

CROP NOTES for October 2, 2019

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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WEATHER

Temperature, GDD

Time to cool down to more normal temperatures. In northeast Iowa, early October should only provide about 6 GDD per day through the first two weeks, and then progressively drop to basically zero GDD to the end to the month. The entire month of October should produce about 130 GDD.

Frost?

Once again looking at highly unreliable long-term forecasting, but it looks like we won't have a killing frost until roughly Oct. 27 (26F). The nightly lows between now and Oct. 27 will be mostly in the low 40's and sometimes in the high 30's. Right now, the so-called alfalfa killing frost is not likely until mid-Nov. More on this in the section below "ALFALA

Fall Harvest – Now or After a Killing Frost?"


Soil Temperatures

With the mild temperatures, it will be a while before soil temperatures drop to 50 F.

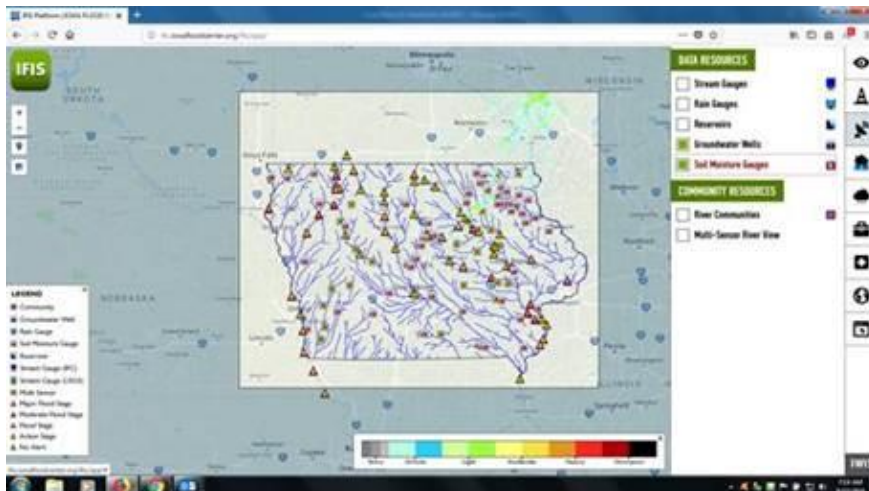
Here's 2 soil temperature resources. A really simple one to use, and one that takes a few more steps on its website:

- Iowa Mesonet provides a daily average (currently still in the 60's F):
<https://mesonet.agron.iastate.edu/agclimate/soilt.php>
- Iowa Flood Information System provides hourly readings for various locations:
<http://ifis.iowafloodcenter.org/ifis/>

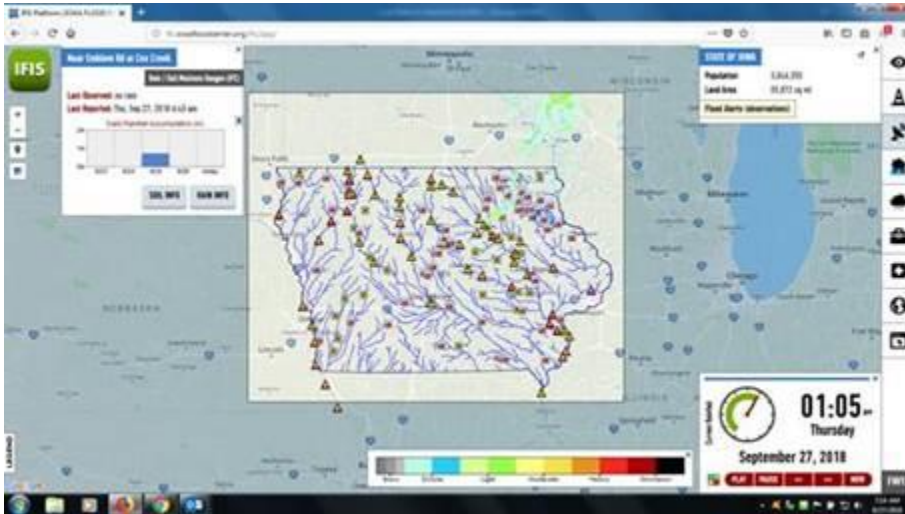
This website is a bit harder to get to the 4-inch soil temperatures. Here's a short tutorial to get there:

1. Go to: <http://ifis.iowafloodcenter.org/ifis/app/>
2. Click on this image on the right side of the screen  (First image below).
3. Click on the boxes for "Groundwater Wells" and "Soil Moisture Gauges" (First image below).
4. Then click on any of the "boxes" on the map to get a "Rain / Soil Moisture Gauges" reading on the left side of the screen, and in that click on "Soil INFO" (Second image below).
5. Follow the 4-inch line in the red area of the screen for soil temperature (i.e. 60F at 6:00 AM on Sept. 27), Third image below.

