Agronomic Directions

A Newsletter of Cornelius Seed® Read it. Profit.

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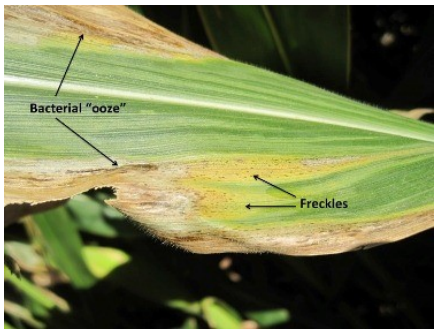
2014 has proven to be a year for diseases across much of the corn belt with wet weather, intense storms, and ideal temperature conditions. It is important to be able to distinguish the different corn diseases as you scout your fields to determine if a rescue treatment is needed and to manage against it over the long term. As the corn crop continues to reach physiological maturity (black layer) the leaves naturally begin to senesce (die) but should not be confused with diseases. Stalk rots are also beginning to be reported, especially where leaf diseases occurred and in fields with high yield potential. We will report on stalk rots early next week.

Goss's Wilt

Adapted from ISU Integrated Crop Management News

Goss's Wilt is a disease caused by a bacterium, making fungicide applications ineffective. When scouting for Goss's wilt, focus your attention on fields that are planted to a Goss's susceptible hybrid, have a history of Goss's, have surface corn residue, and may have been injured by severe weather. The most common symptom of Goss's wilt are "freckles" within large reddish-brown lesions that usually occur along the edge of the leaves. Differentiating Goss's wilt from other diseases and abiotic disorders, is the bacterial ooze that occurs on the lesions, giving it a wet or greasy appearance. Dried bacterial exudate is shiny, especially when viewing in sunlight. This disease can also look like normal environmental stresses which make scouting for it even more vital.



Your best management method is selecting hybrids with genetic resistance to Goss's wilt. Cornelius Seed has a great selection of those hybrids in our line-up. If the disease is prevalent this year, a crop rotation out of corn may be your best management control for the following year. Other management methods include reducing corn residue and controlling grassy weeds that are hosts for the bacteria. The bacteria overwinter in crop residue.

Northern Corn Leaf Blight (NCLB)

Adapted from ISU Integrated Crop Management News

Infection of corn by NCLB fungus occurs when temperatures are warm (65 to 80 degrees) and free water is present on the leaves for 6 to 18 hours. Much of our footprint has received rain in the past week along with warm, humid conditions making the environment ideal for NCLB. The pathogen is spread by wind and rain making the potential for this disease to be widespread. Best time to scout is VT through R4. Fungicide applications are an effective form of control when applied properly.

Typical symptoms of the disease are large 1 to 6 inch cigar-shaped lesions that are initially grayish-green and later turn gray or tan. NCLB can be misdiagnosed as Goss's Wilt and leaf blight, so be sure to look for the unique symptoms of each disease. Many Cornelius Seed hybrids carry resistance genes to NCLB so choice of hybrid is also very important.

Anthracnose Top Dieback

Adapted from ISU University Extension Corn Field Guide

Early symptoms of Anthracnose top dieback are a yellow, purple, or dead flag leaf (surrounding emerging tassel) on scattered plants. Such disease-related patterns of upper leaf senescence usually occur more randomly from plant to plant rather than affecting all plants within a field or area of field. Distinguishing symptoms of anthracnose are black lesions that form between the leaf sheath and the stalk at the top of the plant and are easily seen when the leaf sheath is peeled back. The pith is rotted or discolored in the upper internodes of the split stalks.

Rainfall was short to non-existent in some areas during mid-July and through mid-August, pushing some corn fields to drought stress. Anthracnose top dieback is more prevalent when plants are stressed and the best time to scout is between R3 through R5.