



This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

Cherry

Cherry leaf spot caused by, *Blumeriella jaapii*, anamorph *Phloeosporrella padi*, is the most important fungal disease of cherry in much of the world's growing regions. Plums are also susceptible. Symptoms on leaves first appear as small reddish to purple circular spots. On the underside of the leaves, masses of white to pink spores are produced during rainy weather. The leaves eventually turn yellow, leaving the area around the lesions green, creating a mottled effect. On some prunus species such as plums, the necrotic lesions may drop out, giving a shot hole appearance. The infected leaves fall prematurely. In severe cases complete defoliation and yield loss may occur. Early defoliation may reduce bud survival and fruit set for at least two seasons. The fungus overwinters in leaves on the ground that was infected the previous season. Cherry leaf spot can be controlled by fungicides applied at petal fall and at 7-10 day intervals to harvest. Commercial growers may use a copper fungicide, or Syllit, or Gem, or Pristine. Homeowners may use Captan, or a copper fungicide. Clean up all fallen leaves.

Cherry leaf spot-*Blumeriella jaapii*, anamorph *Phloeosporrella padi*



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Cherry leaf spot-*Blumeriella jaapii*, anamorph *Phloeosporrella padi*- spore mass



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Cherry leaf spot- anamorph *Phloeosporrella padi*- spore mass



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Cherry leaf spot- anamorph

Phloeospora padi- spores



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helps break down crop residue faster and should be practiced where practical.

Cabbage Black rot- *Xanthomonas campestris* pv. *campestris*



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Broccoli

Black rot caused by *Xanthomonas campestris* pv. *campestris* is one of the most damaging diseases of crucifers wherever they are grown. Yield and quality losses may be high when environmental conditions are conducive for disease development. On seedlings, cotyledons may turn black and drop off. Lesions appear on leaves as yellow, V-shaped spots along the leaf edge, with the base of the V usually directed along a vein. As the lesions expand, the tissue wilts and becomes necrotic. The infection may move up or down the petiole and spread through the stem into the roots. The veins of infected leaves, stems, petioles, and roots become black as the bacterium multiplies and shuts off the flow of nutrients to plant parts. When affected stems are cut crosswise, the vascular ring appears black. Yellow bacterial ooze may exude from cut tissues. The use of clean seed is important in preventing the disease. Seedling rates should not be too high as the dense foliage aids in disease development. Sprinkler irrigation should be avoided. Fields should only be worked when the foliage is dry. Transplants or seed should not be grown in a spot that has been in crucifers the last 3 years. Plants with visible symptoms should be pulled up and removed from the vicinity of the field. Deep plowing

Broccoli Black rot- *Xanthomonas campestris* pv. *campestris*



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Zinnia

Bacterial leaf spot of Zinnia is caused by *Xanthomonas campestris* sub. Sp. *Zinniae*. Leaf symptoms begin with dull gray, water-soaked areas. The areas develop small, brown-reddish spots with a yellow halo. As the lesions enlarge they become angular to roughly circular. The older spots may dry out and crack. Small brown spots may develop on flower petals during humid or wet weather. Infections of the petals may result in severe flower blight. The bacterium can survive in dried leaves for a long time, making good sanitation critical for controlling this disease. All plant debris and infected plants should be removed from the planting. Working in the planting should be avoided when the foliage is wet. Overhead irrigation should be avoided as it can splash the bacterium onto nearby plants. Promote good air circulation by not overcrowding the plants. Chemicals controls are not terribly effective, especially if good cultural practices are not also followed. Copper hydroxide is labeled for control of *Xanthomonas* on ornamentals.

Zinnia bacterial leaf spot- *Xanthomonas campestris* sub. Sp. *zinniae*



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Hosta

Anthraco leaf spot of Hosta is caused by several species of *Colletotrichum*. Symptoms are small reddish spots that rapidly enlarge, becoming large, irregular spots with a dark border. The center of older lesions often become tattered and falls out. Small black fruiting bodies with little black hairs may be observed on the surface of the lesions. Dead leaves should be removed from the planting. Hostas should be watered early in the day, and at ground level to avoid unnecessary leaf wetness. Ornamental fungicides containing chlorothalonil, or propiconazole, or triadimefon, or myclobutanil helps protect new leaves.

Hosta anthracnose- *Colletotrichum* spp.



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