CROP NOTES for April 10, 2018
Iowa State University Extension Information for Northeast Iowa
Brian Lang, ISU Extension Agronomist, Decorah, IA
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http://www.extension.iastate.edu/winneshiek/page/crop-notes-brian-lang
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TABLE OF CONTENTS
WEATHER
   Soil Temperature
   Precipitation
WEEDS
   Dicamba On-line Training for Iowa Pesticide Applicators
   2018 Herbicide Guide for Iowa Corn and Soybean Production
INSECTS
   Handy Bt Trait Table for 2018
   Do You Need an Insecticide Seed Treatment for Soybeans?
   Common Stalk Borer Control in Corn – Option 1: Prescribe Burn of Grass Bordering Corn Fields
NITROGEN MANAGEMENT
   Corn
   Pasture
FARM MANAGEMENT
   Iowa Farm Custom Rate Survey
   Economics of Cover Crops
MANURE
   New Version of RUSLE2
MISCELLANEOUS
   Youth Crop Scout Competition Announced
EVENTS
   April 21, Pond Care 101, New Hampton
   April 27, Vegetable Production Workshops to Explore Managing Disease, Insect Pests and Weeds, Calmar
   Upcoming programs at the Northeast Iowa Dairy Foundation, Calmar
      April 18-19: Seven Habits of Highly Successful Feeders
      April 25-26: It’s Transition Time
      May 1-2: Calmar Calf College
      May 7-8: Master Hoof Care Workshop
      May 9-11: Dairy Robotics
      May 10, Field Scouting Basics Workshop, Boone
      June 13-14, Four-State Dairy Nutrition & Management Conference, Dubuque
WEATHER

Soil Temperature
Current soil temperatures are in the mid- to low 30’s. As we approach planting season, a nice website to help track changes in the 4-inch soil temperature is: http://mesonet.agron.iastate.edu/agclimate/smts.php. At this website, select the station location first (upper left), then the time frame (right). Below is the last 2-weeks. You can see where the colder weather and snow fall (insulated the soil to a steady 32F) came in and stopped the fluctuation in the 4-inch soil temperature (red line) from the day-night air temperature changes (blue line) at Nashua.

Nashua 4-inch soil and air temperatures March 28 to April 10

Cedar Rapids 4-inch soil and air temperatures March 28 to April 10

Precipitation
Departure from normal for the last 3 months (figure below) shows above average precipitation for much of Iowa in the range of 1 to 4 inches. Northeast Iowa will start the season with full soil moisture profiles at about 8 to 10 inches of water held in the upper five feet of soil at field capacity (loam and silt loam soils; field capacity of sandy soils can be as low as 5 inches of water). Tile lines drain the water from the soil that is above field capacity.
WEEDS

Dicamba On-line Training for Iowa Pesticide Applicators
The new rules that require “Additional Label Training” for those that want to use the new dicamba formulations on dicamba resistant soybeans can now achieve this requirement through an on-line course. You can find the online course options at https://www.agribiz.org/dicamba-training/
Then page down and chose one of the “ONLINE TRAINING LINKS”. Any of the three will meet requirements for all three products.
BASF
https://www.engeniastewardship.com/#/training
DowDuPont
http://cloud01.bader-rutter.com/DAAGFEXA7051/training/Iowa/
Monsanto
English Version: https://training.roundupreadyxtend.com/
En español: https://training.roundupreadyxtend.com/?es=1

2018 Herbicide Guide for Iowa Corn and Soybean Production
Free pdf download for information on product and management updates, the role of preemergence herbicides in glyphosate resistant crops, corn and soybean herbicide effectiveness ratings, herbicide package mixes, and herbicide site of action and injury symptoms. Go to: https://store.extension.iastate.edu/product/2018-Herbicide-Guide-for-Iowa-Corn-and-Soybean-Production

INSECTS

Handy Bt Trait Table for 2018
The very popular “Handy Bt Trait Table” updated for 2018 is available at: https://lubbock.tamu.edu/files/2018/01/BtTraitTableJan2018.pdf