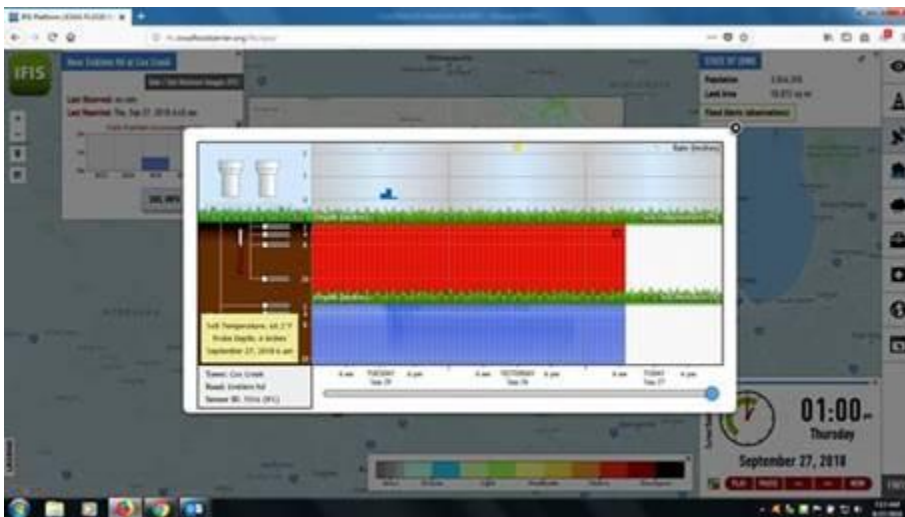
FIRST IMAGE 1



SECOND IMAGE 1



THIRD IMAGE 1



CORN

Growth and Development

Corn growth & development for dent stage to black layer for 105-day corn.

CORN GROWTH AND DEVELOPMENT 1

Stage	Description of stage	Comments	Typical fall days to the next stage	Typical GDD to the next stage
Half-way through R5	½ milk line	Often a target for silage harvest for upright stave silos. Whole plant is about 65% moisture. 90% DM in kernel.	~ 10 days	175
	¾ milk line	97% DM in kernel. Grain is about 37% moisture	~ 14 days	200

R6	Physiological maturity (black layer)	100% DM in kernel.	Aerial seeding of cover crops often timed with initial black layer as the crop canopy starts to open.
		Grain is about 35% moisture.	

SOYBEANS

Growth and Development

Soybean growth & development for reproductive stages R6-R8.

SOYBEAN GROWTH AND DEVELOPMENT

Stage	Description of stage	Comments	Time to next stage
R6	Pods contain green seeds that fill the pod to capacity at one of the four uppermost nodes on the main stem with a fully developed leaf.	Period of rapid, steady seed dry weight accumulation continues up to the R6.5 stage. Rapid leaf yellowing begins shortly after R6, from the lower canopy spreading upward. Aerial seeding of cover crops usually timed ~R6.5 stage. Drop seed before too much leaf drop.	About 18 days to R7 stage.
R7	Physiological maturity. One pod on the main stem has reached a mature color (tan or brown).	Beginning maturity. Very little yield loss (<2%) if a killing frost occurs at this stage.	About 9 days to R8.
R8	95% of pods have reached a mature color.	Full maturity.	About 7 days to <15% moisture.

ALFALA

Fall Harvest – Now or After a Killing Frost?

I suggest neither. Don't harvest now, but you don't have to wait for a killing frost either. However, you should wait at least until the last half of Oct. for the last harvest.

On average, the alfalfa killing frost (25°F) in northeast Iowa occurs in the 3rd week of Oct., but current long-term forecasts suggests the 1st killing frost for 2019 not until mid-Nov. (not that we can trust long-term forecasts). It really doesn't matter relative to the goal at hand. What does matter is to avoid accumulating more than 200 GDD (Base 41F) from cut date to killing frost. Accumulating more than 200 GDD between cut date and killing frost would contribute to a significant depletion of carbohydrate reserves that we count on to get the plants through the winter. While it's too wet to cut now, if you did cut now the estimated GDD accumulation from now (Oct. 2) to mid-Nov. would be 350 GDD which is well over the max 200 GDD concern. If waiting

until Oct. 15 before cutting, the estimated GDD accumulation for the last half of Oct. (130 GDD) plus the first half of Nov. (50 GDD) is 180 GDD total, which is in the “safe” range of less than 200 GDD.

