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Bacterial Blight on Geraniums, again.

Bacterial blight on geraniums (Figure 1), caused by *Xanthomonas hortorum* pv. *pelargonii*, is back this growing season. In this Alert we will discuss the symptoms of the disease and management options.



Photo Leanne Pundt, UConn Extension

Figure 1. Bacterial blight on geraniums.

Last spring, I gave a presentation on common diseases in the greenhouse and I said “Bacterial Blight on Geraniums caused by *X. hortorum* pv. *pelargonii* was a prevalent problem, but not anymore”. However, this year things have changed and we have observed the disease in multiple locations across the northeastern U.S. Therefore, we will review important facts about this disease to help growers identify symptoms and prevent spreading the disease if it enters into the greenhouse.

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Host Range:

The “good thing” about this pathogen is that it “only” infects geraniums—unlike other bacteria like *Xanthomonas campestris* which infects a broad range of crops.

Bacterial blight can infect zonal geraniums (*Pelargonium x hortorum*), ivy geraniums (*Pelargonium peltatum*), Regal or Martha Washington geraniums (*Pelargonium domesticum*), and cranesbill geranium (*Geranium sanguineum*).

Symptoms:

The symptoms of the disease include:

- Small, water-soaked spots on the underside of the leaves, followed by wilting and death of the affected leaf (Figure 2).
- Yellow to tan leaf v-shaped lesion wedged between the veins of the leaves (Figure 1,3).
- The petiole might remain turgid, while the leaves wilt down (Figure 4). The affected leaves may drop off immediately or may hang onto the plant for a week or more.

Disease Spread & Favorable Conditions:

The disease can come into the greenhouse from infected cuttings or plants. It can then spread from plant to plant with tools (e.g. knives) or via water splashing or subirrigation.

Warm temperatures favor bacterial foliar diseases—such as *Xanthomonas* spp. As temperatures rise the symptoms are visible faster.



Photo Yonghao Li, CAES

Figure 2. Wilting and death of leaves infected with *Xanthomonas hortorum* pv. *pelargonii*

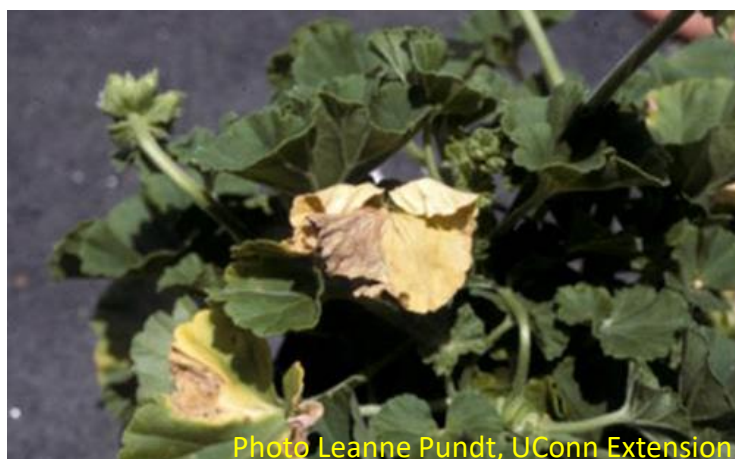


Photo Leanne Pundt, UConn Extension

Figure 3. Angular lesions in the leaves, cells die within the leaf veins when geraniums are infected with *Xanthomonas*.



Photo Dr. Yonghao Li, CAES

Figure 4. Angular or v-shape lesion on mature geranium plants.

Control:

The main strategy for control is to catch the disease early and prevent it from becoming a prevalent problem in your operation. Specific strategies include:

- Inspect all incoming cuttings, seedlings, or plants.
- Incoming plants may be infected without visible symptoms. If possible, keep the incoming plants separate from established, disease-free plants for 7-10 days. Alternatively, you could test incoming plants using an ImmunoStrip® for *Xanthomonas* (<https://orders.agdia.com/agdia-immunostrip-for-xan-isk-14600>).
- Scout frequently and discard any symptomatic plants.
- Prevent water or substrate splashing.
- Disinfect all surfaces that were in contact with infected plant material or substrates.
- Send infected material to a plant diagnostic clinic near you to confirm the cause of the disease.

Additional Resources:

- Nameth, ST, ML Daughtey, GW Moorman, MA Sulzinsk (1999) Bacterial Blight of Geranium: A History of Diagnostic Challenges
<https://apsjournals.apsnet.org/doi/pdf/10.1094/PDIS.1999.83.3.204>
- New England Floriculture Guide:
<https://greenhouseguide.cahn.uconn.edu/>

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