Do You Need an Insecticide Seed Treatment for Soybeans?
There are three key reasons to consider the use of an insecticide seed treatment for soybeans.
1) Threat of certain soil insects, i.e. Seed corn maggot, White grubs and/or Wireworms.
Regarding (1), **Seed corn maggots**: Seedcorn maggots are occasional pests of both corn and soybean seeds at germination. Yield reduction occurs because of stand loss, and damage is more likely in cool, wet springs when the seeds are slow to germinate but the insects are still actively feeding. The greatest potential for Seedcorn maggot damage exists when sod, weedy fields or fresh animal manure (spring or winter applied) are incorporated into the soil just before planting. Decaying material attracts the adult flies where the females lay their eggs. If manure has been spread on the field in spring or winter, or a cover crop or sod or considerable weed biomass was disked or plowed this spring, consider using an insecticide seed treatment for soybeans and corn. If using a rootworm insecticide in corn, the seed treatment is not usually necessary for Seedcorn maggot control, although an ISU study at Ames in 2000 showed some inconsistencies with Force 3G and Capture 2EC on control of Seedcorn maggot. See photo of pest and additional information at: [https://crops.extension.iastate.edu/cropnews/2016/04/look-seedcorn-maggot-corn-and-soybean](https://crops.extension.iastate.edu/cropnews/2016/04/look-seedcorn-maggot-corn-and-soybean)

Regarding (1), **Wireworm**: If you have had recent problems in a field with Wireworms, consider using an insecticide seed treatment. Problems are more likely to occur in corn or soybeans following sod or CRP, but Wireworm problems have been found in some corn-soybean rotations. Since Wireworms can exist up to 7 years in the larval stage, if Wireworms were a problem in a field 1, 3 or 5 years ago, there is a good chance they will still be there this year. Insecticide seed treatments offer effective control for moderate populations. In corn, if high populations are expected, a soil insecticide offers greater assurance of control. See photos of this pest at: [http://www.ent.iastate.edu/imagegal/coleoptera/click/](http://www.ent.iastate.edu/imagegal/coleoptera/click/)

Regarding (1), **White grubs (more specifically True white grubs)**: As with most soil insects, it is difficult to predict when and where True white grubs will be found. Problems can be expected in corn and soybean fields following grass sod (pasture, CRP, etc.). But stand loss has also occurred in both continuous and rotated corn. In Iowa, the problem is usually but not always found adjacent to areas bordered by cottonwood or willow trees. Sometimes True white grubs are found far from trees and the reason for their occurrence in a field remains a mystery. Since True white grubs can take up to 3 years to complete their life cycle, if they were a problem last year, they still could be a problem this year. The Nicotinoid seed treatments are very effective on grubs. If using a rootworm insecticide, *i.e.* in continuous corn, the insecticide seed treatment is not necessary for True white grub control. Additional information on control and ID of True white grubs is at: [https://crops.extension.iastate.edu/cropnews/2015/06/true-white-grub-identification-and-management](https://crops.extension.iastate.edu/cropnews/2015/06/true-white-grub-identification-and-management)

Regarding (2), **Bean Leaf Beetle**: If Bean leaf beetle populations are high in spring they can be a problem feeding on emerging soybeans, and the Nicotinoid seed treatments are very effective on this pest (*i.e.* research results on populations in 2002-2004 [https://crops.extension.iastate.edu/seed-treatments-soybean-managing-bean-leaf-beetles](https://crops.extension.iastate.edu/seed-treatments-soybean-managing-bean-leaf-beetles)). However, we have not seen significant Bean leaf beetle populations in northeast Iowa for many years now… not since the early 2000’s. Currently found populations in northeast Iowa do not appear to be a viable reason to use an insecticide seed treatment for soybeans.
Regarding (3), Soybean Aphid: When Soybean aphid first invaded Iowa, economic threshold levels were often reached in June and July. The use of insecticide seed treatments were able to reduce and/or delay these threshold levels from occurring until August, and based on crop scouting having a timely foliar insecticide applied just once a season in August. As Soybean aphid and the Iowa environment (predation by insects and diseases) adapted to each other, we now see Soybean aphid populations not reach economic thresholds until August. This is far enough removed from planting date such that the insecticide seed treatment has little influence on the pest, so the insecticide seed has little value in control of this pest. But regardless of using an insecticide seed treatment or not, we still crop scout mid-July through mid-August to see if a timely foliar insecticide application should be made.

