Crop Diagnostic Training Center Workshop

July 25 at Arlington WI, Agricultural Research Station

The best of all workshops! This year our crop & pest management workshop and diagnostic troubleshooting workshop have been combined into a single day.

The day starts with 2 hours of multi-disciplinary agronomic topics and culminates with 6 separate diagnostic troubleshooting scenarios.

Late and Prevented Planting coverage factsheet

Paul D. Mitchell, Agricultural and Applied Economics, University of Wisconsin-Madison

This fact sheet quickly reviews crop insurance rules to remind returning growers and to help new growers understand late and prevented planting dates and options.

http://www.aae.wisc.edu/pdmitchell/CropInsurance/LatePreventPlant2017.pdf
Scouting for Soybean Seedling Diseases

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

The 2017 planting season has been frustrating for many farmers with frequent rains, wet soils, and cool temperatures. These conditions have resulted in slow, or no planting, for some farmers. To add insult to injury, these conditions are also conducive for many seedling diseases of soybean.

The Crop Protection Network, which the UW Field Crops Pathology program is a part of, has generated several useful publications for diagnosing and managing soybean seedling diseases.

The first publication is a full length fact sheet titled "Soybean Seedling Diseases." It also has a companion website found by clicking here. This publication can help you differentiate seedling diseases and also herbicide injury, both of which could be issues for many farmers this season.

Speaking of herbicide issues, the CPN has also generated a useful publication on using ILeVO® seed treatment on soybean. Many farmers in Wisconsin have considering using ILeVO® to manage sudden death syndrome and soybean cyst nematode. Farmers should be aware that it is well known that ILeVO® can cause some phytotoxicity to soybean that looks similar to a soybean seedling disease. A useful fact sheet on this phenomenon can be found by clicking here.

Figure 1. CPN-1008 “Soybean Seedling Diseases”

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Speaking of herbicide issues, the CPN has also generated a useful publication on using ILeVO® seed treatment on soybean. Many farmers in Wisconsin have considering using ILeVO® to manage sudden death syndrome and soybean cyst nematode. Farmers should be aware that it is well known that ILeVO® can cause some phytotoxicity to soybean that looks similar to a soybean seedling disease. A useful fact sheet on this phenomenon can be found by clicking here.

Figure 2. CPN-1016 “Soybean seed treatments: Questions that emerge when plants don’t”

Many farmers have elected to use a seed treatment (fungicide, insecticide, nematicide or combination) to protect their seed investment. This is a wise decision, especially considering the cool wet soils that many of us have planted into this season. However, just because a seed treatment was used, there still can be emergence issues. To aid in understanding these issues, the CPN has generated a webpage and fact sheet “Soybean Seed Treatments: Questions that emerge when plants don’t.”

Finally, if conditions remain wet, Phytophthora root and stem rot may affect soybean stands early to mid-season. The CPN has developed a webpage and PDF on this subject, which can be found by clicking here. The UW Field Crops Pathology program has also generated a similar fact sheet on Phytophthora root and stem rot that can be found by clicking here.

As always, if you have questions about diseases of soybean, or any field crop, please contact and we can assist in diagnosing and developing a management strategy.
Wisconsin Winter Wheat Disease Update – May 28, 2017

Damon Smith, Extension Field Crops Pathologist, Department of Plant Pathology, University of Wisconsin-Madison
Brian Mueller, Graduate Research Assistant, Department of Plant Pathology, University of Wisconsin-Madison

The Wisconsin Field Crops Pathology crew spent some time this past week scouting wheat and rating wheat variety trial plots, between planting soybeans and dodging rain storms. Despite the challenging week, the crew was able to get around to several sites and take a look at winter wheat.

Wheat ranges from fully emerged flag leaf to emerging heads across the sites visited. As predicted, stripe rust is progressing to epidemic levels on susceptible and moderately susceptible varieties (Fig. 1).

We were able to find many plots with stripe rust on the L2 leaf (leaf immediately below the flag leaf) with some varieties already showing 20% or more severity on flag leaves (Fig. 2). We were also able to find many varieties still showing no symptoms of stripe rust. We also have had several reports of disease-free winter wheat across the state. Further inquiry suggests that many did their homework last summer and fall, and chose varieties with excellent stripe rust resistance. This will more than pay for itself this season in fungicide spray savings.

