

CROP NOTES for August 5, 2020

Iowa State University Extension Information for Northeast Iowa

Brian Lang, ISU Extension Agronomist, Decorah, IA

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

Stage	Description of stage	Comments	Time to next stage
R1	Silk	Maximum plant height	~ 10 days to R2
R2	Blister (clear liquid in developing kernel)	Maximum vegetative dry matter. Grain dry matter is just starting. Ear is at maximum length. If growing conditions become stressful during R2 and R3 stages, yield reductions would occur from kernel abortion via tipping back of the ears.	~ 8 days to R3
R3	Milk (white liquid in developing kernel)	Outside of kernel is yellow. Starch accumulation increasing.	~ 6 days to R4
R4	Dough	Starch accumulation increasing. Kernel moisture starts decreasing. Once corn reaches R4 stage, kernel number is established and yield reductions caused by stress would be from a decrease in kernel size. Can make in-field yield estimates.	~ 7 days to R5 which is dent stage

Soybeans

Stage	Description of stage	Comments	Time to next stage
R3	A pod at least 3/16-inch long at 1 of the 4 uppermost nodes of the main stem with a fully developed leaf.	Most popular stage for foliar fungicide applications.	About 9 to 10 days to R4 stage.
R4	A pod a pod at least 3/4-inch long at 1 of the 4 uppermost nodes on the main stem with a fully developed leaf.	Rapid and steady dry weight accumulation by the pods. Yield is most sensitive to stresses during R4 to R5.5 stage. Still a timely stage for fungicide application for Frogeye leaf spot and Cercospora leaf blight.	About 10 to 11 days to R5 stage.
R5	Seeds are 1/8-inch long in the pod at one of the four uppermost nodes on the main stem with a fully developed leaf.	By R5.5 stage, plants obtain maximum height, leaf area and node number. Rapid and steady seed dry weight accumulation. At R5.5 dry weight plateaus and begins to move from vegetative parts to developing seeds.	About 16 days to R6 stage.

Seed and pod abortion can occur all the way through R7 stage. That's one more reason why early yield estimates for soybean fields is not very accurate.

INSECTS

Corn Rootworm

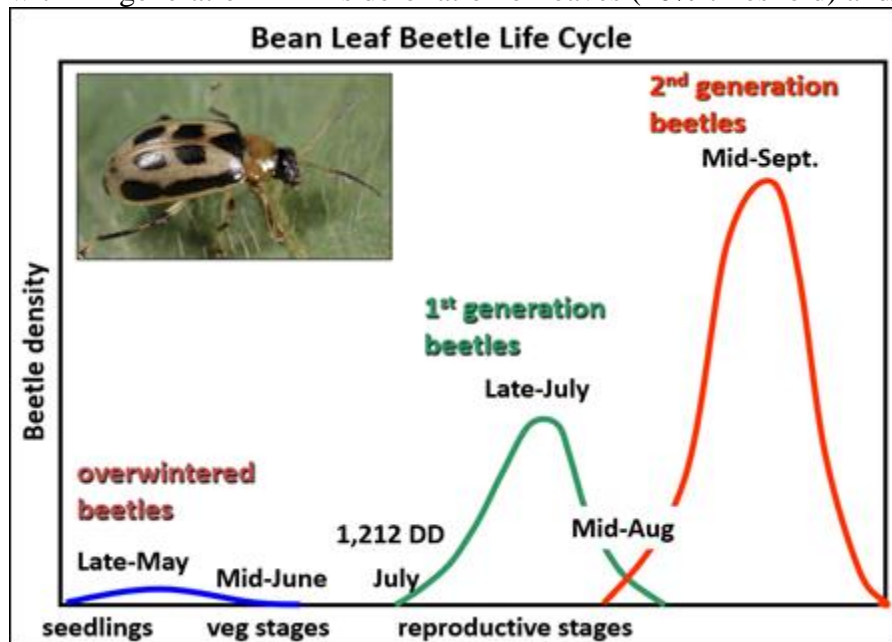
Scout late planted fields not yet pollinated for silk clipping. Corn rootworm and Japanese beetles may congregate on these last 'green silk' fields in the area. During pollination it is important for ears to maintain at least 1/2-inch of silk to accept pollen. After pollination, silk length is not important.

