

CROP NOTES for April 3, 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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WEATHER

Soil Temperatures

1. The NPKnowledge website provides an overview average estimate of state-wide soil temperatures: <http://extension.agron.iastate.edu/NPKnowledge/> Soil temperatures reached 50 yesterday, but obviously it stay there yet. However, it is warm enough to plant small grains and forages.
2. If you check your own fields with a soil thermometer, the daily low and high 4-inch soil temperatures in spring are usually around 7:00-8:00 AM and 5:00-6:00 PM, respectively. A noon to 1:00 PM reading would be pretty close to a calculated daily average. There are many soil thermometers on the market. For example, Taylor 5989N (1-inch dial) for ~\$4 to \$10 or a 2-inch dial unit made by Taylor 5976-35 for ~\$9 to \$15. Just Google either model or Google soil thermometers for other options.

OATS

Seeding Rate

For grain and straw production, the general recommendation for seeding rate is to achieve 30 seedling plants/sq.ft. With typical tiller development of 2 tillers/plant plus the main stem, we should get 90 seed heads/sq.ft. at harvest. A ball park seeding rate recommendation to achieve this is 3 bu/ac. We would use half this rate if oats was a nurse crop for an alfalfa seeding to be harvested for silage, and reduce the competition against the developing alfalfa stand. More specifics regarding the general recommendation of 3 bu/ac is to consider actual seeds per pound and % purity and germination on the seed tag. Seeds per pound could vary by as much as 30% from variety to variety and circumstances affecting the growing season. To achieve 30 plants per square foot we would also consider using Pure Live Seed (PLS) in the calculations. $PLS = \% \text{ purity} \times \% \text{ germination}$ from what is listed on the certified seed tag. PLS plus the actual seeds per pound in the purchased seed bags are used to calculate a more specific seeding rate.

Seeding Date

Oats can be seeded anytime in spring as soon as the soil is fit for planting operations. However, alfalfa should not be planted until April (soil temperatures in the 40'sF). Oats planted after mid-April will usually yield less than for oats planted before that time. On average in Iowa, after mid-April the average yield reduction is about 10% yield per week, and after May 1 about 15% per week. The basic trend is that the earlier the small grains are planted, the better the test weight and yield. This is thought to be mostly in response to plants flowering prior to the hot part of summer.

Variety Trials

A repeat from earlier Crop Notes, please find ISU variety trial results at:

<https://practicalfarmers.org/research/oat-variety-trial-2019/>

Also a repeat from earlier Crop Notes, here is a nice video of a presentation from Grain Millers on profitable oat production: <https://practicalfarmers.org/2018/11/profitable-oats-production-bruce-roskens/>

ALFALFA

Little Winter Injury in Northeast Iowa

Its routine to rotate-out about 20% of the alfalfa stands every year. Older stands get too thin, but still provide an excellent N credit to a rotated corn crop only needing another 0 to 30 lbs. of N fertilizer for the crop. Sometimes the winter along with other management factors cause additional winter injury. A wetter than normal fall can add stress to plants in low spots, hill-side seep areas, and increase the chance for heaving.

Low Spots and Hill-side Seeps: We all know alfalfa does not tolerate wet soils for an extended period of time. It's a matter of drainage and time. I am not expecting wide-spread occurrences of these problems this spring, but there certain can be some.

Heaving: The wet fall conditions and going into the winter with full soil moisture profiles can enhanced the chance for frost-heave injury to alfalfa. In general what happens is the entire field heaves with the winter freeze (the same reason for sidewalk pavement heaving, or busting of shallow water pipes), then settles back down. Sometimes the alfalfa completely moves with the soil, and sometimes the alfalfa does not completely settle back down but leaves some of the crown exposed above the soil surface. If this happens too early in winter, the heaved-exposed crown tissue will be killed by the cold winter temperatures (right plant in the photo is dead). If this happens late enough in winter/spring, the exposed crown may still survive for another season (left plant in photo is alive), and as long as cutting height is above the heaved crown. But the plant with the raised crown would winterkill next winter exposed to the cold temperatures.



Heaving is usually more prevalent with younger vs. older stands. The other photo below which I took yesterday shows heaving only in a late fall wheel while the rest of the field is perfectly fine.



Alfalfa stubble height in fall. Fields with little stubble going into the winter are at increased risk of winter-injury. For some winters it doesn't matter, but for others it can make the difference of keeping or terminating

the stand. Both cold injury to plants and heaving damage are more prevalent in fields that were cut short and late into the fall.