We are quickly approaching head emergence and anthesis on many varieties in the state of Wisconsin. I predict that anthesis (flowering) will take place within the next week or so in Wisconsin. Farmers should focus on making a decision on fungicide application to control Fusarium head blight (FHB or scab).

At this point, I think farmers should hold off on a fungicide application specifically for stripe rust. The major focus for fungicide application on winter wheat in Wisconsin should shift to managing FHB. With this said, the two primary products that have performed well in Wisconsin for FHB, also perform well on stripe rust and are ranked excellent in the Small Grains Fungicide Efficacy Table. This means that spraying for FHB will also control stripe rust, as long as the stripe rust epidemic has not advanced to high levels on the flag leaves.

Currently, the Fusarium Head Blight Prediction Center is ranking much of the primary winter wheat growing area of Wisconsin at medium-to-high risk for FHB on susceptible varieties (Fig. 3, next page). Plenty of rain and adequate temperatures are making conditions ripe for FHB in the major wheat production area of the state.

Figure 1. Severe stripe rust on winter wheat prior to head emergence.

Figure 2. Stripe rust on a flag leaf of winter wheat.

We were able to find many plots with stripe rust on the L2 leaf (leaf immediately below the flag leaf) with some varieties already showing 20% or more severity on flag leaves (Fig. 2). We were also able to find many varieties still showing no symptoms of stripe rust. We also have had several reports of disease-free winter wheat across the state. Further inquiry suggests that many did their homework last summer and fall, and chose varieties with excellent stripe rust resistance. This will more than pay for itself this season in fungicide spray savings.
The next 7-10 days poses a critical time to make a decision for fungicide application to control FHB and stripe rust. The primary fungicides for control of FHB are Caramba and Prosaro. I would urge you to wait until anthesis has begun in your field before applying. We have observed poor control of FHB where application of these effective fungicides was made before anthesis. In fact, we have observed improved control of FHB and lower levels of DON in finished grain where fungicide application was delayed 4-5 days after the beginning of anthesis, compared to applications at the start of anthesis.

Data from a fungicide efficacy trial to support this observation can be found by clicking here and scrolling down to pages 16 and 17.

Also, remember that application of fungicides should be made no later than 6-7 days after the start of anthesis. After this time, fungicide efficacy on FHB is much reduced. Finally, DO NOT use any fungicide products that contain a strobilurin fungicide after the “boot” stage in wheat. Some studies have demonstrated that using strobilurin fungicides at, or after heading, can result in increased vomitoxin (DON) levels in finished grain. Get out there and SCOUT, SCOUT, SCOUT!

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**Wet weather field crop pests, millipedes and slugs**

Bryan Jensen, UW Extension and IPM Program

**Millipedes**

Because of the wet/cool weather, I’m sure a lot of people will be in fields focusing on corn and soybean emergence. Although there are many potential causes for poor stands, millipedes are often looked at as a potential pest. Millipedes are in the class Diplopoda and therefore, only somewhat distantly related to insects. Millipedes have two sets of legs on most of the body segments and usually feed on decaying plant materials. They are most common when field conditions are wet.

I rarely, if at all, think of millipedes as the primary cause of poor emergence. Rather, they may feed on decaying seeds/seedlings that are already compromised by other pests or environmental problems. However, they are easy to find close to the decaying seed and are often considered “guilty by association”. Although I will not rule out the possibility of millipedes, I would want to focus on all the other possibilities before settling on millipedes. Quickly jumping to a conclusion may prevent finding what the real cause is.

**Slugs**

Not all that unexpectedly, slug calls have started. Both soybean and corn are susceptible and once the field is planted, preventive options (tillage, residue control, rotation, not using a neonic seed treatment, seed furrow closure, etc.) are no longer available and focus must be on rescue. Unfortunately, relying on baits and other rescue treatments may not provide economical (or acceptable) control. An integrated approach using prevention is always preferable.

Non-chemical options including row cultivation isn’t always possible, reliable or practical. Effective weed control can help but is already part of your best management practices. Some people have tried spraying liquid fertilizer solutions at night with mixed results. I have had no experience with this practice but can see some problems including lack of replicated research, high costs and that multiple applications may be needed for a lethal dose. Control is by contact only, there is no residual control.

