Survey seeks Wisconsin soybean farmers’ views on dicamba

Dicamba Use in Wisconsin Soybean Production – SURVEY

Rodrigo Werle (UW-Madison Extension Cropping Systems Weed Scientist)

In 2017 the Xtend soybean technology was completely launched in the United States (e.g., Environmental Protection Agency [EPA] approval of dicamba-tolerant seed trait and POST-emergence application of labeled dicamba formulations). Despite the great level of broadleaf weed control observed when dicamba was sprayed POST-emergence in Xtend soybeans, particularly of the troublesome weeds giant ragweed and waterhemp, off-target dicamba movement is still a concern.

We have designed a short survey intended to investigate Wisconsin soybean farmers’ perceptions on dicamba use in Xtend soybeans. The survey comprises of four main sections:

1. Demographics of participants
2. Outcomes from dicamba application in Xtend soybeans in 2017 and 2018
3. Perceived dicamba injury in non-Xtend soybeans in Xtend 2017 and 2018
4. Expected adoption of the technology in 2019 (assuming it remains available to US soybean farmers in 2019).

We truly appreciate the time of those answering the survey (even if you did not and don’t plan to adopt the technology, please take the time to answer; your feedback is of extreme importance). Dr. Paul Mitchell, UW-Madison Extension Ag Economist, will assist with data summarization and analysis. Your answers will be kept confidential and the final results will be made available via Wiscon-
Soil pH is also important to alfalfa crown health. Alfalfa grows best at soil pH near 6.8. Because ag lime needs 3 years to be fully effective, lime applications prior to stand establishment are most effective. Top hay producers maintain soil pH and fertility levels throughout the crop rotation.

Another important factor affecting winter survival of alfalfa is a fall resting period. Alfalfa must build a good store of protein and carbohydrates in the crown and taproot to survive the winter. Alfalfa uses root reserves for early growth in the spring and after each cutting. As regrowth occurs, protein and carbohydrate reserves are replaced in the root. If alfalfa is cut, and regrows to 6 or 8 inches and freezes, it will suffer more winter injury and death than if more or less growth occurs before dormancy. This is because root reserves will be used, but not enough regrowth will have occurred to replenish the root reserves.

Late fall cutting can also stress alfalfa. It removes top growth, which provides insulation for the crown, primarily by catching and holding snow. Alfalfa will generally be killed when the crown reaches minus 15 degrees F. Overall crown health, soil nutrient management and late summer/fall cutting management can all influence an alfalfa stand's ability to survive through the winter.

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**Time to Start Getting Alfalfa Field Ready for Winter**

Bill Halfman, Monroe County Ag Agent, Carrie Laboski, Soil Fertility/Nutrient Management Specialist

Management decisions made now can impact how alfalfa stands make it through next winter. This year there were a lot of reports of alfalfa stands coming through winter but were weak and not yielding up to normal expectations. Certainly, some of that is due to last winter’s weather, but management practices and overall health of the crowns can influence how well the plants make it through the winter.

**Crown health** is a strong indicator of an alfalfa plant’s likelihood of making it through the winter in good shape. This should be assessed by digging up crowns in several places in each field to determine if they are healthy or not. Crowns that are in poor health will have lower yield anyway, and those fields should be considered good candidates to rotate out of alfalfa. The UW Extension publication titled: “Alfalfa stand assessment: Is this stand good enough to keep?” located at: [http://learningstore.uwex.edu/assets/pdfs/a3620.pdf](http://learningstore.uwex.edu/assets/pdfs/a3620.pdf) has pictures of alfalfa roots and also indicates their probability of winter survival. This guide can help assess stand health when planning crop management and rotations. Overall crown health declines with age and older stands are typically less tolerant of stress compared to younger stands (18-36 months). Younger stands commonly have lower levels of disease incidence and less physical damage from wheel traffic.

**Potassium** is vital for carbohydrate movement to the tap root. Therefore, stands with optimum or higher levels of potassium (K) in the soil are at lower risk to experience winter injury than stands growing on low fertility sites. Sufficient potassium levels must be present before the fall rest period. Applying potassium in August/September is ideal for the alfalfa plant to prepare for winter dormancy. Topdressing in October/November is too late for the plant use the potassium for winter preparation.

