

Wisconsin Crop Manager

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Wisconsin Midseason Corn Disease Update

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

The Wisconsin Field Crops Pathology crew has scouted corn from the southern portion of Wisconsin, to as far north as Spooner. Overall, disease levels are low.

We have run into northern corn leaf blight (NCLB) in fields in the southern and central portions of the state. In most cases incidence was in the 10% or less range, with severity in the 5-10% range on leaves below the ear leaf. We have also had several samples arrive in the diagnostic clinic and confirmed with NCLB. [For more information on managing NCLB or other corn diseases in Wisconsin, see my blog post.](#)



Northern Corn Leaf Blight symptoms on a corn leaf.

Goss's wilt has been confirmed in Grant Co. via the diagnostic clinic. Other samples have also been submitted that were suspected for Goss's wilt. However, these turned out to be NCLB. [For assistance in differentiating these two diseases, click here to view a PDF quick diagnostic guide.](#)

Common rust remains super common. I have received several questions about spraying fungicide to control common rust. For field corn hybrids, no fungicide will be needed. In any specialty corn situations (inbreds for seed production, sweet corn, etc.) spraying for common rust might need to be considered. Most field corn hybrids have excellent resistance to common rust and will yield well, despite finding some pustules on a corn plant.

Southern rust has not yet been found in Wisconsin. However, it has been reported very close to Wisconsin (<http://ext.ipipe.org>). You should continue to be diligent in scouting for this rust disease. Yield reductions can be substantial if the fungus moves in over the next several weeks. Fortunately, our weather systems have been moving into Wisconsin from Canada and Minnesota. This has likely slowed progress of the southern rust fungus from moving into Wisconsin. [Click here to view a great new resource on southern rust by the Crop Protection Network.](#)

Wisconsin White Mold Risk Update – August 5

Damon L. Smith, Extension Field Crops Pathologist, University of Wisconsin-Madison, Jaime Willbur, Graduate Research Assistant, University of Wisconsin-Madison

Using Sclero-cast: A Soybean White Mold Prediction Model

This tool is for guidance only and should be used with other sources of information and professional advice when determining risk of white mold development. [We encourage you to read the model how-to guide which can be downloaded by clicking here](#)

Continued dry conditions over the past couple of weeks have helped to continue to decrease white mold risk in non-irrigated fields. Some areas of high risk still exist in the southern and eastern portions of the state. However, many fields we have visited are moving to R3 and R4 growth stages. Thus, they are getting outside of the extremely critical period for infection by the white mold fungus. Some reports of symptoms of white mold are beginning to come in. I suspect we will begin to see more symptoms of disease over the next couple of weeks and will begin to get an understanding of how severe the epidemic will be this year.

Risk remains high for any soybeans planted to 15-inch rows AND irrigated. This planting and management scenario is highly conducive for white mold development. We continue to find apothecia under irrigation and in 15-inch row-spacing. I would expect to see significantly higher levels of white mold in irrigated soybeans planted to 15-inch rows. Risk of white mold remained steady for soybeans planted to 30-inch rows and irrigated. Risk remains high in the southwestern and western portions of Wisconsin for soybeans planted to 30-inch rows and irrigated.

Forecasts indicate cool temperatures with chances of precipitation for the next week. I would expect white mold risk to hold steady. Continue to growth-stage soybeans and note that map predictions should be considered for making white mold management decisions if soybeans are flowering AND soybean canopies are nearly closed. We have visited fields all over the state and find soybeans well into the reproductive growth stages. We are quickly getting outside the window of opportunity to treat for white mold. Any remaining white mold management decisions should be made very soon.

[To see the maps and this article on Damon Smith's blog click here.](#)

Does the Application of a Plant Growth Regulator and Fungicide Increase Oat Yield

Shawn Conley, State Soybean and Small Grains Specialist, John Gaska, Senior Outreach Specialist, Adam Roth, Program Manager

In an Oat Shock:

- The addition of Palisade PGR and Trivapro fungicide increased oat yield and reduced lodging
- Increased N rate above those recommended in A2809 did not increase oat yield
- Growers should explore expected ROI and apply BMP's prior to adding any additional inputs

A research trial was initiated in the spring of 2017 at the Arlington Agricultural Research Station, Arlington, WI to assess the impact of a plant growth regulator (PGR) (Palisade, trinexapac-ethyl, Syngenta) and a foliar fungicide (Trivapro, benzovindiflupyr+azoxystrobin+propiconazole, Syngenta) in oats. Click here to [view or print PDF](#).