Insecticides will not work. Slug baits can be effective but given tight profit margins they might not be an option depending on severity of infestation.
Economic thresholds do not exist for slugs. Before baits are considered, **thoroughly read the label**. The metaldehyde-based baits labels that I have read **exclude** soybean use in Wisconsin. This is not obvious because you must read a footnote which indicates states that are approved for use. The Sodium Ferric EDTA containing product (Iron Fist) comes with precautions as well. Although labeled for corn and soybean production in Wisconsin, it must be applied between the rows at the seedling and later stages of crop development. Furthermore, its availability is restricted in some Midwestern states.

One of the best options available right now may be patience and the hope that summer-like dry weather will arrive.

UW IPM has a video about slug damage and scouting [https://www.youtube.com/watch?v=sgXL14zBEZw](https://www.youtube.com/watch?v=sgXL14zBEZw)

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**Weed Identification Series, 3 Biennial Thistles**

Mark Renz UW Madison Associate Professor and Extension Specialist, Chelsea Zegler UW Madison Associate Research Specialist

We wanted to emphasize Wisconsin’s common weedy biennial thistles in this weed identification series installment. While Wisconsin has dozens of different thistles, we have three relatively common biennial thistles that are considered weeds. Recall that biennial plants germinate and grow leaves only in the first year and then after overwintering produce a stem and flowers. Once flowering is complete the plant dies. It is important to distinguish these thistle from our perennial thistle (Canada thistle) which has plant parts that can last more than two years and result in dense patches that persist and spread.

Plumeless thistle is by far the most common of the biennial thistles in Wisconsin as it can be found throughout the state. In contrast musk thistle is more common in southern Wisconsin, but populations have been spreading north. Bull thistle, while common throughout Wisconsin, rarely forms large populations, but none the less can be problematic.

These three species are common to pastures and right of way areas, but have become more common in no-till fields over the past decade. These species can be difficult to differentiate from one another, but close examination of leaves and flowers will find unique characteristics that can help. To aid in identification we have provided a summary table along with side-by-side pictures.

Click below to download. There are 4 files.

- Plumeless Thistle ID
- Musk Thistle ID
- Bull Thistle ID
- Biennial Thistle Comparison table

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**Wisconsin Fruit News – season 2, issue 4**

Christelle Guédot, Entomology Specialist, UW-Madison and Amaya Atucha, Horticulture Specialist

In this issue of the newsletter, you can read about:

- Soil-borne diseases of fruit crops: Introduction
- IPM: Monitoring pest populations and action thresholds
- Plant Disease Diagnostic Clinic update
- Insect Diagnostic Lab update
- Spotted wing drosophila forecast for 2017
- Strawberry root weevil and Black vine weevil
- Cranberry degree-day map and update
- Controlling vine vigor by shoot thinnings
- Wine and table grapes developmental stages
- Grape insect pest scouting report — Grape plume moth
- Codling moth flight begins

Read or download here – [http://go.wisc.edu/pzxk8w](http://go.wisc.edu/pzxk8w)
Wisconsin Pest Bulletin 6/1/17

Volume 62 Issue No. 6 of the Wisconsin Pest Bulletin is now available at:

https://datcpservices.wisconsin.gov/pb/pdf/06-01-17.pdf

- Much of the state's corn still at high risk for black cutworm infestation.
- FORAGES & GRAINS: Alfalfa weevil larval populations continue to increase
- CORN: Spring flight of European corn borer moths underway
- SOYBEANS: Damage from slugs expected if wet weather persists
- FRUITS: Grape plume moth larvae appearing in southern and western WI vineyards
- VEGETABLES: Begin scouting for Colorado potato beetle eggs and small larvae
- NURSERY & FOREST: Assorted observations from this week's nursery inspections
- DEGREE DAYS: Degree day accumulations through May 31, 2017

Plant Disease Diagnostic Clinic (PDDC) Update, 6-2-17

Brian Hudelson, Sue Lueloff 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 May 27, 2017 through June 2, 2017.

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

FORAGE CROPS

Alfalfa, Root/Crown Rot, Pythium sp., Rhizoctonia sp., Fusarium sp., Outagamie

FRUIT CROPS

Cherry, Bacterial Canker, Pseudomonas syringae pv. syringae, Dane

VEGETABLE CROPS

Potato, Fusarium Dry Rot, Fusarium sp., Dane, Grant (WA)
Potato, Leak, Pythium sp., Grant (WA)
Potato, Pythium Stem Canker, Pythium sp., Kankakee (IL)
Potato, Soft Rot, Clostridium sp., Grant (WA)
Tomato, Cucumber Mosaic, Cucumber mosaic virus, Washington
Tomato, Tobacco Mosaic, Tobacco mosaic virus, Washington

Vegetable Crop Update No. 6 – May 31

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

- Late Blight and Early Blight Disease Forecast Updates
- National Late Blight Updates
- National Cucurbit Downy Mildew Updates
- Request for Soil Samples for Microbe Research

Follow us

Veg Crop Update 6 2017
The best of all workshops! This year our crop & pest management workshop and diagnostic troubleshooting workshop have been combined into a single day. The day starts with 2 hours of multi-disciplinary agronomic topics and culminates with 6 separate diagnostic troubleshooting scenarios.