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**How to use Plant Tissue Analysis for In Season Nutrient Management**

Andrew Stammer, Lab Director UW Soil and Forage Analysis Lab

The growing season is in full swing and the UW Soil and forage lab is receiving questions about how to use plant tissue analysis for in season nutrient management. Plant tissue analysis is a way of measuring macro and micro-nutrients in plant tissue. It is a direct measure of plant nutritional status during the growing season. When sampling plant tissue, a clear understanding of the plant part and growth stage to be sampled is essential. Nutrient concentrations vary between plant parts. Additionally, processes such as dry matter accumulation and movement of nutrients from one part of the plant to another influence nutrient concentrations across the growing season. These fluctuations require that sample results be compared to recommended nutrient sufficiency ranges for the same plant part and growth stage or to tissue results from healthy looking plants in the same field.
Nutrient concentration in the plant are influenced by a variety of factors. Soil conditions such as pH, soil temperature, compaction and moisture influence plant nutrient concentrations occasionally leading to situations where tissue nutrient concentrations are depressed when the soil has adequate nutrient levels. Conversely, plant tissue can show abnormally high results when testing leaves recently sprayed with a foliar fertilizer, while excessively high concentrations of iron are usually the result of a small amount of soil contaminating the plant sample. Different varieties or maturities of crops may have different optimal tissue nutrient concentration ranges. Because of these possible interferences, collecting separate tissue samples from good and bad areas within a field can be a helpful comparative diagnostic.

The interpretation ranges available for plant tissue can be used as rough guidelines, but do not provide enough information to advise fertilizing on their own. Collecting soil samples from the same areas that plants are sampled allows an evaluation of both the crop and the soil. These samples may explain plant tissue levels and may be used to guide fertilizer application next season.

For additional information on plant parts and growth stages to sample and interpretation data see: [http://ipcm.wisc.edu/blog/2016/06/plant-analysis-are-you-using-it-and-interpreting-the-results-correctly/](http://ipcm.wisc.edu/blog/2016/06/plant-analysis-are-you-using-it-and-interpreting-the-results-correctly/)

For more information on tissue testing and lab Submission Sheets visit: [https://uwlab.soils.wisc.edu/plant-tissue/](https://uwlab.soils.wisc.edu/plant-tissue/)

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**Late Season Corn Foliar Disease Update and Hail-Damaged Corn**

Damon L. Smith, Extension Field Crops Pathologist, University of Wisconsin-Madison

To view this article on their website, click here.

Scouting by my team and phone calls from extension personnel, consultants, and farmers have made it evident that there are several foliar diseases of corn showing up in this first part of August. Gray leaf spot (GLS), northern corn leaf blight (NCLB), and tar spot have all been found in various locations over the last week or so. It is becoming very late in the season to try to control GLS or NCLB. Current data on tar spot indicate it likely doesn’t need to be controlled. Thus, there is likely not much to do at this point, but to document which fields have which diseases. This can help in fall scouting to make harvest decisions, as fields with higher levels of leaf disease may not have experienced any yield loss, but might have stalk integrity issues, which could lead to lodging. Determining which fields might be more prone to lodging can help establish harvest order to minimize any losses due to severely lodged plants. Below is more information about each foliar disease.

**Gray leaf spot (GLS)**

Gray leaf spot is cause by a fungus named Cercospora zeae-maydis. During times of very warm temperature and high humidity (greater than 90%), GLS can increase rapidly on susceptible hybrids. In fields with large amounts of corn residue (e.g. corn-on-corn rotation, minimal tillage, etc.) GLS may be more prominent due to higher levels of inoculum. Symptoms start as small narrow, blocky lesions that might be tan in the center and have a darker margin (Fig. 1). Lesion can increase in size and number and will typically move from lower leaves to upper leaves. Yield loss is most prominent when lesions reach the ear leaves either 2 weeks before tasseling or two weeks after tasseling. Currently, in Wisconsin, we have seen few fields where lesions have reached the ear leaves prior to brown silk. However, in a small number of fields planted to a susceptible hybrid, there has been rapid increase to the ear leaves prior to tassel. In those fields a fungicide application may result in adequate yield protection to cover the cost of fungicide application. See my previous article on how to make the decision to spray fungicide on corn.

