

# Fungal Leaf Spots

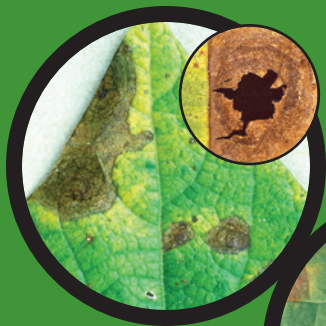


FIGURE 1

FIGURE 2



FIGURE 3



FIGURE 4



FIGURE 5



FIGURE 6



# Fungal Leaf Spots

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**PHOTOGRAPHS:** Courtesy of H.F. Schwartz & S.K. Mohan [09/2011]

**COMMON HOSTS:** Legumes such as *Phaseolus vulgaris* are affected by various fungal diseases that are widespread in tropical to semi-tropical growing regions around the world.

**FIGURE 1** • Alternaria Leaf and Pod Spot, *Alternaria* spp. Lesions appear as small circular to irregular spots and flecks with a pale brown center and a dark margin on leaves and pods. Lesions may enlarge (5-15 mm in diam.) as concentric rings.

**FIGURE 2** • Cercospora Leaf Spot and Blotch, *Cercospora* spp. Brown or rust-colored lesions (2-10 mm in diam.) may vary in shape (circular to angular) with a gray center and slightly reddish border. Tissue in the lesions dries and falls out. Lesions can occur on other plant parts.

**FIGURE 3** • Floury Leaf Spot, *Mycovellosiella phaseoli*. Light green to slightly chlorotic lesions (10-15 mm in diam.) form on the upper leaf surface with white floury mats of fungal growth on the lower surface of leaves (rarely on the upper surface).

**FIGURE 4** • Gray Leaf Spot, *Cercospora vanderysti*. Light green to slightly chlorotic lesions (2-5 mm in diam.) are usually delimited by veins and veinlets on the upper leaf surface with grayish white fungal growth on the lower surface of leaves.

**FIGURE 5** • Powdery Mildew, *Erysiphe polygoni*. Slightly darkened spots (10 mm in diam) become covered by growth of white, superficial, powdery mycelium on leaves. Infection can occur on stems and pods as well.

**FIGURE 6** • White Leaf Spot, *Pseudocercospora albida*. Lesions appear as white, angular spots (2-5 mm in diam.) restricted by veins. Spots become slightly gray with age and may appear pale green to yellow (chlorotic) on the upper leaf surface.

## **FACTORS FAVORING:**

- Presence of previously infested crop debris
- Lack of crop rotation
- Poor sanitation of previous legume debris
- Contaminated seed
- Susceptible varieties
- Moderate to high moisture conditions
- Infection at V4–R2 results in enhanced symptom severity, reduced pod set, poor seed fill, and yield loss

## **ADDITIONAL DIAGNOSTICS AVAILABLE AT:**

<http://legume.ipmpipe.org>

<http://wiki.bugwood.org/PIPE:Legume>

<http://www.apsnet.org/> —Compendium of Bean Diseases, 2nd Ed.