Update on Northern Corn Leaf Blight in Iowa

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Abstract
On July 7, 2015, I spent much of the afternoon in Marion Country walking cornfields looking for Northern corn leaf blight (NCLB).

We visited 11 fields planted to various hybrids, and ranging in growth stage from V13 to almost tasseling (VT). Driving up to the fields, the corn looked very good (Figure 1), and it was easy to think there was not much going on in the field.

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Update on Northern Corn Leaf Blight in Iowa

By Alison Robertson, Department of Plant Pathology and Microbiology

On July 7, 2015, I spent much of the afternoon in Marion Country walking cornfields looking for Northern corn leaf blight (NCLB).

We visited 11 fields planted to various hybrids, and ranging in growth stage from V13 to almost tasseling (VT). Driving up to the fields, the corn looked very good (Figure 1), and it was easy to think there was not much going on in the field.

![Image of corn field](image-url)

Figure 1. Good-looking corn in Marion County, Iowa.

In all of the fields, we did not have to walk far before we found NCLB.

- In three of the fields, we were able to find 1-2 lesions in the mid-canopy on 10-15 percent of the plants.
- In another three fields, numerous NCLB lesions (Figure 2) were visible on every plant in the field (Figure 3). In one field we counted over 20 lesions in the lower and mid canopy on each of several plants. These fields were 2 to 3 days away from tasseling.
- In another three fields, NCLB was again present on every plant, but less than 5 lesions were present on most of the plants. These fields had been planted a little later and were probably 10 days away from tasseling.
- In the final field we visited, NCLB was again present but at low incidence and severity, however, gray leaf spot was present on 80 percent of the plants in the lower canopy (Figure 4). No lesions were present on the ear leaf, but a few lesions were present on the leaf below the ear leaf.
Figure 2. Typical northern corn leaf blight lesions
Figure 3. Northern corn leaf blight prevalent in the mid canopy of corn

Figure 4. Rectangular lesions of gray leaf spot developing in the lower canopy.

It is likely that the hybrids planted in the fields varied in susceptibility to NCLB, and those fields with more disease were planted to a susceptible hybrid. In corn-on-corn fields, NCLB was present in the lower and mid-canopy, while in corn-on-soybean fields, lesions usually occurred in the mid-canopy. This should not be surprising since the fungus that causes NCLB survives in corn residue.
On susceptible hybrids, a foliar fungicide application at tasseling/silking is likely necessary. Farmers and agronomists are advised to scout fields, especially all fields planted to NCLB-susceptible hybrids. If the disease is present on 50 percent of the plants in the field (one or more lesions per plant) at tasseling, a fungicide application may be necessary to protect yield. Severe NCLB development during grain fill can result in yield losses of 30 percent of more. Fields planted to more resistant hybrids should be scouted on a weekly basis to monitor disease development. A fungicide spray may not be necessary.

I have received lots of questions regarding which fungicide to spray. Every year the Corn Disease Working Group, corn pathologists from across the U.S., put together a table on fungicide efficacy against corn diseases. In fungicide trials that were done at six locations in Iowa in 2014, most products effectively controlled NCLB (see Corn Fungicides: To spray or not to spray?).

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