Crop Update Newsletter Prepared By:
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Serving northwest Iowa

IOWA STATE UNIVERSITY
University Extension

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Introduction

Area crops are rapidly moving towards maturity, pushed ahead by warm and relatively dry conditions across most of the region. Local rain showers over the next couple of days may slow this process down a bit, but forecasted warm conditions will continue to push crops towards physiological maturity. Harvest preparations, from the last field scouting to machinery and storage readiness should be top priority. Be sure to print off the grain drying fact sheet by the University of MN (link provided), this is an excellent source of basic corn drying facts. Scouting now for stalk health, and while you doing that, collect stalk samples to analyze how well your nitrogen program worked for the year. In your spare time, be sure to take 30 minutes and listen to last week's Crop Update Live recorded session about soybean rust in GA. The guest speaker, Dr. Phil Jost provides an excellent overview of how rust is advancing in his state and explains how producers are currently dealing with the disease.

Weather information

Growing Degree Day Corn physiological maturity will be reached this week for many corn fields planted during April. Corn maturity is being pushed forward by warm and dry conditions. Slightly above average degree-days were accumulated last week (134 vs. 130). A very warm week is forecasted, with nearly 170 degree-days forecasted for the week, compared to the average for the week of 105. The forecasted warmer than normal week will advance west-central IA to an average of 107% of normal in DD accumulations for most corn planting dates. Accumulation and predicted plant phenology stages are shown in Table 1 and Figure 1 and is forecasted through Sept. 11. More detailed degree-day accumulations by planting date can be obtained at this URL: http://www.extension.iastate.edu/nwcrops/degree-days-2005.htm

Figure 1, Degree-day accumulation – forecasted to Sept 11

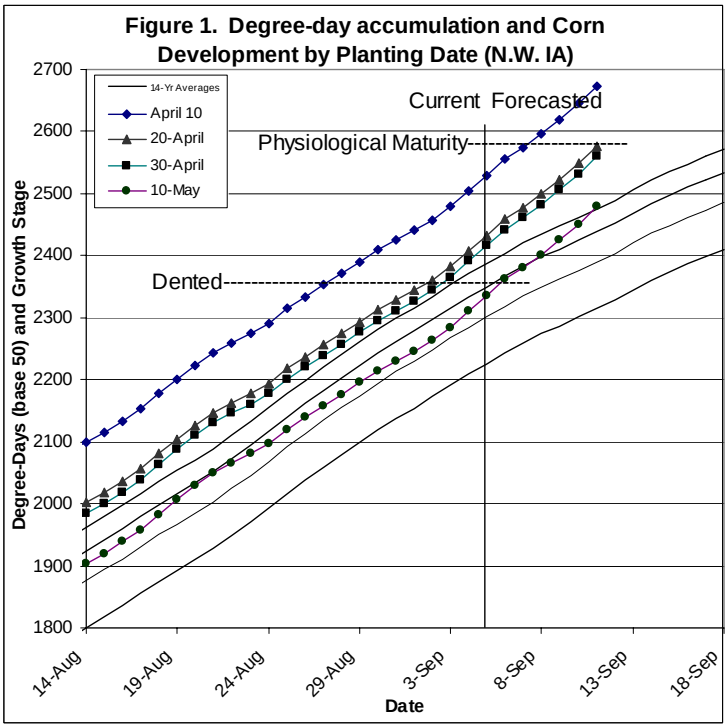

Table 1. Degree-Day Weekly Accumulation

	2005	2004	2003	14-Yr Ave
Aug 29-04	134	140	101	130
Forcasted Sept 5-11	169	111	135	105

Crop Management

Harvest Preparations Soybeans are turning color and dropping leaves and corn leaves are turning brown…all indications that harvest is just around the corner. My colleague Joel DeJong provided some good comments on harvest preparations in his newsletter that I will provide here as well.

