CROP NOTES for February 17, 2017
Past issues of Crop Notes are posted at:
http://www.extension.iastate.edu/winneshiek/page/crop-notes-brian-lang

Iowa State University Extension Information for Northeast Iowa
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WEATHER

Recent Warm-Up and Alfalfa Dormancy

The following link provides an article from Dan Undersander, Forage Specialist, University of Wisconsin, mostly discussing alfalfa fall dormancy, but including the following statement. “During an untimely winter warm-spell, de-hardening can threaten alfalfa. The threat is when temperatures are more than 60 degrees Fahrenheit (F) and the soil temperature at 2 to 4 inches is more than 40 degrees F.” [http://agronomy.wisc.edu/2014/09/04/fall-alfalfa-management-can-make-or-break-survival-says-dan-undersander/](http://agronomy.wisc.edu/2014/09/04/fall-alfalfa-management-can-make-or-break-survival-says-dan-undersander/)

Questions then arise as to how many days at +60F air temp and +40F soil temp before dormancy breaks. There are many variables to this. Assuming we have all selected for varieties with a good winter survival rating (WS) for our location, the next largest factor is what Fall Dormancy rating (FD) does your alfalfa variety have. In general (and I really mean in general), it probably takes about 5 consecutive days of +60F air temp and +40F soil temp to start breaking dormancy of FD2 varieties, but only about 2 consecutive days of +60F air temp and +40F soil temp to start breaking dormancy of FD5 varieties. Along with this we have to consider many other field management variables such as soil fertility, varietal disease resistances, pest management, drainage, north slope vs. south slope, last year’s cutting schedule intensity (how much stress was put on the stand), was there a late fall cut or not, and if cut late was there fall stubble left or not. These are all issues dealing with stress management and how healthy the stand entered into the winter. The bottom line is that we will just have to wait and see! By the way, if you need a bit more background on understanding alfalfa FD ratings versus alfalfa WS ratings, please read the following article: [http://www.midwestforage.org/pdf/532.pdf](http://www.midwestforage.org/pdf/532.pdf)

Soil Temperatures

The NPKnowledge website provides an overview of state-wide soil temperatures: [http://extension.agron.iastate.edu/NPKnowledge/](http://extension.agron.iastate.edu/NPKnowledge/) For more detailed information soil temperatures and trends, Iowa Environmental Mesonet website provides links to the automated weather stations showing hourly soil temperature readings. To select your general location, date, etc. go to: [http://mesonet.agron.iastate.edu/agclimate/#soil04t](http://mesonet.agron.iastate.edu/agclimate/#soil04t) Click on “Plot Time Series” for a 3-panel illustration of soil temperature, air temperature, solar radiation, and soil water content (soil water content readings are not accurate when soil is frozen). The following chart for Nashua shows soil temperatures for the last few days staying right at about 32F.
INSECTS
Resistance Management Plan for Soybean Aphid
Erin Hodgson, ISU Entomologist, has written an article regarding management plans to avoid or delay development of soybean aphid resistance to insecticide. Current research has identified areas in Minnesota with soybean aphid resistant to some pyrethoid insecticides, and a location in northwest Iowa with similar concerns. Integrated management tactics will be necessary to prolong efficacy of insecticides against soybean aphid and manage soybean aphids effectively. You can find Erin's article at: http://crops.extension.iastate.edu/cropnews/2017/02/resistance-management-plan-soybean-aphid  Also, the 2016 insecticide trials on soybean aphid are available at: https://store.extension.iastate.edu/Product/14722

Corn Rootworm Insecticide Trial Results
ISU posts there annual research reports on corn rootworm insecticides and other trials (“Evaluation of Insecticides and Plant-Incorporated Protectants”) at the following website: http://www.ent.iastate.edu/dept/faculty/gassmann/rootworm

