

# IOWA STATE UNIVERSITY

## Extension and Outreach

### **CROP NOTES for July 27, 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

- The upper most ear shoot will dominate forming at node 13 on the plant  $\pm$  a node.
- V18 – The potential number of kernels per row is complete. Potential kernels per ear are usually in the range of 700 to 1,000, but kernels per ear at harvest are usually around 450 to 550. The plant has reached about 35% of total dry matter accumulation and internode elongation is nearly complete.
- VT-R1 – With silks emerging before tassels are completely emerged, modern corn hybrids reach R1 stage before VT stage. However, wait on foliar fungicide applications until VT stage is complete (tassels completely emerged).
- R2 – occurs about 11 days after pollination. Called the blister stage as kernel growth begins and consists of rapid water increase. The ear is at its maximum length. Plants have reached maximum vegetative dry matter as kernel dry matter accumulation is just starting.

### Soybeans

- R3 – has a 3/16-inch long pod at 1 of 4 uppermost nodes on the main stem with a fully developed leaf. A decision on whether or not to apply a foliar fungicide is usually made during this stage. It takes about 9 to 10 days to get to R4.
- R4 – has a 3/4-inch long pod at 1 of 4 uppermost nodes on the main stem with a fully developed leaf. It takes about 10 to 11 days to get to R5 (initial seed fill stage).
- R5 – seed in 1/8-inch long in pod at 1 of 4 uppermost nodes on the main stem with a fully developed leaf. It takes about 16 days to get to R6.
- About two-thirds of total plant leaves petioles & stems develop between R2 to R5 stage (about a 4 week period).
- Soybean yield potential is most sensitive to stresses during R4 to R5.5

## INSECTS

### Corn Rootworm

As corn fields approach VT-R1 stages it's time to scout silks for clipping by corn rootworm beetles (Fig. 1) and/or Japanese beetles (Fig. 2). The greater risk to silk clipping is with the later planted, later developing fields. During pollination it is important for ears to maintain at least 1/2-inch of silk to accept pollen. After pollination, silk length is not important.



In addition to checking for silk clipping, late July is a good time to dig roots and evaluate corn rootworm injury. Did plants lodge because of high winds, or was it actually corn rootworm larvae feeding, or both. Here's a pdf card description of the node-injury scale and a couple of links to additional information: <https://ipcm.wisc.edu/download/pubsPM/Corn-rootRate-card2015hx.pdf>

### **Western Corn Rootworm Resistance to Bt Traits**

High wind activity on July 9 and July 11 across northeast Iowa caused corn lodging in some fields. A number of these fields were continuous corn with Bt-corn rootworm traits. When checked for larvae feeding, many were scored with node-injury ratings of 1 to 2 on a scale of 0 to 3. A rating greater than 0.25 is considered to have significant feeding damage. This problem has been found with all four corn rootworm Bt traits. If you have lodged corn, you should evaluate root systems for node-injury. If found, adjust next year's management accordingly, such as 1<sup>st</sup> choice – to rotate to another crop like soybeans or alfalfa, or 2<sup>nd</sup> choice – use a corn rootworm insecticide. Rotating Bt traits is questionable depending on which trait or stacked traits showed resistance issues in your field.

### **Japanese Beetles**

There is activity in many soybean fields, but nothing close to 20% defoliation yet. Sometimes it's just the headlands that reach high enough defoliation levels. Also, defoliation is typically heavier from Hwy 3 on south compared to north of Hwy 3.

### **Potato Leafhopper (PLH)**

Continue scouting through August. 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 15-inch diameter sweep net.

### **Soybean Aphid**

Our typical window for scouting of soybean aphid in northeast Iowa is mid-July through August. Speed scouting is the preferred method for scouting. It's simple and quick. A free scouting card with instructions is available at:

[https://www.ent.iastate.edu/soybeanresearch/files/page/files/2009\\_speed\\_scouting\\_blank\\_form.pdf](https://www.ent.iastate.edu/soybeanresearch/files/page/files/2009_speed_scouting_blank_form.pdf)

FYI, here's my aphid counts per week for 100 random plants in a local field near Decorah. This field and one other that I have been scouting have a considerably higher infestation than for all other fields that I have scouted in the area. There are always a few 'hot spots' relative to the general pest distribution, thus another reason to scout rather than just treat a field with an insecticide.

<b>Date</b>	<b>Crop stage</b>	<b>% infestation</b>	<b>Avg. aphids/plant of infested plants</b>
<b>June 30</b>	V5	19	4
<b>July 6</b>	R1	31	5
<b>July 13</b>	R3	62	7
<b>July 20</b>	R4	96	12
<b>July 27</b>	R4	100	54

Threshold is >80% infestation with >250 aphids/plant.

