CROP NOTES for June 7, 2015
Past issues of Crop Notes are posted at:
http://www.extension.iastate.edu/winneshiek/page/crop-notes-brian-lang

Iowa State University Extension Information for Northeast Iowa
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CORN
Corn Growing Degree Days (GDD), Growth & Development
Northeast IA is currently anywhere from 390 to 450 GDD from May 1 to today depending on location in northeast Iowa. Normal for northeast Iowa in general is about 450 GDD. Normal GDD per day in June in northeast IA is about 17, 19 and 20 per day during the 2nd, 3rd, and 4th week of June, respectively. A new leaf (fully developed, collar visible) appears approximately every 84 GDD. At 17, 19 and 20 GDD per day, a new leaf develops in 5 days, 4.4 days and 4.2 days, respectively. If you want to determine GDD for any given period of time, go to:

Silver Leaf
Over the last 2 weeks I have seen many corn fields with “Silver Leaf”. This is corn leaves with irregularly shaped sliver areas on leaves, such as: http://www.agry.purdue.edu/ext/corn/news/timeless/SilverLeaf.html. It occurs when there is bright sunshine while the early morning plants are cool and covered with dew. It is considered to be a very minor event that yield loss will not occur.

Purple Corn
The following link has photos and a discussion on both yellow and purple corn early in the season http://www.ipm.iastate.edu/ipm/icm/2007/6-11/coloredcorn.html. The comments below expand on the purple corn discussion. The most common reason for wide-spread purple corn is a combination of bright, sunny days and cool nights when corn ranges from V3 to V6 in development. As explained in a Purdue University article “Hybrids with more anthocyanin-producing genes will purple more greatly than those with fewer “purpling” genes. In most cases, the purpling will slowly disappear as temperatures warm and the plants transition into the rapid growth phase (post-V6). A hybrid’s genetic makeup greatly determines whether corn plants are able to produce anthocyanin. A hybrid may have none, one, or many genes that can trigger production of anthocyanin. Most agree that the anthocyanin pigments develop in young plants in direct response to a number of stresses that limit the plants’ ability to fully utilize the photosynthates produced during the day. These stresses include cool night temperatures, root restrictions, and water stress (both waterlogged and droughty conditions).”

Causes:
1) Cool conditions, slowing growth or cold events such as a light frost.
2) Damage to the root system from insects, herbicide carryover or compaction
3) Genetics
4) P deficiency, more likely with low soil P, high soil pH, poor nutrient uptake conditions

Effects/actions:
1) If it is cold or genetic there should be little if any impact.
2) Problems before the 4-5 leaf stage are easily overcome and have little lasting effect in many cases.
3) A non-uniform problem suggests problems with root systems… look for 2-dimensional roots, problems from compaction, insect damage, fertilizer burn from starter or ammonia-N.
4) Soil test if P deficiency is suspected.

**Anthracnose Leaf Blight**
The recent rainy weather on high residue corn-corn fields has enhanced the chance for Anthracnose leaf blight development on early season corn. Anthracnose leaf blight is caused by the fungus *Colletotrichum graminicola*. The fungus survives in crop residue and is splashed onto the leaves. Anthracnose is definitely more severe where corn follows corn. Symptoms are brown, oval, or elliptical spots (up to 1/2 inch in length) with a dark brown or purplish border, often surrounded by a yellowed zone. There may be black speckles within the dead tissue. This fungus is also often noted to infect leaves showing potassium (K) deficiency symptoms. Corn with Anthracnose at this stage usually grows right out of it and is not likely to cause economic injury, but there have been exceptions, especially in fields where K deficiency was also noted. But usually, it just occurs on the lower leaves, does not move up the plant after those leaves are shaded out, and does not cause Anthracnose stalk rot. Those concerned could apply a foliar fungicide (i.e. application at the V5 stage), but University research does not show reliable economic returns for that practice. Details of last year’s research on this practice is available at: [http://www.extension.iastate.edu/CropNews/2015/0603Robertson.htm](http://www.extension.iastate.edu/CropNews/2015/0603Robertson.htm)

[Anthracnose lesions on corn.](image)

[Anthracnose symptoms on leaf with potassium deficiency symptoms](image)