Japanese Beetles

Their activity seems to have slowed down in many soybean fields. It does not appear that any fields will reach the economic threshold of 20% defoliation.

Second Generation Bean Leaf Beetle (BLB)

Early to mid-August is the beginning of increasing populations the 2nd generation BLB. Since 1st generation populations were barely noticeable, 2nd generation populations will likely not be a threat. The threat of damage with 2nd generation BLB is defoliation of leaves (20% threshold) and/or pod clipping (10%).



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

FYI, here's my aphid counts per week for 50 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. When scouting, randomly pull a plant out of the ground to more easily view any aphid presence throughout the plant. The majority of the aphids are likely in the mid- to lower canopy on the underside of leaves and will be rather small with a whitish color. FYI, photo below.

Date	Crop stage	% infestation	Avg. aphids/plant of infested plants
June 30	V5	19	4
July 6	R1	31	5
July 13	R3	62	7
July 20	R4	96	12
July 27	R4	100	54
Aug. 3	R5	100	189

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



Small white aphids on mature leaves (above) vs. more active aphid activity on developing leaves (below). Although, we count all of them in determining threshold.



Caterpillars in Corn Ears

Crop scouting includes taking notes on insect pests to help plan for next season. In recent years there has been a slow increase in occurrence of Corn earworm (CE) whether from increased pest activity or because of resistance to some Bt traits. Other possible caterpillars to find in corn ears would be European corn borer (ECB) and Western bean cutworm (WBC). Proper identification is important for future management. Key identifying features include:

	Head color	Body features
ECB	dark brown	Body without distinct strips.
WBC	orange	Black rectangles behind head.
CE	orange	Color varies. Alternating light and dark stripes run lengthwise.

