

Winnebago County Crops Quick Update

Assembled by Nick Schneider, Winnebago County Agriculture Agent

August 3, 2009

Wisconsin Crop Progress: August 3 2009. Source: USDA, NASS, Wisconsin Field Office

Full report at: <http://www.nass.usda.gov/wi/>

Soil Moisture		
	East Central Wisconsin	State Average
Very Short	10	21
Short	61	35
Adequate	29	40
Surplus	0	4

Wisconsin Weekly Weather								
City	Temperature		GDD (50 base)		Last Week	Precipitation		
	Avg.	Avg. dep. from normal	March 1 to August 1	Normal		Since June 1	June 1 dep. from normal	Year to date
Green Bay	66	-4	1331	1435	1.03	5.28	-1.66	15.71
Madison	67	-5	1539	1697	0.21	7.20	-0.88	23.95

Wisconsin Crop Progress					
Crop and percent of acreage	East Central		State Average		
	Central	East Central	This Year	Last Year	5-Year
Corn Silked	63	28	52	57	69
Soybeans Setting Pods	25	29	21	30	45
Winter Wheat Harvest	16	15	23	30	63

Crop Conditions: Corn: VPoor=7%, Poor=15%, Fair=30%, Good=39%, Excellent=9%

Soybeans: VPoor=5%, Poor=10%, Fair=35%, Good=43%, Excellent=7%

Observations of the week: Soybean aphids remain the same at the Winnebago County Sentinel Plot: present but few. Please note in the DATCP report, soybean aphids have reached thresholds in other parts of the state. County fair exhibits should give me a good idea of how consistent the population is. Potato leafhopper population averaged 0.2 per sweep in 6 inch alfalfa regrowth. It's still worthwhile to keep an eye on them. Last week I checked corn rootworm feeding in eight corn-on-corn fields that used CRW Bt hybrids. Of the 40 roots rated, only 7 had no signs of feeding. The overwhelming majority of plants had a few bites taken out of the roots, but nothing serious rating at 0.1 or less on the 0-3 corn rootworm feeding scale. There was one field at the south end of the county that had 0.6 and 0.7 nodes of roots eaten on two plants. It would not be appropriate to draw conclusions from these two roots. Based on the number of CRW adult beetles found on the corn plants, this field clearly had a higher

population than the other fields sampled. The corn rootworm larva has to ingest the toxin for it to be effective.

I have visited two field fields in the past week that were potassium deficient. With the high potassium prices for the past couple years, I suspect growers have been cutting back on this nutrient. Plants need potassium to perform. In droughty years, soil potassium deficiency and lack of rainfall synergize to make the problem worse. I know money is tight but we still need to keep potassium from dropping into low soil test levels or yields will suffer. Potassium can be visual identified by yellowing or even browning on the lower leaf edges.

Wisconsin Pest Bulletin: Wisconsin DATCP. Volume 54, Number 13, July 31 2009

Full report at: <http://pestbulletin.wi.gov/>

Forages & Grains

POTATO LEAFHOPPER - Populations continue to be variable, with some fields of alfalfa having 3-5 per sweep and others only 1-2. The average number observed during in the past week was 2.2 per sweep. Yellowing is occurring in alfalfa on sandy soils in Adams, Juneau, Marquette and Wood counties and extreme populations of 7-10 per sweep are present in these fields.

PEA APHID - Counts remain comparatively low in all surveyed areas, rarely exceeding 3 per sweep. Occasional fields have as few as 0.2 per sweep or as high as 8 per sweep.

PLANT BUGS - Surveys of alfalfa in the southern, central and west-central districts yielded counts of 0.5-2.1 per sweep, with the exception of Adams County where numbers varied from 3-4 per sweep. Nymphs are common in most fields and comprise about 40-50% of sweep net collections.

