A new factsheet has been written by UW Entomologists about Insect and Mite Pests on Field Grown Hemp in Wisconsin. It includes 14 pages of pest profiles providing basic information for identification, life cycle and damage symptoms.

Seventeen insect and mite pests are featured and are grouped according to type of damage (piercing-sucking, stem boring and defoliators). Additionally, we have provided known management practices if available. I admit, there is a lot to learn about insect and mite management on hemp. However, be cautious when recommending an insecticide. Any pesticide used on Wisconsin grown hemp must be licensed and approved by the Wisconsin Department of Agriculture and Consumer Protection (DATCP).

A current list of DATCP approved pesticides can be found on their website. If a pesticide is not found on their list it cannot be used even if approved in another state. Furthermore, if a pesticide has the same active ingredient but is not specifically listed it cannot be used. Likewise, OMRI approved pesticides cannot be used if not specifically listed by DATCP. What about “home remedies, snake oils or other concoctions” for controlling insects? The simple answer is NO. If a pesticide, and yes they are considered pesticides, is not on this list it is illegal to use in Wisconsin.

This list is subject to change as new label information becomes available. Consult the current list before any pesticide recommendations are made and remember to read and follow all label instructions.
BADGER CROP CONNECT WEBINAR SERIES BEGINS MAY 20

Badger Crop Connect, timely crop talks with state specialists

Bi-weekly webinars, starting May 20, 12:30 PM – 1:15 PM

Register by 5:00 PM on May 19: https://go.wisc.edu/jn9z00

Badger Crop Connect is a new webinar series from the University of Wisconsin-Madison Extension Crops and Soils Program to bring farmers and agronomists timely crop updates for the state of Wisconsin. This will be a bi-weekly webinar starting May 20th and continuing through September. Every webinar will have CCA CEUs available.

May 20th agenda (approximately 45 min total):

- **Early Season Weed Control Considerations for Corn and Soybeans**, Rodrigo Werle, UW-Madison Extension Weed Specialist
- **GDD and Emergence – Assessing and Evaluating Corn Stands**, Joe Lauer, UW-Madison Extension Corn Specialist

CCA CEUs available for the first webinar are 0.5 Integrated Pest Management and 0.5 Crop Management. Register for this free webinar at: https://go.wisc.edu/jn9z00. The webinar link is emailed the morning of the webinar to all those that pre-registered.

You may direct questions to UW-Madison Extension Agriculture Educators Mike Ballweg michael.ballweg@wisc.edu or Dan Marzu dan.marzu@wisc.edu

This program is sponsored by University of Wisconsin-Madison Division of Extension with special support from the following Extension Educators: Mike Ballweg, Sheboygan County, Dan Marzu Lincoln and Langlade Counties, Nick Baker Rock County, Josh Kamps Lafayette County, Jerry Clark Chippewa County and Kimberly Schmidt Shawano County.

BLACK CUTWORM PREPARATION

BRYAN JENSEN, DEPT. OF ENTOMOLOGY AND INTEGRATED PEST MANAGEMENT PROGRAM

The Wisconsin DATCP Pest Bulletin has reported a few Wisconsin locations with intense black cutworm moth captures, as have several other Midwest states. Although trap captures do always translate into field damage, it does give us advance warning of when to start field scouting.

Black cutworm larvae (pictured next page) are a little difficult to identify because of the lack of markings which jump out at you. Identification can be made by looking at the larvae and the damage they cause. Black cutworm larvae are shades of gray to near black.

Small larvae damage emerging corn by feeding on leaves or cutting plants at soil level. This damage will not reduce the plant stand until the corn and larvae are more mature. At that time, larger larvae will burrow into the corn below...
ground level and feed at the growing point. Furthermore, a single larva may feed on several plants before pupating. This obviously reduces plant stand. Above ground symptoms at this point are often called dead-heart or wilted whorl because the newly emerging leaves are wilting.

The value of recognizing black cutworm injury when both larvae and corn are small is that it gives you time to prepare and react if/when needed. Once corn has reached the V5 stage of development it is more resilient to feeding and larvae tend to remain on a single plant.

The DATCP Pest Bulletin predicts a June 3 date for cutting plants in southern Wisconsin and is based on arrival of the migrating adults and expected accumulation of degree days. Remember that is an estimate based on the best information currently available. Actual weather and planting date should also be considered. My preference is to “sleep with the light on” and start spot checking before that date.