Some view insecticide seed treatments for soybeans as an insurance policy. Others can consider that if their current farming conditions are not threatened by (1), (2) or (3) above, they could save a few dollars and skip the insecticide treatment for soybeans.

**Common Stalk Borer Control in Corn – Option 1: Prescribe Burn of Grass Bordering Corn Fields**

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.

There are 3 basic options for controlling this pest. Option 1 tends to be the most effective if it can be done safely.

1) Right now, the over-wintering stalk borer eggs are on the dead grass residue bordering corn fields. A controlled burn of the grass will destroy most of the eggs. Take the proper precautions: (a) Don’t burn if roadside crews have established native plantings in your road ditches. (b) Be aware of roadside utilities (gas, electrical, communications) that could be damaged and you would be held liable. (c) Pay attention to ‘no-burn’ orders if droughty conditions exist in the county. (d) Be careful of other trash in ditches (discarded oil or gas cans, broken glass, etc.). For prescribe fire planning and coordination, please read the following article: [http://www.extension.iastate.edu/smallfarms/spring-time-prescribed-fire-time-iowa](http://www.extension.iastate.edu/smallfarms/spring-time-prescribed-fire-time-iowa)

2) Some Bt corn controls or suppresses stalk borer, and some do not. Check the “Handy Bt Trait Table” for those products: [https://lubbock.tamu.edu/files/2018/01/BtTraitTableJan2018.pdf](https://lubbock.tamu.edu/files/2018/01/BtTraitTableJan2018.pdf)

3) Otherwise we can wait for either Common stalk borer egg watch or larval migration windows based on degree days, which I will report on when the time comes.

**NITROGEN MANAGEMENT**

**Corn**
Consider using the Corn N Rate Calculator to provide a practical baseline economic N rate, then begin your discussion of then fine-tuning the N rates for different fields, N placement, fall or spring applied, split application, with or without manure applied (fall or spring, surface or incorporated, type of livestock), etc. Go to: https://crops.extension.iastate.edu/blog/john-sawyer/corn-nitrogen-rate-calculator-website-2018-update

**Pasture**

*by Steven K. Barnhart, retired ISU Extension Forage Agronomist.*

Grass-based pastures generally respond very efficiently to the first 40-50 pounds per acre (A) of nitrogen (N). Bluegrass will continue to respond to N applications up to 150-180 lbs/A annually, but at a decreasing rate of response. Tall cool-season grasses (bromegrass, orchardgrass, tall fescue) respond to N levels of 250 to more than 300 lbs/A, but at a decreasing rate of response. N recommendations for grass-based pastures are greater than the minimal amounts, but at still modest, yet efficient rates.

**Kentucky Bluegrass**
- Early spring (March and April) 60-80 lbs/A
- Late spring (May to early June) (optional) additional 30-40 lbs/A
- And/or late summer (August to September) (optional) additional 30-40 lbs/A

**Tall, Cool-season Grasses**
- Early spring (March and April) 80-120 lbs/A
- Late spring (May to early June) (optional) additional 40-60 lbs/A
- And/or late summer (August to September) (optional) additional 40-60 lbs/A

**Legume-Grass Mixed Pastures**
- If less than 1/3 legume, treat as a grass pasture
- If more than 1/3 legume, no nitrogen is recommended

Note for legume-grass mixed pastures, high or frequent applications of N (particularly spring N applications) will make the grass component of pastures more competitive and limit the amount of legumes in the mixture. To encourage a greater legume presence, use modest N rates and limit application to summer or fall.