**Early Season K Deficiency Symptoms**
Every spring we see some corn fields with K deficiency symptoms. The plants are often stunted, with lower leaves yellowing and browning along the margins. [http://www.ipm.iastate.edu/ipm/icm/2002/7-1-2002/cornleaf.html](http://www.ipm.iastate.edu/ipm/icm/2002/7-1-2002/cornleaf.html) This can be from low soil K levels, but it is often due to poor root function. Usually the fields look fine until the corn reaches
the rapid-growth phase when K needs for the plant rapidly increase. Along with the leaf symptoms, the plants are often stunted with internodes stacked closer together, but stage of development is usually similar to the rest of the field. If root function improves, the yellowing will not progress up the plant, in which case they usually yield better than expected. There can be large differences among hybrids showing this K deficiency phenomenon. Anything that restricts root growth during the initiation of the nodal root system can lead to the problem. Negative influences include shallow planting and/or soil settling or eroding after planting aggravates the problem, compaction, planter slots that open back up, erosion, seedling root rot, and/or very wet or droughty soil conditions for an extended period. It shows up in no-till and tiled fields. There is no rescue treatment, however, if the nodal root system is at or very near the soil surface, a cultivation throwing soil up around the plants may help by stimulating root growth. Soil samples should be taken to make sure it is not a true K deficiency problem.

SOYBEANS  
Still Planting; Stay With A Full Season Variety  
Stay with “normal” adapted maturity soybeans for northeast Iowa until about mid-June. For soybean planting delayed into June, if feasible, it is suggested to use narrower rows (i.e. 15 or 20-inch vs. 30-inch) since late planted soybeans tend to not cover the mid-rows as well as earlier planted soybeans.

GRAZING  
Greenhorn Grazing Program in Northeast Iowa – 1st Session on June 10  
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. Events to be held June 10, July 21, Aug 24, Sept 9, Nov 10. More details are provided at: [http://www.iowabeefcenter.org/news/GreenhornGrazingNE2015.html](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.  
The June 10 Greenhorn Grazing Program includes:  
In the Classroom: Goals and indicators of grazing success; Soil fertility and plant productivity; Forage species, ID, characteristics, seeding methods, growth curves, etc.; Pasture condition scoring & CSP contracts.  
In the Field at the John Schupbach farm, Elgin: Grazing basics, planning and resource inventory; Soil sampling and fertility; Forage ID; Pasture condition scoring.  
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.

INSECTS  
Armyworm – More Reports
I am receiving a report about every other day on Armyworm activity. About half are from soybeans following a cereal rye cover crop. Armyworm don’t appear to feed very much on soybeans; just enough to migrate out of the field to an adjacent area of corn, oats, grass forage, etc.). Armyworms typically do not feed in the day time (unless heavily overcast skies), usually spending the daytime in the plant whorl or under crop residue or soil clods. Its easiest to scout for this insect very early in the morning when many are still likely to be feeding. The higher probability feeding sites are:

1) corn following a winter cereal cover crop
2) corn following CRP or grass pasture
3) small grain fields

Continue to scout for this insect through June. 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)

**Black Cutworm – Scout thru V5 Stage**
Expect extremely spotty activity with the very few significant moth trap catches this spring. We scout for cutting damage through V5 stage corn. It is difficult for cutworm to cut/kill corn of that size. An article about identification, scouting and threshold information is available at: [http://www.extension.iastate.edu/CropNews/2015/0514Sisson.htm](http://www.extension.iastate.edu/CropNews/2015/0514Sisson.htm) Areas of greatest concern tend to be:

1) areas that had heavier infestations of low growing perennial and winter annual broadleaf weeds during moth flights
2) fields with heavy soybean residue
3) low lying areas
4) fields with later corn plantings

**Common Stalk Borer**
For those that lose corn plants in the first few rows along grassy field borders or grass-back terraces, you may have a problem with Common Stalk Borer.