### **Bird Cherry-Oat Aphid in Corn**

This little researched pest is extremely spotty and on the rare-side to cause any problems, but select fields have had some problems. Since 2009, the greatest occurrence of this pest has been in a region around Riceville to Protivin. The aphid population starts at the base of the corn plants in late July to early August. As it increases in population it moves up to the ear. Scouting is fairly easy in that you can occasionally focus on the lower stalk as you scout for other pest activity in corn (foliar diseases, silk clipping). Lack of research does not provide us with a good economic threshold, but if the aphid activity reaches the ear (i.e. >500 aphids/plant), it is probably a treatable situation with a foliar insecticide.





early August



mid-August

## **DISEASES**

### **Scouting Corn for Leaf Diseases – *Gray leaf spot increasing***

My findings so far:

- Last week I saw Gray leaf spot (GLS) increasing in many fields from the week before. However, the lack of rain predicted for this week will slow leaf disease development.



- I found just a little bit of Tar spot (TS) in NE Iowa last week, with similar findings at the Northeast ISU Research Farm, Nashua. The first Tar spot sightings were also posted last week for southwest WI.
- I have yet to find Northern corn leaf blight (NCLB).
- Eyespot is in the lower canopy in every field as it usually is, but in some fields it is advancing nicely to the ear leaf and above.
- I have not found any Southern rust yet. The Corn IPM PIPE Network still has all Southern rust findings no farther north than Hwy 30 in IL and NE with no reports for IA: <https://corn.ipmpipe.org/southerncornrust/>
- Common rust is quite common to find in northeast Iowa, but is a minimal threat to yield.

**Scouting guidelines** for the presence of lesions for GLS, NCLB and TS. A foliar fungicide is justified if:

- Any disease lesions from these three diseases are present on 50% or more of the plants in the field,
- The weather forecast for August is favorable for disease development,
- The hybrid is not rated resistant to moderately resistant for that disease (resistant hybrids can still show signs of leaf disease, but the disease fails to significantly advance),
- And product cost vs. grain market price is reasonable to assume a profit could be achieved.

**Disease ID:**

- GLS: <https://cropprotectionnetwork.org/resources/articles/diseases/gray-leaf-spot-of-corn>
- NCLB: <https://cropprotectionnetwork.org/resources/articles/diseases/northern-corn-leaf-blight-of-corn>
- TS: <https://crop-protection-network.s3.amazonaws.com/publications/tar-spot-filename-2020-05-12-175731.pdf>
- Eyespot: <https://cropprotectionnetwork.org/resources/articles/diseases/eyespot-of-corn>
- Common rust: <https://cropprotectionnetwork.org/resources/articles/diseases/common-rust-of-corn>
- Southern rust: <https://crop-protection-network.s3.amazonaws.com/publications/southern-rust-filename-2019-08-28-140616.pdf>



## **Efficacy Ratings for Corn and Soybean Foliar Fungicides**

In other words, which products are rated best on which diseases.

Corn: <https://crop-protection-network.s3.amazonaws.com/publications/fungicide-efficacy-for-control-of-corn-diseases-filename-2020-03-18-150007.pdf>

Soybeans: <https://crop-protection-network.s3.amazonaws.com/publications/fungicide-efficacy-for-control-of-soybean-foliar-diseases-filename-2020-03-18-150123.pdf>

## **FORAGES**

### **Are You Planning a Late Summer Perennial Forage Seeding?**

Planting in early August is the usual target in northeast Iowa to start a new alfalfa, alfalfa-grass, or perennial grass stand for forage for next year. The typical steps in the process are provided in a recent ICM News article at: <https://crops.extension.iastate.edu/cropnews/2020/07/planning-late-summer-perennial-forage-seeding> For starters, we will need to see a more encouraging forecast for rain, unlike are expectations for this week.

### **Steps for Beef Producers Dealing with Storm Damaged Crops**

A few of the mid-July wind & hail storms severely damage corn and soybean fields to a near total loss. This article covers the basic considerations in re-planting those fields to a late-summer forage for livestock feed. Go to: <https://www.extension.iastate.edu/news/steps-beef-producers-dealing-storm-damaged-crops>

## **EVENTS**

### **July 28 & Aug. 4, Silage Beef Webinar Series**

12:30 to 1:30 PM. Topics include:

- July 28, Tips and tricks for silage pile construction.
- Aug. 4, Silage feeding and management for beef cattle in the current environment.