Time to Begin Evaluating Corn Fields for Harvest



For most corn fields in Wisconsin, pollination and the "lag" phase of kernel development is wrapping up and we are in a "linear" phase of development where kernels are accumulating 4-6 bu/A per day. The grain filling period of corn lasts approximately 60 days. The "lag" phase

starts with the kernel ovule fertilized by pollen and for the next 7-10 d cell division occurs in the endosperm. The “linear” phase is most important for yield and lasts about 40 days. For a 200 bu/A yield level, starch accumulates in the kernel endosperm at the rate of 5 bu/A per day during this phase. The grain filling period ends with a 7-10 d “maturation” phase when the kernel moves from 50% kernel milk to the black layer stage. During grain filling most management options are no longer available unless irrigation is available when water and N can be applied during the first half of grain filling.

Click [here](#) to continue to full article

Corn Rootworm

Bryan Jensen, UW Extension and IPM Program

Useful corn rootworm management data can, and should be gathered during the month of August. Digging and washing roots will provide insight on efficacy of rootworm management tactics. Scouting for beetles will give you a perspective regarding forthcoming pressure in continuous corn fields.

The window is closing for the best time to observe rootworm feeding. Most larvae have now completed feeding. Root regeneration has started and will only continue to get worse. Especially when soil moisture is adequate. Although root regeneration is good, it does mask larval feeding and may not give you a true picture of efficacy.

I don't hear or see enough people digging roots to validate their management choices. You wouldn't consider using herbicides in a weed management program without ever checking to see if it worked. Do the same for corn rootworms. Just because the field has not lodged doesn't mean there isn't economic damage. Conversely, lodging is not always a definitive sign of rootworm feeding.

Dig and wash roots starting in late July through August. This information will validate your management choice



Western (L) and Northern (R) corn rootworm beetles

but can also provide important information regarding Bt resistance and presence/absence of first-year western corn rootworms.

To quantify root damage, use the Nodal Injury Scale developed by J. Oleson, Y. Park, T. Nowatzki and J. Tollefson at Iowa State University. This is an excellent rating system and more information is available at <http://www.ent.iastate.edu/pest/rootworm/nodeinjury/nodeinjury.html>. Essentially, the injury scale uses a decimal system. The number to the left of the decimal indicates the number of complete nodes (or equivalent number of nodes) of roots pruned back to within 1 ½ of the stalk. The number to the right of the decimal indicates the % of the next node of roots pruned. A root rating of 1.2 indicates the equivalent on one complete nodes of roots is pruned and 20% of the next.

There are several UW Extension resources available to guide you through the root rating procedure and rating system.

[Corn Rootworm: How to Validate Your Management Decision \(Video\)](#)

[Rating corn roots for rootworm feeding \(document\)](#)

Scouting for corn rootworm beetles is every bit as important as it was decades ago. Perhaps more so because of the need to diversify management practices that reduce the potential for resistance. The Pest Survey Bulletin has reported low beetle counts in the 2015 and 2016 growing seasons. Several locations did not report finding a single beetle.

Counting adults during the egg laying period (mid-August to early-September) will give a good indication of expected larval damage in next year's corn. The process is simple and doesn't take a great amount of time when compared to the overall value. By establishing the level of adult infestation during the current year, you can determine whether preventative treatments will be necessary in the following year's corn crop.

The grower will need to manage corn rootworm larval populations if you find an average of 0.75 beetles per plant during any one of the three field samplings. This data will help you make appropriate management decisions based on observed field populations. Several UW Extension resources are available to help with beetle scouting.

[Corn Rootworm Beetle Scouting \(document\)](#)

[How to Scout for Rootworm Beetles \(Video\)](#)

Wisconsin hosts the 2017 North American Manure Expo: August 22 & 23

George Koepp, Columbia County UW-Extension, Richard Halopka, Clark County UW-Extension

The latest equipment and technology for professional manure management will be on display at the 2017 North American Manure Expo on August 22 and 23, 2017 at the University of Wisconsin-Madison Arlington Agricultural Research Station.

“The North American Manure Expo is the largest manure equipment demonstration event in the U.S. and Canada,” said George Koepp, University of Wisconsin-Extension Columbia County agriculture agent. “The show combines demonstrations of the latest developments in manure handling equipment with presentations on the latest research in manure management.”

In addition to the tours, field demonstrations, hands-on product and safety education, exhibitor booths, and commercial vendor displays, 24 educational sessions will be hosted in four separate themed tents. The themes are

1. Manure Safety and Manure Management Tools
2. Manure as a Fertilizer Resource
3. Manure Application Techniques and Technology
4. Manure and Environmental Protection

The three tours are:

— **Statz Brothers, Inc. in Sun Prairie** – featuring the manure digester and bedding recycling facility of the Statz Brothers Farm. The tour will go through one of the dairy barns and then stop at the manure digester to hear about the digester design, solids separation for bedding recycling and the use of the gas and energy bi-products of the manure digester system. The last stage of the system takes liquid to the storage lagoon.

