

CROP NOTES for Aug 26, 2009

Past issues of Crop Notes are posted at:

<http://www.extension.iastate.edu/winneshiek/info/crops.htm>

Iowa State University Extension Information for Northeast Iowa

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WEATHER

Degree Days for Corn

From May 1 to Present:

Nashua = 1,824 GDD (353 below normal)

Cedar Rapids = 1,925 GDD (403 below normal)

I recent ICM News article compares GDDs of 2009 with previous years:

<http://www.extension.iastate.edu/CropNews/2009/082409pope2.htm>

INSECTS

Bird Cherry Oat Aphid

This aphid has been found in many corn fields in August. As with Corn Leaf Aphids, there are no known thresholds established for this aphid on corn after pollination, however, as with Corn Leaf Aphid, ISU suggests the following Action Threshold to trigger an insecticide application.

“Aphids on or above the ear leaf, increasing in population heavy enough to leave noticeable honey dew on the leaves.” The deposited honey dew provides a growing medium for sooty mold which can reduce photosynthesis and in turn possibly reduce grain fill. Climate is also a factor, with aphids being a larger threat in a more drought-stress type of environment. However, since we have no research on this pest, we also have no idea how late into the season (R4? R5?) the Action Threshold might apply. Unlike Corn Leaf Aphid, this aphid can overwinter in Iowa. This aphid is also a possible vector for Barley Yellow Dwarf Virus in oats.
<http://pubs.cas.psu.edu/FreePubs/pdfs/ul206.pdf> I had some BYDV cross my desk this spring causing Blast in oats (sterile oats, reduced grain set).
<http://ipm.illinois.edu/diseases/series100/rpd117/index.html> A good reference for aphid ID on corn is: <http://elkhorn.unl.edu/e-public/live/g1284/build/>

Potato Leafhopper

With to cool weekend approaching, this should be the end of any significant pressures from PLH. Of course there are no guarantees on that, but that is the usual seasonal pattern of PLH activity. Scouting tips and photos are available in the 2009 ICM article at: <http://www.extension.iastate.edu/CropNews/2009/0615hodgson.htm>

Soybean Aphid Update

The research plot numbers at Decorah have leveled off, and the winged aphids are decreasing. Table below provides data for “untreated control” and “(insecticide treated seed)”. Plots treated with foliar insecticide on Aug. 3 currently average 240 aphids per plant.

Date	Stage	% plants with aphids		Avg aphids/plant		Winged aphids/plant	
July 12	R1-R2	60%	(24%)	3			
July 19	R2	95%	(54%)	13			
July 26	R3	100%	(77%)	26	(11)	0.05	(0.03)
July 29	R3	100%		45		0.2	
Aug 1	R4	100%	(100%)	99	(41)	0.6	(0.5)
Aug 4	R4	100%	(100%)	187		1.9	
Aug 9	R5	100%	(100%)	584	(416)	3.0	(2.6)
Aug 12	R5	100%	(100%)	940	(580)	4.5	(11.0)
Aug 15	R5	100%	(100%)	2,054	(1,625)	8.5	(8.1)
Aug 18	R5	100%	(100%)	2,025	(2,090)	7.0	(8.0)
Aug 22	R5	100%	(100%)	2,040	(1,835)	6.2	(3.7)
Aug 26	R5	100%	(100%)	1,903	(1,878)	1.6	(1.8)

This plot should reach beginning R6 stage by Saturday.

How late do you treat? The 250 threshold applies up to R5.5 stage. There is insufficient research to define aphid thresholds beyond R5.5 stage. Soybean stages and approximate dry matter accumulation of seed at those stages are listed below. If aphid populations are high enough (500?, 1,000?, more?), there could be reasons to still protect soybeans at the very beginning of the R6 stage. Although if you have high aphid populations at beginning R6, you very likely had >250 aphids at R5.5. And with 50% DM already accumulated in the seed at R6 stage, what is the probability that you can at least preserve the 2-4 bushel per acre required to

breakeven on treatment costs? Clearly, once soybeans are well into the R6 stage, there is no reason to treat for aphids.

R5 stage is beginning pod fill. Takes about 18 days until R6.

R6 stage is 1 pod in the top 4 nodes completely filled. Equals ~50% DM accumulation in seed. Takes ~18 days until R7.

R6.5 stage equals ~90% DM accumulation in the seed.

R7 stage (1 pod on the main stem a mature brown color) equals ~98% DM accumulation in seed.

