

IOWA STATE UNIVERSITY

Extension and Outreach

CROP NOTES for June 8, 2020

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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GROWTH & DEVELOPMENT

Corn

Emerged corn develops a new leaf stage about every 84 GDD.

Long-term average GDD in northeast Iowa:

- for early June its about 15 GDD per day.
- for mid-June its about 18 GDD per day.
- expectations for this week is to average 15 GDD per day.

At V3 stage corn, the nodal root system (the root system starting at about ¾ inch below ground) should be a similar size to the initial seed roots (called the seminal roots).

At V6 stage the seminal roots are no longer important and the main growing point is just above the soil surface.

At V7 the number of rows of kernels for the ear is determined. The number of kernels per row begins initiation now and continues until about one week prior to silk emergence.

Soybeans

A final stand of a uniform 100,000 plants per acre should maximize yields. It seldom pays to replant uniform stands of 75,000 because of the cost of replanting and yield penalty for the delayed planting. Below is plant population table in plants per foot of row.

	Desired plants per acre (X1000)					
	75	100	125	150	175	200
Row Width	Average number of plants per foot of row					
6 inch	0.9	1.2	1.4	1.7	2.0	2.3
7.5 inch	1.0	1.4	1.8	2.2	2.5	2.9
10 inch	1.4	1.9	2.4	2.9	3.3	3.8
15 inch	2.2	2.9	3.6	4.3	5.0	5.7
20 inch	2.8	3.8	4.8	5.7	6.7	7.7
30 inch	4.3	5.7	7.2	8.6	10.0	11.5

V1 stage soybeans is when the 1st trifoliolate leaflets unfold.

At V2 to V3 stage, N-fixation from the nodules begins.

A new leaf stage will appear about every 5 days through the V5 stage.

INSECTS

Iowa Moth Trapping Network Update on True Armyworm & Black Cutworm

The June 3 update on moth trapping is available at:

<https://crops.extension.iastate.edu/blog/ashley-dean/final-iowa-moth-trapping-network-update-2020>

Black Cutworm. Although flights have been light in northeast Iowa, we still include this pest in our routine scouting until corn reaches V5 stage. Most corn in northeast Iowa is currently around V4 stage, so we are close to checking this pest off our scouting list. Tips on scouting, identification and thresholds for treatment is available at:

<https://crops.extension.iastate.edu/cropnews/2020/05/2020-scouting-recommendations-black-cutworm>

True Armyworm. Include armyworm in your scouting awareness throughout the entire month of June. Armyworm is easy to scout for, and allows some time to respond with treatment. Its

feeding is above ground and the feeding injury is easy to identify. It greatly favors grasses (corn, small grains, forage grasses), and tends to not feed much on broadleaves (soybeans, alfalfa) unless there is nothing else to eat. Light armyworm activity was noticed last week south of Hwy 20 in a corn following rye cover crop field.

Feeding on young corn. Growing point still below ground.



*Feeding on corn farther along. Eats all but the mid-ribs.
No contact with the growing point yet, allows time for an insecticide treatment and full crop recovery.*



Armyworm often hide in the whorl from sunlight.



Common Stalk Borer Larval Migration Starts in 1 Week

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.



A common control window for this pest is to wait for the beginning of larval migration from the grass field border into the first few rows of corn and apply an insecticide to that area. This larval migration occurs from 1,300-1,700 DD (from Jan. 1, base 41F) with the goal to treat within the first half of this window. 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 below) and moves out to find something larger, like the nearby corn. Current DD are about 1,000 along Hwy 9 and 1,100 along Hwy 20. We should reach 1,300 DD around June 18 along Hwy 9 and June 15 along Hwy 20. The migration starting at about 1,300 DD provides a prime window of about a week to spray an insecticide on the first few rows of corn along the grass border. **You can scout for “dead-heads” in the grass borders as a way to estimate 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.