European corn borer

- Dark brown to black head

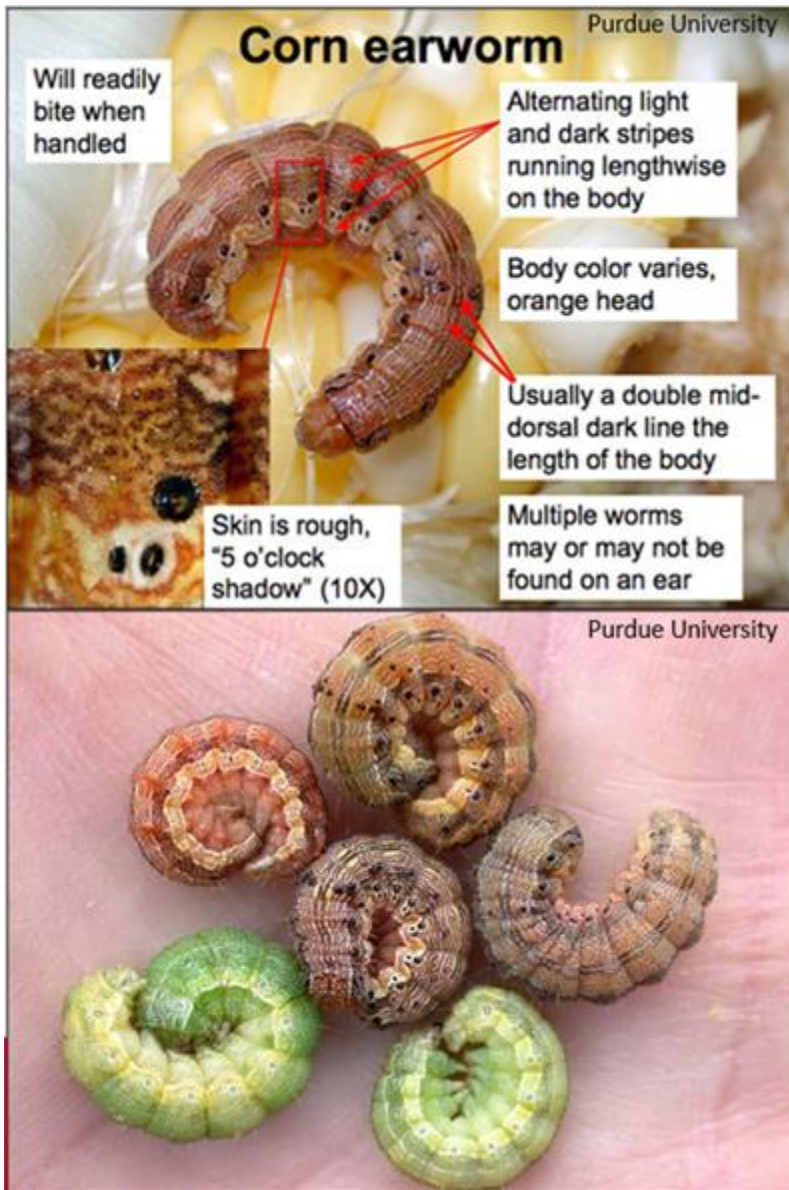
- Body without distinct strips

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Western bean cutworm

- Orange head
- Black rectangles behind head

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Spider Mites

This insect is never a problem in seasons with regular rainfall. However, they are always worth scouting for in droughty fields. The following link provides tips on scouting and treatments: <https://crops.extension.iastate.edu/cropnews/2020/07/scouting-reminders-spider-mites> In the past, we only used insecticides to control spider mites. Now miticides are also available as a better control option (Zeal, Oberon, and Onager). However, with our recent cooler weather it is also worth noting that treatments may not be required when temperatures drop below 85F and humidity levels are greater than 90% for an extended time. Under these conditions a naturally-occurring fungus can control two-spotted sider mite populations. Mites that are infected by the fungus will appear brown, and will not move on the piece of paper used for scouting.



Flare up in infestations often start at a field edge.



Stippling on leaf surface (right) with mites on leaf underside (left).

DISEASES

Scouting Corn Leaf Diseases

My findings so far:

- Gray leaf spot (GLS) is still the most common of the 3 most threatening leaf diseases in corn (GLS, TS, NCLB), however, the lack of rain now going on 3 weeks has significantly slowed fungal disease activity.
- Tar spot (TS) findings are still few and far between. Light occurrence in very few fields in Clayton and Dubuque counties in northeast Iowa. See county postings for Tar spot on the Corn IPM PIPE Network at: <https://corn.ipmpipe.org/tarspot-2/>
- Most interesting to me is that I have still yet to find Northern corn leaf blight (NCLB) while traveling around northeast Iowa.
- 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.
- Southern corn rust does not overwinter in Iowa, so while it can be a serious leaf disease, it is usually slow to move this far north. The Corn IPM PIPE Network still has all findings of southern rust south of Hwy 20: <https://corn.ipmpipe.org/southerncornrust/>
- Common rust is quite common to find in northeast Iowa, but is a minimal threat to yield.

FORAGES

Are You Planning a Late Summer Perennial Forage Seeding?

Planting in the first half of 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> However, we need to see a more encouraging forecast for rain, unlike are expectations for this week.

WEBINARS

Essential Row Crop Management Webinar Series

In July the universities of Iowa State and Minnesota ran a webinar series on some crop production topics. Each 30-minute webinar included a short discussion on a key topic followed by time for questions and answers. If you missed the series when it was first announced, you can view the recorded events at the following link: <https://extension.umn.edu/courses-and-events/essential-row-crop-management-online> Topics include Tar spot identification and management, Soybean aphid IPM, Corn rootworm management, and Soybean gall midge update.

EVENTS

Aug. 6 - 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 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 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

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Brian Lang

Iowa State University Extension Agronomist

325 Washington St., Suite B, Decorah, IA 52101

Office 563-382-2949; Cell 563-387-7058

<https://crops.extension.iastate.edu/>

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