CROP NOTES for June 13, 2018
Iowa State University Extension Information for Northeast Iowa
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Past issues of Crop Notes are posted at:
http://www.extension.iastate.edu/winneshiek/page/crop-notes-brian-lang
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TABLE OF CONTENTS
CORN
  Growth and Development
  Silage Conference June 21, Dubuque (early registration on-line or postmark by June 14)

SOYBEANS
  When to Switch Varieties
  Growth and Development
  R1 Stage Already!

NITROGEN
  Late Spring Soil Nitrate Test (LSNT)
  Potential N Loss in Spring 2018

INSECTS
  Common Stalk Borer
  Black Cutworm
  True Armyworm
  European Corn Borer
  Potato Leafhopper
  Slugs

DISEASES
  Stormy Weather, Hailed Crops, Do I Apply a Fungicide?
  New Hail Crop Injury Publications for Corn and Soybeans

WEEDS
  PPO Herbicide Injury in Soybeans
EVENTS
June 16, Clayton County Cattlemen Locker Tour, Edgewood
June 20, ISU Northern Research Farm Field Day, Kanawha
June 21, Northeast Iowa Silage Conference, Dubuque – early registration online or postmark by June 14
June 23, Breakfast on the Farm Iowa's Dairy Center, Calmar
June 27, ISU Northeast Research Farm Field Day, Nashua
June 28, Seventh Annual Iowa Swine Day, Ames
June 28, ISU Southeast Research Farm Field Day, Crawfordsville
July 11, Field Diagnostic Clinic, Field Extension Lab west of Ames
July 12, Crop Management Clinic, Field Extension Lab west of Ames

CORN
Growth and Development
In northeast Iowa, late April planted corn is V7 to V8. The third week of May was another popular planting window with corn currently V4-V5 stage. Emerged corn will develop a new leaf every 84 GDD (about every 4 days with the current weather conditions). For a map of current GDD from May 1 to today, go to:
http://mesonet.agron.iastate.edu/GIS/apps/coop/gsplot.phtml (based on the map, for your various planting dates, subtract 100 GDD to account for emergence, then divide the remainder by 84 to estimate leaf stage. We continue with warmer than normal weather. Average GDD for mid-June is about 18.5 per day, however, this week (Wednesday-Tuesday) will average about 24.5 per day.

June 21, Northeast Iowa Silage Conference, Dubuque (early registration on-line or postmark by June 14)
9:30 AM to 3:30 PM at the Midway Best Western Plus, Dubuque (3100 Dodge Street). The conference will feature presentations from both academic and industry experts. This one-day conference will focus on the keys to growing, harvesting, storing and feeding high quality silage to beef and dairy cattle. Topics include quality corn silage before, during & after harvest, characteristics of corn varieties for silage, preventing molds and mycotoxins, pricing corn silage, silage in beef or dairy rations, and safety. Online registration and more conference information is available at:  http://www.aep.iastate.edu/silage/

SOYBEANS
When to Switch Varieties
Stay with full season varieties until about June 20. For delayed planting, if feasible, use narrower rows (i.e. 15 or 20-inch vs. 30-inch) and up the population a bit since late planted soybeans don’t develop as robust and cover the rows as good as earlier planted soybeans.

Growth and Development
At V2 stage, lateral roots are developing rapidly and nodules begin to fix N. A new leaf stage appears about every 5 days through V5 stage; and after that about every 3 days. At V5 stage, lateral roots reach across a 30-inch row.
R1 Stage Already!
I was in the Strawberry Point area on Monday and noticed an extremely nice looking soybean field. It was planted late April, and with the warm May and June weather, its development had advanced to some plants beginning to flower. It should ‘officially’ reach R1 stage later this week. As nice as this is, we have to be ready for timely post-emerge herbicide programs applied within crop-stage labeled recommendations. Historically, most timely planted soybeans in northeast Iowa reach R1 stage in the last week in June (photoperiod sensitive plants triggered by the longest day of the year June 21). However, sensitivity to photoperiod is not absolute. Variety and environment (i.e. warm temperatures) also have strong influences. Also, late planted soybeans cannot start flowering until a minimum vegetative stage is first reached.