What to do? Fields are just starting to green-up now. Once there is a few inches of growth, it will be much easier to assess surviving stands, versus localized spots for patch-work seedings, versus fields to keep for 1st crop then rotate, versus fields to just rotate.

Patch-Work for Winter-Injured Alfalfa Stands

This is one of those impossible topics, because it depends on any number of factors... degree of damage, location in field relative to the good areas, intended length of time to keep the stand (through 1st crop, just this season, two seasons?), forage package desired (haylage or hay, quality or quantity). But here's a few points to consider.

1. If inter-seeding spots with Italian ryegrass, consider it a one-season fix. Italian ryegrass tends to have wider leaves than other annual and perennial ryegrasses, and retains better quality since they do not head out in the first year. The following University of Wisconsin article discusses this further. <https://fyi.extension.wisc.edu/forage/files/2014/01/ItalRye-FOF.pdf>
2. Otherwise there is the "usual grocery list" of options, which are nicely discussed in this 2009 Michigan State University article: https://www.canr.msu.edu/news/dealing_with_winter_injury_in_alfalfa_fields

Alfalfa Establishment

Its April. We can seed alfalfa as soon as the soil is fit.

- Seed-to-soil contact (press wheels or cultipacker) and seeding depth (1/4 to 1/2 inch) is crucial to getting a new stand off to a quick start. The 1/4 to 1/2 inch seeding depth is just as important for forage grasses (brome, orchard, fescue, timothy, etc.).
- When using oats as a nurse crop consider the following from the article "Oats as a Cover Crop for Alfalfa" <https://www.midwestforage.org/pdf/182.pdf.pdf> where the research showed "Highest grain yields generally result from oat seeding rates of 2 to 3 bu/ac. Highest forage yield for silage is still achieved with seeding rates as low as 1.5 bu/ac. There is generally no weed control advantage to seeding oats at more than 1 bu/ac."

CROP SCOUTING

Tip Sheet Listing Useful Equipment and Resources

The attached pdf is a listing of reference materials, suggested equipment, and websites. One short note on bargain pricing – the University of Nebraska is offering Weeds of the Great Plains (best weed ID book available) at 50% off (\$12.50) because a new version will soon become available. The old version is still excellent, even if a new version is coming soon. See the weblink on the tip sheet.

INSECTS

Common Stalk Borer

One insect in its current "control window" is Common stalk borer. We can implement a field border burn of the grass next to planned 2020 corn fields. The burn is very effective in killing fall laid eggs from Common stalk borer moths into the grassy field borders.

Two important considerations:

- 1) Do you even have this pest present? Did the last corn crop show the following issue along the field border (left photo below)?

2) Can a field border be burned safely? No roadside utility boxes, no wood fence posts, and a sufficiently controlled burn to not set the field on fire. If not, there is another “control window” for this pest during larval migration, usually in June, and monitored via degree days for which Crop Notes will provide a heads-up in plenty of time to deal with this.



Crop Scouting for Insects

One of the insect pest resources that I use in the Crop Scout School is an insect pest calendar. It provides an average seasonal view of when to scout for various insect pests. The calendar is attached. The shaded boxes represent general scouting times and treatment windows. Other tips are included within the space provided. Although, more information on each pest and photo ID's, I highly recommend that you have a copy of publication CSI 14 Field Crop Insects which can be ordered at: <https://store.extension.iastate.edu/Product/13725> It costs \$5 out of the local Extension office, or add another \$4 for shipping.

ISU CROP & LIVESTOCK NEWSLETTERS

ICM News & Blogs

With social distancing, Extension staff are finding more time in the office to write articles. There are regular additions to the ICM News & Blogs to be aware of. Go to: <https://crops.extension.iastate.edu/cropnews> You can subscribe for free on the right side of the web page to receive these kinds of updates.

For example:

ICM News

- Spring Forage Fertilization Considerations, April 1, 2020
- Deadline Waived for Iowa Pesticide Applicators to Renew Certification, March 31, 2020
- The Opportunities and Challenges with Hemp, March 26, 2020
- Terminating Cover Crops This Spring, March 25, 2020
- Recommendations to Achieve High Quality Dry Fertilizer Applications, March 25, 2020
- Crop Sulfur Fertilization This Spring, March 25, 2020
- Managing Winter Annual Weeds this Spring, March 20, 2020
- Management Considerations for Slugs: Do Insecticides Work? March 19, 2020
- Legally Operating a Drone in the Agriculture Industry, March 18, 2020