**Northern Corn Leaf Blight (NCLB)**

Northern corn leaf blight is caused by the fungus Setosphaeria turcica. The fungus is most active when wet weather coincides with temperatures between 65 F and 80 F. During these conditions, the fungus will readily make microscopic spores (called conidia) inside the
symptomatic areas of leaves and those spores will get splashed onto more leaves. Therefore, the disease typically moves from the lower canopy, up the corn plant as the season progresses. When temperatures get above 80 F and it is dry, growth and spread of the fungus slows dramatically. This is why little NCLB was observed in July, but is showing up now. It is all about the temperature at which the fungus likes to grow. Lesions initiate as cigar-shaped lesions on lower leaves. When conditions are conducive lesions can expand and increase, moving rapidly up the plant (Fig. 2). Occasionally a gray-to-black fuzzy growth is evident in the center of lesions. This growth is sporulation of the fungus. Like GLS, yield loss is greatest when lesions reach the ear leaf either two weeks before or two weeks after tasseling. Again, consult my previous article on how to make the decision to spray fungicide on corn.

Tar Spot

Tar spot is a relatively new disease in the U.S. and Wisconsin. It is caused by a fungus called Phyllachora maydis. Tar spot causes small tar-like spots on the surface of corn leaves. For great information about tar spot and what it looks like, consult this Purdue Extension fact sheet. Tar spot was first found in the U.S. in 2015. In 2016 and 2017, tar spot was identified in Green, Iowa, Grant, and Lafayette counties in Wisconsin. In 2018 confirmations have been made in these same general areas. In Latin America Phyllachora maydis can be found in a complex with another fungus called Monographella maydis. In areas where the complex occurs significant yield loss has been described. However, in the U.S. Monographella maydis has not been found in complex with Phyllachora maydis. Furthermore, Phyllachora maydis is not known to cause yield loss on corn in the U.S. While it can be a striking disease, fungicide applications are not recommended for tar spot in the U.S. Much more work is needed to characterize this pathogen and understand the disease. We are working with Dr. Nathan Kreczewski at the University of Illinois to improve our understanding of this pathogen in the U.S. If you would like to confirm tar spot on corn, or provide samples for research purposes, you can send samples to the University of Wisconsin Plant Disease Diagnostic Clinic.

What about Spraying Fungicide After Hail Damage?

The best study on this subject was conducted by my colleagues at Iowa State University a couple years back. They found that for the most part application of fungicide after hail does not result in any benefits. Especially after the R2 growth stage. We also had an opportunity to look at a natural hail event in 2014 at Arlington. This happened around VT. We were also unable to find a significant difference in treating with a fungicide versus not treating after late season hail-damage. In addition, it isn’t likely that fungal infections will increase after hail. In fact in the Iowa State University study, they found a negative correlation between hail damage and fungal disease. Hail CAN increase Goss’s wilt risk. However, Goss’s wilt is caused by a bacterium. Thus, fungicide application does not work for this disease. For more information on Goss’s Wilt and how to manage it click here.

In summary, given the current market prices and the fact that corn is generally through the silking period, fungicide application on hail-damaged corn is not needed.

Cancellation of Chlorpyrifos

Bryan Jensen, Dept. of Entomology and IPM Program

Some of you have probably heard or seen popular press articles about the Ninth Circuit Court of Appeal’s order ruling that EPA must ban the active ingredient chlorpyrifos which is an active is several insecticides including Lorsban 4E, Lorsban Advanced, Cobalt, Cobalt Advanced and several generic insecticides. At this point it is very early in the process and impossible to tell what the outcome will be and how it affects us.

Currently EPA is reviewing the court’s decision and it is unknown how they will respond. EPA could appeal or decide to fully comply. Perhaps it will be something in between. I am sorry but the best thing to do, for now, is to stay tuned. The glass half-full response is that the 60-day cancellation period will get us through the 2018 Wisconsin growing season. We will just have to take a wait and see approach for next year.

For the interim, you can continue to use chlorpyrifos according to label directions. Typically, with a cancellation or tolerance revocation there is window of time where existing stocks can be used. I do not know if there will be such a window or how long that window will be open. Stay connected.