NITROGEN
Potential N Loss in Spring 2018
The Corn Nitrogen Rate Calculator provides a good starting point for N recommendations, but sometimes circumstances like a wet spring requires additional adjustments. An article posted last spring on the ICM News discusses issues with above average spring rainfall and risk of N fertilizer loss. [http://crops.extension.iastate.edu/cropnews/2017/05/potential-nitrogen-loss-spring-2017](http://crops.extension.iastate.edu/cropnews/2017/05/potential-nitrogen-loss-spring-2017) The 4th approach in this article discusses concerns with April 1 through June 30 rainfall that exceeds 15 inches and the recommendation for supplemental N fertilizer. The 2018 rainfall map from April 1-June 12 (below) shows the top 1-2 tiers of counties in northeast IA already exceeding 15 inches of rainfall with half of June to still come. [https://mesonet.agron.iastate.edu/GIS/apps/coop/gsplot.phtml?network=IACLIMATE&var=prec&year=2018&smonth=4&sday=1&emonth=6&eday=12](https://mesonet.agron.iastate.edu/GIS/apps/coop/gsplot.phtml?network=IACLIMATE&var=prec&year=2018&smonth=4&sday=1&emonth=6&eday=12)

Late Spring Soil Nitrate Test (LSNT)
Free download of the LSNT publication is available at: [https://store.extension.iastate.edu/Product/Use-of-the-Late-Spring-Soil-Nitrate-Test-in-Iowa-Corn-Production](https://store.extension.iastate.edu/Product/Use-of-the-Late-Spring-Soil-Nitrate-Test-in-Iowa-Corn-Production) Soil sample collection for the LSNT should be accomplished in early June even if the corn is not to the suggested height for soil nitrate sampling. This sample timing caveat is mentioned in the time and depth of sampling section of the publication. For N rate guidelines on corn not based on this test, use Extension publication CROP 3073,
INSECTS

Common Stalk Borer (CSB)
For those that lose corn plants in the first few rows along grassy field borders or grass-back terraces may be from CSB (figure 1).

The remaining control option for this pest this season is to wait for larval migration from the grass border to the first few corn rows. When the larva gets too large for the perennial grass, it “dead-heads” the grass (kills its growing point which turns the grass prematurely tan color – see photo above) and moves out to find something larger, like the nearby corn. This migration is now occurring along the region around Hwy 20, so spray an insecticide on the first few rows of corn along the grass border within the next week. Currently, the region around Hwy 18 will reach 1,300 DD (base 41 from Jan. 1) in the next few days, so an application could be made from about June 15 through June 25. I think it’s important to scout now for “dead-heads” (figure 2) in the grass border as a way to figure if there are just a few or many Common stalk borer along your field. Don’t worry about treating if the “dead heads” are few.

Black Cutworm
I have not had any significant reports in northeast Iowa. Scout corn to V5 stage. Much corn is past V5 stage, but late planted corn in the north is still vulnerable. Common thresholds for V2, V3, and V4 stage corn plants are 3, 5, and 7 plants cut out of 100, respectively. For scouting tips and a threshold spreadsheet, go to: https://crops.extension.iastate.edu/cropnews/2018/05/black-cutworm-scouting-2018

True Armyworm
There have been just a few significant armyworm reports in corn so far. Keep scouting for this pest through June. The following article provide some photos, scouting tips and threshold recommendations. https://crops.extension.iastate.edu/blog/adam-sisson-erin-hodgson/true-armyworm-trapping-update Armyworm tend to avoid of direct sunlight by hiding in the corn whorl or under residue in very young corn fields, and feed at night or in the daytime with overcast skies.