![Common Stalk Borer](image)

Larval migration from the grass field borders to the corn begins around 1,300 DD base 41, Jan. 1 as the developing larvae get too large to remain in the smaller diameter grass plants. They migrate to something with a larger stem diameter like corn. At this time, apply an insecticide on the grass field border and the first few rows of corn. This usually occurs around mid-June in northeast Iowa. A current DD map is at: [http://mesonet.agron.iastate.edu/cgi-bin/oagdd.py?year1=2015&month1=1&day1=1&year2=2015&month2=6&day2=8&base=41&max=86](http://mesonet.agron.iastate.edu/cgi-bin/oagdd.py?year1=2015&month1=1&day1=1&year2=2015&month2=6&day2=8&base=41&max=86)

East central Iowa has reached 1,300 DD. Expect northeast Iowa to reach 1,300 DD next week. Insect ID and threshold information is available at: [http://www.extension.iastate.edu/CropNews/2015/0528Hodgson.htm](http://www.extension.iastate.edu/CropNews/2015/0528Hodgson.htm)

**Potato Leafhopper (PLH)**
Once 1st crop is harvested it is time to scout for PLH. They migrate up from the south and usually start to appear in alfalfa fields in late May. They favor warmer, drier weather. Current PLH resistant alfalfas have done well, and this resistance development is accomplished through normal plant breeding which fits well with organic alfalfa production. Information on ID, thresholds and management is available at: http://www.extension.iastate.edu/CropNews/2014/0602hodgson.htm

Soybean Aphid – First Findings
For the last 14 years, I could always find my first soybean aphid in soybeans in the first week of June. This was in research just south of Decorah in plots of non-insecticide treated seed. I no longer have that research site available to me, so my earliest findings of soybean aphid will no longer be reported. However, in case you were wondering if soybean aphid once again showed up in early June, the University of Wisconsin reported last week on their first findings of soybean aphids in soybeans in southwest WI, near Onalaska and West Salem. Just 1-4 aphids per infested plant on 1-3% of the plants examined. Nothing to get excited about at this time.

EVENTS
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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.

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June 10-11, Four-State Dairy Nutrition & Management Conference, Dubuque
At the Grand River Center in Dubuque. Conference topics include “Animal nutrition focusing on animal health and immunity”, “Creating a perfect dining experience for your cows”, “How to move beyond 90 lbs of milk”, “Dry cow diets”, “Rumen lipid sub-models in nutrition programs”, “Practical mineral recommendations”, “Feeding low lignin alfalfa”, “Precision dairy monitoring technology investment considerations”, “Useful information from a TMR fat analysis”, “Five things to help manage foot health”, “Sampling variation in feeds”, “Dollars and sense of organic dairying”, “Corn silage fungal disease”, “Serotonin impact on calcium status”, “Building milk protein and Using the KetoMonitor to manage herd level ketosis”. For details about the conference, go to: http://wiagribusiness.org/fourstate.html
June 11, Advanced Reproductive Swine Management Seminar, Waverly
9:30 AM to 3:00 PM at the Waverly Civic Center, 200 1st St. NE., Waverly. Speakers include Larry Coleman, DVM, Broken Bow, Nebraska, on “No Pig Left Behind: Increasing Piglet Survival in the Farrowing House.” and on “Increasing Employee Success: Is There a Silver Bullet?”; Jason Ross, Iowa State University, on “Summer Heat Impact on Fertility”; Mark Storlie, ISU Extension, on the “Sow Caliper, a tool to manage sow body condition scores and feed costs”. Cost is $30 per person, includes lunch and materials. A multiple-attendee discount is available. Preregistration is strongly encouraged. More details and a registration form are available at: http://www.ipic.iastate.edu/events/AdvanceRepro2015Waverly.pdf Other questions or to register? Just contact Mark Storlie, 563-425-3331 or email at mstorlie@iastate.edu

June 16, Iowa Cattlemen’s Assoc., Hosts Pasture-Walk, Decorah
4:30 to 5:45 PM at the Eric Smith farm, 2417 348th St., Decorah. Emphasis on brush management and maximizing feeder calf value. The program is free, but producers should RSVP by calling 515-296-2266 to plan for the free meal. For more information, go to: http://www.extension.iastate.edu/winneshiek/news/ica-hosts-pasturewalk-near-decorah-june-16

