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July 14-15, Crop Management Clinic, Boone
July 21, Aug 24, Sept 9, Nov 10, Greenhorn Grazing Program, NE Iowa
July 22, SWCD Walking Tour of Conservation Practices, Calmar

CORN
Growing Degree Days (GDD), Growth & Development
Northeast IA is currently anywhere from 730 to 880 GDD from May 1 to today depending on location, which is right at the long-term normal. Normal GDD per day for early July in northeast IA is about 21 per day. Timely planted corn is around V10 at this time, so the pace of leaf development will now speed up to over 2 leaves per week. From VE to V10, a corn leaf develops every 84 GDD. From V11- VT, a corn leaf develops every 56 GDD. If you want to determine GDD for any given period of time, go to: http://mesonet.agron.iastate.edu/GIS/apps/coop/gsplot.phtml?network=IACLIMATE&var=gd
d50&year=2015&smonth=5&sday=1&emonth=6&eday=30

SOYBEANS
Growth and Development
A new V-stage (a new trifoliate leaf) appears about every 5 days through V-5 stage. By late June we often find the first open flower on the main stem which is R1 stage. So most soybeans are starting to set flowers. Once the flower fully opens, the plant is at R1 stage. Once a plant has an open flower in one of the top 2 nodes of the main stem, it is at R2 stage. For a reminder of definitions of growth stages go to: http://extension.agron.iastate.edu/soybean/production_growthstages.html

HAIL
The June 22 storm caused significant hail damage within a relatively small region about half way between Cresco and Ridgeway. Adjusters usually prefer to wait 7 to 10 days before assessing a site, which puts us at that window now. General tips on assessing hail damage are as follows for corn, soybeans and alfalfa:

Corn Grain
A simplified reference to sort out potential hail damage to corn is publication NCH-1, Assessing Hail Damage to Corn. The publication is due for a revision, but the information is still very useful. Go to: https://www.extension.purdue.edu/extmedia/NCH/NCH-1.html Your insurance agent would be using the recently updated information. FYI: Plant staging by the hail insurance adjusters is done a bit different than from the Universities using the “collar” system. They count to the uppermost leaf that is 40-50 percent exposed from the whorl and whose tip points below a horizontal line.

Corn Silage
The following is a summary of research by the University of Wisconsin and Penn State University examining the effects of hail damage on yield and quality of corn silage. http://extension.psu.edu/plants/crops/grains/corn/silage/effects-of-hail-damage-on-corn-silage-yield-and-quality

Soybeans
Soybeans in the vegetative stages that only suffer defoliation from hail basically have no yield loss. However, if the hail causes stem breakage or bruising, the hail adjusters have detailed
instruction to follow on how to assess potential yield loss. Many times when bruising occurs, the settlement is deferred and yield checked at harvest.

**Alfalfa**
Management decisions depend on a few factors… new seeding or established stand; hay or haylage; and planned days to next harvest vs. amount of damage. The following article provides recommendations: [http://ipcm.wisc.edu/blog/2012/05/managing-hail-damaged-alfalfa-and-red-clover/](http://ipcm.wisc.edu/blog/2012/05/managing-hail-damaged-alfalfa-and-red-clover/)

**INSECTS** - Many repeat comments from last week still relevant.

**Armyworm**
I had no indications of True Armyworm activity last week. The first generation may be complete with most survivors now in the pupal stage. A second generation is possible and if so would start to show activity in just a few weeks. However, if most of the first generation outbreaks were managed, the second generation survival and activity should be light. Management information about the pest is available at: [http://www.extension.iastate.edu/CropNews/2015/0526Hodgson.htm](http://www.extension.iastate.edu/CropNews/2015/0526Hodgson.htm)

**Corn Rootworm**
Based on soil degree days, the hatch is progressing just a little bit behind normal. The first beetles usually should emerge in early July.