--Krista Hamilton, DATCP Entomologist

Corn

CORN ROOTWORM - Adults are becoming more abundant in silking corn fields as the peak emergence period approaches. Counts remain at less than 1 beetle per plant in surveyed fields in the southwest and west-central counties, but individual plants have as many as 5-6 beetles. Corn fields with fresh silks should be examined in the next week to determine if numbers are high enough to impair pollination. An insecticide treatment is warranted when 5 beetles per plant are present and silks are pruned to ½ inch or less before 50% of the plants are pollinated. Growers and consultants are advised to carefully examine green silks while making their counts since the northern species can be easily overlooked. A comprehensive survey of adult populations will begin in August.

WESTERN BEAN CUTWORM - Larvae are appearing in corn in the southern, central and west-central areas of the state. Surveys conducted in Adams, Columbia and Marquette counties found low infestation rates of 2-4% in 4 of 17 fields examined. Adults have also become increasingly active and number as high as 175 in pheromone trap collections. Egg deposition should continue to intensify for another 1-2 weeks if nightly temperatures are conducive for flight activity. All susceptible corn fields should be checked at this time.

EUROPEAN CORN BORER - Degree day accumulations are appropriate for emergence of the first summer moths at advanced southern and western locations. The corn borer phenology model predicts this event for 1,400 degree days (base 50°F). Surveys for second generation egg masses and small larvae should be initiated by August 1 near Beloit, August 5 near Madison, and August 13 near Stevens Point. A greater percentage of egg masses are likely to be found on leaves near the ear zone. The treatment interval for second generation corn borers extends from 1,550-2,100 degree days.

CORN LEAF APHID - Light to moderate colonies were found on corn in Adams, Juneau and Marquette counties, where approximately 10-30% of the plants were infested with 25-100 aphids per plant. Other fields examined as far north as Eau Claire and Jackson counties had very light infestations of 5-15 per plant on less than 5% of plants. Colonies of 50 or more aphids per plant on 50% of plants may interfere with pollination and should be treated promptly. --Krista Hamilton, DATCP Entomologist

Soybeans

SOYBEAN APHID - Preliminary results of the annual survey now in progress indicate populations remain below the economic threshold of 250 aphids per plant in the vast majority of Wisconsin soybean fields. Examination of R2-R4 soybeans in Brown, Columbia, Crawford, Dodge, Door, Eau Claire, Grant, Green Lake, Jackson, Kewaunee, Lafayette, Manitowoc, Marinette, Oconto, Richland, Shawano, Sheboygan and Vernon counties during the period of July 24-31 found very low densities of 0-25 aphids per plant in 70% of fields, low densities of 26-100 aphids per plant in 25% of fields, moderate densities of 101-249 aphids per plant in 1% of fields, and economic densities of 250 or more aphids per plant in 4% of fields (in Columbia and Eau Claire counties). Populations appear to be highest in the south-central and west-central districts at this time, although the extreme variability between individual fields and geographic area makes it difficult to assess the current situation. This insect requires frequent observation from now until the R5 stage of growth in August.

--Krista Hamilton, DATCP Entomologist

The Soy Report, Shawn Conley UW Soybean and Small Grain Specialist and Paul Esker, UW Plant Pathologist.

FRIDAY, JULY 31, 2009

Scout Soybean Fields for Stressed Plants

We have started to receive some reports of stressed fields where the verbal description of the field situation is very similar to 2008. As a frame of reference, as well as to get a feel for what was learned in 2008, please click [here](#).

Also, samples have been submitted to the [Plant Disease and Diagnostic Clinic](#) that has tested positive for Phytophthora, Fusarium spp, and Rhizoctonia.

Similar to what we emphasized earlier this year, when we recommended assessing plants from the V2 to V4 growth states to look for early indications of stressed soybean plants, follow up assessments beginning now during the reproductive period is important for understanding the possible complex set of interactions. Start by checking areas of the field where there may be higher compaction, such as the headlands. In 2008, we saw a variety of symptoms in the field. Check soybean plants for petiole retention; also scrape away at the epidermis to look for signs of organisms like *Macrophomina phaseolina*; lastly, split and examine stems and determine if there are necrotic areas to the stem or as we move into the later reproductive period, brown stem rot. Based on our observations from 2008, there is not a single pattern to these composite sets of symptoms in field as we saw anything from circular-like patches to patterns that followed down the rows.

