2017 Field Crop Fungicide Efficacy Tables Now Posted

Damon Smith, Extension Field Crops Pathologist, Department of Plant Pathology, University of Wisconsin-Madison

The 2017 fungicide efficacy tables are now posted for foliar diseases of corn, soybeans, and small grains. New this year is an added efficacy table for fungicides effective against seedling diseases of soybean. You can access these tables by browsing to the linked page and then scrolling down the page to find the tables. The efficacy ratings are generated based on independent, University efficacy trial data from across the U.S. If you can’t find a particular product on the table, it is likely that it isn’t commonly used, or there isn’t enough data to confidently generate an efficacy rating.

Remember to follow all label recommendations attached to the fungicide container. The label label is the law!

http://fyi.uwex.edu/fieldcroppathology/field-crops-fungicide-information/

2017 Wisconsin Soybean Association Soybean Yield Contest

Shawn P. Conley, Soybean and Wheat Extension Specialist

Notable changes to the 2017 WSA Yield Contest:

- Entry fee decreased to $25 per entry
• Due date is extended to December 15th or 2 weeks post field harvest. Whichever comes first.
• Simplified entry form: Growers need only submit one form to enter the contest.
• Your harvest form is your entry form. This will allow growers to start harvest before making entry decisions
• Entry/Harvest form changed to support a fillable PDF format.

Click here for the contest rules and entry/harvest form.

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**Stripe Rust Found to be Present and Already Active in Wisconsin Winter Wheat**

Brian Mueller, Graduate Research Assistant, Department of Plant Pathology, University of Wisconsin-Madison
Damon Smith, Extension Field Crops Pathologist, Department of Plant Pathology, University of Wisconsin-Madison
Shawn Conley, Extension Soybean and Small Grains Agronomist, Department of Agronomy, University of Wisconsin-Madison

On March 29, 2017 the Field Crops Pathology Team observed the first signs of stripe rust in Wisconsin for the 2017 field season. Plots were located in the Wisconsin Winter Wheat variety trial in Sharon, Wisconsin. A sample was brought back to the Field Crops Pathology lab and placed on water agar to test for spore viability. The red arrow in figure 1 points toward a germ tube extending from the base of a urediniospore, indicating a viable spore. Very low levels of disease incidence and severity were detected in the plots scouted (Fig. 2 and 3). It is speculated that the pathogen that causes stripe rust overwintered on wheat leaves that remained green through the winter of 2016/2017. These same plots were scouted and confirmed to have active stripe rust infection this past fall (Fall 2016). However, application of fungicide was not recommended because stripe rust typically does not overwinter in the northern U.S. To our knowledge this is the first time that overwintering of the stripe rust fungus has been observed in Wisconsin winter wheat fields and is likely due to the mild winter season.

Stripe rust of wheat is caused by the fungus *Puccinia striiformis*. Stripe rust can be identified by orange/yellow pustules that typically occur in a striped pattern on the surface of the wheat leaf. However, under low severity, single, or very few sparsely spaced pustules may be observed. Subsequent infections can arise from a single pustule as seen in Figure 2. Disease is favored by prolonged periods of rain (or dew), high relative humidity, and cool temperatures ranging from 50 to 60 °F. For more information visit the [USDA Cereal Disease Lab website](https://www.ars.usda.gov/services/docs/1872)

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**Figure 1.** Urediniospores of the stripe rust fungus. Red arrow indicates a germinating, viable spore.

**Figure 2.** A single pustule of the stripe rust fungus on a wheat leaf.
Management of stripe rust includes using resistant cultivars and applying fungicides. Although it is too late to make decisions on a cultivar, scouting should be prioritized to fields where you know there was a susceptible cultivar planted. Considering the early start to the stripe rust epidemic, careful and frequent scouting will be critical this season. If stripe rust pustules are observed, consider sending samples to the University of Wisconsin Plant Disease Diagnostic Clinic for positive identification. If stripe rust is confirmed and it appears to be active, a fungicide application might be necessary.

While we typically don’t recommend an application of fungicide at the Feekes 5 growth stage, an application might be necessary this season if you find stripe rust in your wheat stand. This fungicide application could be tank-mixed with your last herbicide application. You should scout prior to this treatment, as it will only be necessary if active rust is observed. Products labeled for control of stripe rust can be found in publication A3646 – Pest Management in Wisconsin Field Crops. Many fungicides are labeled with excellent efficacy on stripe rust. So, find a product rated excellent, that also fits your pocketbook. Finally, remember to stick with labeled rates. Get out there and scout!

