2020 WISCONSIN HERBICIDE MODE OF ACTION CHART IS ONLINE

The Nutrient and Pest Management program and the Wisconsin Cropping Weed Science program have recently updated the Wisconsin herbicide mode of action chart. This publication provides herbicide mode of action, group number, site of action, chemical family, active ingredient, and example trade names for herbicides currently registered in Wisconsin. The second page of the chart details registered herbicide combination products in Wisconsin including the trade name, active ingredients, trade name examples included in the premix, and site of action group.

With the widespread occurrence of herbicide-resistant weeds, it’s important that farmers and crop advisors select effective herbicides from multiple sites of action. The intent of this publication is to help farmers and crop advisors understand the different sites of action and products registered in Wisconsin and assist with their herbicide selection.

We would like to thank our industry partners for providing feedback to improve the 2020 Wisconsin Mode of Action Chart.

The full 2020 Herbicide Mode of Action chart can be found here: https://ipcm.wisc.edu/download/pubsPM/Herbicide-Mode-of-Action.pdf

More info on the Wisconsin Cropping Weed Science program can be found here: http://www.wiscweeds.info/
CONSIDERATIONS OF LANDSPREADING MILK

Some Wisconsin dairy farmers have been asked by their processors to withhold delivery of milk, resulting in the need for milk or milk/manure mixtures to be applied to cropland. To help farmers who are—or may soon be—facing this situation, UW–Madison Division of Extension, the College of Agricultural and Life Sciences, and the UW Nutrient & Pest Management (NPM) Program, along with partner agencies are providing resources to assist farmers in making decisions.

Consideration of Landspreading of Milk webinar and presentation slides. The webinar was hosted on April 7 and the topics covered were:

- **Where are we now, and why we are here?,** Mark Stephenson, UW–Madison Department of Agricultural and Applied Economics, Center for Dairy Profitability, and Division of Extension
- **Nutrient availability, agronomics, and water quality issues associated with landspreading milk,** Carrie Laboski, UW–Madison Department of Soil Science, and Division of Extension
- **Applicable DATCP and DNR rules/regulations for landspreading milk,** Aaron O’Rourke, Wisconsin DNR
- **Managing milk in manure storage, handling, and treatment systems,** Becky Larson, UW–Madison Department of Biological Systems Engineering, and Division of Extension

The full recording of the webinar and additional information relating to this can be found at the following website along with a UW Nutrient & Pest Management Program publication that addresses agronomic and environmental considerations in emergency spreading of milk and milk/manure mixtures.

https://fyi.extension.wisc.edu/covid19/2020/04/08/considerations-for-landspreading-milk/

CONTROL YOUR WEEDS TO REDUCE PRODUCTION COSTS IN 2020 AND BEYOND

NICHOLAS ARNESON, UNIVERSITY OF WISCONSIN-MADISON CROPPING SYSTEMS WEED SCIENCE OUTREACH SPECIALIST, DANIEL H. SMITH, SOUTHWEST REGIONAL AGRONOMIST- NUTRIENT AND PEST MANAGEMENT PROGRAM, UNIVERSITY OF WISCONSIN-MADISON, RODRIGO WERLE, UNIVERSITY OF WISCONSIN-MADISON CROPPING SYSTEMS WEED SCIENTIST AND EXTENSION SPECIALIST

Top Five Reasons to Invest in Your Weed Control Program

• An Ounce of Prevention is Worth a Pound of Cure: Preventing early season weed competition is essential to optimize yield potential. Preventing the establishment of herbicide-resistant weeds is often less expensive than trying to control them after the fact.

• Not in Your Fields?: Be aware that herbicide resistance is widespread in Wisconsin (for more information see WiscWeeds blog posts: Wisconsin Waterhemp Herbicide Resistance Project Update and An Overview of Herbicide Resistance in Wisconsin).

• Zero Tolerance Approach: No Seed = No Weed: Troublesome weeds such as waterhemp, Palmer amaranth, and giant ragweed can produce a vast amount of seeds. One plant turns into few, while few can turn into an infestation within a few growing seasons.