**European Corn Borer**
All corn is protected up to about 17 to 21-inch extended leaf height by a naturally occurring compound in corn called DIMBOA. Beyond that height we would scout non-Bt corn borer corn for 1st generation corn borer. Details on ID and scouting are in this 2001 ICM Newsletter article. [http://www.ipm.iastate.edu/ipm/icm/2001/7-2-2001/scoutecb.html](http://www.ipm.iastate.edu/ipm/icm/2001/7-2-2001/scoutecb.html)

**Japanese Beetles**
This insect has been much more of a pest around Hwy 80 and Hwy 30, but has been increasing in occurrence along Hwy 20 and up around Hwy 3. This insect is known to favor feeding on soybean foliage and corn silks. The treatment threshold in soybean is 30% defoliation before bloom and 20% defoliation after bloom. To estimate soybean defoliation go to: [http://www.ent.iastate.edu/imagegal/plantpath/soybean/beanlb/soybean_defol_composite.html](http://www.ent.iastate.edu/imagegal/plantpath/soybean/beanlb/soybean_defol_composite.html) For “lawn and garden” concerns, looking to protect certain trees and shrubs from this insect, go to the following article for management tips: [http://www.ipm.iastate.edu/ipm/info/insects/beetles/japanese-beetle](http://www.ipm.iastate.edu/ipm/info/insects/beetles/japanese-beetle)

**Potato Leafhopper (PLH)**
They favor warmer, drier weather. With the rainy weather, I am not finding a lot of PLH, but my sweeps have found a few fields above threshold. A 15-inch diameter sweep net is required for scouting. Information on ID, thresholds and management is available at: [http://www.extension.iastate.edu/CropNews/2014/0602hodgson.htm](http://www.extension.iastate.edu/CropNews/2014/0602hodgson.htm)

**Slugs – More Calls**
I had two more calls on slugs just this morning. One from Dubuque County and one from Howard County, both dealing with soybeans. Normally, in Iowa, it more of a novelty, but there can be spotty areas with serious damage. They will feed on many plants including corn and soybeans. They do best in high residue fields with extended moist soil conditions. They are night-time feeders. The best time to scout is about 4:30 to 5:00 AM. They are more of a problem in the eastern U.S., thus the Ohio State University reference, photos and management tips: [http://u.osu.edu/wayneipm/files/2015/05/slugs-on-field-crops-OSU-Extension-14ddclb.pdf](http://u.osu.edu/wayneipm/files/2015/05/slugs-on-field-crops-OSU-Extension-14ddclb.pdf)  Penn State University includes another possible control measure for slugs. It is to spray crops at night with nitrogen solutions, which act as a contact poison and burn slugs. A common approach is to use a 30% urea-based nitrogen solution, mix it with an equal amount of water, and apply 20 gallons per acre. This tactic should be repeated a few nights in a row to maximize its effectiveness, because nitrogen solutions provide no residual control and all slugs in a field will not receive a killing dose in a single application.

**Soybean Aphid – Normal Activity**
Just south of Decorah I have a field without insecticide treated seed that has an infestation of 5% (10 plants out of 200) with no more than 7 aphids on any one plant. This level is typical compared to the last 5-6 years and nothing to be concerned about at this time. See the attachment for comparisons of soybean aphid activity over the last 13 years just south of Decorah.

**DISEASES**
**Northern Corn Leaf Blight (NCLB) – Repeat from last week**
Southern and Central Iowa continues to see an earlier than typical occurrence of NCLB in some corn fields. I have not seen this in northeast Iowa. The disease over winters on corn residue. Continuous no-till corn would be at greater risk for a reoccurrence of the problem this season assuming the weather is favorable for disease development. Favorable weather includes above normal rainfall and below normal temperatures and long periods of dew. The presence of this disease is usually not noticed until after tassel stage (VT). If scouting at this time finds 50% or more of plants with a NCLB lesion, and the hybrid has known susceptibility to NCLB, a fungicide application may be warranted at this time. Not to be confused with a much less serious disease of Anthracnose leaf blight which is present in nearly all corn fields at this time. For information, ID and general concerns on Anthracnose leaf blight see the ICM article at: [http://www.extension.iastate.edu/CropNews/2015/0616Robertson.htm](http://www.extension.iastate.edu/CropNews/2015/0616Robertson.htm)

