CROP NOTES for June 7, 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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CORN
Growth and Development
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 this map, May 1 planted corn in northeast Iowa should be V7 stage. We continue with warmer than normal weather. 
Average GDD for early to mid-June is about 17 per day, however, this week (Thursday-Wednesday) will average about 21 per day.

SOYBEANS – repeat from last week
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.

NITROGEN – repeat from last week
Nitrogen Application Over Emerged Corn
Urea-ammonium nitrate (UAN) alone can be applied to emerged corn, and the risk of injury to the corn is dependent upon UAN rate, corn stage and weather conditions. Conservative suggestions are to limit post-emergence applications of UAN to 90 lb N/acre when corn is at the V3 to V4 stage and to 60 lb N/acre at the V7 stage. Applications beyond the V7 stage are not recommended, and the risk of injury increases during hot, dry conditions. While many pre-emergence herbicides are applied using UAN as a carrier, this practice is only recommended prior to crop emergence.

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 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, https://store.extension.iastate.edu/Product/Nitrogen-Use-in-Iowa-Corn-Production and the Corn Nitrogen Rate Calculator http://cnrc.agron.iastate.edu/

INSECTS
Common Stalk Borer
For those that lose corn plants in the first few rows along grassy field borders or grass-back terraces may be from Common Stalk Borer.
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 starts ~1,300 (from Jan. 1 base 41F) and provides window of about a week to spray an insecticide on the first few rows of corn along the grass border. Currently, Hwy 18 is at about 1,125 DD, and Hwy 20 is at about 1,250 DD. With predicted temperatures over the next week we should reach ~1,300 DD around June 13 for Hwy 18, and June 9 for Hwy 20. You can scout for “dead-heads” 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 so far 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 Seedling, V2, V3, and V4 stage corn plants are 2, 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.

**Corn Rootworm**
50% egg hatch occurs at about 684 to 767 soil degree days (base 52 from Jan. 1) which is usually mid-June. Currently we have about 637 DD for northeast Iowa (Nashua) which is a little ahead of normal (cold April, warm May). Hatch has started with 50% hatch to be around June 10 (>700 soil DD at Nashua). FYI, here’s the Mesonet website to track this information statewide: http://mesonet.agron.iastate.edu/GIS/apps/agclimate/gsplot.phtml?var=sgdd52&year=2018&smonth=1&day=1&imgsz=640x480&emonth=6&eday=7

**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 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. My sweeps yesterday have found very few, but this insect can populate quickly. 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. Many companies sell sweep nets. You want one with a 15-inch diameter net, a sturdy cloth net and strong handle.

**WEEDS**
**Corn Growth Stage and Post-emergence Herbicides**
Here is a recent University of Illinois posting of a summary of post-emergence corn herbicides allowed at various crop growth stages. For product labels that indicate a specific crop height and growth state, be sure to follow the more restrictive of the two. For more details go to: http://bulletin.ipm.illinois.edu/?p=4173 Be sure to consult the respective product label for additional precautions or restrictions.

**Soybeans and Post-emergence Herbicides with Residual**
Here is a recent University of Illinois posting of a summary of post-emergence soybean herbicides with residual control. For product labels that indicate a specific crop height and growth state, be sure to follow the more restrictive of the two. For more details go to: http://bulletin.ipm.illinois.edu/?p=4237 Be sure to consult the respective product label for additional precautions or restrictions.

**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. 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.

**FERTILITY**
**Here’s What the Research Says About Managing Sulfur (S) in Soybeans**
While sulfur is an essential nutrient for all crops, including soybeans, research shows that the best way to manage S in soybeans is not to apply fertilizer S directly to soybeans, but to corn in a corn-soybean rotation. Here’s the University of Minnesota article on this subject: https://z.umn.edu/3j22

**WINTER BURN**

**Many Iowa Evergreens Showing Signs of Winter Burn**

The following article was written by Tivon Feeley, DNR Forester, April 2016, but seems to apply very well to the spring of 2018.

Conifers, or evergreen trees, provide color and wind protection to the Iowa landscape during the winter months. However, this year, many of these trees are showing signs of winter desiccation, also known as winter burn. Although this past winter was mild, several days had air temperatures above freezing while the soil remained frozen. “When this happens, conifers use the water reserves they have in their needles, but are unable to absorb new water from the frozen soil,” says Tivon Feeley, DNR forest health program leader. “Because roots in frozen soil have no ability to replace water, winter burn occurs as needles dry out and brown. The tree literally runs out of water.” Symptoms of winter burn include browning or bleaching of needles and loss of needles, which can eventually lead to death. The symptoms tend to be worse on the windward side of the tree and become more apparent as the days become warmer. According to Feeley, the DNR is beginning to receive calls about arborvitae, white pine and white fir with moderate to severe damage from winter burn, and he expects the damage will become more apparent in June and July. If needles on trees are dead but buds are alive, new plant foliage will regrow to replace the winter burned foliage; however, if both the buds and needles are dead, the tree will not recover and will need to be removed. “There is no way to prevent winter burn,” says Feeley, “however, you can reduce the risks by properly mulching around your conifers and watering in the fall just before the trees goes dormant.” “Watering is especially important in drought years,” adds Feeley, “and therefore the DNR recommends using site-appropriate conifers or deciduous trees for newly planted windbreaks.”

**EVENTS**

**June 12, Herbicide Resistance Management Field Day, McCallsburg**

5:00 to 7:00 PM. Attendees will learn about effective herbicide sites of action, effective application rates, the impact of pre- and post-emergence applied herbicides and timing of applications. ISU Extension agronomists Meaghan Anderson, Terry Basol and Angie Rieck-Hinz will lead attendees through the plots to discuss herbicide principles used to manage herbicide resistant weeds. Details available at: https://www.extension.iastate.edu/news/herbicide-resistance-management-field-day-june-12

**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](https://www.extension.iastate.edu/news/isu-research-farm-summer-field-day-june-20-near-kanawha)

**June 21, Northeast Iowa Silage Conference, Dubuque**
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/](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](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/](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/meetsrec.html

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