Wisconsin Soybean Marketing Board Announces Changes to the 2017 Free Nematode Testing Program

Shawn P. Conley, Soybean and Wheat Extension Specialist

Four out of every five animals on earth today is a nematode so it is not surprising that agricultural fields are home to many nematode species. Fortunately, most nematodes are beneficial to crop growth and soil health because their activities help decompose crop residues and cycle nitrogen and other nutrients. Pest nematodes do not threaten yield if their numbers remain low. The key to avoiding population explosions of nematode pests is to be proactive – know what the situation is and take appropriate measures when nematode numbers indicate a problem is brewing.

The WSMB sponsors free nematode testing to help producers stay ahead of the most important nematode pest of soybean, the soybean cyst nematode (SCN) (Figure 1). Eggs of SCN persist in the soil between soybean crops so a sample can be submitted any time that is convenient. The soil test report indicates the number of eggs in the sample and is useful for selecting the right variety for the next soybean crop. Retests of fields planted with SCN-resistant varieties over multiple years shows how the nematode population is responding to variety resistance and provides an early warning should the nematode population adapt to host genetics.

In 2017, the WSMB is again offering the expanded nematode testing program to include other pest nematodes in addition to SCN. These nematodes are less damaging
to soybean than SCN but can cause enough yield loss to warrant treatment. As is the case for SCN, there are no rescue treatments for nematodes so the primary purpose of this year’s soil test is to plan for next year’s crop. Soil samples collected in corn for nematode analysis have predictive value for explaining yield if they are collected before the corn V6 growth stage. Sampling early in the season will provide information about the risk potential for the current corn crop AND the next soybean crop.

The assays used to recover nematode pests other than SCN in soil require that the nematodes are alive. So, it is important to keep the samples moist and at least room temperature cool. Collecting a sample that includes multiple cores ensures that there will be plenty of root pieces to assay. It is not necessary to include live plants in the sample. The soil test report will indicate which pest nematodes are present and at what quantities and their damage potential to soybean and corn based on the numbers recovered.

In 2017 the WSMB will use PestPros Inc. as the diagnostic lab for nematode quantification. Please discard all old kits and order new ones at the email address below.

Free soil sample test kits are available now and can be requested at (freescntest@mailplus.wisc.edu).

For more information on SCN testing and management practices to help reduce the losses from this pest, please contact: Shawn Conley: spconley@wisc.edu; 608-262-7975 or visit www.coolbean.info.

Seed applied fungicides and insecticides have become a common component in modern soybean production for their broad spectrum of activity and the implementation of earlier planting dates. Recent studies have shown farmers can maximize their economic return on investment by lowering seeding rates alone (De Bruin and Pedersen, 2008; Epler and Staggenborg, 2008) or in conjunction with a fungicide + insecticide seed treatment (Gaspar et al., 2015). However, it is unknown if a target specific seed treatment, like ILeVO (fluopyram, Bayer CropScience AG), can be profitable when added to these seed treatment packages, especially when farmers make seed treatment choices during the winter when upcoming diseases and/or insect problems are unclear.

Response of Broad Spectrum and Target Specific Seed Treatments and Seeding Rate on Soybean Seed Yield, Profitability and Economic Risk (Above)

**Wisconsin Farm Technology Days Peterson Award**

John Shutske, 608-890-2949, john.shutske@wisc.edu

It’s not often that people can have their picture taken with a ten foot tall goat or be able to pose in a pen with pigs and not get dirty, but it was possible for people who visited the University of Wisconsin Integrated Pest Management (IPM) and Nutrient Management Programs (NPM) booth at the 2016 Wisconsin Farm Technology Days.

Using an iPad and some creativity to run a photo booth where visitors could pose and interact with images of farm animals, IPM/NPM staff demonstrated the computer power that simple mobile devices have and explained how the University of Wisconsin-Extension uses digital technology to be flexible and relevant to the needs of farmers, including developing apps for farmers.

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**Risk and Profitability of Lowering Your Soybean Seeding Rates in 2017**

Shawn P. Conley, Soybean and Wheat Extension Specialist

Earlier soybean planting coupled with increasing seed costs and higher commodity prices have led to a surge in the number of acres planted with seed treatments (Esker and Conley, 2012). Furthermore, the components and relative cost of various soybean seed treatments has broadened greatly. Recent studies have suggested that growers should consider lowering seeding rates to increase their return on investment.

Economic Risk and Profitability of Soybean Seed Treatments at Reduced Seeding Rates (Above)
“UW-Extension doesn’t manufacture giant farm machinery,” said Roger Schmidt, UW-Extension computer specialist at UW-Madison, “But we do create research and foster community relationships that help farmers reap bountiful harvests, earn more money and allow people to eat the best food the earth can grow sustainably.”