June 17, Iowa Cattlemen’s Assoc., Hosts Pasture-Walk, Delmar
4:30 to 5:45 PM at the Marty Green farm, 2440 180th St., Delmar, with meal at Buzzy’s in Welton. Emphasis on brush management and maximizing feeder calf value. The program is free, but producers should RSVP by calling 515-296-2266 to plan for the free meal. For more information, go to: http://www.extension.iastate.edu/winneshiek/news/ica-hosts-pasturewalk-near-decorah-june-16

June 17, Iowa Learning Farms Webinar on Cover Crops
Starting at 1:00 PM with Sarah Carlson talking about the latest work on cover crops. For more information and the log-in link, go to: http://www.extension.iastate.edu/article/iowa-learning-farms-june-webinar-cover-crops
Iowa Learning Farms field day June 18 in Buchanan County

June 18, STRIPS Project Field Day, Rowley
5:50 to 7:30 PM at the Dick and Diana Sloan farm at 3046 Harrison Ave., Rowley. The STRIPS project focuses on planting a small percentage of a field into strips of perennial prairie plants to reduce soil erosion, water runoff, and to create habitat for pollinators. The event will show application of this conservation practice on farm fields and resulting benefits. Speakers include the host farmer Dick Sloan, who will discuss his use of cover crops and installation of perennial prairie strips; Mary Harris, a member of the STRIPS project team, will discuss pollinators and prairie strips importance to the ecosystem; Tim Youngquist, STRIPS project farmer liaison, will cover details on installing prairie strips. A complimentary supper from the Buchanan County Cattlemen follows the program. The program is free and open to the public, but an RSVP is requested by phone 515-294-8912, or email: ilf@iastate.edu

June 23, ISU Southeast Research Farm Field Day, Crawfordsville
9:00 to Noon, a special Certified Crop Advisors program.
1:00 to 3:00 PM, annual farm field day.
Details for both programs are provided
at: http://www.extension.iastate.edu/Pages/eccrops/meetserc.html

**June 24, ISU Northeast Research Farm Field Day, Nashua**
1:00 to 4:00 pm. Speakers include Elwynn Taylor for a crop-weather update; Antonio Mallarino to discuss N management in crop rotations; Matt Helmers to address water quality research on the farm and implications, and Matt Liebman to cover economics of longer-term crop rotations. The field day is free and open to the public. It starts at the Borlaug Learning Center on the ISU Northeast Research Farm near Nashua. Directions: From Nashua at the Jct of Hwy 218 (Exit 220) and Co. Rd. B60, go west on B60 1.1 miles to Windfall Ave., then south 1 mile to 290th St., then east 0.2 miles to the farm. For more information about the event, call Terry Basol at 641-426-6801.

**June 24-25, Farm Progress Hay Expo, Cannon Falls, MN**
The Hay Expo is a bit to the north this year, in Cannon Falls, MN, about 80 miles north of the IA-MN state line. Details are available at: http://hayexpo.com/

**June 25, ISU Northern Research Farm Field Day, Kanawha**
9:00 AM to 1:00 PM with lunch at Noon. Free and open to the public. Details provided at: http://www.extension.iastate.edu/CropNews/2015/0602RieckHinz.htm

**June 25, Weed Science Field Day, Ames**
Self-guided field day begins at 8:30 AM. Free and open to the public. Details provided at: http://www.extension.iastate.edu/CropNews/2015/0528Owens.htm

**June 25, Fourth Annual Iowa Swine Day, Ames**
Topics include the world protein supply, preparing for new swine diseases, and other pork production-related issues. The $60 registration fee includes coffee, snacks, lunch and copy of the proceedings. There is a $35 registration fee discount for students. These early registration fees end June 12. As more information becomes available, it will be posted on the Iowa Pork Center page at: http://www.ipic.iastate.edu/

**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/

**NICC-Calmar**

**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.

Iowa State University Extension and Outreach programs are available to all without regard to race, color, age, religion, national origin, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. veteran. Inquiries can be directed to the Director of Equal Opportunity and Compliance, 3280 Beardshear Hall, (515) 294-7612. Cooperative Extension Service, Iowa State University of Science and Technology, and the United States Department of Agriculture cooperating.

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