A podcast covering state-wide soybean aphid activity is posted each week on Monday afternoon at:

<http://www.ent.iastate.edu/soybeanaphid/>

DISEASE

Soybean Rust Update

The risk to Iowa soybeans remains very low, but along with the hurricane activity there has been a surge in findings up the Mississippi valley towards Missouri. Most soybeans in Iowa are in the late R5 stage and soon to be R6. Once soybeans reach R6 stage, soybean rust control becomes irrelevant. <http://sbr.ipmpipe.org/cgi-bin/sbr/public.cgi>

Sudden Death Syndrome (SDS)

More SDS findings over the last week. This disease is wide spread across Iowa. SDS is now showing up nicely across field areas that were low, wetter spots in spring where the disease was initially present and susceptible varieties were planted. This disease starts as an infection through the roots. Soybean cyst nematode can aid this infection process often making SDS more prevalent in an SCN infested field. No foliar fungicides will control SDS because the leaves do not have a fungus on them. The leaf symptoms are due to a toxin produced by the disease present in the root and now stem region of the plant. Research shows that a crop rotation with corn does NOT reduce SDS presence in the field. Selecting resistant varieties is the most important means for future control. Photos and symptoms are discussed at:

<http://www.ipm.iastate.edu/ipm/icm/2006/9-18/sds.html> Management of this disease is addressed at: <http://www.ipm.iastate.edu/ipm/icm/2003/1-21-2003/sdsmanage.html>

White Mold

Many more findings of White Mold in northeast Iowa this last week. University of WI comments on similar problems in southwest WI. Most important at this time is to recognize the problem, take notes, and identify resistant varieties to use in the future. General information and photos on White Mold can be found at:

http://www.plantpath.wisc.edu/soyhealth/pdf/whitemold_06.pdf Also a recent article on White Mold Management was posted last week on the ICM News at: <http://www.extension.iastate.edu/CropNews/2009/0814yangsavi.htm>

EVENTS

Sept 2, Grand Opening of the Borlaug Learning Center, Northeast ISU Research Farm, Nashua

4:30 to 7:30. Inside exhibits, wagon tours and more. Tours occur between 4:30 to 7:30 with (1) separate 15-minute Agronomy wagon tours of the north farm and south farm, (2) research garden walking tour, (3) vineyard walking tour, (4) windbreak walking tour, (5) historic corn hybrids walking tour, (6) Borlaug Learning Center building tour (displays, donor recognition, energy conservation features like geothermal, rainwater collection, and more).

5:00 to 5:30 is the official Grand Opening Ceremony on the Borlaug Learning Center porch.
5:30 to 7:00, complimentary meal offered.

Directions: Take the Nashua exit off of Hwy 218, then west on Hwy B60 1.2 miles to Windfall Ave. South on Windfall Ave. 1 mile to 290th Street, and 0.2 miles on 290th Street to the farm.

Aug-Sept, Crop Management and Diagnostic Clinics, Ames

The Field Extension Education Laboratory is a 43-acre teaching and demonstration facility dedicated to providing a hands-on learning experience for crop production professionals. The demonstration plots are used to show a wide range of management problems, solutions, and diagnostic challenges. “We make the mistakes on these plots so you won't in the future!” The clinics and programs are taught by Iowa State University staff and faculty and invited specialists from other institutions and industry. Modern, air-conditioned classroom facilities complement the in-field sessions, all of which are within walking distance. Current open programs for this summer include the following. Just click on the program title (Ctrl + Click) for details:

September 2, [Alfalfa Production Clinic](#)

September 3, [Corn Disease Diagnostics and Management](#)

September 15, [Soil Management Clinic](#)

For other Agribusiness Education program information, check out the Homepage at:

<http://www.aep.iastate.edu/homepage.html>

Sept 17, Advances in Precision Ag Expo, ISU Southeast Research Farm, Crawfordsville

10:30 a.m. to 4:30 p.m. Come see the latest in precision ag technology, including RTK guidance systems, auto-steer, automatic shut-off planters and sprayers. The expo will feature field demonstrations and industry exhibits on the latest technology. For details about the program and exhibitor information go to:

<http://www.extension.iastate.edu/Pages/eccrops/09apaexhibitorbrochure.pdf>

Sept 23, Pasture-Walk Event, Garnavillo

1:00 to 3:00 pm, hosted by Andy Schaefer at his farm. The grazing field day will emphasize Andy's organic dairy, new swing-nine parlor, and late fall grazed stockpiled hayfields.

Directions: From Garnavillo, go east on C17 3.5 miles, then south on 232 St. for 1.1 mile, then south on Lake Rd. for 2.3 miles. Farm is on the right at 25037 Lake Rd.

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