fee is \$15 / person (\$25 at the door) and includes materials and refreshments.

Tuesday, February 3, 1998
Rowan County Extension Office
Salisbury, NC
(registration deadline of 1-26-98)

Thursday, February 5, 1998
Mountain Research Center
Fletcher, NC
(registration deadline of 1-26-98)

Tuesday, February 17, 1998
Craven County Extension Office
New Bern, NC
(registration deadline of 2-2-98)

Program at Each Location:
12:30 to 1:00 AM EST: Registration
1:00 to 4:00 PM: Hands-on Workshop

Note: For the workshop, growers will conduct a pH and E.C. analysis on their own samples. Please bring along: 1. a root medium sample (2 cups), 2. irrigation water sample (8 oz.), 3. "hose-end" fertilizer sample to check your injector (8 oz.) and 4. (optional) your own pH or EC meter. For registration information, please contact Brian Whipker, Dept. of Horticultural Science, NC State University, Raleigh, NC 27695-7609 or at 919/515-5374 (FAX: 919/515-7747)