Where to scout

You can increase your chances of finding cutworms by scouting fields with significant winter annual weed populations, broadleaf cover crops and corn planted after soybean. Low lying, areas of field and near streams may also increase your chances of finding damage. Fields with above ground Bt traits may suppress black cutworm feeding. Do not ignore these field when scouting. Consult the 2020 Handy Bt Trait table for guidance on trait packages.

The threshold for treating black cutworm is to consider treating when 2-5% of the plants are damaged. Size of corn should be considered as well as size of larvae. If cutworm larvae are larger than ¾ to 1 inch please consider what your “preventable yield loss” will be. Suggesting most of the yield loss has already occurred and your rescue treatment may not provide a return on investment.

Larvae are not considered mobile so spot treating fields should be considered if damage is isolated. Whole field treatments should be based on accurate field scouting. Walk fields in a W-shaped pattern and examine 50 consecutive plant at each of 5 random locations. If that seems like a lot of work, remember that you don’t make nutrient recommendations based on one soil core. To view insecticides labeled for black cutworms on corn consult A3646, Pest Management in Wisconsin Field Crops 2020.

Finally, dingy cutworms are a black cutworm look-a-like but are not considered an economic pest on corn. Dingy cutworms can be found in mixed population of black cutworm or all by themselves. They overwinter and larvae may appear to be further along in their development.
development than black cutworms, so don’t get too excited if you find larger than expected cutworms. Unlike black cutworm they are consider a “climbing” cutworm. That is, damage is usually confined to leaf feeding not cutting. Identifying characteristics are best seen on larger larvae and may require a handlense. Each species will have 4 black “tubercles” or spots/segment on their backs. On dingy cutworms these tubercles will be similar in size. On black cutworms the two tubercules closest to the head will be smaller than the tubercules to the rear (See picture on previous page).

TIMELY WHEAT DISEASE MANAGEMENT VIDEOS AND WHEAT FUNGICIDE INFORMATION

DAMON SMITH, EXTENSION FIELD CROPS PATHOLOGIST, DEPARTMENT OF PLANT PATHOLOGY, UNIVERSITY OF WISCONSIN-MADISON

Winter wheat in Wisconsin is finally starting to move along in growth stages. Warmer weather is helping to increase tillering. As wheat begins to move through growth stages, diseases and disease management will begin to be of concern.

To assist in making wheat disease management decisions in Wisconsin, we have developed a 3-video series on the subject. Each video talks about making fungicide application decisions at the critical growth stages in for management in Wisconsin.

For information about fungicides and fungicide efficacy for winter wheat diseases, you can check out the “Fungicide Efficacy for Control of Wheat Diseases” fact sheet on the Crop Protection Network Website. Fact sheet A3878 – Fungicide Resistance Management in Corn, Soybean, and Wheat in Wisconsin has also been updated and available by CLICKING HERE.

Local data from fungicide efficacy trials in Wisconsin are also available on the Wisconsin Fungicide Test Summary Page. These trials date back to 2013 with the latest data from 2019. Be sure to scroll all the way through the documents as the wheat trials generally are listed toward the end of the documents.

Finally, don’t forget to get out and Scout, Scout, Scout to best make your in-season wheat disease management decisions!

The video links can be found below:

Winter wheat in-season disease management (part 1) https://youtu.be/mGebymFnxxo

Winter wheat in-season disease management (part 2) https://youtu.be/nc94ZuVz8PM

Winter wheat in-season disease management (part 3) https://youtu.be/8cvtITqFmMq
EARLY SEASON SOYBEAN IRRIGATION

AUTHORED BY EMMA MATCHAM AND SHAWN P. CONLEY

Did you know that roughly 500,000 acres of WI cropland are irrigated? Interestingly, most of WI irrigated land is used for vegetable (potato, sweet corn, etc.) or seed corn production. You might notice that soybean is not highlighted on the preceding list, however soybean is frequently grown in rotation or used as a “set up” crop with potatoes and corn under these irrigation systems.

Given the Covid-19 crisis we are seeing more irrigated vegetable production going to other crops such as soybean. Here are some things to keep in mind for your early-season soybean irrigation planning.