European Corn Borer (ECB)
All corn is protected up to about 17 to 21-inch extended leaf height by a naturally occurring compound in corn called DIMBOA. Once corn grows beyond the 17 to 21-inch extended leaf
height, we start scouting fields that are not protected by Bt ECB traits (identified in the Handy Bt Trait Table: https://lubbock.tamu.edu/files/2018/01/BtTraitTableJan2018.pdf). The following publication includes photos of a hatching egg masses, shot-holing, stalk and ear damage, as well as general timelines and threshold calculations: https://store.extension.iastate.edu/Product/15141. An interactive spreadsheet threshold calculator is also available at: https://www.ipm.iastate.edu/field-crop-insects (two-thirds down the page). In a nutshell, threshold is about 1 larva per plant average.

**Potato Leafhopper (PLH)**
After first crop harvest and with initial alfalfa regrowth of a few inches, it’s time to scout (with a sweep net) for PLH. Scouting and threshold information is provided at: http://crops.extension.iastate.edu/cropnews/2014/06/managing-potato-leafhoppers-alfalfa. They are blown up from the gulf coast region every spring. Warm and dry weather favors their development. Don’t forget to check on new alfalfa seedings under the oat nurse crop. Serious PLH populations can kill new seedlings.

**Slugs**
Whenever environmental conditions are very wet, slug injury to corn and soybeans is possible in fields, especially those with high residue. If they are present, damage is usually not spanning a significant area, and there is no affordable rescue treatment. I just included this information to help with identification. Slugs are nighttime feeders. The best time to see them is to scout suspected areas at about 5:00 AM.
Photos: slug injury to corn (by Ted Bay, UW Extension), and slug injury to soybeans (note more injury associated where there is residue cover for the slugs during the daytime).

For more information on slugs, see The Ohio State University fact sheet at: https://ohioline.osu.edu/factsheet/ENT-20
DISEASES
Stormy Weather, Hailed Crops, Do I Apply a Fungicide?
No! Save your money. Recent storms dropped hail in Mitchell, Floyd and some other areas. A question always follows about whether a fungicide application is beneficial following this crop damage. The short answer is no. If you want to no more… the explanation follows at: https://crops.extension.iastate.edu/blog/adam-sisson-alison-robertson-daren-mueller/would-fungicide-benefit-hail-damaged-crops

New Hail Crop Injury Publications for Corn and Soybeans
ISU Extension Store has available two publications that discuss hail damage and injury assessment for corn and soybeans. Go to,
Hail on Corn in Iowa: https://store.extension.iastate.edu/product/14776
Hail on Soybean in Iowa: https://store.extension.iastate.edu/product/14792

WEEDS
PPO Herbicide Injury in Soybeans
Soil-applied PPO-inhibiting herbicides in soybeans, including flumioxazin (like Valor & Fierce), and sulfentrazone (like Spartan & Authority products), are very effective for control of Amaranthus species. However, at times these herbicides (and many others) can also cause some soybean injury. Pre-applied product, then crop emergence, then rain splash of product onto the emerging/early developing crop. The most commonly encountered injury symptoms occur on the hypocotyl and cotyledons (see photos in the following IPM Bulletin article at: http://bulletin.ipm.illinois.edu/?p=2183  I have been seeing some spotty occurrence of this injury in some soybean fields in northeast Iowa with injury symptoms on soybeans a bit further along in development then what the photos show in the Illinois article. The photo below shows PPO injury (left) vs. uninjured (right) in the same field.

EVENTS
June 13-14, Four-State Dairy Nutrition & Management Conference, Dubuque
At the Grand River Center, Dubuque, IA. Presenting the latest research on issues concerning the dairy industry including feed efficiency, calves, and transition cows. Complete agenda and registration is available at http://www.wiagribusiness.org/fourstate.html
June 16, Clayton County Cattlemen Locker Tour, Edgewood
1:00PM at the Edgewood Locker, sponsored by the Clayton County Cattlemen and the Iowa Beef Industry Council Edgewood Locker tour and cutting room demonstrations, calculate dressing percent, retail yield, and measuring carcass, determine quality grade, pricing, and compare to industry standards. Participants will also taste test new cuts. Learn how you benefit from the checkoff at both the state and national level from Chris Freland. Dr. Woerner from Colorado State University will give an update on the industry as well. Registration by June 11th at www.tinyurl.com/beefworkshop18