Thistle Caterpillar

Last year, southern and western Iowa had to deal with high populations of Thistle caterpillar. Southwest Iowa commented recently about finding some Thistle caterpillars in their region. As with any defoliator insect in soybeans, the threshold for V-stage soybeans is 30% defoliation. For a refresher on Thistle caterpillar ID, go to:

<https://crops.extension.iastate.edu/encyclopedia/thistle-caterpillar>

Trapping Network for Corn Rootworm – Free Traps for Cooperating

ISU Extension is starting up a new trapping network for corn rootworm. If you are interested in volunteering to set up and monitor traps for corn rootworm or would like additional information, send an email to bugtraps@iastate.edu by June 15, 2020. Please include your contact information and mailing address in the email. As part of the Iowa corn rootworm monitoring network, ISU will provide enough traps for each cooperater to monitor one transect (4 traps) for 4 weeks. Traps and a protocol will be mailed to you in late June. Trapping would likely begin during the third week of July (depending on degree days for the season).

<https://crops.extension.iastate.edu/blog/ashley-dean-erin-hodgson/new-trapping-network-corn-rootworm>

Corn Rootworm Larvae

50% egg hatch occurs at about 684 to 767 soil degree days (base 52 from Jan. 1) which is usually mid-June. Central Iowa is on track to reach 50% hatch sometime next week.

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 not protected by Bt ECB traits (identified in the Handy Bt Trait Table: https://agriflife.org/lubbock/files/2020/02/BtTraitTable_FEB_2020.pdf)

The following free 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)

PLH migrate up from the southern U.S. every spring, often first found in our region in mid- to late May, and becomes of concern to scout for after first crop harvest. Scouting and management tips are available at: <http://www.extension.iastate.edu/CropNews/2009/0615hodgson.htm> The only way to properly scout for PLH is with a sweep net. When purchasing a sweep net, it should be a 15-inch diameter net.

Aphids in Alfalfa

It usually takes a rather dry environment for significant development of aphids in alfalfa. Parts of western Iowa (south and north) are currently finding some activity. Timely control of potato leafhopper usually also controls aphids. It takes quite a few aphids to reach threshold levels and populations are usually quite spotty across a field.

Economic thresholds for aphids in alfalfa from publication IPM-58

Plant height, inches	Pea aphids/stem	Blue aphids & Cowpea aphids/stem	Spotted aphids/stem
< 10	30 – 50	10 - 50	10 – 20
10 – 20	50 – 75	30 - 50	20 – 40
> 20	100	> 50	> 40

Green and pink pea aphids (photo from University of WI).



Cowpea aphids.



WEEDS

Dicamba for DT Soybeans

By now you have heard or read about the United States Court of Appeals for the Ninth Circuit ruling to immediately vacate the registrations of Xtendimax, FeXapan and Engenia. All neighboring states acknowledge effective June 3, 2020 that Xtendimax, FeXapan, and Engenia cannot be sold, used, or distributed as their registrations have been vacated. Tavium is not affected by this decision. In Iowa, Ag Secretary Naig has sent a letter to EPA Administrator Andrew Wheeler requesting guidance on what the U.S. Court of Appeals for the Ninth Circuit's decision to vacate the EPA's dicamba product registration means for Iowa farmers. The Iowa Department of Agriculture and Land Stewardship (IDALS) has not issued a stop sale order and will continue operating under the current pesticide program until it receives guidance from the EPA. The Department does not anticipate taking enforcement action against those who otherwise

appropriately purchase, sell, or use these products in the interim. This enforcement decision may change immediately based on further guidance from the EPA. While IDALS would not take enforcement action against its labeled use in Iowa at this time, there may be some question of applicator liability insurance if a non-target event occurs. You may want to check with your insurance company before proceeding with an application.

Other Herbicides for Herbicide Resistant Waterhemp

The following link is to a recent ISU Extension article titled “Managing Herbicide-Resistant Waterhemp in Dicamba-Resistant Soybean”, which discusses alternatives to dicamba for management of herbicide resistant waterhemp. <https://crops.extension.iastate.edu/blog/bob-hartzler-meaghan-anderson-prashant-jha/managing-herbicide-resistant-waterhemp-dicamba>

DISEASES

Anthracnose Leaf Blight on Early Corn Growth

In most seasons at this time we start to find Anthracnose leaf blight on early-stage corn in some fields. The dark-bordered oval lesions are easy to identify. They may advance to cause necrosis of the leaf tip and leaf edges. Some believe this is a reason to apply a foliar fungicide on early-stage corn, however, ISU trials have not found a yield response to this type of management. The following article provides more details about this issue.

