

Winnebago County Crops Quick Update

Assembled by Nick Schneider, Winnebago County Agriculture Agent

August 10, 2009

Wisconsin Crop Progress: August 10 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	24	14
Short	36	36
Adequate	38	42
Surplus	2	8

Wisconsin Weekly Weather								
City	Temperature		GDD (50 base)		Last Week	Precipitation		
	Avg.	Avg. dep. from normal	March 1 to August 8	Normal		Since June 1	June 1 dep. from normal	Year to date
Green Bay	67	-3	1450	1567	2.10	6.00	-1.79	16.44
Madison	69	-2	1674	1842	1.37	7.48	-1.53	24.23

Wisconsin Crop Progress					
Crop and percent of acreage			State Average		
	Central	East Central	This Year	Last Year	5-Year
Corn Silked	86	57	77	80	86
Soybeans Setting Pods	31	44	37	53	63
Winter Wheat Harvest	65	42	56	72	84

Crop Conditions: Corn: Very Poor=7%, Poor=10%, Fair=28%, Good=42%, Excellent=13%

Soybeans: Very Poor=6%, Poor=8%, Fair=24%, Good=47%, Excellent=15%

Observations of the week: Soybean aphids remain the same at the Winnebago County Sentinel Plot: There was a slight increase in soybean aphid in the sentinel plot field, now averaging around 20 per plant. The county fair was an interesting example of what pests are out there. While soybean aphids could be found at low densities without much trouble, the keen eye of the judge did find an exhibit with spider mite problems. Other reports I have been hearing indicate the same, so let's watch for spider mites as well as aphids. Potato leafhoppers are about the same.

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

Forages & Grains

POTATO LEAFHOPPER - Numbers have not changed significantly in the past week. Representative counts in the central and west-central counties vary from 1.5-7.2 per sweep, with an average of 3.0 per sweep. Scattered fields along the Mississippi River in Buffalo, Pierce, Pepin and St. Croix counties have populations sufficient to justify treatment, but in all cases early cutting is the preferred control method. Nymphs remain abundant in most areas.

BLACK BLISTER BEETLE - Alfalfa fields surveyed in Chippewa, Pierce and St. Croix counties contained low counts of 1-2 per sweep. Blister beetles can be an indicator of potentially high grasshopper populations since the immature stages are predaceous upon grasshopper eggs. Surveys of fields in Dunn, Eau Claire and Pepin counties failed to reveal any additional beetles.

--Krista Hamilton, DATCP Entomologist

Corn

CORN ROOTWORM - Surveys conducted in Grant, Lafayette, Ozaukee, Washington and Waukesha counties yielded averages of 0-1.4 beetles per plant, with economic populations above 0.75 per plant in 14% of fields examined. An exceptional field near Millville in Grant County had 2-3 beetles per plant on 100% of the plants. Some lodging damage has become apparent in continuous corn in Grant and Lafayette counties after the disastrous storms on July 24 and 27.

WESTERN BEAN CUTWORM - Black light and pheromone trap collections should begin to decline in advanced southern areas where the degree day standard has surpassed 1,526 (base 50°F), the point at which 75% of the moth population is expected to have emerged. High counts for the week were 146 moths in the black light trap at Arlington in Columbia County and 120 in the trap near Sparta in Monroe County. Refer to the **WESTERN BEAN CUTWORM**

MONITORING NETWORK website at <http://www.ent.iastate.edu/trap/westernbeancutworm/bsite> for current counts at all 138 Wisconsin pheromone trap locations.

--Krista Hamilton, DATCP Entomologist

Soybeans

SOYBEAN APHID - The annual survey of soybean aphid populations should be completed by August 14, at which time the findings will be analyzed and published in this bulletin. Preliminary results indicate **VERY LOW** densities of 0-25 aphids per plant for 72% of the 234 surveyed fields, **LOW** densities of 26-100 aphids per plant for 18% of surveyed fields, **MODERATE** densities of 101-249 aphids per plant for 5% of surveyed fields, and **HIGH** densities of 250 or more aphids per plant for 5% of surveyed fields.

Examination of R3-R4 soybeans in Dunn, Pepin, Pierce and St. Croix counties in the past week revealed economic populations in 7 of 17 fields (40%). In the central and north-central areas, including Clark, Marathon, Portage, and Taylor counties, average densities ranged from 6-559 aphids per plant and just 1 of 14 fields checked had more than 250 per plant. Many acres have been treated in the last two weeks for control of aphids, particularly in the south-central and west-central areas. All soybean fields should be appraised in the immediate future, while some yield benefit can be realized by chemical treatments.