Tuesday – July 25, 2017
Lunch is provided at noon
Tiered fee: $90 before 7/15/17, $100 after 7/15/17
Location: Arlington Ag Research Station
CCA CEU’s: 5.0*

Pigweed Species Identification & Control – Mark Renz, Extension Weed Science Specialist
• Is it pigweed? Waterhemp? Some other Amaranth species?
• This session will provide you with the tools to positively identify these troublesome weeds and discuss control options while considering herbicide resistance and recent technologies

Spray Drift Mitigation – Dan Heider, UW Integrated Pest Management Specialist
• Rain followed by more rain. When the rain stops, the wind seems to start with few good spray windows between. Are you confidently spraying on target?
• Nozzles and drift control additives will be demonstrated so you can really see what’s happening behind the spray boom

Diagnostic Troubleshooting – UW Specialists from multiple disciplines
• Fine tune your crop diagnostic skills in a fun and interactive setting. Small groups will rotate through field problems with UW Specialists role playing as farmers. Through digging up plants, asking questions and consulting references participants will make a diagnosis of the problem being observed and a recommendation for correction. Each participant will experience 6 separate diagnostic scenarios

Schedule:
8:30 - 8:50 registration
8:50 - 9:00 introduction/orientation
9:00 - 11:00 agronomic topics 1-2
11:00 - 12:00 troubleshooting sessions 1-2
12:00 - 12:45 lunch (provided)
12:45 - 2:45 troubleshooting sessions 3-6

Workshops begin in the Public Events Facility of the Arlington Agricultural Research Station. Be aware that this is not a “traditional” field day. Training sessions are designed to be in-field and hands-on. Therefore we advise that you come prepared for all types of weather.

*CCA CEU’s: Continuing education units/categories are subject to change pending approval from the Certified Crop Advisor Program.
Late and Prevented Planting Coverage and Replant Provisions for Wisconsin Farmers

Paul D. Mitchell, Agricultural and Applied Economics, UW-Madison
Office: (608) 265-6514 Email: pdmitchell@wisc.edu Web: http://www.aae.wisc.edu/mitchell/extension.htm

May 25, 2017

This bulletin quickly reviews crop insurance rules to remind returning growers and to help new growers understand late and prevented planting dates and options as this wet spring continues.

**Corn final planting dates**  **Soybean final planting dates**

- May 25
- May 31
- May 31 & June 5
- June 10
- June 15

**Key Dates**
For crop insurance, the final planting dates in Wisconsin differ by crop and from north to south. The dates are May 25 for corn for grain and May 31 for corn silage in the north and May 31 for corn for grain and June 5 for corn silage in the south. For soybean, the dates are June 10 in the north and June 15 in the south (see maps for your county). Acres planted after these dates are still insured, but farmers must notify their crop insurance agents, even if they do not have late and prevented planting coverage. Small areas do not trigger late and prevented planting; the area must exceed 20 acres or 20% of the unit’s acreage to qualify.

Explaining the options for a hypothetical case will help insured farmers understand their options. However, farmers should consult with their crop insurance agent so they clearly understand their specific options and the associated restrictions and implications.

**Assumptions:** You bought crop insurance with a yield history of 160 bu/ac for your corn and 40 bu/ac for your soybeans. With 75% Revenue Protection, your yield guarantees are 120 bu/ac for the corn and 30 bu/ac for the soybeans. Revenue guarantees are 120 bu/ac x $3.57/bu = $428.40/ac and 30 bu/ac x $9.73/bu = $291.90/ac. The final planting dates in your county are May 31 for corn, June 5 corn silage, and June 10 for soybeans. By May 31, you planted 250 acres of corn and by June 10, you planted 150 acres of soybeans, leaving 100 acres unplanted. You trigger Prevented Plant since at least 20 acres or 20% of the insured acres are affected.

