

Grain Plot Harvest



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Northern Corn Leaf Blight: High Levels in 2014

By: Chad Stoeckl

As you read this article, corn harvest is well underway, or perhaps even completed. Some of the dates for early discounts on next year's seed orders have already come and gone. Before we jump into seed purchases, it generally helps to evaluate past performance. One notable observation from the past year was widespread pressure from leaf diseases, specifically Northern Corn Leaf Blight (NCLB), throughout the region.

We always have some pressure from Antracnose Leaf Blight, Common Rust, Eye Spot, Gray Leaf Spot, Northern Corn Leaf Blight, Northern Corn Leaf Spot, and Stewart's Leaf Blight. This year, most all corn varieties had some level of pressure stemming from NCLB. Brown Mid Rib (BMR) varieties seemed to show symptoms earlier and with greater severity than most conventional varieties, which held off the pressure till late, even with the heavy dews in September.

NCLB is caused by the fungal pathogen *Exserohilum turcicum*, which survives the winter on infected corn residue at the soil surface. The cool, humid/wet conditions and prolonged leaf wetness (dews) this year have been ideal for the spread of spores and plant infection. Onset of the infection usually occurs at silking, but may be earlier or later. The timing of the infection determines the severity of the impact on yield. If lesions reach the ear leaf or higher during the two weeks before or after tasseling, yield loss could be reduced by as much as 30 percent. At this point, there is no clear relationship between the amount of leaf tissue covered by lesions and quantity of yield loss, so it is not possible to predict yield loss based on disease severity for any hybrid.

So how do we proceed with our seed orders? There are preventative management strategies that can help reduce economic losses from NCLB. First, be sure the hybrids you order have good resistance scores for NCLB. All seed dealers have seed charts/books with "Corn Characteristic Trait Charts" which list Relative Maturities, Growing Degree Units (GDUs), Agronomic Characteristics, and Disease Resistance. Pay close attention to all rating scales as they differ between companies, similar to the differences in day lengths. For areas that are chronic NCLB problems (ex. a river valley), look for hybrids with race-specific resistance genes (known as Ht genes).

Crop rotation, field selection, and tillage will all help to reduce the amount of inoculum present at the start of the season. Tillage and rotation assist with the breakdown of corn residue, and, by avoiding poorly drained low-lying fields with high humidity, you can lower disease potential. Continuous corn and reduced-tillage systems are at the highest risk for disease development due to the amount of residue left on the soil surface, especially if corn was combined instead of chopped. A conventional one year rotation away from corn followed by tillage is recommended to reduce the potential for disease development in the following corn crop. In reduced-tillage systems, especially in fields with a history of NCLB, a two year out-of-corn rotation may be necessary to reduce the amount of disease in the proceeding corn crop.

We have to remember that weather is the primary factor for disease development. Regardless of whether everything we do is right, even the most heavily traited and resistant corn varieties can succumb to disease pressure. Every year presents new situations with new challenges.

Spreading Tools

by Rhonda Lindquist

Winter spreading has been a common practice for decades, but now both agricultural and environmental groups have begun to question the practice. This past winter and spring, a record number of manure related water quality complaints were filed with the DEC. The severity of these incidents has prompted the DEC to re-evaluate the current regulations, which could possibly lead to stricter rules in the new five-year permit currently being written. Mandatory minimum storage for CAFOs is one strategy the DEC is considering.

Let's face it, the challenges that farms experienced last year should not be minimized. Our weather patterns have changed, and the frequency of extreme storm events has increased. With last year's late fall harvest and the early onset of a long cold winter, farms were forced to spread in the winter in less than ideal conditions. Unfortunately, a water quality violation, outside of a twenty-five year 24-hour rainfall event, will likely result in a fine, regardless of the underlying cause.

Knowing this, can careful planning help reduce the manure you have to spread during the winter?

- If you have a storage, make emptying it a priority before we head into the winter months.
- Make sure all unnecessary surface water is excluded from your storage.
- Clean out the residuals in the bottom to gain more storage. Consider using an agitation boat (such as a Puck) to agitate the whole storage. Thorough agitation brings solids into suspension for pump-out.
- Consider hiring a custom hauler/applicator, or work together with another farm, if you find that other projects are keeping you from emptying your manure storage.
- Take advantage of every opportunity before the ground is frozen or snow falls.

If you daily spread or are forced to spread in the winter, what strategies can you use to minimize the potential for environmental impact during the winter months?

- Select fields covered by a living crop or crop residue.
- Select fields located away from surface water or tile inlets.
- Do not apply to any land subject to flooding or where water collects before flowing into surface water.
- Do not apply on sloped fields leading to surface water or tile drains.
- Increase your setbacks.
- Reduce your rates.
- Work with your crop consultant to improve your spreading strategy.

Like many of the tools we have in our toolboxes, we are finding that if they are used improperly or without the proper safeguards, the tools can become ineffective or can cause more problems further down the line. It is crucial that farms of all sizes develop a winter manure strategy and recognize the environmental risks.

