Should you be scouting for Goss's wilt?

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Abstract
This weekend, Dr Tamra Jackson-Ziems at University of Nebraska-Lincoln reported that Goss's wilt had been spotted in multiple cornfields in three counties in south central and eastern Nebraska. She suspects that infection may have occurred as a result of plant wounding due to severe storms earlier in the growing season. The infected corn plants were at the V6 growth stage and had characteristic lesions of Goss's wilt. A few plants were systemically infected.

Keywords
Plant Pathology and Microbiology

Disciplines
Agricultural Science | Agriculture | Plant Pathology

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Should you be scouting for Goss's wilt?

By Alison Robertson, Department of Plant Pathology and Microbiology

This weekend, Dr Tamra Jackson-Ziems at University of Nebraska-Lincoln reported that Goss’s wilt had been spotted in multiple cornfields in three counties in south central and eastern Nebraska. She suspects that infection may have occurred as a result of plant wounding due to severe storms earlier in the growing season. The infected corn plants were at the V6 growth stage and had characteristic lesions of Goss’s wilt. A few plants were systemically infected.

Goss’s wilt was found on a few plants in a field Calhoun County on Monday, June 11 (Figure 1). The field had been planted to a very susceptible hybrid in 2011, had severe Goss’s wilt and surface residue was present. Strong winds that have occurred in the area likely caused damage to the leaves and enabled infection.
The Goss’s wilt bacterium, *Clavibacter michiganensis* subsp *nebraskensis* (CMN), survives well in infested surface residue. Infection is usually associated with severe weather events that injure the corn leaves and thereby enable entry of the bacterium into leaf tissues. In the greenhouse, we typically see symptoms on corn seedlings 10 to 21 days after inoculation with CMN.

**Scouting tips**

If you are 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 wilt,
- have surface corn residue, and
- may have recently been injured by severe weather.

The most characteristic symptoms of Goss’s wilt are “freckles” (Figure 2) within large reddish-brown lesions that usually occur along the edge of the leaves. Bacterial ooze may also occur on the lesion, giving it a wet or greasy appearance. When the ooze dries, it leaves a shiny residue on the surface of the lesion.

**Management**

Planting a tolerant hybrid is the most effective way to manage Goss’s wilt.

There are several foliar products being marketed for Goss’s wilt management. Unfortunately there are no field data available on their efficacy. Preliminary trials in the greenhouse on V3 corn seedlings indicated some products might slow disease development. Because greenhouse conditions are very different from field conditions, further evaluations in field situations are needed.

This growing season, we have field trials to evaluate foliar products at three locations in Iowa. On-farm trials in collaboration with ISU-FARM also are being done in northwest Iowa. Furthermore, participants at the Crop Management Clinic and Corn Disease workshops, which will be held in July.
and August, respectively, at the ISU Extension and Outreach Field and Education Laboratory (FEEL) near Boone, will evaluate foliar products in CMN-inoculated trials.

**Holcus leaf spot**

ISU Extension and Outreach field agronomist Joel De Jong from northwest Iowa reported seeing Holcus leaf spot in corn. Characteristic symptoms of this disease are round (~1/4 inch diameter), pale yellow to white spots with a water-soaked halo. On some hybrids, the spot may have a purple or brown margin.

Carl Bradley from University of Illinois and Kiersten Wise form Purdue University also reported Holcus leaf spot in their recent newsletters (The Bulletin and Pest and Crop, respectively).

Holcus is another disease of corn caused by a bacterium, Pseudomonas syringae pv. syringae. Infection of leaves occurs through wounds or stomates. Holcus rarely gets severe enough to impact yield.

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