**What are Your Options?**

1) Plant corn, corn silage, or soybeans late with a reduced guarantee
   a. Corn: guarantee reduced 1% per day for each day after May 31.
   b. Corn silage: guarantee reduced 1% per day for each day after June 5.
   c. Soybeans: guarantee reduced 1% per day for each day after June 10.

   **Example:** Suppose you planted all 100 remaining acres to soybeans on June 17 (7 days late). Your guarantee on these 100 soybean acres would be (100% – 7%) = 93% x $291.90/ac = $271.47/ac x 100 acres = $27,147. The guarantee on the 150 soybean acres planted on time is unchanged.

2) Take the full Prevented Plant (PP) indemnity equal to 60% of your guarantee.
   a. Corn: full PP indemnity = 60% x $428.40/ac = $257.04/ac x 100 acres = $25,704.
   b. Soybean: full PP indemnity = 60% x $291.90/ac = $175.14/ac x 100 acres = $17,514.

   **On these acres, you can plant a forage/cover crop (including establish alfalfa), but you cannot harvest or graze the forage/cover crop until after November 1.**
3) Take a partial Prevented Plant (PP) indemnity equal to 35% of your full PP indemnity
   a. Corn: partial PP indemnity = 35% x $257.04/ac = $89.96/ac x 100 acres = $8,996.
   b. Soybean: partial PP indemnity = 35% x $175.14/ac = $61.30/ac x 100 acres = $6,130.
   On these acres, you can plant any forage/cover crop you want and harvest as you want.

4) Leave the acres uninsured – you pay no premiums for these 100 acres, will receive no indemnities, but have no restrictions on planting & harvesting/grazing a forage or cover crop.

Comments
1) Acreage Limits: When you choose to claim Prevented Plant acres for a crop, your planted
   acres plus Prevented Plant acres for this crop cannot exceed the maximum acres planted of
   that crop in any of the last 4 years. In this example, the farmer has already planted 250 corn
   acres. If the farmer had planted at least 350 corn acres in any of the last 4 years, he could
   claim up to 100 acres for corn Prevented Plant indemnities. If instead the maximum the
   farmer had planted was 300 corn acres and 200 soybean acres in any of the last 4 years, he
   could only claim 50 acres for corn Prevented Plant indemnities and would have to claim 50
   acres as soybean Prevented Plant indemnities.

2) Alfalfa Establishment: Growers can establish alfalfa with or without a nurse crop on
   prevented plant acres (options 2 and 3). If alfalfa is planted by July 1, you can insure its
   2018 production with a 2018 Forage Production policy if the stand is adequate on May 24,
   2018. If alfalfa is planted August 1 - 24, 2017, you can insure against winter kill with a 2018
   Forage Seeding policy written agreement.

3) Yield History Impacts: Late planted crops (option 1) use actual yields for future yield history
   calculations. Acres claimed for reduced Prevented Plant (option 3) use 60% of the yield
   history from planted acres for future yield history calculations. Acres claimed for full
   Prevented Plant (option 2) and uninsured acres (option 4) generate no yield history.

4) Agronomic Considerations: This bulletin only summarizes crop insurance rules – agronomic
   considerations such as switching corn maturity dates or from grain to silage should be part of
   the decision. See the UW Extension corn and soybean agronomy web page:

Replant Provisions
If a crop stand is damaged early in the season so that the projected yield is less than 90% of the
yield guarantee, a farmer can receive an indemnity for part of the actual cost of replanting. A
claim must be filed and an insurance adjuster must inspect the stand. The affected area must
exceed 20 acres or 20% of the unit’s acreage. The maximum indemnity is the price election
multiplied by the 20% of the yield guarantee, up to 8 bu for corn, 3 bu for soybeans and 1 ton for
corn silage. The replanted crop has the same production guarantee as for the original plant date
(i.e., no reduction for late planting is imposed).

Replant Example
Suppose a 200 acre unit of corn for grain has a yield guarantee of 150 bu/A x 200 A = 30,000 bu
with a $3.57/bu price election. All acres are planted before May 31, but cool wet weather
reduces the stand to less than 20,000 plants/A on 80 acres of the unit. The farmer can replant
these 80 acres to corn and keep the 150 bu/A yield guarantee, even if the corn is replanted after
May 31, and receive an indemnity of up to $2,284.80 (8 bu/A x $3.57/bu price election x 80
acres) towards the actual cost of replanting these acres.