June 20, ISU Northern Research Farm Field Day, Kanawha
Registration starts at 9:00, the field tour runs from 9:30 to noon followed by a lunch provided (so please RSVP to the Wright Co. Extension office 515-532-3453 or Hancock Co. Extension Office 641-923-2856). Topics include sulfur fertilization of corn, 2018 weed control, growing cereal rye for seed, and current challenges with the 2018 growing season. More information is available at: https://www.extension.iastate.edu/news/isu-research-farm-summer-field-day-june-20-near-kanawha

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9:30 AM to 3:30 PM at the Midway Best Western Plus, Dubuque (3100 Dodge Street). The conference will feature presentations from both academic and industry experts. This one-day conference will focus on the keys to growing, harvesting, storing and feeding high quality silage to beef and dairy cattle. Topics include quality corn silage before, during & after harvest, characteristics of corn varieties for silage, preventing molds and mycotoxins, pricing corn silage, silage in beef or dairy rations, and safety. Online registration and more conference information is available at: http://www.aep.iastate.edu/silage/

June 23, Breakfast on the Farm at Iowa's Dairy Center, Calmar
8:30 AM to Noon for the 9th annual Breakfast on the Farm. Provides breakfast and guided tram tours of the nationally-recognized Dairy Center. The kids will enjoy the chance to pet calves, plus families can visit several educational exhibits, milk a cow and see robots milk cows. More details available at: http://www.iowadairycenter.com/tours-events/breakfast-on-the-farm.php

June 27, ISU Northeast Research Farm Field Day, Nashua
1:00 to 4:15 PM starting at the Borlaug Learning Center, ISU Research Farm, Nashua. Elwynn Taylor, Extension climatologist, will kick-off the program providing his insights on crop weather for the 2018 growing season. Mahdi Al-Kaisi, Extension soil/tillage specialist, follows with updates on various strip-till and no-till studies at the research farm. We will then convene outside for the farm wagon tours to include John Sawyer, Extension soil fertility specialist, to share his expertise on corn nitrogen fertilizer management (rate, timing, split-apply, N sensors, etc.), and finish with Brian Lang, Extension agronomist, to discuss and demonstrate crop scouting for insect pests. The field day is free and open to the public. 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. CCA credits will be available (1 SW, 1 NM, 1 PM, 1 CM).
June 28, Seventh Annual Iowa Swine Day, Ames
Showcases national industry speakers. Details at: http://www.aep.iastate.edu/iowaswineday/

June 28, ISU Southeast Research Farm Field Day, Crawfordsville
9:00 to noon plus lunch is a special session for Certified Crop Advisors (CCAs).
1:00 to 3:00 is the annual Field Day, which is open to everyone.
Details posted at: https://www.extension.iastate.edu/Pages/eccrops/meetserc.html

July 11, Field Diagnostic Clinic, Field Extension Lab west of Ames
The ISU Field Extension Education Laboratory (FEEL) offers the Summer 2018 Field Diagnostic Clinic from 8:55 AM to 4:00 PM. The clinic focuses on identifying common issues within crop fields. Extension specialists will discuss diagnostic methods and skills, management options and decision making for future crops. This program is meant for new crop advisors as well as individuals interested in a diagnostics refresher. For more information, go to:
http://www.aep.iastate.edu/feel/diagnostic.html

July 12, Crop Management Clinic, Field Extension Lab west of Ames
The ISU Field Extension Education Laboratory (FEEL) offers the Summer 2018 Crop Management Clinic from 9 AM to 4 PM. The clinic provides interactive workshops and discussions to give patrons the best tools, resources and means-tested strategies to make the best crop management decisions in their corn or soybean fields. The clinic topics cover four primary areas: crop management, pest management, nutrient management, and soil and water management. Small group sizes encourage discussion and interaction with Extension instructors, and practical exercises in field situations. For more information, go to:
http://www.aep.iastate.edu/feel/management

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