WEEDS
Herbicide Resistant Weed Update
Is 80% of Iowa's waterhemp really resistant to PPO (Herbicide Group or HG 14) herbicides? The University of IL Plant Clinic recently posted results of their resistance screens in waterhemp from 2016. Almost 75% of samples sent in from the state of Iowa were positive for both PPO (HG 14) and glyphosate (HG 9) resistance. 80% of samples were positive for PPO resistance. Does this mean we're doomed for 2017? Dr. Hartzler wrote a blog to explain these
results: [http://crops.extension.iastate.edu/blog/bob-hartzler/80-iowa-waterhemp-really-resistant-group-14-herbicides](http://crops.extension.iastate.edu/blog/bob-hartzler/80-iowa-waterhemp-really-resistant-group-14-herbicides) These samples were very likely sent to the clinic as the sender already suspected they might be resistant to either one or both of those herbicide groups, making the sample biased. The presence of these resistances across the state is likely much lower than this, but the increase in resistance is happening very quickly. Remember good stewardship for this coming year and feel free to send me an email or call if you have any questions or concerns about weed management. Do you have a field with HPPD (HG 27) or PPO (HG 14) resistant waterhemp? The ISU Weed Science group is looking for a location to research HPPD (HG 27) resistant waterhemp and a site to research PPO (HG 14) resistant waterhemp. If you have a location with one of these resistances and might be interested in helping out, please contact Mike Owen at 515-294-5936 or [mdowen@iastate.edu](mailto:mdowen@iastate.edu)

**Weed Science Program 2016 Weed Control Results**
The annual publication of herbicide trial results conducted at the ISU Research Farms is now available at: [https://store.extension.iastate.edu/Product/Weed-Science-Program-2016-Weed-Control-Results](https://store.extension.iastate.edu/Product/Weed-Science-Program-2016-Weed-Control-Results) The 2015 results and 2017 Weed Management Guide are also available at this website.

**DISEASE**
**Farmer’s Guides to Corn and Soybean Diseases**
These are ‘higher-level’ crop disease reference guides made available at bargain prices ($30 each) for what you get. Information for each disease includes symptoms and signs, conditions that favor disease, similar looking diseases and disorders, and a review of basic management options. The books also contain a diagnostic key and disease distribution maps.
Corn Diseases [https://store.extension.iastate.edu/Product/A-Farmers-Guide-to-Corn-Diseases](https://store.extension.iastate.edu/Product/A-Farmers-Guide-to-Corn-Diseases)
Soybean Diseases [https://store.extension.iastate.edu/Product/A-Farmers-Guide-to-Soybean-Diseases](https://store.extension.iastate.edu/Product/A-Farmers-Guide-to-Soybean-Diseases)

**PASTURE**
**Time to Frost Seed**
Once the snow clears so that seed can make seed-to-soil contact, it is time to ‘frost-seed’. The typical window for this is February through early March. It is perfectly fine to have snow fall on top of a frost seeding, but it is not recommended to seed on top of snow. More detailed information on frost seeding is in the ISU publication available at: [https://store.extension.iastate.edu/Product/Improving-Pasture-By-Frost-Seeding](https://store.extension.iastate.edu/Product/Improving-Pasture-By-Frost-Seeding)

**EXTENSION PUBLICATIONS**
**A Few New Extension Publications (2016-2017) include:**
Sudden Death Syndrome [https://store.extension.iastate.edu/Product/Sudden-Death-Syndrome](https://store.extension.iastate.edu/Product/Sudden-Death-Syndrome)
Herbicide Guide for Iowa Corn and Soybean Production
https://store.extension.iastate.edu/Product/2017-Herbicide-Guide-for-Iowa-Corn-and-Soybean-Production
Take a Good Soil Sample to Help Make Good Fertilization Decisions
https://store.extension.iastate.edu/Product/3915
Iowa Soil Health Field Guide https://store.extension.iastate.edu/Product/Iowa-Soil-Health-Field-Guide
2017 Driftless Region Beef Conference proceedings https://store.extension.iastate.edu/Product/2017-Driftless-Region-Beef-Conference-proceedings
Many other publications can be found at the Extension Store https://store.extension.iastate.edu/ by just typing the subject into the search box.

IOWA SOYBEAN ASSOCIATION
Searchable Database of Replicated On-Farm Trials
A great feature of the ISA On-Farm Network® Replicated Strip Trials is a database with various drop menus to sort for the research that most interests you. Please find the searchable database at: http://www.isafarmnet.com/onlinedb/index.php