— **Arlington Agriculture Research Station** – includes three features: (1) the Arlington Agriculture Research Station Dairy Manure Run-off Study which compares manure run-off on no-till versus chisel plow and soil finisher tillage. The application timings are early December and late January. Results of the study to date and implications for manure management and time of manure applications will be discussed; (2) Blaine Dairy, which has a state of the art sand separation and reclamation system that is less than one year old; and (3) the

UW Swine Research facility to view their manure separation and application systems.

— **Endres Composting** – Jeff Endres’ dairy operation utilizes a compost bedding management and bedding recycling system. Bedding pack manure and sawdust are mixed with free stall manure before going to the compost pad that is under roof. Compost windrows are built over 4 weeks and with scheduled turning produce finished compost over the next 8 weeks. This compost system helps balance P & K for the farm nutrient management plan and brings the opportunity for better distribution of nutrients and a wider window for application. This tour also includes field application of compost.

“We’re excited to showcase the latest innovations, research and solutions to manure management that are developed through the working relationships between professional

manure applicators, UW-Extension and research scientists, and equipment manufacturers,” said Richard Halopka, UW-Extension Clark County crops and soils agent.

Tours on Aug. 22 require a \$20 registration fee. There is no cost to attend any of the Expo events on Aug. 23.

For a complete list of tours, demonstrations, exhibitors, educational sessions, and sponsorships visit the Manure Expo website <http://www.manureexpo.com/>.

The North American Manure Expo is presented by the Professional Nutrient Applicators Association of Wisconsin, University of Wisconsin-Extension – Nutrient Management Team, Annex Business Media, Manure Manager Magazine and is supported in part by a consortium of land grant universities and conservation agencies from across the United States.

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 July 29, 2017 through August 4, 2017.

PLANT/SAMPLE TYPE, DISEASE/DISORDER, PATHOGEN, COUNTY

FIELD CROPS

Corn, Northern Corn Leaf Blight, *Exserohilum turcicum*, Adams

FRUIT CROPS

Apple, [Anthracnose](#), *Gloeosporium* sp., Bayfield

Blueberry, *Gloeosporium* Leaf Spot and Stem Canker, *Gloeosporium* sp., Bayfield, Oneida

Cherry, [Anthracnose](#), [Bacterial Canker](#), [Brown Rot](#), Cherry Leaf Spot, *Gloeosporium* sp., *Pseudomonas syringae*, *Monilinia* sp., *Blumeriella jaapii*, Sauk, Dane, Dane, Dane

Cranberry, *Phyllosticta* Leaf Spot, Upright Dieback, *Phyllosticta elongata*, *Phomopsis* sp., Vilas, Vilas

Grape, [Herbicide Damage](#), None, Columbia

VEGETABLE CROPS

Cucumber, Anthracnose, *Colletotrichum orbiculare*, Sauk

Onion, Purple Blotch, *Stemphylium* Leaf Blight, *Alternaria porri*, *Stemphylium* sp., Sauk, Sauk

Pumpkin, [Bacterial Wilt](#), *Erwinia tracheiphila*, Milwaukee

Squash (Summer), [Bacterial Wilt](#), *Erwinia tracheiphila*, Milwaukee

Tomato, Bacterial Canker, [Bacterial Speck](#), [Septoria Leaf Spot](#), *Clavibacter michiganensis* subsp. *michiganensis*, *Pseudomonas syringae* pv. *tomato*, *Septoria lycopersici*, Douglas, Sauk, La Crosse, Milwaukee

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu. Follow the clinic on Facebook and Twitter @UWPDDC.

Vegetable Crop Update No. 16- August 4, 2017

Amanda Gevens, Associate Professor & Extension Specialist, Potato & Vegetable Pathology, Plant Pathology Department, University of Wisconsin-Madison

[Newsletter No. 16](#)– August 4, 2017

Thank you to the staff and participants for making the Leah Starks Foundation Seed Farm Field Day an outstanding event. Despite the unseasonable cool temperatures, attendance was excellent with great discussion.

In the UWEX Vegetable Crop Updates newsletter this week, please find info on P-Day and DSV accumulations,

national and WI late blight updates and cucurbit downy mildew updates.

Late blight was confirmed from a second WI county earlier this week – Pierce County – along our west side. The case was on commercial tomato. Please see recommendations for prevention in this newsletter.

