

July 20, 2011

Goss' Wilt

Goss' Wilt was discovered on corn in the Hayfield area last summer, and is now considered widespread across Southern Minnesota.

A bacterial wilt, Goss' is partial to warm humid conditions. It is identified by long, large, tan lesions in centers or on edges of leaf blades (see photo below). The margins of these lesions may have a water-soaked appearance. Black flecks or "freckles" can be observed within the lesions. These flecks can be large and cannot be rubbed off plant tissue. When symptomatic leaves observed early in the morning or after a rain, one can observe a bacterial ooze, or exudates on lesion surfaces. Dried exudate appears shiny, especially in direct sunlight, a varnished appearance.



Foliar diseases reduce yields by reducing the amount of healthy green leaf tissue that performs the photosynthesis that create sugars to fill the grain on the ear. Less sugar production by the leaves forces the corn plant to "cannibalize" nutrients from the stalk to fill the ear, sometimes leading to reduced standability. Significant yield losses can occur in outbreaks in susceptible hybrids. The photo above shows a field planted with half the planter loaded with a susceptible hybrid, and the other half loaded with a tolerant hybrid.

Goss' Wilt most often is observed in wounded plants. These wounds can be caused by hail, wind driven rain, sand blasting, wind, machinery, or insect feeding. It can also be introduced through the roots, and infected seed.

Since Goss' Wilt is a bacterial disease, there are no in crop treatments to control the disease. A foliar fungicide will not control Goss' Wilt. Resistant or tolerant hybrids are the first line of defense in a suspect environment. Deep tillage to bury residue and speed decomposition will reduce host material, and rotation away from host crops are other practices to help manage the disease. Do not overlook controlling grassy weeds such as, green foxtail, shattercane, and barnyard grass which are host crops as well.

Your Central Valley agronomist can recommend hybrids and information on handling this new corn production challenge.