If you have soybean planted under irrigation this year, the good news is that you can use the same irrigation planning tools you use for other crops to grow a great soybean crop. The Wisconsin Irrigation Schedule Planner is designed for a wide range of crops including soybean, potato, sweet corn, field corn, alfalfa, and more! Find out more about WISP and evapotranspiration data here: https://fyi.extension.wisc.edu/cropirrigation/wisconsin-irrigation-scheduling-program-wisp/

If you’ve already planted but your soybeans aren’t up yet: Phew… you just missed the cold weather! However, keep an eye out for crusting, especially if you got hit with heavy rains last week. On sandy soils with thin crusts, soybeans can usually break the crust on their own. But, if your crust is thicker or you’re on finer soils, you can use a shallow rotary hoeing or even apply some water to help get the beans up.

If you’ve planted and your beans are up: cold temperatures around the state were largely either not prolonged enough or cold enough to damage most emerged soybeans, but microenvironments exist and it never hurts to check. This video shows you what to check for regarding early season damage symptoms, including freeze.

If you discovered that you have frost damage but don’t know if you should replant, remember a stand of ~100k plants/acre at harvest is enough to maximize yield in most situations. Furthermore, our data shows that soybean stands as low as 50k plants/acre typically don’t require a replant. Here’s an article to help you make that choice: Soybean Replant Decisions: Just the Facts Jack.

If you’re ready to plant: and the weather looks dry in your area over the next few weeks. In order to get soybean out of the ground, seeds need to imbibe water and start germinating. Be prepared to provide 0.2-0.5 inches of water to moisten soils to a depth of around 6 inches, which is the length of soybean roots at growth stage VE.
Moving into the early season, here’s some additional information to keep in mind. Most crops begin to experience moisture stress at around 50% soil water deficit, but soybean can handle drier conditions during vegetative growth and flowering without seeing yield decreases. Lyndon Kelley at MSU suggests that you can reach a 75% soil water deficit before R3 (pod formation) and still not experience yield loss.

In Nebraska, and irrigated finer soils, Jim Specht recommends withholding water until soybeans reach the R3 growth stage.

In Wisconsin we’re primarily irrigating on coarse sandy loams that simply cannot hold substantial water reserves, so withholding irrigation entirely until R3 isn’t typically advisable. Instead, consider setting your deficit threshold somewhere between 50 and 75% without impacting your final seed yield.

Beyond reducing the energy and water demands of your soybeans, there might be some side benefits to reducing early-season irrigation. A soybean crop that is exposed to extreme early season irrigation tends to invest less energy in their root systems and instead grow tall and leafy, making them more susceptible to lodging and diseases like white mold.

Stay tuned as we will continue this conversation about irrigating soybean when we approach R3 (pod formation) soybean.

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**EARLY SEASON SCOUTING WHEAT IN WISCONSIN**

DAMON SMITH, EXTENSION FIELD CROPS PATHOLOGIST, BRIAN MUELLER, ASSISTANT FIELD RESEARCHER, DEPARTMENT OF PLANT PATHOLOGY, UNIVERSITY OF WISCONSIN-MADISON

The Badger Crop Docs have started scouting wheat in south-central Wisconsin over the past few days. In general the crop needs some heat and is moving slow. However, the overall health looks good.

The mild winter of 2019/2020 was needed as a lot of the wheat was planted late and into less than ideal conditions last fall, due to the extremely wet weather. The mild winter spared stands that weren’t well established, including some of our own research plots. Most fields we have been in are still tillering.

No visible disease is present in any of the fields we have scouted. However, it will be important to keep visiting fields and scout. Also be sure to pay attention to local extension and follow our blog to keep up to speed on any developments as we move forward. The biggest disease concerns for Wisconsin wheat will be stripe rust and Fusarium head blight. You will want to be prepared to manage these diseases if they should become problematic. You can keep track of the status of these diseases nationally by visiting the Stripe Rust Ag Monitor and the Fusarium Head Blight Risk Tool. The key to managing both diseases is to catch them before they arrive. Both of these resources can be used to help you anticipate the arrival of these diseases in your field. Continue to check back here regularly for more reports and scout, scout, scout!
**UPDATED! FUNGICIDE RESISTANCE MANAGEMENT IN CORN, SOYBEAN, AND WHEAT IN WISCONSIN**

MIMI BROESKE, NUTRIENT AND PEST MANAGEMENT PROGRAM, DAMON SMITH, EXTENSION FIELD CROPS PATHOLOGIST, DEPARTMENT OF PLANT PATHOLOGY, RICHARD PROOST, REGIONAL AGRONOMIST, NUTRIENT AND PEST MANAGEMENT PROGRAM, UNIVERSITY OF WISCONSIN-MADISON

Updated for 2020! Fungicides are important tools for managing plant diseases in corn, soybean, and wheat. Unlike insecticides and herbicides that are used to kill insects and weeds, fungicides act as a barrier to protect healthy plant tissues from infection by fungi. But resistance to fungicides can become a real problem if not managed well.