ICM Blogs

- Updated views on corn and soybean planting recommendations, April 1, 2020
- Join us April 6-10 for the "Essential Row Crop Management" Webinar Series!, March 31, 2020 7:55 AM
- Interactive Display Monitor Help for Your 2020 Crop Season, March 26, 2020
- When it's time to roll! (a printed and video version of Planter Maintenance and Set-up), March 19, 2020

- Crop Protection Network releases 2020 fungicide efficacy tables, March 19, 2020
- Plant and Insect Diagnostic Clinic to offer some remote diagnostics, March 17, 2020
- Yield Considerations for High Speed Planting, March 17, 2020

Other ISU Newsletters

The electronic age offers many possibilities in news information resources. ISU is no exception, and offers many choices from “E-Dairy News and Views” to “Growing Beef” to “Snouts and Tails”, and others. All free to subscribe to. Go to <https://www.extension.iastate.edu/ag/newsletters> for links to other ISU email newsletters.

CROP MANAGEMENT WEBINARS

Essential Row Crop Management for Spring 2020

A series of 5 webinars from Iowa and Minnesota Extension Specialists. Each webinar is limited to 10-15 minutes with time for Q & A. The webinars are free and open to all. Each starts at 1 PM.

- April 6 – Top 3 tips for cover crop termination.
- April 7 – Grain storage management for spring.
- April 8 – Management of fertilizer spread patterns.
- April 9 – Pre-emergence herbicide programs.
- April 10 – Tillage options this spring.

Each webinar will be recorded for those that want to participate, but can't join the live webinar.

The program link is: <https://www.extension.iastate.edu/news/row-crop-management-webinar-series-be-provided-iowa-state-minnesota-extension-specialists> and the entry into the individual webinars is the link at the bottom of the page, which is the same link to play recordings of these sessions if you cannot attend live.

Farm Management Webinars from the University of Illinois

Outlook and Farm Policy Moving Forward, Friday, April 3 from 11:00-11:30 AM

Acreage Decisions 2020, Tuesday, April 7 from 11:00-11:30 AM

Crop Management Outlook for 2020, Wednesday, April 8 from 10:00-11:00 AM

Registration is free, however pre-registration is required. The registration is limited to 1000 participants.

Go to: <https://mailchi.mp/illinois/farmdoc-webinar-march-9th2020-crop-insurance-decisions-747877?e=153d7be3f1>

PESTICIDE APPLICATOR CERTIFICATION

Recertification by Meeting or Testing

Details for Private Pesticide Applicator Recertification

The Iowa Department of Agriculture and Land Stewardship (IDALS) waived the deadline for pesticide applicators to meet recertification requirements. Those farmers with certification that were current up to December 31, 2019 will be able to purchase and apply restricted use pesticides for the 2020 growing season. Private pesticide applicators whose certification expired Dec. 31, 2019 and planned to recertify by testing now have until December 31, 2020 to meet that requirement. Private pesticide applicators who plan to recertify by attending a private applicator Continuing Instruction Course (P-CIC) and were unable to attend the 2019-2020 P-CIC will now have until September 30, 2020 to attend the 2019-2020 CIC program. Stay tuned for a list of meeting opportunities later in the year.

Testing for Initial Certification

Individuals who are receiving their initial pesticide applicator certification must still pass a test to become certified. Stay tuned for more information in this evolving situation.

HEMP

Current Status of Hemp Production in Iowa

As of April 1, the Iowa Department of Agriculture and Land Stewardship (IDALS) has opened the permitting process for growing hemp in Iowa. All information can be found on the IDALS hemp web page. <https://iowaagriculture.gov/hemp> However, while the permitting process opened on April 1, it still is not legal to grow, possess, buy or sell hemp in Iowa until an official notice is published in the Iowa Administrative Bulletin which is schedule to occur on April 8 AND you have a license from IDALS. Instructions on How to Apply is linked on the IDALS hemp webpage. The deadline for application is May 15, 2020 for the 2020 season. The status of fingerprint requirements for the licensing procedure may be difficult to accomplish because many local law enforcement entities are currently not open to public traffic due to COVID-19 and they are not currently offering fingerprint services. USDA has been asked if they would waive fingerprint requirements and their response was no. Folks are asked to consult information on this site to determine options located near them. <https://www.nbinformation.com/locations/> and <http://www.print-ids.com/> by appointment. At this point in time all questions related to hemp licensing, fingerprinting, seed licenses and other regulatory issues/concerns should be address to hemp@iowaagriculture.gov or 515-725-1470. For more information on hemp opportunities, please see this article by Chad Hart, “The Opportunities and Challenges with Hemp”, which is posted on the ICM News at: <https://crops.extension.iastate.edu/cropnews/2020/03/opportunities-and-challenges-hemp>

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