If you have suspected samples, submit those to the [Plant Disease and Diagnostic Clinic](#). For further information about the different soybean diseases that may be found in Wisconsin, consult [Soyhealth](#).

Posted by Paul (pde@plantpath.wisc.edu) at 11:26 AM

THURSDAY, JULY 30, 2009

[Low Test Weight in Wheat](#)

As wheat harvest is finally getting into full swing we are hearing scattered reports of low weight and subsequently significant dockage. As these questions arise there are a few factors to consider that may be causing the low test weights.

1. Genetics: There is a wide range in test weight among the common wheat varieties grown in WI. In a "good" year these differences may not appear significant however in a "bad" year these differences can cost growers significant dollars. The University of Wisconsin Variety Test Program not only provides growers with yield information, but we also report test weight differences. Our variety trial results will be published in the next two weeks. Go to www.coolbean.info for these results.
2. Weather: The wetting and drying action of frequent rainfalls on dry wheat can drop test weight quickly. Thus timeliness of harvest is critical. Wheat can also swell following a rainfall and remain swollen even after the grain has dried back down. This increased kernel size displaces space and leads to lowered test weight.
3. Thin stands: Thin stands due to winterkill in parts of WI have led to late tillering, green stems and immature heads in the field. This may be causing a resource allocation issue in some fields (e.g. some photosynthates maybe going to growth instead of grain fill). If possible avoid these parts of the field if you are experiencing low test weight.

Posted by Shawn Conley (spconley@wisc.edu) at 6:37 AM

TUESDAY, JULY 28, 2009

[K Deficiency and the Soybean Aphid](#)

Given the high input costs for P and K in soybean many growers either cut back or as I have been told "took a year off". I wanted to remind growers as well as crop consultants of the relationship between K deficiency and soybean aphid fecundity. Below please read a blog contribution from Dave Hogg: Professor of Entomology, University of Wisconsin, Madison.

Soybean aphid infestations remain at sub-economic levels throughout Wisconsin. Will they stay there, or will we have a repeat of last year's late season aphid buildup? We will have to wait to see what aphid populations do over the next several weeks. However, one thing we do know - that soybean fields with suboptimal potassium levels are at greater risk of soybean aphid population increase and yield loss.

Following the 2000 discovery of the soybean aphid in Wisconsin, entomologists and agronomists noticed that soybean aphid infestations seemed to be more severe in K deficient soybeans. [The below photo of a soybean field in Grant County (taken by John Wedberg in August, 2000) illustrates this. The yellow beans on the left were literally dripping with soybean aphids and were presumed to be K deficient, whereas the healthy beans on the right had few aphids and were thought to have adequate K. The demarcation line follows the field contour.]



Subsequent research has proved this observation to be correct, plus we now have a better understanding of why this occurs. What happens is that low K actually makes soybean more nutritious for soybean aphids, promoting higher aphid reproduction and leading to more rapid aphid population increase. To give an idea of how this might work, under field conditions in a K deficient field an aphid infestation can increase from 10 per plant to 230 per plant in 10 days; in a field with adequate K, that same population would increase from 10 to 150 aphids per plant. Further research suggests that K deficient beans have a greater percentage of asparagine in the plant phloem where the aphids are feeding. Asparagine is known to be an important amino acid for aphid nutrition.

Finally, we think the yellowing of K deficient soybean leaves may preferentially attract migrating soybean aphids, placing K deficient fields at a further disadvantage. The color yellow has been shown to be highly attractive to a number of aphids.

Bottom line, maintaining adequate K levels in soybean goes a long way toward managing soybean aphid.

Posted by Shawn Conley (spconley@wisc.edu) at 7:01 PM