For more details and registration, go to: <https://www.extension.iastate.edu/news/silage-beef-webinar-series-begins-july-7>

### **July 30-Aug. 20, Drought Webinar Series**

More than half of Iowa is considered “abnormally dry” and nearly 40% of the state is in moderate to severe drought, with the worst conditions in the west central portion of the state. The webinars will run from 1:00 to 2:00 PM on July 30, Aug. 6, Aug. 13 and Aug. 20. Topics will include a general weather update, drought monitor updates, pasture and hay shortages, preparing for silage and nitrates, yield estimates, and end-of-year considerations related to grain quality and storage. Registration is free but is required for participation. For more details, please go to: <https://www.extension.iastate.edu/news/drought-webinars-begin-iowa-july-30>

## **Aug. 10-14, RUSLE2 Soil Loss Workshop On-Line**

This 5-day workshop is designed to train livestock producers and service providers on how to use RUSLE2 and the Iowa Phosphorus Index in nutrient management and manure management plans. Each day will be a Zoom session from 2:30 to 4:00 PM. The class is limited to 15 participants. Pre-register by Aug. 5 for \$150. The class qualifies for 6 SW and 1 NM Crop Advisor Credits. Details about the program and links for registration and Zoom software are available at: <https://www.extension.iastate.edu/news/rusle2-soil-loss-workshop-sessions-will-be-offered-online>

## **Aug. 10 & 14, Farm Leasing & Management Webinars for Northeast IA**

Free 90-minute webinars, but pre-registration is required at least 24 hours prior to the webinar.

**Monday Aug. 10 from 6:00 to 7:30 PM**, register at:

<https://register.gotowebinar.com/register/9083678393274286091>

**Friday Aug. 14 from 9:30 to 11:00 AM**, register at:

<https://register.gotowebinar.com/register/8121407806877403403>

Topics include:

- Farmland management issues
- Legal aspects of farmland leases and terminating a lease
- Cash rental rate and farmland value survey results
- Cost of production considerations
- Methods for determining fair 2021 cash flexible rent
- Tenant – landlord communication
- Submit questions by virtual chat

More information at: <https://iastate.app.box.com/s/n6kdtljqsvvm9pnmgag0c0lhpapwxb2h>

Other meetings across the state at: <https://www.extension.iastate.edu/agdm/info/meetings.html>

## **Aug. 11-13, Beef Feedlot Short Course, Ames**

At the Hansen Agriculture Student Learning Center in Ames. The short course is designed specifically for feedlot managers, employees and industry. The \$350 per person registration fee includes program materials and meals listed on the agenda. The registration deadline is midnight, Aug. 4 or when the course limit of 30 is reached, whichever occurs first. All registrations must be done online. See the short course website for registration, requirements, and other information at: [www.aep.iastate.edu/feedlot](http://www.aep.iastate.edu/feedlot) The event will follow ISU guidelines to ensure health and safety of all participants. Nearly half of the program is on-farm with other sessions at the ISU Beef Nutrition Farm and Couser Cattle Company in Nevada, Iowa. The program runs from 12:30 PM on Tuesday, Aug. 11 through noon on Thursday, Aug. 13.

Topics include:

- Bunk management and the basics of starting cattle on feed.
- Feed mixing demonstration and evaluation.
- Managing and identifying cattle health issues in the feedlot.
- Facility design and cattle handling.
- Data management.



## Aug. 19-28, Swine Building Maintenance Webinar Series

ISU Extension is joining industry partners to offer a 5-part webinar series on the maintenance issues faced by facility managers and maintenance crews. The sessions are geared toward livestock producers, livestock building owners and contractors, facility managers, maintenance crew members, engineers, designers and others interested in techniques for better ventilation, concrete and truss management, and maintenance of swine buildings. Each session is offered from 1:00 to 2:00 PM by Zoom videoconference.

- Aug. 19 – It Is Your Concrete Pit as Well.
- Aug. 21 – Maintenance of Concrete Pits and What to Look For.
- Aug. 24 – Gable End Attic Air Intakes for Roof and Moisture Management.
- Aug. 26 – General Maintenance Tips for Swine Buildings.
- Aug. 28 – Building Truss Management.

The series is offered in collaboration with the Iowa Department of Natural Resources and sponsored by Ag Property Solutions, AgVICE, Hills Bank, Hog Slat, Iowa Pork Producers Association, Marcus Lumber and Pinnacle. **Registration is \$20 for all 5 sessions.** Advance registration is required to participate and must be completed by midnight, Aug. 17. Payment is online with credit card only. Online registration and additional information is available at [www.aep.iastate.edu/building](http://www.aep.iastate.edu/building)

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