



MILLE LACS SOIL SERVICE ASSN. MONTHLY NEWSLETTER

MARCH 2025

FSA DATES, DEADLINES, OR MESSAGES

FSA has some fast-approaching deadlines we want to ensure everyone is meeting.

March 15th: NAP coverage on annual spring-seeded vegetable crops and pasture deadline

March 31st: DMC registration deadline

April 15th: ARC/PLC election and enrollment deadline.

Please contact the office to complete any paperwork before the deadlines!

BATTLING HERBICIDE RESISTANCE

It is no secret that weeds are increasing in resistance to chemicals and becoming more and more resilient and hard to control. With continued application of the same chemicals, weeds not fully killed are able to build up tolerance to the same herbicides and produce offspring with the same resistant capabilities. Waterhemp, being target weed number one, is the weed that has built up some of the most resistance to herbicides. In a study done by the U of M, waterhemp populations from across the state showed that 89 percent of the sample population were resistant to glyphosate. This is due to repeated use of the same chemical year after year.

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 320.294.5511

 Mille Lacs Soil Service

 www.millelacssoil.com

 165 MN-23 Foreston, MN 56330

How do we address this issue? Instead of relying on continued post-emerge application, one way to help combat spraying weeds late season is to hit them early when they are the most vulnerable. One way to do this is with a pre-emergent spray. When pre-emergent sprays are implemented and successful, weeds are unable to come in thick and if a second pass is needed, there will be fewer weeds on the ground to try and kill. This pre-application of herbicide was shown to have an 11 bushel increase in a study done on soybeans, showing that when weeds are not present early on, the crop does not have to compete as hard for nutrients and resources, allowing them to thrive when they are young.

Pre-emergence can only work so well and the weather plays the biggest factor in their success. If there is no rain in the forecast, moisture will be lacking, not allowing the herbicide to activate soon enough. Alternatively, if there is too much rain in the forecast, farmers run the risk of losing the herbicide they put down to runoff and leaching. Because of the risk involved in this weather based application, some alternatives for weed control may need to be looked at.

For example,

- Row Spacing
 - One study looking at a 12 inch vs 22 inch row spacing on soybeans showed that it took two weeks longer for the 22 inch soybeans to reach a 90 percent canopy cover. This sooner cover allowed for the soybeans to outcompete the weeds for sunlight and prevented weed seeds from germinating later on in the season.
- Planting Date
 - In the same study, 3 different planting dates were compared, May 1, May 15, and June 1. The first planted date showed a significantly sooner time of canopy which resulted in a 12 bushel yield increase.
- Crop Rotation
 - When rotating crops, the different planting dates, row spacing, tillage practices, and fertilizer uses and applications change the predictability and environment for the weeds. Crop rotation also allows for a broader amount of herbicides that can be used.
- Cover Crops
 - Increases in biomass results in a decrease in weed growth due to the competition. When the soil is bare, weeds have a higher chance of taking hold.

NORTHERN CORN LEAF BLIGHT (NCLB)

At the beginning of 2025, we discussed a few of our findings in local crops over the course of 2024, tar spot, and southern rust. Over the course of the last two months we have discussed those findings, leaving us with NCLB as the only big issue left to discuss.

NCLB is a yield-limiting disease that is spread throughout the United States. Symptoms vary depending on hybrid resistance and the genotype that infects corn. Early symptoms include small, light-colored lesions that develop parallel to the leaf margins or veins. The lesions will continue to expand over time as the disease progresses sometimes reaching up to 6 inches long and expanding across leaf veins into the classic “cigar shape”. Over the course of infection, lesions will grow to be gray or tan in color and can have dark green masses or fungus spores in the middle. Multiple lesions can develop on individual leaves and cover a large area of the leaves. When cases are severe, lesions can coalesce, or come together to form one mass or whole, resulting in severe leaf blighting.

Spores are rainsplash and wind dispersed within the field. In areas with large amounts of residue, lesions may first be observed on the lower leaves. Symptoms continue to develop into the middle and upper canopies as conditions favor spore dispersal and development. Symptoms can appear at any time but are typically observed from late vegetative stages (V10-V14) through maturity (R6). NCLB requires long periods of leaf moisture for infection, moisture could be caused by rain, dew, or irrigation. Disease development is also favored by high environmental moisture and moderate temperatures. Lesions can appear within a week of favorable conditions. Hot and dry weather can reduce the spread of NCLB and slow development.

When NCLB lesions are present in the canopy significant yield losses can occur in susceptible hybrids. Up to 50% yield losses have been observed if the disease is established prior to tasseling. Late season development will likely have an impact on reducing yield.

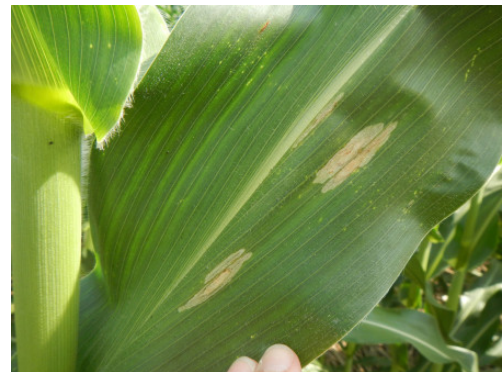
There are multiple management options available to minimize the impact of NCLB. One of the most effective options is to plant hybrids that are less susceptible to NCLB. Partial resistance and hybrids with genotype specific resistance are available. The NCLB fungus survives on corn residue, continuous corn and conservation tillage practices can increase the risk of disease. Crop rotation and residue management where possible can help reduce in-field sources. Foliar and at-plant fungicides are available for NCLB. Preventative applications are most effective, and foliar fungicide timings targeting tasseling/silking have been most successful at reducing NCLB compared to non-treated control in studies.

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NCLB - A CLOSER LOOK



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