IOWA STATE UNIVERSITY
Extension and Outreach

CROP NOTES for June 2, 2016
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
by Brian Lang, ISU Extension Agronomist
325 Washington St., Suite B, Decorah, IA 52101
563-382-2949

TABLE OF CONTENTS

WEATHER

Northeast Iowa on the Dry Side

Both April and May had below normal rainfall. Low enough for far northeast IA to currently register "abnormally dry" on the U.S. Drought Monitor. http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?midwest Normal rainfall from now through August is about 1 inch per week.

CORN

Corn Growing Degree Days (GDD); Growth & Development

Northeast IA is currently around 350 to 400 GDD from May 1 to today. Long-term normal is ~ 350 GDD.

- It takes about 90 to 120 GDD from planting to emergence.
- A new leaf (fully developed, collar visible) appears approximately every 84 GDD.
- May 1 planted corn should be between V2 & V3 stage.
- Mid-April planted corn (~500 GDD) should be between V4 & V5 stage.
- Normal GDD in northeast Iowa for early June averages 16 per day (a new leaf formed in ~ 5days).

If you want to determine GDD for any given period of time, this website can do that http://mesonet.agron.iastate.edu/GIS/apps/coop/gsplot.phtml?network=IACLIMATE&var=gdd50&year=2016&smonth=5&sday=1&emonth=6&eday=3

SOYBEANS

Basic Scouting for Emerged Soybeans. Check for:

1) Population, seed depth and plant spacing. Did you get what you intended with your planter settings? If a reduced stand, why? soil crusting, planter setup, soil insects (seedcorn maggot, wireworms, grubs), seedling disease?

2) A final stand of a uniform 100,000 plants per acre should maximize yields, and it seldom pays to replant uniform stands of 75,000 because of the cost of replanting and yield penalty for the delayed planting. Here's soybean plant populations in plants per foot of row.

	Desired plants per acre (X1000)					
	75	100	125	150	175	200
Row Width	Average number of plants per foot of row					
6 inch	0.9	1.2	1.4	1.7	2.0	2.3
7.5 inch	1.0	1.4	1.8	2.2	2.5	2.9
10 inch	1.4	1.9	2.4	2.9	3.3	3.8
15 inch	2.2	2.9	3.6	4.3	5.0	5.7
20 inch	2.8	3.8	4.8	5.7	6.7	7.7
30 inch	4.3	5.7	7.2	8.6	10.0	11.5

3) Still planting or replanting? Stay with "normal" adapted maturity soybeans for northeast Iowa until about mid-June. For delayed planting, if feasible, use narrower rows (*i.e.* 15 or 20-inch vs. 30-inch) and up the population a bit since late planted soybeans don't develop as robust and cover the rows as well as earlier planted soybeans.

4) Early-season weed issues? Pre-emerge program working? Weed escapes? Figure timing for post-emergence program.

INSECTS

Armyworm in Corn

True Armyworm (TAW) is a spotty inconsistent threat every spring. I received a report yesterday from northern Clayton County (Joe Shirbroun, Pioneer Seed Dealer/Agronomist) regarding significant armyworm activity. Also, TAW activity was noted today in NW Iowa. Moths migrate from the south and lay eggs into grassy and high residue areas. Overwintering small grain cover crops (rye, wheat, triticale) tend to be quite favorable to the moths, but so are grass pastures, CRP, and no-till fields. Scout now through June for TAW regardless of corn stage. There are just a few Bt-hybrids listed as tolerant to TAW: http://corn.agronomy.wisc.edu/Management/pdfs/Handy_Bt_Trait_Table.pdf . This pest is a minor threat to soybeans. They usually just feed enough on soybeans to sustain their migration as they move to much more favorable food sources (corn, oats, grass pasture, etc.). For photos and scouting tips, go to: http://www.extension.iastate.edu/winneshiek/sites/www.extension.iastate.edu/files/winneshiek/CropNotes/First%20Generation%20True%20Armyworm.pdf

Black Cutworm in Corn

Scout now to V5 stage corn. Some activity has been reported in southern and central Iowa. The recent ICM article provides scouting tips (potential hot spots) and thresholds: http://crops.extension.iastate.edu/cropnews/2016/05/black-cutworm-scouting-advisory-2016

Common Stalk Borer Control in Corn

For those that lose the first few rows of corn plants (photo 1) along grassy field borders or grass-back terraces, you may have a problem with Common Stalk Borer. First check if you are using a Bt-hybrid tolerant to this insect: http://corn.agronomy.wisc.edu/Management/pdfs/Handy_Bt_Trait_Table.pdf . Otherwise, the management option remaining this season is to spray during larval migration.



Wait for initial migration from the grass to the corn for when to apply insecticide on the grass field border and the first few rows of corn. This begins around 1,300 DD (base 41, Jan. 1). Northeast Iowa is at about 1,000 to 1,200 DD depending on location (see mesonet link below). DD are currently advancing at about 25 per day, so 1,300 DD will be reach in 4 to 12 days depending on location.

http://mesonet.agron.iastate.edu/cgi-bin/oa-gdd.py?year1=2016&month1=1&day1=1&year2=2016&month2=6&day2=2&base=41&max=86

A scouting method quite helpful to estimate a need for treatment is to evaluate grass seedheads bordering the fields. As the larvae feed in the grasses, they eventually kill the main growing point at which time the seedhead dies prematurely and turns tan color (photo 2, plant in the middle). This premature tan color shows up nicely against the other green plants (photo 3). Seeing just a few plants like this indicates a low threat, but seeing many indicates a high population of common stalk borer that could migrate into the first few rows of corn. Combine this scouting method with accumulated DD to assess whether or not to treat at initial migration.

