

## Winnebago County Crops Quick Update

Assembled by Nick Schneider, Winnebago County Agriculture Agent

August 31, 2009

**Wisconsin Crop Progress:** August 31 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	4	1
Short	33	12
Adequate	62	77
Surplus	1	10

Wisconsin Weekly Weather								
City	Temperature		GDD (50 base)		Last Week	Since June 1	Precipitation June 1 dep. from normal	Year to date
	Avg.	Avg. dep. from normal	March 1 to August 30	Normal				
Green Bay	-5	61	1809	1938	1.46	8.76	-1.54	19.20
Madison	-3	64	2076	2261	0.36	8.72	-3.22	25.47

Wisconsin Crop Progress						
Crop and percent of acreage	State Average		This Year	Last Year	5-Year	
	Central	East Central				
Corn in dough	46	36	58	59	69	
Soybeans Setting Pods	83	89	93	97	96	
Third cut hay	70	78	73	81	71	

**Crop Conditions: Corn: Very Poor=2%, Poor=8%, Fair=25%, Good=49%, Excellent=16%**

**Soybeans: Very Poor=1%, Poor=7%, Fair=24%, Good=51%, Excellent=17%**

### Observations of the week:

If it were the beginning of August with soybean pods just starting to fill out, there would be enough soybean aphids to justify treatment. Soybean aphid populations exploded this week in the sentinel plot to well over 250 per plant with many plants having 500+. With soybeans at R6, full pod, there no longer is value in treating for soybean aphids at this location. I have been an agronomist for about as long as soybean aphids have been a problem in the Midwest, and I never have seen the population increase this late. Strangely, there were few predators to be found this week. I think I will check my attic when I get home tonight to see if the Ladybeetles took up residence there to stay warm.

Digging deeper into the USDA crop condition report, the report included a bar graph of progress in corn dent from 1999 to 2009. There were three years with less than 10% corn dented at this time of year. They are 2001, 2004, and 2009. So I dug out the USDA data from 2001 and 2004 to compare. In 2001, Winnebago County had a 103 bu/acre corn and 30 bu/acre soybean yield while the state yields were 127 bu/acre and 37 bu/acre respectively. 2004 yields were similar with the Winnebago County yields at 103 bu/acre and 31 bu/acre and state yields at 136 bu/acre and 35 bu/acre. While these yields from years with late maturing crops are below our typical goals, provided we don't have an early frost, I remain hopeful for an average yield. There is a saying, "August rains make beans". While soybeans aren't very tall, pods look plentiful and plump. Corn is just starting to dent in a few places and ear size and ear counts look OK, lots of 14 or 16 around by 30 to 35 kernel long ears.

Last week was the first corn dry down date, drying down six samples. All samples, regardless of maturity had moistures between 73% and 75%. I would consider these samples field wet and not yet accurate predictors of corn silage harvest date.

**Wisconsin Pest Bulletin: Wisconsin DATCP. Volume 54, Number 18, August 28 2009**

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

## **Forages & Grains**

**POTATO LEAFHOPPER** - Numbers in forage legumes continue to be low, seldom exceeding 2-3 per sweep. Exceptions were noted in the Mauston area of Juneau County and near Brooks in Adams County, where a few fields contained 4-5 per sweep and distinct yellowing was evident. In such fields, timely harvest of the third crop should effectively reduce populations. This insect has been less of a problem in second and third growth alfalfa than anticipated. In most instances, the lack of adequate precipitation or rainfall on cut hay has caused more loss in yield and quality than leafhopper injury.

--Krista Hamilton, DATCP Entomologist

## **Corn**

**EUROPEAN CORN BORER** - Development of corn borers is variable, depending on area of the state. Near Arlington, Janesville, Lancaster and Mazomanie in the southwest and south-central counties, the peak of summer moth activity has subsided. In the eastern areas, the peak has yet to occur. Black light counts have been extremely light since the flight began in late July and surveys indicate that egg masses and second generation larvae are scarce. Larvae in the 3rd-5th instars were found in Marquette, Monroe and Wood counties. Practically all of the late-instar larvae present by mid-August will enter diapause and will not pupate until next spring

**WESTERN BEAN CUTWORM** - Damaging populations were noted in Adams, Green Lake, Juneau, Marquette, Monroe, Rock and Waushara counties this week, where 5-45% of the ears were infested with intermediate to late-instar larvae. One corn field near Brooks in Adams County had approximately 30% of the ears infested with 2-3 full-grown cutworms. Most were located in the ear tips, although some were observed at the base of the ear near the shank. The heaviest infestations generally can be found in the central counties.

**CORN ROOTWORM** - Below is a table summarizing the PRELIMINARY results of the 2009 corn rootworm beetle survey conducted between August 4 and 27. Populations decreased greatly as compared with the 2008 data, particularly in the southeast and east-central districts. The state average thus far is 0.6 beetle per plant, compared to 1.0 last season. District average

populations are 0.5 per plant in the west-central district, 0.4 per plant in the central district, 0.6 per plant in the east-central district, 0.7 per plant in the southwest district, 1.1 per plant in the south-central district, and 0.3 per plant in the southeast district. Economic numbers of beetles (0.75 or more per plant) were found in 43 of 188 (23%) surveyed fields. **Please note these results are preliminary and are subject to change as surveys of corn are completed in the northern counties. Final results will be published in the 2009 summary issue.**

--Krista Hamilton, DATCP Entomologist

### **Soybeans**

**SOYBEAN APHID** - Surveys conducted from July 15-August 11 showed 94% of 247 soybean fields examined did not develop economic infestations of 250 or more aphids per plant during the R2-R4 stages of growth, while 6% of fields did develop significant populations. Specific counties in which economic densities were noted include Columbia, Dunn, Eau Claire, Marquette, Pepin, Pierce, Taylor, St. Croix and Wood, principally in the south-central, west-central and central districts.