Limiting the Spread of Weed Seeds- Combine Cleaning Clinic

Daniel H. Smith, Nutrient and Pest Management Program, University of Wisconsin-Madison

An upcoming field day on August 30th in Green County will provide insight into limiting the spread of weed seeds. The field day will start with Dr. Rodrigo Werle (UW-Madison and Extension Cropping Systems Weed Scientist) discussing weed seed production, viability, and the spread of common weeds. Then there will be a demonstration of how to clean a combine to limit the spread of weed seeds. The field day will begin at
10:00 a.m. and conclude by 12:00 p.m. The field day is being hosted by Tim and Bryon Feller at N6437 Schneeberger Rd., Monticello, WI. The field day is free.

For additional details please contact Tonya Gratz, Green County LWCD at 608-325-4195 ext.121. CCA credits have been applied for.

Please see the attached flyer for more information.

**Planter Set-up and Enhancement Workshop**

Daniel H. Smith, Nutrient and Pest Management Program, University of Wisconsin-Madison

An upcoming field day on September 14th in Grant County will provide insight into optimizing planting equipment for corn, soybean, small grains, and cover crops. The field day will start with John Gaska (Senior Outreach Specialist, UW Madison Soybean Program) demonstrating planter operations and discussing options for optimal no-till and conventional till planter performance. Then there will be discussion lead by Jamie Horsfall (Southwest Technical College) and Daniel Smith on establishing cover crops using a no-till drill and broadcast seeding options.

The field day will begin at 9:00 a.m. and conclude by 12:00 p.m. The field day is being hosted by Southwest Technical College at 1800 Bronson Blvd, Fennimore, WI 53809. The field day is free. For more information please contact Jamie Horsfall or Daniel Smith. CCA credits have been applied for. Please see the attached flyer for more information.

**Wisconsin Pest Bulletin, Issue No. 15, August 16**

Krista Hamilton, Entomologist, Bureau of Plant Industry/Division of Agricultural Resource Management, Wisconsin Department of Agriculture, Trade and Consumer Protection

Volume 63 Issue No. 15 of the Wisconsin Pest Bulletin is now available at:


**INSIDE THIS ISSUE**

**LOOKING AHEAD:** First significant corn earworm migration recorded this week

**FORAGES & GRAINS:** Potato leafhopper levels in alfalfa still below-threshold

**CORN:** Surveys indicate corn rootworm beetle numbers low for mid-August

**SOYBEAN:** Annual soybean aphid survey finds non-economic populations in all fields

**FRUITS:** Large summer codling moth flights continue in Wisconsin orchards

**VEGETABLES:** UW confirms late blight on potato in Adams and Marquette Cos.

**NURSERY & FOREST:** Reports on brown rot, tar spot, and hosta foliar nematode

**DEGREE DAYS:** Growing degree day accumulations as of August 15, 2018

**Wisconsin Fruit News – Volume 3, Issue 9**

Janet van Zoeren and Christelle Guédot, UW-Extension

[https://go.wisc.edu/0kw6wn](https://go.wisc.edu/0kw6wn)

This week in the Wisconsin Fruit Newsletter you can read about:

- Insect Diagnostic Lab update
- Plant Disease Diagnostic Clinic update
- Raspberry rust diseases
- Strawberry root health
- Cranberry plant and pest degree-days: Aug 8, 2018
- New cranberry early rot scouting guide available
- UW-Extension Door County vineyard walk on August 13th
- Grape variety developmental stages: Aug 9, 2018
- Grape scouting report: spotted wing drosophia review
- Apple summer diseases
- It is time already to start apple harvest?
Wisconsin UWEX Vegetable Crop Update Issue 19

Amanda Gevens, Associate Professor & Extension Specialist, Potato & Vegetable Pathology, UW-Madison Plant Pathology Department

Newsletter 19 August 11, 2018

- summary of late blight findings and risk
- cucurbit downy mildew reports from the US
- crop products updates for potato

UW/UWEX Plant Disease Diagnostic Clinic (PDDC) Update August 10

Brian Hudelson, Sue Lueloff, John Lake and Ann Joy

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from August 4, 2018 through August 10, 2018.