<https://crops.extension.iastate.edu/blog/alison-robertson/anthracnose-leaf-blight-prevalent-corn-fields>





UPCOMING EVENTS

June 10, Four-State Dairy Nutrition and Management Conference, Virtual

This conference presents the latest research on issues concerning the dairy industry including feed efficiency, calves and transition cows. Participate live on the virtual conference.

Registration fee: \$75 before June 1, \$100 after June 1. Live presentations and Q&A sessions will be recorded and available to participants for 60 days after the conference. Registered participants will be emailed where to receive links to the conference recordings and PDF materials. Program details are at: <http://fourstatedairy.org/> or contact Jim Salfer at salfe001@umn.edu , or 320-203-6093.

June 10, How to Optimize Nutrient-Reducing Prairie Strips, Webinar

Noon webinar on how to optimize the potential value of this practice, applied research focused on improving the chances of successful implementation, maximizing the ability to provide multiple ecological benefits, and improving cost-effectiveness is needed. To participate in the live webinar, shortly before noon on June 10:

- Click the following URL, or type this web address into your internet browser: <https://iastate.zoom.us/j/364284172>
- Or, go to <https://iastate.zoom.us/join> and enter meeting ID: 364 284 172
- Or, join from a dial-in phone line: Dial: 1-312-626-6799 or 1-646-876-9923. Meeting ID: 364 284 172

The webinar will also be recorded and archived on the ILF website, so that it can be watched at any time. Archived webinars are available at <https://www.iowalearningfarms.org/page/webinars> CCA credits have been applied for.

June 24, 25, 26, Virtual Spring Field Day Webinar Series

In replace of the traditional face-to-face ISU Research Farm Field Day in June, ISU Extension is offering three 30-minute webinars. Each webinar will start at 8:00 AM with a 20-minute presentation followed by 10 minutes for questions. Topics to be featured each day of the webinar series are:

- June 24: Utilizing Tile Drainage to Better Manage Nitrogen and Improve Corn Yields, Mike Castellano, Professor of agronomy (CCA credit of 0.5 SW)
- June 25: Late Season Field Scouting with UAVs, Matt Darr, Professor in agricultural and biosystems engineering (CCA credit of 0.5 CM)
- June 26: Multi-tactic Approaches to Manage Herbicide Resistance, Prashant Jha, Associate professor in weed management (CCA credit of 0.5 PM).

This webinar series is free and open to anyone. It will be offered through ZOOM. There is no charge to attend, however registration is required and can be completed by going to www.aep.iastate.edu/serf After registering, participants will receive an email with instructions and a link for joining the webinar series. Once registered, you will be able to watch any or all the webinars. Participants may join through their web browser, mobile phone or tablet. Participants will need to download a free app prior to joining. Participants should join the webinar 15 minutes in advance to ensure connections and software is working correctly. If you cannot attend the live webinar, a recording of each session will be posted for viewing as soon as they are available on the ISU Extension Crops Team YouTube Channel. For more information, questions or if you need assistance with registration please contact ISU Extension agronomists Rebecca Vittetoe at 319-653-4811, or rka8@iastate.edu ; Virgil Schmitt at 563-263-5701, or vschmitt@iastate.edu ; or Josh Michel at 319-523-2371, or jmichel@iastate.edu

July 1, Soil & Water CCA Webinar for 3 SW Credits

8:00 to 11:00 AM, Webinar, \$25 registration required by midnight June 29.

Topics:

- Progress and tools for scaling up adoption of Iowa Nutrient Reduction Strategy
- Tile Drainage: Reducing nitrogen fertilizer, increasing yield and implementing conservation practices

To register, go to www.aep.iastate.edu/serf-cca/ The link, password and instructions for joining the webinar will be emailed to participants after the registration is completed with payment and prior to the start of the session on July 1. Participants may join through their web browser, mobile phone or tablet. Participants will need to download a free app prior to joining. Participants should join the webinar at least 15 minutes in advance to ensure connections and software is working correctly. For more information, questions or if you need assistance with registration please contact ISU Extension agronomists Rebecca Vittetoe at 319-653-4811, or rka8@iastate.edu ; Virgil Schmitt at 563-263-5701, or vschmitt@iastate.edu ; or Josh Michel at 319-523-2371, or jmichel@iastate.edu

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