• Don’t Forget About the Little Guys: Each year presents new challenges and potential for new problem weeds; a neglected weed species today could become the problem weed of tomorrow. For example, we have seen marestail (aka horseweed) become an emerging problem weed as more growers switch to no-till.

• There is No Silver Bullet: Crop rotation provides additional chemical control options. Diversifying and mixing effective herbicide sites of action can delay herbicide resistance. Growers should always adopt integrated weed management strategies to lower additional selection for weed herbicide resistance.

Top Ten Ways to Control Weed Control Costs

• Know the troublesome weeds in each field and target management practices towards controlling these weeds.
• Calibrate and perform preventative maintenance to application equipment: calibrated equipment ensures the appropriate application rate is being delivered and preventative maintenance ensures application equipment will perform as expected. Proper applications minimize the potential for poor weed control or resistance selection if lower rates were delivered and alleviates potential carryover concerns if higher rates of herbicides with soil activity were unintentionally applied.

• START CLEAN with the use of pre-plant cultivation or effective chemical burndown and STAY CLEAN with the use of an effective soil residual herbicide program (DON’T CUT RATES). Controlling troublesome weeds early in the season is often more cost-effective than managing them POST-emergence later in the season.

• Target effective POST-emergence applications when weeds are small (<< 4 inches) to ensure adequate coverage and the highest level of control.

• Do your homework: Shop around and find the best prices. Compare prices of premixes with mixing brand and/or generic products. Always check the labels and run a jar test to evaluate the tank-mix compatibility before mixing.

• Promote good agronomics: the faster the crop makes canopy, the better it will compete with weeds.

• Utilize effective crop rotations to improve diversity of weed control options, application timings, and additional competition. For example, including winter wheat in a corn-soy rotation can “trick” weeds with providing crop canopy competition at a different time of the season.

• The use of cover crops can directly compete with fall-emerging and early spring-emerging weeds while also providing residue to suppress weeds emerging during the growing season.

• Prevent weeds from going to seed: no seeds added to the seedbank = fewer weeds to manage in the future.

• Clean equipment: prevent field to field spread of weed seeds and/or rhizomes. Be strategic when selecting tillage/harvest sequence. Start with clean fields (or with no suspected resistance) and move to infested (suspected/confirmed resistance) last.

Additional useful resources to help guide weed management decisions:

Residual Control of Waterhemp with PRE-emergence Herbicides in Soybean
Herbicide Comparison for Residual Waterhemp Control in Corn
2018 Wisconsin Weed Science Research Report
2019 Wisconsin Weed Science Research Report
Pest Management in Wisconsin Field Crops—2020
Wisconsin Herbicide Mode of Action Chart
Herbicide Rotational Restrictions for Cover and Forage Cropping Systems
THOUGHTS ON TRANSITIONING A COVER CROP INTO A CASH GRAIN CROP

SHAWN P. CONLEY, SOYBEAN AND WHEAT EXTENSION SPECIALIST, DEPARTMENT OF AGRONOMY, UNIVERSITY OF WISCONSIN

My grandfather (whom I nicknamed Fudd), left school after the 8th grade due to farm obligations and may not have had the largest vocabulary nor could write in any legible form (we always teased him that he was a M.D.), but he could rattle off math and markets like no one’s business. Today farmers are running their own calculations and right now, corn and soybean margins are tight to say the least. A common question I have received over the last few days is how we can transition our cover crop acres into cash grain acres. Here are a few thoughts to ponder:

Is it legal?
- Determine if you have enrolled in any programs or cost-share that prohibit the sale of said crop.
- Check to see if there are any plant back restrictions due to previous herbicide or other pesticide use that limit the sale of said grain crop or livestock use of straw for feeding or bedding.
- Verify if the seed source has limits for sale due to PVP or genetic licenses.

