

# Wisconsin Crop Manager

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## Crop Management and Conservation Field Day

The UW-Extension offices of Eau Claire, Chippewa, and Dunn Counties are hosting a Crop Management and Conservation Field Day for corn and soybean growers, agronomists, and students on June 18 from 2:30pm to 5:00pm. The field day will be hosted by Harrison Farms, Inc. near Elk Mound. The Crop Management and Conservation Field Day will focus on crop management while maintaining soil integrity.

Speakers and topics at the clinic include Bryan Jensen, UW-Extension Integrated Pest Management Coordinator, "IPM in corn/soybean rotations"; Dr. Vince Davis, UW-Extension Cropping Systems/Weed Science Specialist, "Weed management works"; Dr. Joe Lauer, UW-Extension Corn Agronomist, "Do we really need tillage for corn?"; Dr. Shawn Conley, UW-Extension Soybean and Small Grain Specialist, "Comparing soybean yield and returns in tillage systems"; and Jodi DeJong-Hughes, University of Minnesota, "Land rolling pro's and con's".

There is no cost to attend the program. Pre-registration is encouraged to determine educational materials. 2.5 Certified

Crop Advisor continuing education credits in crop and soil management have been applied for.

Directions: The field day is located just east of Elk Mound on University Street. Travel HWY 29 or HWY 12 and turn onto 970th St (Stardust St). Turn west on University Street, (across from Meyer Brothers Grain Inc.) The entrance to the field is ¼ mile on left.

For more information, call Dunn County UW-Extension office at 715-232-1636, or contact Katie Sternweis at [katie.sternweis@ces.uwex.edu](mailto:katie.sternweis@ces.uwex.edu), or [click here to view the flyer](#).

## Vegetable Crop Update 6/12/12

The 12<sup>th</sup> issue of the Vegetable Crop Update is now available. This issue contains information on late blight in Wisconsin. Click [here](#) to view this update.

## Cereal Leaf Beetle and Desiccated Soybean Seeds

Shawn Conley

Over the weekend two issues came to my attention:

1. It appears that cereal leaf beetle has hit threshold in a few fields. Dean Volenberg noted "Seeing high densities in some fields (5 per plant) and the flag leaf is about finished off. It is hit or miss as far as scouting, one field will have them and the next is void of any larvae and adults. Threshold at this stage of wheat is one Cereal Leaf Beetle per plant (NDSU Extension).



Image 1. Cereal leaf beetle larvae and crop injury on oat. (Image from D. Volenberg)

2. Also some late planted soybeans that were planted at the dry/wet soil threshold have imbibed water then desiccated. Please review my article entitled: [Variable Germination and Emergence in Soybean: Which Seeds Are Still Viable?](#) for recommendations.

#### **Addendum from Jim Specht (UNL):**

Thought I would let you know that some Nebraska soybean producers have experienced the problem of germinating seed not having enough soil moisture to complete either the germination and/or emergence process because of two reasons.

One reason is because they planted in dry soil and hoped for a rain, which is risky. Some producers did get a hoped-for rain, but the rain amount was only enough to wet the soil down to where the seed was placed and not enough to connect that wet layer with the moist soil another inch or two below that seed. As a result, the seeds germinated and the radicles emerged, but because roots will not penetrate a dry soil layer, the seedlings died because rooting systems were limited to using surface water, which ultimately dried out. This scenario forced a replanting. A second reason was because some producers have been using cover crops for some years now even though I warned them that cover crop use **WILL** be definitively detrimental in a dry spring. We have had wet springs to date, which led producers to not think about the fact that while cover crops offer all the great stuff that extension specialists have promoted, they have **ONE GIANT PROBLEM** - unlike fallow which can only surface dry out in dry years, cover crops put roots into the soil and act like putting blotting paper in the soil, meaning that cover crops can transpire away the stored soil water! Well, **BINGO**, we got a dry spring in Nebraska this year! Cover crop users discovered the problem this year that I warned them about every time they discussed the advantages of cover crops. One NE Soybean Board Member actually found out that his cover crop had dried out the soil to a depth of almost 10 inches, and when he only got sufficient rain to wet the seed, it was definitely not enough to connect the wet soil surface by wetting the soil down to a deeper down moister soil depth. Consequently, his entire field of soybeans germinated, and then died. What's worse for him, is that he still needed a drenching rain to eliminate that dry soil layer before he could even begin to think about replanting!

Therefore, I have been re-urging all extension specialists in Nebraska to warn producers about this ever-so-often risky proposition of planting soybean seed into dry soil, or using cover crops temporally right up to the Round-Up burn-down before planting. Preventing erosion is a good thing, but transpiring off critical stored water is a definitely a **BAD** thing. There is no **FREE LUNCH!**

- Jim

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## **Weeds could be Tough to Control with POST Herbicides this Year**

Vince M. Davis, Extension Weed Scientist

Corn and soybean growers have encountered several challenges with controlling weeds with herbicides this season, and the current weather may cause that trend to continue.