The vast majority of surveyed fields contained low to moderate numbers of aphids throughout July and early August. Populations in the southwest and southeastern counties were exceptionally low. Average densities per plant by agricultural reporting district were as follows: northwest 49, north-central 89, northeast 22, west-central 102, central 93, east-central 16, southwest 6, south-central 71, and southeast 3. The 2009 state average density of 51 aphids per plant compares to 72 per plant in 2008, 164 per plant in 2007, 69 per plant in 2006, 118 per plant in 2005, 11 per plant in 2004, and 758 per plant in 2003.

In contrast to the survey findings, soybean aphid populations are now very high in many untreated fields. Reports from County Extension agents and consultants, as well as recent field observations, indicate that populations have escalated sharply as far north as Polk County in the last 2-3 weeks. Soybean fields in the R4-R5.5 stages that still qualify for treatment must be evaluated immediately to determine if colonies have reached or surpassed the economic threshold of 250 or more aphids per plant.

**NORTHERN CORN ROOTWORM** - Soybean fields in Green County are reported to be showing light defoliation by this insect. Generally the infestations are minor, but very large numbers of beetles are present.

--Krista Hamilton, DATCP Entomologist

**WHITE MOLD** - Signs and symptoms of this fungal disease, also called Sclerotinia stem rot, are appearing widely across soybean fields from Kenosha to Sauk counties. Foliar symptoms include chlorotic, wilted leaves that eventually die and turn brown, but remain attached to the stem past maturity. The disease is easily diagnosed by the presence of white, fluffy mold growth on the lower stems of plants. As the infection progresses, the fungus produces black, hardened survival structures called sclerotia that persist in plant residue and soil (see image below).

Sclerotinia is expected to be a greater problem this year than most, as a cool July and frequent periods of leaf wetness both extended the soybean flowering period (the critical time for infection) and provided appropriate conditions for pathogen survival. Ironically, sclerotinia stem rot is a greater problem for soybeans managed for high yield, since factors that create a dense canopy favor the disease.

Sclerotinia has a notably wide host range, with over 450 species of dicots having been shown to be susceptible. In some crops, such as sunflower, Sclerotinia can be a production-limiting factor under proper conditions. While varietal differences in response have been noted, useful resistance has thus far eluded plant breeders.

Management options include fungicide treatments, a biocontrol agent, and cultural practices such as longer rotations and canopy management. Further description and control

recommendations may be obtained at the UW Soybean Plant Health website:  
<http://www.plantpath.wisc.edu/soyhealth/cause.htm>.

--Adrian Barta and Kara Geertsma, DATCP Plant Pathologists

## **The Soy Report: Shawn Conley and Paul Esker, UW Specialist**

**Friday, August 28, 2009**

### **Impact of Cool Temperatures on Soybean Seed Fill**

Delayed crop development due to decreased heat units coupled with forecasted cool nighttime temperatures over the next week have many questioning the fate of the WI soybean crop. The soybean fields that I have scouted over the last week range from the R5.5 growth stage to the R6 growth stage (full seed: pod containing a green seed that fills the pod cavity at one of the four upper most nodes on the main stem with a fully developed leaf). The minimum temperature range required for soybean seed ripening is 46.4 to 48.2 °F; whereas the optimal range is 66.2 to 68°F (Holmberg 1973). A survey of the literature suggests that though cool temperatures during grain fill may adversely affect yield, the more serious impact to soybean would likely be increasing the number of days to physiological maturity and the threat of a killing frost

On average a soybean plant remains in the R6 growth stage for 18 days; however the range can be as short as 9 days or as many as 30. The risk to WI growers is that the longer we remain below the optimal temperature range for seed development the longer our crop may remain in the R6 growth stage. As we move through the R6 growth stage and into R7 soybean (physiological maturity) seed moisture declines thus decreasing the risk of yield loss due to frost. Judd et al. (1982) found that seed in green pods which contain 65% moisture are injured at 28 °F whereas seed found in brown pods at 35% moisture was not injured at 10 °F.

Though chilling may adversely impact soybean yield a more important issue may be the effect of chilling on seed quality of yellow hilum soybean. Morrison et al. (1998) found that seed coat discoloration in yellow hilum soybean increased with the accumulation of daily minimum temperature  $\leq 59$  °F during seed development.

**Wednesday, August 26, 2009**

### **Sudden Death Syndrome (SDS) and Soybean Cyst Nematode (SCN)**

Images and phone calls related to Sudden Death Syndrome (SDS) have been coming into our offices over the last 7-10 days. Many of the suspect fields are being positively diagnosed with SDS. Paul Esker and I walked a field this morning with Matt Hanson, Dodge County Crops and Soils Agent, and found a field that was most likely SDS. The symptomology in this field was odd in that it was appearing in small rings across the field and only in certain varieties. Recent literature however has suggested a positive relationship between soybean cyst nematode and SDS. Therefore we would recommend that anyone finding SDS also check for SCN. Remember the WI Soybean Marketing Board provides free testing for SCN for Wisconsin soybean growers.