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Introduction

Precipitation and favorable temperatures will greatly enhance the potential for successful pollination and an extended grain fill period. Be sure to note corn silking date to help estimate harvest date. Soybean development is nearing the grain fill period which is the critical period for yield determination. August rains in 2002 yielded near record soybean yields for this area, hopefully the current weather pattern will persist into August for a repeat of 2002. Western bean cutworm moth flight increased in areas to the north and east (Calhoun and Buena Vista Counties); continue to scout for egg masses and small larva. Monitor area corn and soybean fields for disease development as the crop moves into the high energy demand period of grain fill.

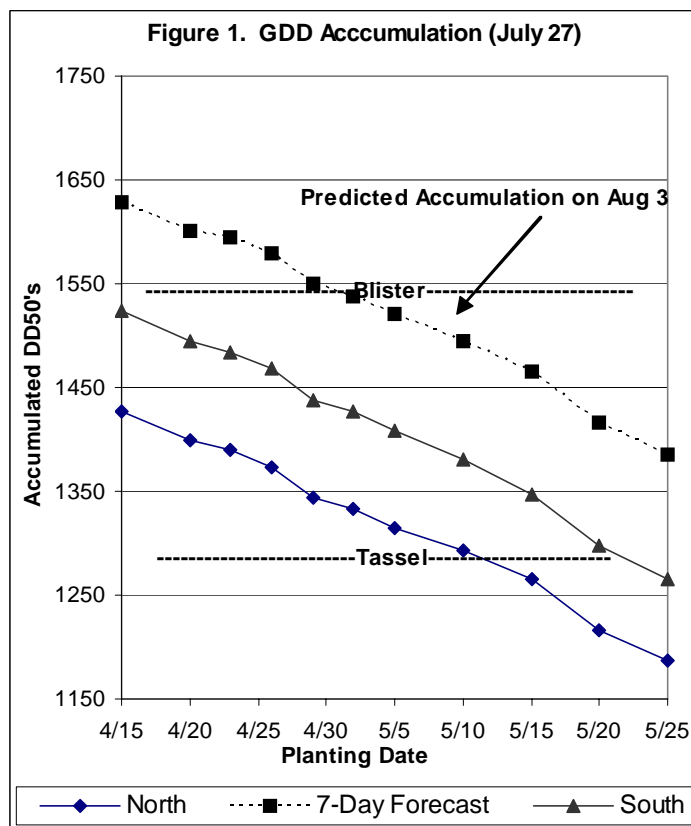
Row-Crop and Forage Development

Figure 1 shows accumulated degree days (Y-axis) by planting date (X-axis) and in turn attempts to predict growth stage of corn based on planting date. For a detailed discussion on how to interpret this figure, refer to the May 5 newsletter http://www.extension.iastate.edu/carroll/crops/vol_3_no_07.htm

Corn degree-days (Base 50) West-central Iowa collected below normal degree-days again last week and is forecasted to collect near normal degree-days in the week ahead. The forecasted mild temperatures should be ideal for pollination and grain fill in corn and for soybeans as the bean begins pod elongation and seed fill. Degree-days (average for NW Iowa) can be accessed at this web site:

<http://www.extension.iastate.edu/carroll/crops/degree-days-2003.htm>

Degree-Day Weekly Accumulation			
	2003	2002	12-Yr Ave
July 21 - 27	144	169	157
Forecasted July 28 - 03	159	170	154



Corn Development is at or past pollination in most fields, although I would estimate 15% of area corn fields have yet to reach the pollination stage. The earliest planted fields are approaching the R2 stage, also called blister. R2 Stage (blister) normally occurs 10-14 days after silking. R2 kernels are white on the outside and resemble a blister in shape. The silks having completed their flowering function darken in color and begin to dry.

The mild temperatures the area has experienced (cool nights and moderate days) should greatly benefit the corn crop as it begins to fill grain. The moderate conditions allow for an extended grain fill period resulting in

increased grain weight and the cool nights decrease plant respiration, resulting in more energy available for grain fill.

Note silking date (R1) to estimate harvest date. Joe Lauer, Corn Agronomist for the University of Wisconsin, describes how to use silking date to estimate harvest date. *“Silking date is the first indicator for predicting date of harvest for grain or silage uses. The dent (R5) stage occurs 35-42 days after silking and black layer formation (R6) occurs 55-60 days after silking. Usually silage harvest begins shortly after half-milkline on the kernels. The halfmilkline stage occurs about 13 days prior to black-layer (Wiersma et al., 1993). Thus, the predicted start date of silage harvest (half-milkline) occurs 42-47 days after silking. These predicted start dates for silage harvest can be relayed to custom choppers if silking date is known, so they can begin to schedule their workloads for the coming fall.”* Of course this will vary depending upon climate, planting date and hybrid relative maturity.

Soybean Development has reached R2 to R3 in fields across the region. R3 is beginning pod growth. R4 is full pod elongation. This stage marks the beginning of the most crucial period of plant development in terms of seed yield determination. Much of the area has received some rain in the last week; this will help the yield potential of the soybean crop as it begins to fill seed over the next several weeks.

Late Summer Alfalfa Seeding Establishing an alfalfa stand is typically done in the spring, but it can also be accomplished in late summer in NW Iowa. This procedure can be advantageous with crop rotations involving small grains or when a spring seeded alfalfa stand did not establish very well. Late summer seeded alfalfa should only be attempted when conditions allow for it. Refer to the following URL for the full article: http://www.extension.iastate.edu/carroll/crops/summer_alfalfa_seeding.htm

Insect Pest Management

Western Bean Cutworm moth catch continues to be high in Crawford, Shelby and Audubon counties and has increased significantly in Calhoun, western Webster and Buena Vista Counties. Scouting for egg masses and hatched larva should be ongoing in these areas. Pay close attention to pre-tassel corn.

Monitor current degree-day accumulations, trap catch numbers, and look at pictures of egg masses and newly hatched larva at the following web page: <http://extension.iastate.edu/carroll/crops/wbc-2003.htm>

Trap Catch numbers for all of Iowa can be seen here: <http://latrodectus.ent.iastate.edu/westernbeancutworm/>

Crop disease management

Be on the lookout for disease development in area corn and soybean crops, particularly as the crop moves into the grain filling period. The early season cool and wet conditions and areas that received hail injury may have created many low level disease situations that have persisted in the crop fields. As area crops begin grain fill, the plant diverts most of its energy into this process and away from disease protection. Many of these low level disease populations then increase and their presence is shown as the plants succumb to the infection. Leaf diseases, smut and stalk rot could be problematic in corn. Root rots, sudden death syndrome, cyst nematode and bacterial blights could be a problem in soybeans.

Go to the following web sites for more information on Corn disease management:

<http://www.ipm.iastate.edu/ipm/icm/1999/7-19-1999/midscomdis.html>

<http://www.ipm.iastate.edu/ipm/icm/2001/6-25-2001/controldis.html>

Go to the following web sites for more information on soybean disease identification and management

<http://www.ipm.iastate.edu/ipm/icm/2001/7-23-2001/soyscout.html>

Crop Management CD Series Available from Purdue University: <http://crop.agriculture.purdue.edu/>

Crop Update Newsletter Prepared By:
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For further information pertaining to this newsletter; please contact me or any of the county extension offices.
This newsletter can also be accessed on-line at http://extension.iastate.edu/carroll/crops/newsletter_2003.htm.

If you would like this letter to be emailed directly to you, please send an email with the desired email address to vagts@iastate.edu.

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