There have been a number of challenges, and most of them have been related to dry soil conditions. Unfortunately, the 7 to 10 day forecast doesn't look to bring us much rain. Additionally, the early spring and the accumulated GDD's early in the season with subsequent temperatures in May and early June fluctuating between normal and above normal has added to the problem. I first discussed the early spring concerns, particularly for no-till growers, in an article on May 3<sup>rd</sup>: [http://ipcm.wisc.edu/download/wcm-pdf/WCM19\\_4.pdf](http://ipcm.wisc.edu/download/wcm-pdf/WCM19_4.pdf). Since that time, there are several common scenarios that have played out that may help direct your scouting and management approaches for POST applied herbicides.

First, many parts of the state were wet for the first couple weeks of May, so most planting got underway after the first week of May in many areas. Unfortunately, most areas received very little rainfall the latter half of the month, and subsequently, many of the preemergence herbicides didn't receive enough rainfall to fully 'activate'. In some of those fields, the POST herbicides were applied early, and those fields need to be scouted again for later emerging weeds. Some weeds can often germinate later into the season and be a problem to control, such as: giant ragweed, pigweed species, yellow foxtail, fall panicum, and large crabgrass, and these fields may need a second POST herbicide application or pass of row cultivation to clean them up a final time.

In another scenario, the POST still has not been applied and the weeds are getting large. As the growth stage of corn advance, the options for applying POST herbicides diminish. In these situations, you may not have the ability to make 'rescue' applications, so make sure you chose a POST herbicide mixture and rate that is sufficient to control the weeds. This warning is important this year because we have received complaints that "glyphosate doesn't seem to be 'working' well" this year. Some of this is likely due to the weeds being larger than normal. However, we have also noticed this in a few of our research trials this year, and it's not just glyphosate herbicide, but the issue is that many of the weeds may be 'hardened off' due to the hot and dry conditions we've been experiencing. What I mean by 'hardened off' is a variety of plant changes including thicker cuticles making herbicide penetration more difficult, slower growth and respiration rates which may slow down translocation when herbicides do get into the plant, and potentially deeper roots and more advanced plant age (development) than the vegetative size (or shoot height) would indicate. Moreover, in several cases many weeds are bigger than they appear because they were not completely controlled during preplant tillage, but rather, they were injured and bent over in the soil but were not killed. When they re-grow they often grow in a new direction with distorted root/shoot development where some of the initial stem remains underground.

In many of these cases where the strategy will be to use glyphosate in Roundup Ready hybrids, pay attention to both crop stage and weed heights. In corn, the maximum glyphosate rate for single POST applications is 1.13 lb ae/acre, and there is a maximum of 2.26 lb ae/acre for the entire season. That translates to 32 fl oz/acre of Roundup Weathermax, or 48 fl oz/acre when using many generic glyphosate formulations that have a concentration of 3 lb

equivalent glyphosate acid per gallon. Glyphosate applications can be made up to 8 developed collars (V8) or 30" corn, whichever occurs first. For both increased efficacy, and for glyphosate resistance stewardship, many late POST applications in corn with large/difficult to control broadleaves like giant or common ragweed and lambsquarters would be well advised to tank-mix 2.5 fl oz/acre Status herbicide + 0.25% v/v nonionic surfactant and 5 lb/100 gallon spray grade ammonium sulfate. In our plots where we're investigating control options for giant ragweed, some of the plants where no preemergence herbicides were applied are already too big according to the Roundup label for the lower rates (less than 1.13 lb ae/acre) (Figure 1).

If you are struggling to control ragweeds or lambsquarters in your fields, here are some excellent resources that were assembled by a large group of weed scientist a couple of years ago in a series called "The Glyphosate, Weeds, and Crops Series":

- Biology and Management of Giant Ragweed: <http://www.extension.purdue.edu/extmedia/BP/GWC-12.pdf>
- Biology and Management of Common Ragweed: <http://www.extension.purdue.edu/extmedia/BP/GWC-14.pdf>
- Biology and Management of Common Lambsquarters: <http://www.extension.purdue.edu/extmedia/BP/GWC-11.pdf>
- Understanding Glyphosate to Increase Performance: <http://www.extension.purdue.edu/extmedia/gwc/gwc-2.pdf>

Additionally, I included an article to review ways to increase performance of glyphosate. One important consideration this year, even though there is little suggestion or remedy, is to be concerned with excessive dust and the impact that may have on glyphosate efficacy this year.



Figure 1. Giant ragweed in a picture taken on 6/11/12 in Sauk county, WI in a no-till corn field. Corn was V6 and giant ragweed ranged from cotyledons (just emerging) to 14 inches in height.

## Black Cutworm Decisions in Corn and a Word About Soybean

Eileen Cullen, Extension Entomologist

Black cutworm larvae and plant cutting have been occurring in V5 or smaller corn since early June with economic infestation reported from Manitowoc, Sheboygan and other counties. Bryan Jensen had a good article in the April 26, Vol. 19(6) WCM issue alerting readers about [Where to Check for Black Cutworms and Armyworms](#).

