

Southwest Iowa Crop Update: June 30, 2009
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Weather and Crops

After a few months of cool temperatures, the weather has finally given us some heat. With the heat there has been some severe weather throughout the state. I recently had a conversation with a producer over a cup of coffee and he asked me about “hard water”, this so called water that is full of minerals I thought, turned out to be really cold water that we know as hail.

I have received a few calls in the last week about replant decisions after “hard water”.

Below is a table from Palle Pedersen (Iowa State University, Soybean Specialist), showing the percent node removal from hail and how this affects yield. As soybeans progress physiologically, the more yield penalty we pay with the same amount of node removal. This again stresses the point that soybeans can compensate as long as damage is done somewhat early in the soybean’s life.

Table 1. Effect of node removal on soybean grain yield at three different growth stages (V2, V6, R3) in Iowa (2003-2005).

Percent node removal	V2	V6	R3
		Bu/acre	
0	51.1	52.4	51.2
20	48.6	48.9	43.8
40	45.4	45.3	39.1
60	45.2	40.7	32.3
80	42.4	31.5	21.2
100	41.4	0.6	0.0
LSD (0.05)		6.3	

Corn can be severely defoliated this time of year by hail. Below is a link to the National Corn Handbook, this article talks about assessing hail damage to corn and determining the yield potential that is left. If you use this link, go through the article and look at Table 3. Table 3 explains the percent yield damage to expect at a certain growth stage of the crop. Just an example, I suspect some of the corn I looked at was at the V16 stage, say 50% defoliation, that comes out to about 18% yield loss at this growth stage. <http://www.extension.iastate.edu/Publications/NCH1.pdf>

Goosenecked and Lodged Corn

In the past two weeks I have walked a few fields that had blown down corn and a few plants that had snapped off. The goosenecked corn seemed to be hybrid specific and

in the wetter areas of the fields. I would guess different hybrids would have varying amounts of root mass. Corn with more root mass and drier soils stood considerable better. These plants lodged at the soil line. Other plants were not so lucky and snapped off.

Here is a link that explains goosenecked corn and yield loss.

<http://www.agronext.iastate.edu/corn/production/management/mid/silking.html>

Now here is a link to an article about greensnap and yield loss.

<http://www.ipm.iastate.edu/ipm/icm/1998/7-13-1998/greensnap.html>

Scroll down through this article and you will see a table from data collected at University of Minnesota. Again, just an example, Corn that had 50% greensnap at the V12-14 stage had a yield 82% of undamaged corn.

Corn is very susceptible to greensnap from now until tasseling. The plants are rapidly growing and cell walls in the stalks are somewhat brittle.

Insects

Soybean aphids have been found in Northern Iowa for the past few weeks. I would strongly suggest that everyone begin to scout their soybean fields once a week for soybean aphids. I have been looking for aphids but have yet to find any here in SW Iowa. Brian Lang (NE Iowa ISU agronomist) has found aphids in his research farm and has noted that the beneficial insect numbers look good also. The threshold for soybean aphid treatment continues to stay the same, 250 aphids/plant. Scouting and using the threshold is the best management strategy to protect our soybean crop.

July 2, 2009 Armstrong Research Farm Field Day

The Armstrong Research Farm will hold its annual field day this Thursday, July 2 @ 9:30 am. Topics will include: Corn and Soybean disease and fungicides, Corn production, Soybean management, and Variable Rate Planting in SW Iowa.

If you have any questions please call the Research Farm @ (712) 769-2600 or send me and email.