The IPM and NPM exhibit, which provided information about free smartphone apps developed for agriculture by these two programs, received the 2016 Donald R. Peterson Technology Transfer Award. Individuals recognized for their efforts with this display were Roger Schmidt, UW-Extension computer specialist at UW-Madison and Mimi Broeske, UW-Madison senior editor.

NPM and IPM mobile apps include Wisconsin’s Corn N Rate Calculator, N Price Calculator, Crop Calculators for Corn, NPK Credits – Manure and Legume Nutrient Credit Calculator, Soybean Replant Calculator, and an IPM toolkit. The apps are available for both Apple and Android devices.

The award was presented at the annual Wisconsin Farm Technology Days Board of Directors meeting in April 2017.

The Donald R. Peterson Award recognizes outstanding educational effectiveness and impact via an interactive exhibit and activities at Wisconsin Farm Technology Days. To receive this award, groups must successfully engage audiences around topics such as: effectively using new management tools, processes, or concepts; incorporating new technologies into a modern farm operation; or issues that challenge contemporary agriculture and our natural resource base.

The Donald R. Peterson Wisconsin Farm Technology (Progress) Days Technology Transfer Award was established in honor of Don Peterson, UW-Madison College of Agriculture and Life Sciences (CALS) Professor and Associate Dean. Peterson was Chair of the Board of Directors from 1975-1993 and Executive Director of Wisconsin Farm Progress Days from 1993-1998.

The Award memorializes Peterson’s diligent efforts to encourage CALS faculty and staff to convey the fruits of College research and knowledge to the public through Wisconsin Farm Technology Days.

Wisconsin Farm Technology Days 2017

The Wisconsin Farm Technology Days is the largest agricultural show in Wisconsin and one of the largest in the nation. The three-day outdoor event showcases the latest improvements in production agriculture, including many practical applications of recent research findings and technological developments. Each year, it is held in a different Wisconsin county – on a different host family farm.

Kewaunee County is excited to be hosting the 2017 Farm Technology Days. Kewaunee has diverse agriculture which provides 2,058 jobs, about 20.7% of the county’s workforce and contributes $423.9 million in economic activity, more than 25% of the county’s total economic activity. The county has more than 176,735 acres, or 81%, used as farming ground. This includes cropland, rangeland, pasture, tree farms, and farm forests. Sales of Christmas trees, fruits and vegetables, greenhouse, nursery and floriculture add strong agriculture impact totaling $2.1 million per year. Leading the list of agriculture impact is milk at $190 million per year followed by grain at $33.95 million per year.

Agriculture in the county is extremely diverse, and in addition to dairy and grain, includes a wide range of livestock and horticultural crops. The direct marketing of vegetables, meat and poultry, cheese, and fruits is a rapidly growing segment of Kewaunee agriculture.

Where: Ebert Enterprises, E5083 County Road K, Algoma, WI 54201

When: July 11-13, 2017

Find more info by clicking here.
Wisconsin Fruit News, Invasive Insects Supplemental Issue

Janet van Zoeren, Christelle Guédot, and Amaya Atucha, University of Wisconsin – Madison, Departments of Entomology and Horticulture

Click here for a supplemental issue on invasive insects of the Wisconsin Fruit News.

In it you will find information about:

• Spotted wing drosophila: end-up-season update
• Brown marmorated stink bug: end-up-season update

All newsletters will also be posted onto at the Wisconsin Fruit website, available at www.fruit.wisc.edu. There you will also be able to search by category or tag, to find crops and/or subject material of interest to you on a particular day.

UW-Madison/Extension Plant Disease Diagnostic Clinic (PDDC) Update

Brian Hudelson, Sean Toporek, Jake Kurczewski 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 March 25, 2017 through March 31, 2017.

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<th>Plant/Sample Type, Disease/Disorder, Pathogen, County</th>
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For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.

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Vegetable Crop Update January 14, 2017

Amanda J. Gevens, Associate Professor & Extension Vegetable Plant Pathologist

2017’s 1st issue of the Vegetable Crop Update is now available. In this edition, please find information on:

• Information on spinach downy mildew, seen this fall/winter on spinach in season extension systems
• An updated agenda for the UWEX/ WPVGA Grower Education Conference, Stevens Point, WI
• Info on the recently updated 2017 UWEX Commercial Vegetable Production guide for Wisconsin, the A3422 document. Please note that the guide now includes information on hops

It was very nice to see many of you at the Wisconsin Agri-Business Classic this past week in Madison. Thank you for all of those that supported and attended the meeting.

Click here to view this update.