e-GRO Alert

Ornamentals

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Bacterial Leaf Spot on Ornamental Peppers

Nora Catlin

nora.catlin@cornell.edu

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Xanthomonas bacterial leaf spot on ornamental pepper is characterized by irregular dark spots with a yellow border and premature leaf drop.

This alert discusses Xanthomonas bacterial leaf spot on ornamental pepper crops.

Symptoms include irregular dark lesions or spots, often with a yellow border or halo. As the disease progresses, spots will expand and can coalesce, and leaf drop occurs. Leaf drop can occur when there are only mild to moderate leaf spot symptoms and sometimes leaf drop may be noticed prior to leaf spots.

This disease can be spread to new crops via infected seed or young plant material, infested equipment or trays, infected plant material or debris, or weeds or volunteer plants. For outdoor crops, the pathogen may be brought in from nearby infected fields by heavy rainstorms.

Xanthomonas leaf spot on ornamental pepper. Photo: Nora Catlin

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Within a crop and between plants, the disease spreads by splashing water and handling. Dense crop spacing, overhead irrigation, warm temperatures, and high humidity help disease development.

A cornerstone in all plant disease management is good sanitation. Start with disease-free seeds and transplants as well as clean pots, benches and equipment. When possible, purchase from reputable sources and look for seed that has been tested and/or treated for the pathogen.

It is possible to treat your own seed, you can learn more here: https://www.vegetables.cornell.edu/pest-management/disease-factsheets/managing-pathogens-inside-seed-with-hot-water/. However, be aware that treating seed may affect germination and can negate guarantees from seed companies.

When transplanting, inspect plants thoroughly and carefully and only transplant healthy plants.

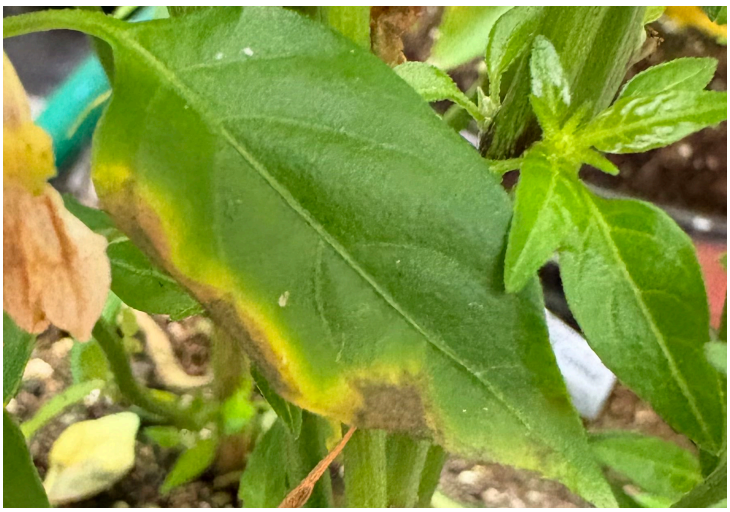
Managing water and moisture are also key to helping prevent the spread of this disease. Use practices that reduce leaf wetness and promote quick drying of leaves. This includes using drip irrigation where possible, timing overhead irrigation so that long drying times for foliage are avoided, and having good air circulation and plant spacing. Practices that keep humidity low will also help.

Carefully removing infected plants or leaves can help prevent spread to new plants. It is good practice to avoid handling or working with infected plants prior to healthy plants so that the bacteria are not spread through these activities.

When managing bacterial leaf spot, the focus is on preventing spread and new infection – infections will not be cured. You can use a labeled bactericide to prevent spread to healthy plants, making sure to follow all label instructions for use and rotation.

Active ingredients reported to be effective in greenhouses include products containing copper, *Bacillus* sp., and streptomycin sulfate. Resistance to copper or streptomycin has been reported in some areas, if present you may need to use alternative active ingredients. Other products are labeled and may help with management or suppression.

When using pesticides, it is important to pay close attention to pesticide labels and local rules. Be mindful that, while this crop is meant to be ornamental, it may be eaten. You may need to use products that are labeled for edible pepper crops or clearly indicate that the plants are strictly ornamental and not edible.



Xanthomonas leaf spot on ornamental pepper. Irregular leaf spots, bordered by a yellow halo are common symptoms. Photos: Nora Catlin

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CONTRIBUTORS

Dr. Nora Catlin
Floriculture Specialist
Cornell University
nora.catlin@cornell.edu

Dr. Chris Currey
Assistant Professor of Floriculture
Iowa State University
ccurrey@iastate.edu

Dan Gilrein
Entomology Specialist
Cornell Cooperative Extension
Suffolk County
dog1@cornell.edu

Dr. Chieri Kubota
Controlled Environments Agriculture
The Ohio State University
kubota.10@osu.edu

Heidi Lindberg
Floriculture Extension Educator
Michigan State University
wolleage@anr.msu.edu

Dr. Roberto Lopez
Floriculture Extension & Research
Michigan State University
rglopez@msu.edu

Dr. Neil Mattson
Greenhouse Research & Extension
Cornell University
neil.mattson@cornell.edu

Dr. W. Garrett Owen
Sustainable Greenhouse & Nursery
Systems Extension & Research
The Ohio State University
owen.367@osu.edu

Dr. Alicia Rihn
Agricultural & Resource Economics
University of Tennessee-Knoxville
arihn@utk.edu

Dr. Debalina Saha
Horticulture Weed Science
Michigan State University
sahadeb2@msu.edu

Dr. Beth Scheckelhoff
Extension Educator – Greenhouse Systems
The Ohio State University
scheckelhoff.11@osu.edu

Dr. Ariana Torres-Bravo
Horticulture/ Ag. Economics
Purdue University
torres2@purdue.edu

Dr. Brian Whipker
Floriculture Extension & Research
NC State University
bwhipker@ncsu.edu

Dr. Jean Williams-Woodward
Extension Plant Pathologist
University of Wyoming
jwilwood@uwyo.edu

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