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IT IS TIME TO TAKE ANOTHER LOOK AT THE SOIL

By Robert Halbohm
 District Conservationist
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Short duration, intense rainfall events have made the past two spring planting seasons some of the most costly in recent memory. Seed and fertilizer was washed off fields after planting. Ditches, streams, and lakes turned brown with tons of displaced sediment. Sloping fields were left scarred with gullies that will take years of effort to restore. Although smaller in scope than the Dust Bowl of the 1930's, events such as these can challenge farmers to reflect on what they can do to protect one of the most valuable assets that they manage-the soil.

Rising prices for commodities such as grain corn and soybeans have resulted in increased acreage planted to row crops. Many of the fields planted have fragile soils due to steep slopes, imperfect drainage, areas of concentrated water flow, and shallow depth to bedrock. In years with moderate rainfall, some of these fragile soil characteristics were not recognized. In years of intense rainfall, these fragile soils become obvious, and they are very vulnerable to damage.



Severe erosion in a Chautauqua County field in May, 2014

Protecting fragile soils from irreparable damage may require some tough decisions prior to the next planting season. A good manager of the soil resource will ask the following questions:

Should this field be planted to a row crop at all? All other things being equal, sloping land is more erodible than flat land. Fields with steep or long slopes are most vulnerable. Some fields are unsuitable for row cropping at all, and they should be reseeded for hay, pasture, or planted to trees. If you cropped one or more of these fields in 2013 or 2014, you already know the answer to this question.

If the field has moderate slope, and there are some erosion problems on it, are there tillage management practices that I can use to control erosion if I plant a row crop?

The list of available options in this case is long, and what you choose depends upon the layout of your field, your management goals and the equipment that is available to you. Practices may include contour strip cropping, no-till planting, mulch-till (parking the moldboard plow and finding a way to leave more than 30 percent residue on the soil surface after you plant), and crop rotation with hay crops. Planting a cover crop to protect the soil surface when the crop is harvested will help. Simply stated, soil should be covered by vegetation. If you leave it bare, it is open to erosion.

Are there some fields that require more than tillage management practices to control erosion? Fields with surface runoff problems may need water management practices to safely remove water, such as diversions, waterways, tile lines, and surface inlets. Tillage management practices alone on these fields will still result in excessive erosion problems. When the cost of these practices becomes prohibitive, it may be time to re-visit question number one.

The soil resource that is available to you took centuries to form. The way it is managed by you now can effect how productive it is for your children, grandchildren, and beyond. Ask some difficult questions now in preparation for 2015, and be prepared to make some changes. If you need help planning to manage your soils for the future, contact the Conservation District, NRCS, or your crop consultant.

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CAFO Roadshow Coming to a Location Near You

Cornell Pro-Dairy, Northeast Dairy Producers Association, New York Farm Bureau and Farm Credit East will host a CAFO Roadshow at four sites in November. The seminar series will be held in cooperation with the NYS Departments of Environmental Conservation and Agriculture and Markets, and USDA's Natural Resources Conservation Service.

These seminars will focus on ways for farmers to do an even better job of preventing runoff and water well problems as well as touch on what may be in the new CAFO permit. All CAFO-permitted farms are recommended to attend, but farms of all sizes are encouraged to attend to learn more about the current issues and ideas as well as the possible direction of CAFO requirements in the future.

Dates and locations...

Central NY: Monday, Nov. 10, 10 a.m. to 12:30 p.m.; Sunnyside Farm Shop, 2231 Indian Field Road, Scipio Center

Western NY: Thursday, Nov. 13, 1 p.m. to 3:30 p.m.: Noblehurst Farm Field House, 7955 York Road, Pavilion

Northern NY: Friday, Nov. 14, 10 a.m. to 12:30 p.m.: Jefferson County CCE, 203 North Hamilton Street, Watertown

Eastern NY: Wednesday, Nov. 19, 1 p.m. to 3:30 p.m.: Saratoga County CCE, 50 West High Street, Ballston Spa

The program...

Winter 2014: Reviewing conditions and runoff impacts

Q and A with audience: What DEC does when there's a well contamination concern

Review of wet weather spreading guidelines

Following the plan, revising the plan, who's responsible?

Considerations for the next CAFO permit

Manure storage/transfer/treatment, NRCS standards, storage closure, etc.

Medium CAFOs: implementation deadline 6-31-14, are you there yet?

200-299 cow farms, never permitted, and seeking termination: DEC experience with no discharge determination

New funding opportunity: Dairy Acceleration Program as a compliment to NRCS and SWCD programs

Advance registration is required to ensure the locations can accommodate everyone.

All deadlines are two business days prior to the meeting. Space could be limited in some locations, so register early. Registration is being handled centrally and cannot be accepted by individual locations. Register online at <http://nyfb.informz.net/NYFB/event.asp?eid=7BB238BE-77BE-48A9-AA96-3EECC29F852C> or call New York Farm Bureau at 1-800-342-4143, and ask for Jessica Lopez. Be prepared to provide details of who's attending and which event you'll be participating in.



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