EVENTS
Feb. 6 – Mar. 20, Soil Fertility Workshops, 8 locations in northeast Iowa
ISU Extension Workshops to Maximize Economic Returns to Fertilizer Expense
With continued low commodity prices, many farmers are looking to trim costs. For fertilizer, don’t simply trim overall costs but rather selectively maximize economic returns to fertilizer expense. ISU Extension is conducting small-group workshops for those wanting to understand soil tests and fertilizer recommendations. “We will take a step-by-step approach on understanding what to test for, how labs provide test results, and how to turn those results into profitable fertilizer rates”, says Brian Lang, agronomist with ISU Extension. Even if you already have soil testing and recommendations hired out to an agri-business, in two hours you can still gain a very good understanding of how to manage one of the top three dollar per acre expenses on your farm. Knowledge gained from this program will likely allow you to selectively reduce fertilizer costs while improving income. It’s a two-hour workshop that starts on time; don’t be late. The program is free but seating is limited, so please RSVP to the County Extension office location listed below that you wish to attend. For more details about the program, contact Brian Lang at 563-387-7058 or bjlang@iastate.edu
Dates, Times and Locations:
   Feb. 6 from 1:00 to 3:00 PM. Fayette Co. Extension office, 218 S. Main St., Fayette, 563-425-3331
   Feb. 14 from 1:00 to 3:00 PM. Chickasaw Co. Extension office, 104 E. Main St., New Hampton, 641-394-2174
   Feb. 17 from 1:00 to 3:00 PM. Clayton Co. Extension office, 120 S. Main St., Elkader, 563-245-1451
Feb. 24 from 10:00 to Noon. Delaware Co. Extension office, 1417 N. Franklin St., Manchester, 563-927-4201
Feb. 27 from 10:00 to Noon. Allamakee Co Extension office, 218 7th Ave. SE, Waukon, 563-568-6345
Mar. 1 from 10:00 to Noon. Winneshiek Co. Extension office, 325 Washington St., Decorah, 563-382-2949
Mar. 3 from 10:00 to Noon. Dubuque Co. Extension office, 14858 West Ridge Ln., Dubuque, 563-583-6496
Mar. 20 from 1:00 to 3:00 PM. Howard Co. Extension office, 132 1st Ave. W., Cresco, 563-547-3001

Feb. 22-Mar. 9, Winter Cover Crop Workshops, 5 locations in Iowa
Iowa Learning Farms and ISU Extension will host cover crop workshops in 5 locations this winter. The workshops are free, open to the public, and include a complimentary meal. At the beginning of each workshop, facilitators will invite questions and concerns from the participants. For the remainder of the workshop, Matt Helmers, professor of agricultural and biosystems engineering, and Mark Licht, assistant professor of agronomy, will address the topics and questions raised by the participating farmers and landowners. They will also be prepared to discuss herbicide recommendations for termination and establishment, planter settings to handle higher amounts of biomass, cover crop seed selection, impacts on crop yields and soil health and more. Iowa workshop dates and locations
Feb. 22, 12:30-2:30 p.m.: Borlaug Learning Center, ISU Northeast Research Farm, 3327 290th St, Nashua
Feb. 23, 12:30-2:30 p.m.: Central City American Legion Post 421, 6 Central City Rd, Central City
Feb. 28, 12:30-2:30 p.m.: Marion County Extension Office, 210 N Iowa St, Knoxville
Mar. 8, 12:30-2:30 p.m.: Dordt College Commons Dining Hall, 498 4th Ave NE, Sioux Center
Mar. 9, 12:30-2:30 p.m.: St. Paul Lutheran Church Fellowship Hall, 1105 Washington St, Eldora
Workshops are free and open to the public, but reservations are suggested to ensure adequate space and food. Contact Liz Juchems at 515-294-5429 or email ilf@iastate.edu

Feb. 27-Mar. 30, “Keep Palmer amaranth off your farm” workshops, Independence and 5 other locations further south
Each two hour workshop is free to attend, but please pre-register with the county to assure we have enough space and food/refreshments. We’ll look at live plants, talk about managing this new weed in crop fields and CRP, and talk about any questions, comments, or concerns you have about it.
Feb. 27, 11:30 a.m., with a light meal; Jones Co. Extension office, 800 N Maple St. #2, Monticello. Pre-register 319-465-3224.
Mar. 1, 6:30 p.m., with refreshments, Heartland Acres Agribition Center, 2600 Swan Lake Blvd., Independence. Pre-register 319-334-7161.
Mar. 20, 6:00 p.m., with a light meal; Traer Public Library, 531 2nd St., Traer. Pre-register 641-484-2703.
Mar. 21, 6:00 p.m., with a light meal; Iowa Co. Extension office, 223 West Welsh St., Williamsburg. Pre-register 319-668-1052.
Mar. 30, 6:30 p.m., with refreshments; Johnson Co. Extension office, 3109 Old Highway 218 S., Iowa City. Pre-register 319-337-2145.