This week, calls are coming in from agronomists and county agents in Clark and Marathon counties about larvae approximately one-inch in length in V4 to V6 cornfields. We are finding similar sized black cutworm in corn in Columbia County at the Arlington Agricultural Research Station. Black cutworm infestations are not limited to these counties and the prime time to scout for this pest was during corn emergence until the V5 growth stage.

Black cutworm larvae begin to cut plants when they reach 4<sup>th</sup> instar (approximately ½-inch in length) and plants are vulnerable to cutting until the V5 stage. Fields of smaller corn, late or replanted, are still vulnerable to cutting and are candidates for treatment if the economic threshold of 3% cut or damaged plants and black cutworm larvae are confirmed. (Scouting, larval ID and treatment recommendations are shown for <V5 corn on the UW Extension video [Black Cutworm in Corn](#)).

Current dry soil conditions are causing the larvae to remain below ground in conventional tillage and beneath residue in no-till. Larvae will still feed on V4 to V5 corn beneath the soil surface burrowing into the corn stem below ground. You will notice this as wilted center whorl leaves on the plant.

Treatment is not economical for cornfields larger than V5 because larvae can no longer cut the plants and insecticide efficacy will be limited as the material cannot contact larvae beneath the soil.



4<sup>th</sup> (left) and 6<sup>th</sup> (right) instar black cutworm larvae. (Photo: Roger Schmidt, UW NPM Program)

As for black cutworm in soybean, there is no threshold for cutworm in soybeans. While uncommon, larvae can occasionally be a concern in soybean. Brian Lang, Iowa State University Extension Agronomist, summed it up well in his recent newsletter:

*The cutworm moths are attracted to no-till and/or weedy or poorly drained areas whether its corn or soybean fields. In soybean, if the weeds are then controlled, the only green material left to feed on are soybean plants. There is no threshold regarding cutworm in soybeans. It's just a common sense assessment of infestation vs. viable population you want to keep, versus cost of control. Smaller cutworm are a greater threat than larger ones.*

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## Aster Yellows was Confirmed in Oat

Shawn Conley

As a followup to last weeks article entitled [Oat and Necrotic Leaf Tips and Margins](#) Dr Russ Groves Lab PCR confirmed the presence of aster yellows in oat. We have also submitted wheat samples showing similar symptomology to Dr. Groves for analysis. Those should be done early next week. There are no known feeding issues related to this pathogen so heavily infected oat can be fed as a forage though tonnage and quality will likely be diminished.

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## Variegated Cutworm on Alfalfa

Bryan Jensen, IPM Program

I have received a number of phone calls and emails regarding variegated cutworms on alfalfa. This damage is likely from migrating moths although some overwintering is likely. Phil Pellitteri, UW Entomology, and Krista Hamilton, WDATCP, have reported intense moth flights and egg laying in the northern part of the state. However, my calls have also included alfalfa in the southern region as well. Incidentally, yellowstriped armyworm has also been found in mixed populations with variegated cutworms.

Variegated cutworms moths are nocturnal. The forewings are dark brown with mottled designs and are approximately 1 ½ in long. The hind wings are lighter in color. Larvae are up to two inches long, vary from light to dark brown and curl up into a ball when disturbed. The distinguishing characteristic is a single row of yellow dots on the back. Not all segments will have this yellow dot but they are more pronounced in the middle segments. Variegated cutworms feed on a wide variety of ornamental, field and vegetable crops. They are a climbing cutworm that feed on foliage and usually don't "cut" plant like black cutworms.

Yellowstriped armyworm larvae can be up to 1 ¾ inches long are usually grey to black in color. Their distinguishing characteristic is two distinct yellow stripes on each side of their body. Like variegated cutworm, they are a foliage feeder with a wide host range that includes both grasses and broadleaved field and vegetable crops.

In the southern part of the state we are very close to harvest and that should be your first control option, if feasible. Most of my concern would be protecting the regrowth. These larvae can survive harvest and would likely start feeding on newly formed crown buds or shoots. Their survival could be increased by hiding under the windrow. Don't automatically assume the lack of green up is a result of variegated cutworm or yellow striped armyworm feeding. Lack of rain can certainly be a cause this year. Although nocturnal feeders,

variegated cutworm (and yellow stripped armyworm) are relatively easy to find. Inspect the soil surface, under leaf litter and cracks in the soil to confirm the cause.



Variegated Cutworm



Yellowstriped Armyworm

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## Wisconsin Pest Bulletin 6/14/12

A new issue of the Wisconsin Pest Bulletin from the Wisconsin Department of Agriculture, Trade and Consumer Protection is now available. The Wisconsin Pest Bulletin provides up-to-date pest population estimates, pest distribution and development data, pest survey and inspection results, alerts to new pest finds in the state, and forecasts for Wisconsin's most damaging plant pests.

Issue No.10 of the Wisconsin Pest Bulletin is now available at:

<http://datcpservices.wisconsin.gov/pb/index.jsp>

<http://datcpservices.wisconsin.gov/pb/pdf/06-14-12.pdf>