What cover crop specie(s) did you plant?
- Is this a cover crop mixture or a single species?
- A cover crop mixture will be difficult to manage for grain yield and straw yield and quality. We can only recommend considering transitioning your cover crop to a grain crop if it is a monoculture cover crop.
- Is it rye or wheat?
- Do I have a market for rye if I keep it for grain? See “Is it legal?”.
- Do I have a market for the rye straw?

What is your cost of production and required yield potential to actually make money? The common numbers I have floated are 90 bushels/acre of grain and 2 ton/acre of straw for wheat. For rye, the yield goals would be similar if not greater based on rye grain and straw price/value. Here are a few agronomic decisions that impact this threshold. These are suggestions generally for wheat. Rye we expect would be similar.

Planting date matters: In WI, we start to lose yield after the last week in September at ~1 bu/acre/day.

Here are a few scenarios to ponder:
Scenario #1. Drilled cover crop on October 15th and seeding rate was in-
creased accordingly. There is a good chance we will hit our yield mark. If the
cover crop was drilled, but not planted in a standard narrow row spacing (7.5”),
(grain and straw yields may be lower and weed control may be more challeng-

Scenario #2. Broadcast and lightly worked-in cover crop in mid-November.
Poor chance we will hit our grain yield mark.

Scenario #3. Flew on cover crop into established corn or soybean before leaf
drop. If you have less than 12 plants per square foot…tear it up…. poor chance
you will hit your grain yield mark.

Scenario #4. Planted in August on prevent plant acres or following another
small grain (oat or winter wheat). We don’t normally recommend a small grain
followed by small grain but typically you can get by in year #2.

- Things to consider here: If you are selling for grain to an elevator watch out
mixing grains. There is a good chance volunteers will come through and
dockage can occur.

- Planting too early will put your crop at risk for Barley Yellow Dwarf Virus
(BYDV). If the crop looks even and does not have irregular patterns across
the field or in pockets you are likely good to go.

For more information on establishment questions: Top 8 Recommendations for
Winter Wheat Establishment in 2019

Nitrogen timing matters. Get out there as soon as the ground is fit.

- For more information: Factors to Consider While Assessing Your 2019 Win-
ter Wheat Crop Stand and Spring Nitrogen Timing

Weed management matters. The value of this crop will be in both grain yield
and straw yield and quality. Do not let the weeds get out of control. This is
especially true if this was on prevent plant acres. Pay attention to herbicide
labels for both crop growth stage and weed height restrictions. We don’t have
many options for weed control in WI small grains. Here are a few tools to help
in these decisions:

Pest Management in Wisconsin Field Crops
High Value Straw and Weedy Wheat…What Do I Do?

Disease management matters for both grain and straw yield. Disease man-
agement is always a huge consideration in small grain production systems.
This would even be more evident if this is a second year of small grain on small
grain. We recommend scouting and watching the bottom line closely. The
Feekes 5 timing that is often tied with a herbicide application is frankly a waste
of money in WI unless significant early-season disease pressure is noted. We
recommend scouting and estimating disease pressure at Feekes 9 (flag leaf)
or Feekes 10.51 (anthesis or flowering). We have also measured an increase in
straw yield (~0.5 tons of dry matter) with the Feekes 10.51 timing for fusarium
head blight (FHB) or scab. Here are a few tools to help in these decisions:

BadgerCropDoc
2019 Integrated Wheat Management Selected Inputs Interaction Trial
Results of Intensive Winter Wheat Management 2019

By the way my grandfather nicknamed me Finkle, after Mr. Weatherman Earl Finkle. His reasoning for this was that I was correct almost as often as he was…. LOL!!

2020 WISCONSIN CCA OF THE YEAR IS BILL PAGE

BRYAN JENSEN, DEPT OF ENTOMOLOGY AND DIVISION OF EXTENSION

On behalf of the WI CCA Board, we would like to recognize and congratulate Bill Page as the 2020 WI CCA of the Year! When you get a chance please congratulate Bill on his accomplishments.