SOYBEAN APHID PARASITOID - Parasitism by the braconid wasp *Lysephlebus testaceipes* was noted as far north as Dunn, Pierce and Pepin counties in the past week, and in Clark, Crawford, Iowa, Juneau, Racine, Rock, Sauk and Taylor counties since the annual aphid survey was initiated on July 15. These observations indicate a statewide or nearly statewide distribution for this beneficial species.

TWO-SPOTTED SPIDER MITE - Reports of significant injury to soybeans continue to circulate. Infestations appear to be most prevalent in the east-central and northern districts where moderate to severe drought conditions still exist. Heavy infestations were observed in Chippewa County on August 6. Soybean fields recently sprayed for aphids should be reexamined for surging mite populations in the 10-14 days subsequent to treatment. Spider mite problems are likely to persist throughout August.

--Krista Hamilton, DATCP Entomologist

The Year of the Yellow Bean

The 2009 soybean growing season has been filled with questions and concerns regarding the yellow "state" of many soybean fields. This topic has been building from emergence through the current R4/R5 growth stage. I have been in many soybean fields over the past 6 weeks and have seen many of the same culprits. Below is a short list of the main issues I have seen.

1. Variable emergence: Variable seeding depth was a major contributor to some of the early season "off color" soybean fields that I investigated. In these fields you would see odd patches of yellow beans. Once you carefully excavated the soybean plants you would see that the yellow beans were planted <1/2 inch deep. Following planting these seeds did not receive enough moisture to stimulate germination. The seed sat in dry soil until a significant rainfall triggered emergence. The delayed emergence and subsequent cool environmental conditions held the soybean plants back developmentally, hence when their neighbors were lush green they appeared light green to yellow. This difference was simply a function of delayed developmental stage (N fixation).
2. Cool temperatures and delayed development: Please refer to the following article to address this topic. "[Yellow soybeans and nitrogen fixation](#)"
3. Potassium (K) deficiency: Many soybean growers either cut-back on their K rate or flat out "took a year off". This has led to an increased number of fields showing K deficiency. This not only has a direct impact on yield but may increase soybean aphid populations (Please see "[K deficiency and the soybean aphid](#)"). To further confound this issue Sale and Campbell (1987) found a differential response to K deficiency among soybean cultivars. This may explain why some varieties or fields are showing greater symptoms than others.
4. Drought: Many soybean fields in Wisconsin have experienced droughty conditions. Research has shown that nitrogen fixation in soybean is extremely sensitive to drought and that this sensitivity to soil drying constitutes a serious constraint to N fixation (Serraj et al., 1998; Sinclair et al., 1987).
5. Poor inoculant application method: Lastly, I have walked several fields where an inoculant was either not applied or improperly applied to "new" soybean ground

leading to variable nodulation (one plant would have nodules and the neighbor lacked nodules) across a field.

First Report of Dockage for DON

Yesterday (8/6), both Shawn and I received the first report of wheat grain being rejected at the elevator for too high of level of DON. DON, which stands for deoxynivalenol, is a vomitoxin that can affect humans and animals. Because of its risk, most grain handlers or processors have set a limit of 2 ppm. Under 2 ppm, no discounts are usually applied for acceptance of the grain. Please also keep in mind that these limits may be more rigid depending on the expected end-use for the grain, or if it may be shipped overseas.

Throughout much of the 2008-2009 growing season, conditions were low for risk of Fusarium head blight (FHB) (Figure 1). However, this did not mean that we would not have scab in the state. Also, the current iteration of risk models is for FHB and not DON. It is known that symptoms of FHB in the field do not always correlate with DON, meaning that asymptomatic kernels could still be infected. Also, there is some newer evidence that also suggests infection by *Fusarium graminearum* can occur after flowering, although how much this affects DON is work that is in progress.

In the meantime, we very much would like to hear about new reports of either dockage or rejection of wheat grain due to the DON. In order to have a better idea of the current DON situation in the state, if you would be able to provide information regarding the location where dockage/rejection occurred, the level of DON, and any other information about the production setting, we would be most appreciative. This will help us move forward to better develop management recommendations that use both the current forecast model, plus what we know is occurring in the state.