

7-14-2014

Northern Leaf Blight Prevalent in Iowa

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Recommended Citation

Robertson, Alison E., "Northern Leaf Blight Prevalent in Iowa" (2014). *Integrated Crop Management News*. 870.
<http://lib.dr.iastate.edu/cropnews/870>

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Northern Leaf Blight Prevalent in Iowa

Abstract

Northern corn leaf blight (NCLB) has been reported in numerous fields in Iowa. Most of the reports have come from central and western Iowa, but since the pathogen that causes this disease is spread by wind and rain, the disease could be more widespread.

Keywords

Plant Pathology

Disciplines

Agricultural Science | Agriculture | Plant Pathology

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Northern Leaf Blight Prevalent in Iowa

ICM News

July 14, 2014

By Alison Robertson, Ph.D., Plant Pathology and Microbiology

Northern corn leaf blight (NCLB) has been reported in numerous fields in Iowa. Most of the reports have come from central and western Iowa, but since the pathogen that causes this disease is spread by wind and rain, the disease could be more widespread.

Symptoms of NCLB

Typical symptoms of the disease are large (1- to 6-inch long) cigar shaped lesions that are usually tan (Figure 1). NCLB is sometimes misdiagnosed as Goss's wilt and leaf blight although there are **certain characteristics of the lesions that enable the two diseases to be differentiated.**



Photo. Large elliptical lesions of Northern corn leaf blight.

Warm, humid conditions favor NCLB

Infection of corn by the NCLB fungus (*Exserohilum turcicum*) occurs when temperatures are warm (65 to 80F) and the free water is present on the leaves for 6 to 18 hours. Considering the warm, humid conditions we have been experiencing it is no wonder NCLB is developing in fields. What is a little unusual is to hear reports of the disease occurring in Iowa prior to tasseling.

Managing NCLB requires an integrated approach

Fungicides may be used to reduce yield losses due to NCLB. Numerous fungicide trials across the Midwest have found that products that contain a triazole are usually more effective than products that do not contain this chemistry. The Corn Disease Working Group, which includes corn pathologists from across the U.S., has published a [fungicide efficacy table](#) that summarizes efficacy data of the most common products. Farmers that have NCLB in their field should wait to apply fungicides until tasseling since applications between V12 and VT may cause [arrested ear development](#), but if the cool, wet weather continues, fungicides applications should not be applied too late. To optimize fungicide efficacy, ensure good coverage of the canopy; pay attention to nozzle type, sprayer pressure and application volume.

For future corn crops in the affected fields rotation to a non-host crop will reduce survival of the pathogen by allowing time for infested residue to break down. Many hybrids carry resistance genes to NCLB, so choice of hybrid can also lower risk of the disease. There are many races of the pathogen, and specific resistance genes have been identified in corn that are effective against specific races. [An article that discusses the prevalent races of](#)

NCLB in the U.S, resistant genes present in hybrids has been published by corn pathologists at DuPont-Pioneer. Resistance is not complete, so smaller, yellowish lesions may be visible on hybrids with resistance. We do not yet know what race(s) is responsible for the current outbreak.

Agronomist and farmers are encouraged to scout at risk fields (susceptible hybrids, corn-on-corn fields) for NCLB and schedule a fungicide application for fields where the disease is prevalent.

Alison Robertson, Ph.D., is an associate professor/extension field crops pathologist. She can be reached at alisonr@iastate.edu or 515-294-6708.

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