Bill, a graduate of UW-River Falls, is currently a Sales and Purchasing Agent for InSight-FS in Antigo. Bill’s professional career has spanned 4 decades and included growing potatoes on the family farm. Undoubtedly that farm experience was instrumental during his career with FS. A 40+ year career with the same company is remarkable but so is 40+ years at the same location! Imagine the contacts, clients, colleagues and especially friends that Bill has accumulated over that time.

Bill works closely with growers, researchers and approximately 45 full time and 30 seasonal staff members. His work with the Next Gen Precision Ag Program includes GPS soil sampling, mapping, yield monitoring, variable rate planting and data tracking. The 4R Nutrient Stewardship concept certainly applies to his sustainable recommendations designed to help growers reach their goals.

Projects Bill has also with ResponsibleAg Audits, Sprayer Applicator Simulator and development of Pollinator Habitat for the FS system.

The board would also like to recognize Steve Peterson for his time and efforts in nominating Bill.

ENLIST E3 SYSTEM IN 2020- WHAT WE THINK APPLICATORS SHOULD KNOW

RODRIGO WERLE, UNIVERSITY OF WISCONSIN-MADISON CROPPING SYSTEMS
WEED SCIENTIST AND EXTENSION SPECIALIST

Farmers around Wisconsin and across the Midwest are getting prepared to hit the ground running when the time comes. A recent survey conducted by the UW-Madison Cropping Systems Weed Science Lab provided interesting insight of how Wisconsin farmers intend to adopt the novel soybean herbicide trait technologies (RR2YX, LLGT27, and Enlist E3).

To view the full article, click below.

WSMB FREE SOYBEAN CYST NEMATODE TESTING PROGRAM

ANN MACGUIDWIN, DAMON SMITH AND SHAWN P. CONLEY

The WI Soybean Marketing Board (WSMB) sponsors free nematode testing to help producers stay ahead of the most important nematode pest of soybean, the soybean cyst nematode (SCN). 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 the spring of 2012, the WSMB expanded the 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.

For more information on SCN testing and management practices or to request a free soil sample test kits please contact: Jillene Fisch at (freescntest@mailplus.wisc.edu) or at 608-262-1390.

Click to view more information on our WI SCN testing program or visit The SCN Coalition.
Remember the first step in fixing a nematode problem is to know if you have one! The WSMB sponsored nematode testing program provides you that opportunity. So Wisconsin farmers….“What’s your number?”

SOYBEAN SULFUR FERTILIZATION REPORT

SHAWN P. CONLEY, WI SOYBEAN AND WHEAT EXTENSION SPECIALIST

Many soybean growers are interested in the use of additional sulfur (S) to increase yields and profitability. However, with low profit margins, the effect of additional sulfur containing fertilizers on soybean yield and economic return is important to understand. In 2019, we began to evaluate some common sources of sulfur to help us identify environmental and soil factors where yield response to applied sulfur is most likely to occur.

Click to view information and results from our: Seven-State Soybean Sulfur Fertilization Trials

INDUSTRIAL HEMP GRAIN PRODUCTION

BRIAN D. LUCK, JESSICA L. DREWRY, KEVIN J. SHINNERS, AND JOSHUA C. FRIEDE

To view this report in full, go online to https://wimachineryextension.bse.wisc.edu/2020/04/02/industrial-hemp-grain-harvest/

Lessons learned from growing and harvesting industrial hemp during the 2019 growing season are as follows.

• The crop grew well in southern Wisconsin.
• Narrower row spacing improved yield and helped with weed suppression.
• The ANKA variety had highly variable crop height which made harvest challenging.
• The combine can be set to harvest the industrial hemp grain and produce a clean product.
• The combine harvester guidelines from Canadian Hemp Trade Alliance are a good starting point but will likely need modifications to account for individual field conditions.
• Harvesting at a higher moisture content will prevent losses and shatter but immediate (within 2 hours of harvest) drying will be required to eliminate spoilage. Fiber wrapping can also be increased when harvesting at a higher moisture content.
In this blog I will attempt to answer three very agronomically important and challenging questions in a very succinct manner.

- When should I start planting soybean?
- What is the optimal soybean seeding rate?
- When do I use a soybean seed treatment?