Wisconsin DATCP Pest Bulletin, Aug 10, 2017

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

Volume 62 Issue No. 15 of the Wisconsin Pest Bulletin is now available at: <https://datcpservices.wisconsin.gov/pb/pdf/08-10-17.pdf>

LOOKING AHEAD: Corn rootworm beetle counts low for early August

FORAGES & GRAINS: Surveys find below-threshold levels of all alfalfa pests

CORN: Annual flight of western bean cutworm moths subsiding

SOYBEANS: Soybean aphid densities remain extremely low

FRUITS: Fewer codling moths and apple maggots reported this week

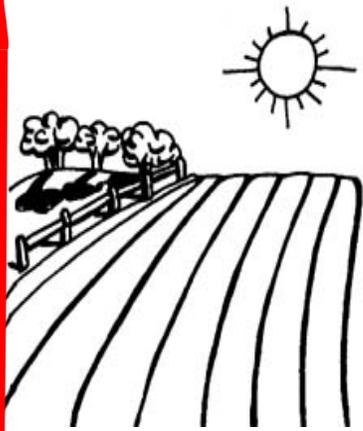
VEGETABLES: Tomato late blight confirmed in Pierce County

NURSERY & FOREST: Assorted reports from this week's nursery inspections

DEGREE DAYS: Degree day accumulations through August 9, 2017

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AGRONOMY/SOILS FIELD DAY

Cultivating a Resilient Agriculture

Tours & Exhibits of Current Crops & Soils Research

Wednesday, August 30, 2017

Arlington Agricultural Research Station

Registration @ 8 am

Tours depart from the Public Events Facility at
8:30 am, 10:30 am, & 1:45 pm

Lunch provided by UW-Madison Badger Crops Club
{suggested donation \$5/person}

Tour A: Building Soil Health {8:30 & 10:30 am}

- Soils of Wisconsin (Alfred Hartemink)
- Importance of perennialization & diversification (Gregg Sanford & Randy Jackson)
- Do cover crops improve soil health? (Matt Ruark)
- Trade-offs with soil management decisions (Francisco Arriaga)

Tour C: Perennial Forages to Accomplish Diverse Goals {10:30 am & 1:45 pm}

- Alfalfa: What have we learned & where are we headed? (Dan Underlander)
- When & where do fungicides pay in forage crops (Damon Smith)
- Intermediate wheatgrass for forage & grain (Valentin Picasso)
- Silvopasture: Benefits & challenges of trees in grazing systems (Keefe Keeley, Diane Mayerfeld & Steve Ventura)

Tour B: Managing Short- & Long-term Risk in Cropping Systems {8:30 & 10:30 am}

- How many corn hybrids should I grow on my farm? Minimizing risk & maximizing options (Joe Lauer)
- Harnessing G x E x M interactions in soybean (Shawn Conley)
- Weed management over 27 years in the Wis. Integrated Cropping Systems Trial (Nathan Drewitz & Dave Stoltenberg)
- Identification, distribution & herbicide resistance of waterhemp & Palmer amaranth (Sam Marquardt & Mark Renz)

***Tour D: Designing Landscapes for Profit, Clean Water, Stable Climate & Biodiversity {10:30 am & 1:45 pm}**

- Yahara 2070: Using scenarios to understand impacts of future watershed land use (Chris Kucharik)
- SmartScape™: Developing a decision support tool for farmscape management (Claudio Gratton)
- Biodiversity in the soil: Exploring how soil microbes influence crops (Thea Whitman)

***Tour D will be held in the Auditorium**

Lunch & Panel Discussion @ 12:00 to 1:45pm, in the Auditorium

“What Do We Mean by Resilient Agriculture?”

Randy Jackson (Moderator; Professor, Dept. of Agronomy, UW-Madison) – Panelists include

Andy Bensed (A B Farms, Dallas, Wis.)

Sarah Lloyd (Special Products Coordinator, Wis. Farmers Union)

Heidi Johnson (Crops & Soils Educator, Dane Co. UW-Extension)

Matt Ruark (Professor & Extension Specialist, Dept. of Soil Science, UW-Madison)

The Arlington Research Station is located on Hwy. 51, about 5 miles south of Arlington & 15 miles north of Madison. Watch for Field Day signs.

For more information contact the Dept. of Agronomy 608/262-1390
or the Dept. of Soil Science 608/262-0485.

In the event of rain, presentations will be held inside.

Sponsored by the UW-Madison College of Agricultural & Life Sciences/Arlington Agricultural Research Station/Departments of Agronomy & Soil Science, & UW Cooperative Extension

{Certified Crop Advisors: 5 CEU credits have been requested}