**White Mold Management in Soybeans**
R1 begins the window for considering White Mold management with Cobra herbicide. Another option includes foliar fungicide products targeted for White Mold during the R1 to R3 stages depending on product. The University of Wisconsin just posted an article that discusses different foliar fungicide products, timings and rates for White Mold management at: [http://ipcm.wisc.edu/blog/2015/06/time-to-consider-your-white-mold-in-season-management-plan/](http://ipcm.wisc.edu/blog/2015/06/time-to-consider-your-white-mold-in-season-management-plan/) The control options are discussed under “What are my In-Season Control Options?” about two-thirds into the article.

**Leaf Diseases in Soybeans**
Septoria Brown Spot is probably the most common leaf disease in soybeans. It occurs in most fields every season, but often remains in the lower canopy in which it is not a threat to yield. If it advances into the mid-canopy during July, than a foliar fungicide application (usually towards the R3 stage) may be profitable. Unlike for White Mold, we can scout for this disease and time an application only if needed. At this time I have not seen a lot of Septoria Brown Spot. FYI for photos and more information on this disease go to: http://pdc.unl.edu/agriculturecrops/soybean/brownspot An excellent “hard copy” publication on soybean diseases is available for free at the ISU Northeast Research Farm, Nashua or ordered online at: https://store.extension.iastate.edu/Product/Soybean-Diseases

EVENTS
June 30, PQA Plus & TQA Certification Meeting, Fayette
3:00 to 5:00 PM at the Fayette Co. Extension Office, Fayette. $25 pre-registration is requested, with 5 participants needed to justify the session. Please e-mail mstorlie@iastate.edu or phone 563-425-3331.

July 14-15, Crop Management Clinic, Boone
The program occurs on the 23-acre teaching and demonstration facility dedicated to a hands-on learning experience for crop production professionals. Field plots show a wide range of management problems, solutions, and diagnostic challenges. Air-conditioned classroom facilities complement the field sessions. For program details, go to: http://www.aep.iastate.edu/feel/

July 21, Aug 24, Sept 9, Nov 10, Greenhorn Grazing Program, Northeast Iowa
A program designed for livestock producers with an interest in beginning or transitioning grazing practices. Offered as a 5-part series with both classroom and hands-on field activities. Each date’s workshop will be held at different locations within Clayton, Delaware and Dubuque county, but is open to all producers in northeast Iowa. For a list of the activities by date, see the news release at: http://www.iowabeefcenter.org/news/GreenhornGrazingNE2015.html Registration is $75 per person for all 5 sessions in the series, and includes a resource notebook and lunches. For more information on specific locations or details contact Schwab by phone at 319-721-9624 or email at dschwab@iastate.edu To register, contact the Delaware County Extension Office at 563-927-4201.

July 22, SWCD Walking Tour of Conservation Practices, Calmar
9:00 to Noon with lunch included. Program starts at the Wilder Business Center. Over the past several years, NICC and the Northeast Iowa Dairy Foundation have installed a variety of conservation practices including bioswale, conservation plantings, shelterbelts, native trees, butterfly garden, storm water wetlands, grassed waterways, sediment basin, cover crops, infiltration trench, enhanced rain garden, permeable pavers and sediment basin. Field activities include touring these sites, a rainfall simulator trailer demonstration, and a Hagie Cover Crop Interseeder demonstration. Registration is required if stay for lunch. Any questions, contact Michelle Elliott or Corey Meyer at 563-382-4352 ext. 3 no later than July 15.