The 8/10/18 PDDC Wisconsin Disease Almanac (i.e., weekly disease summary) is now available at:

AGRONOMY/SOILS FIELD DAY

Wednesday, August 22, 2018
UW-Arlington Agricultural Research Station

PROGRAM

8:00  Registration ($0), coffee

8:30  Soil Fertility & Management
     Grain Production Systems
     Interseeding in Grain & Forage Systems

10:30 Soil Fertility & Management
     Grain Production Systems
     Pest Management

11:00 Lunch Speaker: Dan Veroff
      Wisconsin Population & Demographic Megatrends: Implications for Agriculture & Farming
      Lunch provided by Badger Crops Club ($5 donation)

1:00  Pest Management
     Interseeding in Grain & Forage Systems
     Equipment Rodeo

2:45  Have a safe trip home!

TOURS

8:30  10:30

Soil Fertility & Management
- Improve ROI and NUE by timing N applications for corn
  Carrie Laboski
- Soil sampling with banded fertilizer
  Andrew Stammer
- Use of a rye cover crop in dairy forage production: Environmental and yield benefits
  Francisco Arriaga
- Soil health in Wisconsin
  Matt Ruark

8:30  10:30

Grain Production Systems
- Forages: Old, new and reimagined
  Ken Albrecht
- Management practices that minimize the soybean yield gap on your farm
  Shawn Conley
- Advances in crop biotechnology at the Wisconsin Crop Innovation Center
  Heidi Kaeppler
- The Wisconsin corn pop-up/starter fertilizer challenge
  Joe Lauer

8:30  10:30

Pest Management
- Using fungicide in corn for grain and silage
  Damon Smith
- Weed management for annual cropping systems
  Rodrigo Werle
- Using an integrated approach to western bean cutworm management
  Bryan Jensen
- White mold management
  Megan McCaghey

8:30  1:00

Interseeding in Grain & Forage Systems
- Interseeding cover crops in organic corn and soybean production
  Erin Silva
- Interseeding legumes with Kernza
  Valentin Picasso
- Small grains with frost seeded clover
  Lucia Gutierrez
- Interseeding corn and alfalfa
  Will Osterholz

1:00  Equipment Rodeo
- Agriculture technology: Planting, UAV remote sensing and autonomous machines
  Brian Luck, Jessica Drewry, Jeff Nelson

Visit exhibits between tours and during lunch! UW Soil & Forage Analysis Lab, SnapPlus, Nutrient & Pest Management Program and more!

Certified Crop Advisors
7.5 CEU credits requested

The Arlington ARS is located on Hwy. 51, about 5 miles south of Arlington and 15 miles north of Madison. Watch for Field Day signs.
GPS coordinates: 43.300467, -89.345534

The College of Agricultural and Life Sciences will make a reasonable effort to provide accommodations for participants with disabilities when notified in advance. To request a disability accommodation, please contact ars_accommodation@cals.wisc.edu or call 608-846-3761 ext.101 at least 10 days in advance of event. Efforts will be made to meet same day requests to the extent possible.

To help us organize a successful event, if you are considering attending please complete a RSVP at https://go.wisc.edu/uwtu24
Thanks!
Limit the Spread of Weed Seeds -

Combine Cleaning Clinic

Thursday, August 30, 2018

10AM– Noon

@ Tim & Bryon Feller’s N6437 Schneeberger Road, Monticello– south of County Rd EE

Learn how:
- Weeds are spread
- # Seeds weeds produce
- Time seeds are viable
- Reduce risk of spread

Speakers: Dr. Rodrigo Werle, Extension Weed Scientist & Dan Smith, Southwest Regional Specialist

More information contact Tonya Gratz, Green County LWCD 608-325-4195 ext 121
Planter Set-up and Enhancement Workshop

Friday, September 14th, 2018
Southwest Technical College Demonstration Farm
1800 Bronson Blvd, Fennimore, WI 53809

11:30-noon
Registration and introductions

9:00-11:30
Optimizing your corn and soybean planter
John Gaska Senior Outreach Specialist, UW Madison
• Planter demonstration
• Overview of equipment
• Closing wheel options
• Optimal planter set-up demonstration

11:30-noon
Planting cover crops
Jamie Horsfall, Southwest Tech, Dan Smith, Nutrient and Pest Management Program, UW Madison
• No-till drill and broadcast spreader calibration methods
• Planting depth and seed coverage
• Seeding rates
• Final considerations: Herbicide carryover, forage use, cover crop goals

Questions and Registration: Jamie Horsfall, Southwest Tech (jhorsfall@swtc.edu) 608.822.2465 or Dan Smith, NPM Program, (dhsmith@wisc.edu) 608.219.5170

Free event!