- Prepare your grain storage for harvest. Missouri has a good web page describing things to think about before putting grain into your storage for this winter. Sanitation is the most important part, residual sprays and other treatments are discussed here: http://agebb.missouri.edu/storage/pests/insect.htm.
- Grain drying hints – Minnesota offers some basic thoughts on a two-page fact sheet available here: http://www.extension.umn.edu/distribution/cropsystems/M1080-FS.pdf. Print it off – it at least has the basic hints for drying and management of stored grain. More reference information from Minnesota on grain storage can be found here: http://www.extension.umn.edu/topics.html?topic=4&subtopic=44
- Check all the lights on the machinery – make certain that you can be seen when traveling down the road!

Check corn stalk health Area corn fields are rapidly moving towards black layer. With symptoms of Top die-back (anthracnose stalk rot, http://www.ipm.iastate.edu/ipm/icm/2002/9-23-2002/anthracnose.html) showing up in area corn fields, checking stalk health should be a top priority. Scouting involves looking for lower stalk discoloration and test stalk firmness by pinching the lower internodes between your thumb and forefinger. Healthy stalks are firm and won't compress easily. If a node can be compressed or otherwise feels soft, rotting has started that plant is a good candidate for lodging. Check at least 100 plants per field, in representative locations. Fields with different tillage systems that are in different rotations, planted to different hybrids or with different fertility histories should be scouted separately. If more than 10-15 percent of the stalks show rot damage in a field, significant lodging is likely. If possible, harvest high lodging potential fields early. And don't forget to record the stalk rot incidence in field records so you can use this year's problems to avoid future problems.

Determining soybean maturity Two main indicators can be used to determine when individual pods reach this stage. 1) Pod Color: A short time prior to seed shrinkage, the pods will begin to lose their green color and will take on a yellowish cast. When the pod is completely free of green, the seeds inside have already started to shrink. 2) Seed Shrinkage: Once the seed has attained its maximum dry weight and size, it will begin to shrink. Upon shrinking, the seed will become less associated with the white membrane surrounding the seed. Eventually, the membrane will no longer cling to the seed and will stay with the pod wall when split open. There is a period of about two to three weeks from the time the 1st pod reaches physiological maturity to the last pod reaching physiological maturity. The average seed moisture at the time the pod is physiologically mature is 55%. When all pods on the soybean plant have reached physiological maturity, the average seed moisture for the plant is usually around 44%.

Fertility Management

Evaluate your corn nitrogen strategy this fall. Any time after black layer of corn (sooner is better than later) is a good time to pull end of season stalk N tests to evaluate how your N management program fared this past year. Stalk samples need to be gathered from 15 plants in a field (from a representative area), and sent to a lab for analysis. Since excess N in a corn plant gets stored in the stalk, this data has been correlated to reduced yields at low stalk N levels. This test can help determine if too much or not enough N was available to the plant. You can use the information to better manage over the long run nitrogen rates applied to individual fields. Note that this is only one year, and one year of data might not be enough to make the best decision – a trend line over time is better for that – but one year of information helps build that data base! Go to this site for Stalk N testing details: http://www.exnet.iastate.edu/Publications/PM1584.pdf

Crop Update Live special feature on soybean rust in the southeastern U.S.

If you missed last Friday's Crop Update Live session, be sure to view the recorded session. Even though we are past the point of soybean rust problems here, now is an excellent opportunity to learn from our fellow soybean producers in the southeast while they are in the midst of managing this disease. Dr. Jost (UGA Extension Soybean Agronomist) provided an excellent overview of the current situation in Georgia and he explained how GA producers are dealing with soybean rust. To view a recording of this or past meetings, browse to the Crop Update Live webpage: http://www.extension.iastate.edu/nwcrops/crop_update_Live_2005.htm

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This newsletter is available via fax (in selected counties) or e-mail and can always be found on the web at http://www.extension.iastate.edu/nwcrops/newsletter_2005.htm If you would like to receive this newsletter in a format (different than what you currently receive), please let me know by phone (712-792-2364) or email (vagts@iastatte.edu).

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