General Leaf Diseases of Corn

- Different diseases may have similar symptoms, particularly during the early stages of disease development.
- It is not uncommon for a corn plant to have several different diseases present at the same time. Multiple diseases present on a corn plant can make disease diagnosis very difficult.
- Laboratory culturing and microscopic examination may be required to accurately identify a leaf disease.

**Anthracnose**
Oval to spindle-shaped water-soaked lesions on youngest leaves turn tan to the brown with yellow to reddish brown borders. Small, black hair-like structures (called setae) can be seen in the middle of lesions. Heavily infected leaves wither and die. The same fungal pathogen is responsible for both anthracnose leaf blight and stalk rot; however, the presence of leaf blight does not indicate that stalk rot will be a problem later in the season. The stalk rot phase is of greater concern than the leaf blight phase.

**Stewart’s Wilt**
The leaf blight phase of this disease appears after tasseling. Leaves are streaked with gray-green to yellow-green lesions, that roughly follow leaf veins. Leaf streaks have wavy edges or margins. Flea beetle feeding scars often are noticeable towards the base of the streak. Streaks are long and irregular, turning tan as the tissue dies. Flea beetles are the primary carrier of the disease.

**Common Rust**
Cinnamon-brown, powdery, circular-to-elongated pustules (blister-like growths) occur on both surfaces of the leaves often in bands across leaves because those tissues were infected in the whorls. In contrast, pustules of southern corn rust, which are more orange in color, occur primarily on the upper leaf surface. Pustules rupture the leaf surface and powdery rust spores can be rubbed off. Pustules become dark brown to black late in the growing season. The fungus thrives in moderate to cool temperature and high humidity.

**Eyespot**
Small (less than 1/4-inch) circular, translucent lesions surrounded by yellow to purple margins that gives them a halo effect. Lesions occur on leaves (most commonly as plants approach maturity), sheaths, and husks. The disease is favored by cool, moist weather.

**Goss’s Wilt (Leaf Freckles and Wilt)**
Leaf infections produce dull gray-green lesions forming water-soaked streaks with irregular margins on leaves. Within the developing lesions, small, irregular-shaped water-soaked “freckles” appear. Bacterial droplets may ooze from the leaf surface early in the morning appearing shellac-like when dried. Any plant injury that occurs can enhance disease infection by the bacteria that causes the disease.
Gray Leaf Spot
Gray to tan, rectangular lesions on leaf, sheath, or husk tissue. Spots are opaque and long (up to 2 inches). Lower leaves are affected first, usually not until after silking. Lesions may have a gray, downy appearance on the underside of leaves where the fungus sporulates. The pathogen thrives in extended periods of warm, overcast days with high humidity. Gray leaf spot has become more prevalent with increased use of reduced tillage and continuous corn.

Northern Corn Leaf Blight
Long (up to 6 inches), elliptical to cigar-shaped, gray-green lesions that become tan-brown are symptomatic of infection by this fungus. Infection spreads up the plant starting on lower leaves. The disease is favored by high humidity and moderate temperatures.

Physoderma Brown Spot
Small yellow spots appear first at the base of the leaf. These spots become brown and combine to form chocolate-brown to reddish irregular blotches, sometimes as bands of infection across leaf blades. Sheath, husk, tassel, stalk, and leaves may exhibit symptoms late in the season. Infected stalks may break at a node. This fungus is favored by warm, wet weather.

Southern Corn Leaf Blight
The most common race of this fungus produces small, elongated (up to 1-inch long) lesions that are tan with brownish borders. This blight primarily attacks leaves. It is favored by high humidity and warm temperatures.

Southern Rust
Small, circular, orange pustules (blister-like swelling) occur on leaves; especially the upper surface, and leaf sheaths. Pustules often are very dense in areas of infected tissues. Powdery rust spores are easily rubbed from leaves.

Management
Timely scouting is important to help protect corn plants from diseases. Since much of a corn plant’s energy from photosynthesis is produced by the leaves immediately surrounding the primary ear, those leaves should be protected from foliar diseases. Fungicide applications made before a disease spreads throughout the corn canopy may help maximize yield potential under environmental conditions that result in high disease pressure.

Fields with foliar diseases should be scouted for stalk health as the reduction in photosynthesis can predispose corn plants to stalk lodging. Identification of foliar diseases can help determine the need for management practices such as tillage, crop rotation and the selection of more resistant corn products to help reduce disease next season.

Source:

For additional agronomic information, please contact your local seed representative.

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

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