This 8 page publications has background information about resistance, reviews the relevant FRAC codes, management guidelines and has two handy tables that list fungicides by FRAC code and registered crop.

**NEW! COVER CROP SELECTION CARDS**

The UW-Madison Nutrient and Pest Management Program has two new cover crop selection cards: one for Northern Wisconsin and the other for Southern Wisconsin. Each card has guidelines and seeding rates for both In-Season Cover Crop Establishment into Corn Grain or Silage and Cover Crop Selection Following Corn Grain or Silage.

The cards are available in print and also can be downloaded.

https://ipcm.wisc.edu/download/pubsNM/CoverCropSelection_Northern.pdf
https://ipcm.wisc.edu/download/pubsNM/CoverCropSelection_Southern.pdf

**WISCONSIN VEGETABLE CROP UPDATES FOR MAY 4, MAY 11**

AMANDA GEVENS, ASSOCIATE PROFESSOR & EXTENSION SPECIALIST, POTATO & VEGETABLE PATHOLOGY, PLANT PATHOLOGY DEPARTMENT

Vegetable Crop Update newsletter for 2020: A newsletter for commercial potato and vegetable growers is prepared by the University of Wisconsin-Madison vegetable research and extension specialists

[Wisconsin Vegetable Crop Update blog site](https://ipcm.wisc.edu) where you'll find updates through-
out the year. Direct links here to the most recent issues:

Vegetable Crop Update #5
Vegetable Crop Update #4

WISCONSIN PEST BULLETIN, MAY 14

KRISTA HAMILTON, ENTOMOLOGIST, WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

Volume 65 Issue No. 3 of the Wisconsin Pest Bulletin is now available at: (9 pages)


This Week’s Weather & Pests

Record-breaking cold weather with multiple widespread freezes threatened Wisconsin crops during the week. Below-normal temperatures prevailed and a hard freeze extended across the entire state May 8-11 as overnight lows plummeted to the 20s from Kenosha to Superior. The subzero temperatures damaged some seedling corn, fruit trees, garden plants and cold-sensitive ornamentals, although the slow rate of plant development and emergence this spring helped mitigate the potentially disastrous impact of the cold snap. Brisk conditions persisted through mid-week before milder weather returned, allowing fieldwork to resume at the fastest pace in over five years. After a period of rapid planting in late April and earlier this month, more than 59% of this year’s intended corn acres have been sown, 47 percentage points or 24 days ahead of last year and 20 points or one week ahead of the long-term average.

NEW PLANT DISEASE DIAGNOSTICS CLINIC LISTSERV

The UW-Madison Plant Disease Diagnostics Clinic (PDDC) provides expertise in diagnosing plant diseases, and information on plant diseases and their control to agricultural and horticultural producers and businesses, as well as home gardeners, throughout the state of Wisconsin. If you are interested in receiving regular updates on the educational materials and programs provided by the PDDC, please email Brian Hudelson at pddc@wisc.edu to have your email address added to the new clinic listserv, “UWPDDCLearn”. This listserv will provide announcements of when new content is posted to the PDDC website (https://pddc.wisc.edu/), including (but not limited to) new and revised University of Wisconsin Garden Facts/Farm Facts/Pest Alerts fact sheets, the Wisconsin Disease Almanac (a weekly summary of diagnoses made at the PDDC) and monthly clinic web articles. The listserv will also provide announcements about upcoming PDDC outreach programs. The PDDC also provides similar updates and information via Facebook and Twitter @UWPDDC for anyone who prefers to receive information via these platforms. The PDDC is part of the Department of Plant Pathology in the College of Agricultural and Life Sciences at the University of Wisconsin-Madison, as well as the University of Wisconsin-Madison Division of Extension.