Anytime we target alfalfa for a cutting in late fall (near killing frost), we also would like to leave a good stubble height (~6 inches) to help trap snow and insulate the plants. Most farmers tell me that modern equipment can't be set that high, but do what you can. If we compared risks to an alfalfa stand of cutting now (early Oct.) and getting some regrowth yet this fall to catch snow, but depleting carbohydrate reserves, versus cutting the crop in late fall (late Oct.) at a short stubble height, the late-short cut is the better scenario of the two. But a late cut with 6 inches of stubble height would even be better.

SORGHUM-SUDAN FORAGES

After Fall Harvest – Keep the Livestock Out For Now

Just a quick reminder that without the occurrence of a killing frost (28 F), fall harvested sorghum-sudan forages will still try to regrow. This regrowth of new shoots will be high in prussic acid concentration. So after harvest, keep livestock off of these fields until after a killing frost followed by the plant tissue turning wet-dark green to black, and then in 5 days or so dry-out to a tan-gray color. Once at the tan-gray color, the forage is safe to graze. For a refresher on issues with sorghum-sudan and frost, see the short article from Michigan State University at:

http://www.canr.msu.edu/news/frosted_sorghum-sudangrass_pasture_poses_prussic_acid_poisoning_risk

DISEASES

Stalk Rot

Aside from using grain moisture to rank fields for harvest, also consider standability. Check fields for stalk rot. As corn fields mature (black layer, R6 stage), they should be scouted for stalk rot. If a field has about 15% stalk rot or more, the risk of significant lodging is high enough to justify harvesting the field on the early side. Test stalk firmness by pinching the lower internodes with thumb and forefinger. Healthy stalks are firm and cannot be compressed. If a stalk can be compressed or feels soft, it is rotted and is a good candidate for lodging. Randomly check about 100 plants per field for a good assessment of conditions.



The pinch test. Photo by Rebecca Vittetoe.

Ear Molds

As you check for lodging risk, look at the condition of some ears. Another trigger for an earlier than intended harvest is evidence of ear molds. If a field has 10% or more of the ears with more than 10-20% mold, a field should be harvested as soon as moisture content reaches a level that can be harvested. This increases drying costs, but is less expensive than loss of crop due to potential for mycotoxin development. Moldy corn should be dried to 15% moisture or less for short-term storage, and 13-14% for long-term storage. Overall, very moldy

corn is a poor candidate for storage. If a mycotoxin analyses indicates safe levels, selling the grain or feeding to less sensitive livestock species may be a better alternative than storage. To help with ID and management of ear molds, here is a list of free pdf printable resources:

- Ear Rots
<https://crop-protection-network.s3.amazonaws.com/publications/cpn-2001-ear-rots.pdf>
- Mycotoxin FAQs
<https://crop-protection-network.s3.amazonaws.com/publications/cpn-2002-mycotoxin-faqs.pdf>
- Grain and Silage Sampling and Mycotoxin Testing
<https://crop-protection-network.s3.amazonaws.com/publications/grain-and-silage-sampling-and-mycotoxin-testing-filename-2019-04-10-184011.pdf>
- Storing Mycotoxin-Affected Grain
<https://crop-protection-network.s3.amazonaws.com/publications/cpn-2004-corn-storing-mycotoxin-affected-grain.pdf>

PREPARING FOR HARVEST

Recent News Article Posted in ICM News – repeated from last Crop Notes

Get *ICM News* emailed to you free by subscribing at: <https://crops.extension.iastate.edu/cropnews>

1. Key Tips to Prepare for a Variable Crop Harvest <https://crops.extension.iastate.edu/cropnews/2019/09/key-tips-prepare-variable-crop-harvest>
2. Grain Drying Considerations this Fall <https://crops.extension.iastate.edu/cropnews/2019/09/grain-drying-considerations-fall>
3. Plan Ahead for Potential Harvest and Storage Challenges this Fall
<https://crops.extension.iastate.edu/cropnews/2019/09/plan-ahead-potential-harvest-and-storage-challenges-fall>
4. Verifying Combine Adjustments During Crop Harvest
<https://crops.extension.iastate.edu/cropnews/2019/09/verifying-combine-adjustments-during-crop-harvest>

PESTICIDE APPLICATOR TESTING

Private

Starting September 1, 2019, private pesticide applicator exams will be based on information covered in the newly revised manual.