Feb. 28 & Mar. 1-2, Hawkeye Farm Show, Cedar Falls
The event runs daily from 9 a.m. until 4 p.m. with more than 200 exhibitors. The Farm Show home page is: http://hawkeyefarmshow.com/ Each day, ISU Extension will present educational seminars at 11:00 a.m. and 1:00 p.m. The speaker and topic schedule is:
Tuesday, February 28
11 a.m. – Evolving Pesticide Resistance with Soybean Aphid & Corn Rootworm, Brian Lang, agronomist
1 p.m. – Crop Disease Update, Alison Robertson, extension specialist in plant pathology
Wednesday, March 1
11 a.m. – 2017 Weather Outlook, Elwynn Taylor, extension climatologist
1 p.m. – 2017 Crop Market Outlook, Chad Hart, extension grain markets specialist
Thursday, March 2
11 a.m. – Iowa Cover Crop Research Updates & Recommendations, Liz Juchems, Iowa Learning Farms
1 p.m. – Ins and Outs of Palmer Amaranth in Iowa, Terry Basol, agronomist

Mar. 2, ISU Southeast Research Farm annual meeting, Crawfordsville
Begins at 10:00 AM. More information is available at:
http://www.extension.iastate.edu/Pages/eccrops/meetserc.html

Mar. 8, ISU Northeast Research Farm annual meeting, Nashua
The Northeast Iowa Agricultural Experimental Association (NEIAEA) meeting will call to order at 9:30 for the annual board meeting. This is followed from 10:00 AM to Noon with key presentations from Steve Johnson, Farm Management Specialist, and Allen Pattillo, Aquaculture Specialist.
* Johnson will discuss “Crop Market Outlook: Strategies and Tools”.
* Pattillo will address the growing interest in “Aquaculture and its Opportunities in Iowa”.
* After lunch, Ken Pecinovsky, Farm Superintendent, reviews research trials conducted at the farm in 2016.
This is a free program open to the public and attendees will receive the 2016 Research Farm Report of many of the research trials conducted at the farm. Lunch will be offered by the Riverton Lucky Clovers 4-H Club. Following lunch and Pecinovsky’s presentation will be the NEIAEA Board of Directors meeting. The program will be held at the Borlaug Learning Center on the ISU Northeast Research Farm. Directions: From Nashua at the Jct of Hwy 218 (Exit 220) and Co. Rd. B60, go west on B60 1.1 miles to Windfall Ave., then south 1 mile to 290th St., then east 0.2 miles to the farm. For more information about the event, call Terry Basol at 641-426-6801. Two CCA credits in CM are available.

Mar. 22, Beginners Crop Scout School, Nashua
9:30 AM to 3:30 PM at the Borlaug Learning Center, ISU Northeast Research Farm, Nashua. A class for farmers and crop scouts with limited to no scouting experience. Live plants will be used for weed ID and staging of corn and soybeans in conjunction with a traditional lecture approach. The main topics for the day include; corn and soybean growth and development, weed ID and herbicide injury, corn and soybean disease and insect ID. Registration fee of $75.00 covers lunch, numerous materials, and refreshments for the day. Class size is limited to the first 30 paid registrants, so please register early to secure a seat. The registration form needs to be filled out and sent to the Borlaug Learning Center, Nashua Iowa postmarked no later than March 18. A registration for is attached to this email. For more information, please contact Terry Basol at 641-426-6801, email: tlbasol@iastate.edu

Webinar Series on Aquaculture, Available Online Now
The series features ISU Extension Aquaculture Specialist Dr. Allen Pattillo. Aquaculture professionals have developed this series of webinars to make learning about many aspects of aquaculture easily accessible. The series brings together experts from across the nation in a 15-webinar series to discuss such topics as managing a recreational fish pond, understanding biosecurity rules, raising finfish and shellfish, and the dietary benefits and risks of farm versus wild fish for beginning and expert aquaculture producers. For the webinar, go to: http://www.extension.iastate.edu/article/aquaculture-center-webinar-series-available-online

Commercial Pesticide Applicator Re-certification
See the following for details: http://www.extension.iastate.edu/psep/ComAp.html
- Feb. 22, Seed treatment
- Feb. 22-23, Forestry, ornamental and turf
- Mar. 1, Ornamental and turf
- Mar. 8, Certified handlers

Iowa State University Extension and Outreach programs are available to all without regard to race, color, age, religion, national origin, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. veteran. Inquiries can be directed to the Director of Equal Opportunity and Compliance, 3280 Beardshear Hall, (515) 294-7612. Cooperative Extension Service, Iowa State University of Science and Technology, and the United States Department of Agriculture cooperating.

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