**FARM MANAGEMENT**

**Iowa Farm Custom Rate Survey**

The March 2018 Iowa Farm Custom Rate Survey has just been posted. For each operation, the average rate from the survey, the median, and the range are shown. This information is not designed to set any prices, but rather can provide a starting point for discussion regarding various operations. The publication is available at: https://www.extension.iastate.edu/AGDM/crops/html/a3-10.html

**Economics of Cover Crops**

Worksheets from Ag Decision Maker to help estimate economic costs and benefits of crop crops under different scenarios: https://www.extension.iastate.edu/agdm/crops/html/a1-91.html

Other published information on economics of cover crops: https://www.card.iastate.edu/conservation/

**MANURE**
New Version of RUSLE2
Those involved in developing DNR Manure Nutrient Management Plans should be aware of the upgrade to a New Version of RUSLE2. RUSLE2 and Iowa Phosphorus Index are used in nutrient management plans, comprehensive nutrient management plans, and manure management plans. A newer version of RUSLE2 software (version 2.6.8.4) is available for FIELD USE. The instructions (PC based computers, Windows 10 Operating System) for how to save your prior work, download and install the new version, and import in your prior work are available on the IMMAG web site. All service providers are required to use this version. Installation instructions are at http://www.agronext.iastate.edu/immag/info/RUSLE2instructions.pdf For the latest updates on anything to do with manure, bookmark and checkout the IMMAG website at http://www.agronext.iastate.edu/immag/

MISCELLANEOUS
Youth Crop Scout Competition Announced
Time to pull together your teams and register for another round of the State-wide Youth Crop Scouting Competition. It’s the eighth annual Crop Scouting Competition on July 30. Details are provided at: https://www.extension.iastate.edu/news/isu-experts-help-youth-learn-pest-management-through-friendly-competition

EVENTS
April 21, Pond Care 101, New Hampton
10:00 to 11:00 AM at the Five Star Cooperative Hardware Store, 1949 N. Linn Avenue, New Hampton. Brian Moore with Chickasaw County Conservation will speak on pond care and management as well as fish species and care. For more information, contact the Chickasaw County Extension Office, 641-394-2174, Email: merrifie@iastate.edu

April 27, Vegetable Production Workshops to Explore Managing Disease, Insect Pests and Weeds, Calmar
8:30 AM to 2:00 PM at NICC Dairy Center. The workshop is designed to help growers, local foods coordinators, extension staff, county horticulturists and industry representatives learn to manage common insect and disease challenges in vegetable production in Iowa. Topics to be covered include pest and disease management in vegetable production, weed management and how to correct nutrient deficiencies in vegetable crops. There also will be live plant samples with disease symptoms and disorders. Participants will be encouraged during the workshop to take a quiz to identify these diseases and disorders. For more information, contact Teresa Wiemerslage, 563-794-0599, Email: wiemer@iastate.edu

Upcoming programs at the Northeast Iowa Dairy Foundation, Calmar
ISU Extension, NICC and the Dairy Foundation will be hosting a series of applied workshops for dairy producers, employees and students. The workshops will be held at Iowa’s Dairy Center south of Calmar and will feature a mixture of classroom and hands-on learning on the dairy farm. Mark your calendar for the following dates:
- April 18-19: Seven Habits of Highly Successful Feeders
- April 25-26: It’s Transition Time
- May 1-2: Calmar Calf College
- May 7-8: Master Hoof Care Workshop
- May 9-11: Dairy Robotics

Additional details will soon be available at [www.iowadairycenter.com](http://www.iowadairycenter.com). Prices and participation will vary based on the workshop. If you are interested in participating in one of these workshops, please contact Mariah Schmitt at (563) 534-9957 or schmittma@nicc.edu

**May 10, Field Scouting Basics Workshop, Boone**
10:00 AM to 4:00 PM at the Field Extension Education Lab. A one-day hands-on course for beginning corn and soybean crop scouts. Optional Agricultural Worker Pesticide Safety training follows at 4:00 to 5:00 PM. Details are provided at: [http://www.aep.iastate.edu/feel/scout.html](http://www.aep.iastate.edu/feel/scout.html)

**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](http://www.wiagribusiness.org/fourstate.html)

**June 21, Northeast Iowa Silage Conference, Dubuque**
9:30 AM to 3:30 PM at the Midway Best Western Plus, Dubuque. 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. More information will follow in future Crop Notes, but if you need more information now please contact Denise Schwab, 319-472-4739, Email: dschwab@iastate.edu

**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/)

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**Brian Lang**
_Iowa State University Extension
Agronomist_

325 Washington St., Suite B
Decorah, IA 52101
Office 563-382-2949
Fax 563-382-2940
Cell 563-387-7058
[www.agronext.iastate.edu/](http://www.agronext.iastate.edu/)