This manual is available at County Extension Offices, or ordered online at:

<https://store.extension.iastate.edu/Product/15708>

Commercial

Those recertifying once a calendar year by video program in spring or fall, the fall dates and registration information is available at: <https://www.extension.iastate.edu/psep/ComAp.html>

EVENTS

Oct. 3, Forestry Field Day, Yellow River State Forest Headquarters

Registration begins at 8:30 AM at the Yellow River State Forest Headquarters complex, 729 State Forest Road (County HWY B25); 5 miles SE of Rossville on Hwy 76 to B25; 4 miles NE on B25 to the Headquarters. The program starts at 9:30 AM. Topics will include: How to manage a forest for profit; Water quality; Wildlife and

the aesthetic value of trees; Forest establishment; Tree protection, Invasive species control and herbicide use; Forest products, portable sawmills, timber marketing and the legal aspects of forestry. The cost for the day, which includes morning refreshments and a hot lunch is \$15 payable on the day of the event. You must RSVP to Allamakee County Extension 563-568-6345 or email juliechr@iastate.edu by September 27 to guarantee your meal. If you leave a message, please provide your name and phone number. Participants should dress for outdoor conditions. More information and the full agenda can be found at www.forestry.iastate.edu FYI, the same program is on Oct. 8 at the Clear Lake Forestry Field Day at McIntosh Woods State Park (Clear Lake).

Oct. 21, Clinic on Harvest Weed Seed Control, Boone

10:00 AM to 3:00 PM. Free program, includes lunch and free CCA credits. Do you want to learn the latest information about mechanized weed seed control at harvest time? This workshop will cover one of the potential alternative weed management tools currently being used in other parts of the world: "harvest weed seed control". This clinic should be of interest to anyone interested in learning how farmers in other regions are adopting to the threat presented by herbicide resistance.

Agenda:

10-Noon, Dr. Michael Walsh, Director of weed research, University of Sydney, will present on harvest weed seed control (HWSC) tactics used in Australia and how they might fit in

Lunch provided

1-3 PM, In-field demos and discussion.

Location: The ISU Field Extension Education Lab, 1928 240th St., Boone, IA.

While the technology is not currently available for our system, it is likely this will be a tool that will be of value in the near future. For more information about the program, go to: <https://crops.extension.iastate.edu/blog/bob-hartzler-meaghan-anderson-prashant-jha/october-21-harvest-weed-seed-control-clinic> Please RSVP by Oct. 14 for an accurate lunch count.

Oct. 22, Great River Graziers Pasture Walk near Prosper, MN

Discuss evaluation of grazing and pastures for fall and planning for spring. Considerations for Karst geology/water quality in the Driftless region. More information

at: <https://crawford.extension.wisc.edu/files/2019/04/FINAL-GRGKGI-PASTURE-WALK-SCHEDULE-2019.pdf>

Oct. 24, Tri-State Ag Lender's Seminar, Dubuque

9:30 AM to 2:30 PM. The 33rd Annual Tri-State Agriculture Lender's Seminar on Thursday, Oct. 24 at the Best Western Plus Hotel, Dubuque IA. This year's focus is on market outlooks for livestock, grains and dairy, along with the issues of the farm technology, farm stress and tax laws affecting agriculture.

The list of nationally recognized presenters includes:

- Dr. Mark Stephenson, UW Madison, UW-Extension: "Dairy Marketing and Risk Management Update"
- Dr. Larry Tranel, ISU Extension and Outreach: "Farm Mental Health and Grief"
- Doug Johnson, Moody's Analytics: "Convergence of the Big Three: Ag Economy, Ag Technology and Ag Experience"
- Kristine Tidgren, Center for Ag Law & Taxation: "New Tax Law and Legal Issues of Concern"
- Dr. Chad Hart, ISU Extension and Outreach: "Land, Grain & Livestock-Marketing and Risk Management"

This seminar has proven itself in assisting lenders and farm financial advisors in helping farmers manage that risk. For more information, go to:

https://www.extension.iastate.edu/dairyteam/files/events/files/ag_lenders_2019_flyer_and_registration.pdf The

cost of the program is \$100 per person by Oct. 14. To register, contact Larry Tranel at ISU Extension in Dubuque County at 563-583-6496 or e-mail tranel@iastate.edu

Nov. 5-6, 49th Annual North Central Extension – Industry Soil Fertility Conference, Des Moines

Learn more about current soil fertility issues and research being conducted at universities across the North Central United States. The conference will include invited presentations from university and industry leaders, research reports from university soil fertility researchers, and posters outlining research by graduate students at universities across the North Central region. For all information about the conference, including registration and hotel arrangements, go to: <https://northcentralfertility.com/>

Nov. & Dec., Farm Bill programs to be Scheduled, many locations across Iowa

Coming in Nov. & Dec. across the state are Farm Bill programs to cover the decisions involved in election and enrollment in the 2018 Farm Bill. As sites dates and locations are finalized this page will be updated:

<https://www.extension.iastate.edu/agdm/info/meetings.html>

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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

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