Potato Leafhopper (PLH) in Alfalfa

Once first crop alfalfa is harvested, its time scout for PLH. Consider your first scout 7-10 days after cutting first crop. Scouting and threshold information is provided at: http://crops.extension.iastate.edu/cropnews/2014/06/managing-potato-leafhoppers-alfalfa . Although, a simple threshold that still basically holds true = 1 or more PLH per inch height of alfalfa per 10 sweeps. In other words, if I take 10 sweeps on 4-ich tall alfalfa, I reached threshold if I find 4 or more PHL in the net. Owning a sweep net is an excellent investment. Thresholds are based on a 15-inch diameter net, and taking about a 3-4 foot sweep across the alfalfa canopy with the edge of the net about half-way into the canopy. If PLH are present, they are easy to kill. The lowest labeled rates work very well on this pest.

Seedcorn Maggot in Soybeans

I received a report yesterday from northern Clayton County (Joe Shirbroun, Pioneer Seed Dealer/Agronomist) regarding significant Seedcorn maggot damage to a few soybean fields. There is no rescue treatment. Low population areas will require a replant. This situation is a bit unusual in that most seedcorn maggot problems occur in fields with spring applied animal manure or green manure tilled down. The flies are attracted to the fermentation order of the decaying manure or green plant matter, where they then lay their eggs. The hatching larvae can feed on corn and soybean seed/seedlings (photo 1). The larvae pupate as orange cocoons (photo 2) from which the adult fly emerges and flies away. At this time, most seedcorn maggots will have pupated. Many insecticide seed treatments are only moderately effective on this insect while others are very good. Attached is a 2003 research summary on seedcorn maggot control under very high infestation levels. Clearly, some products worked better than others. Additional research summaries are available in the reports listed at: http://www.ent.iastate.edu/dept/faculty/gassmann/rootworm

DISEASES

Coming Up on 1st Applications of Fungicides on Corn, or Not!

Does it pay to treat corn at V5 stage? Here's an article summarizing the 2015 foliar fungicide trials at 4 locations in Iowa. In general, V5 applications do not fare

well. http://crops.extension.iastate.edu/cropnews/2016/06/2015-evaluation-foliar-fungicides-corn-four-iowa-locations

WEEDS

Postemergence Herbicides on Emerged Corn

Overall, the recent rain was quite welcome for the crops, but it did delay some herbicide applications. Be sure to check labels for crop stage/height restrictions for post emergence applications. Here is a summary check list on maximum stage of corn development for many post emergence herbicides. http://bulletin.ipm.illinois.edu/article.php?id=1502 For large Giant ragweed, a couple of Postemergence favorites include Status in corn and FirstRate in soybeans. However, be very cautious of emerged corn with herbicides plus nitrogen fertilizer.

NITROGEN

Late-Spring Nitrate Test

A timely way to check the N status of the soil is to take one-foot depth soil samples when the corn is 6 to 12 inches tall. Take at least 16 soil cores (24 is better) for each sample, then subsample from this about a cup of soil to send to a testing lab. Cores should be pulled in a systematic way going across corn rows. For example, take the first core from within a row, walk a ways and take the next core 1/8 the distance between rows, walk a ways and take the next core 2/8 the distance between rows, the next 3/8, the next 4/8, or so one for a "set of 8 cores". Two or 3 "sets of 8" comprise one sample for a test. For more information on the Late Spring Soil Nitrate Test, go to: https://store.extension.iastate.edu/Product/Nitrogen-Fertilizer-Recommendations-for-Corn-in-Iowa An information sheet for sending samples to ISU is available at: http://soiltesting.agron.iastate.edu/analyses/Late%20Spring%20Soil%20Nitrate-Nitrogen%20Test%20for%20Corn%20form.pdf The cost for analysis is $9/sample.

N Applications on Emerged Corn

Urea-ammonium nitrate (UAN) alone can be applied to emerged corn, and the risk of injury to the corn is dependent upon UAN rate, corn stage and weather conditions. Conservative suggestions are to limit postemergence applications of UAN to 90 lb N/acre when corn is at the V3 to V4 stage and to 60 lb N/acre at the V7 stage. Applications beyond the V7 stage are not recommended, and the risk of injury increases during hot, dry conditions. While many preemergence herbicides are applied using UAN as a carrier, this practice is only recommended prior to crop emergence.

EVENTS

June 7-9, A.I. Training, Dairy Center, Calmar

Three day, intensive hands-on class for those who wish to artificially inseminate their own cattle or gain experience to work for others. Class offered in partnership with Accelerated Genetics. For more information, go to: https://nicc.augusoft.net/index.cfm?method=ClassInfo.ClassInformation&int_class_id=50583&int_category_id=0&int_sub_category_id=0&int_catalog_id=0&upid=10513646&ebid=11981069&ebslid=726640&eblid=165

June 9, Grassroots Grazing Program, Belle Plain

6:30 to 9:30 PM at the Belle Plaine High School. This is the first of a 3-part series for beginning graziers. All participants will receive a resource manual. The first session includes discussion on

controlling feed costs, goal setting for individual grazing systems, and comparing various grazing programs. The second and third sessions will include pasture walks and additional meetings on dates determined by the participants. For more information, go to: http://www.iowabeefcenter.org/news/GrassrootsGrazingBP2016.html

June 9, Sustainable Iowa Land Trust (SILT) Showcase Farm, Calmar
10:00 AM to 2:00 PM, Lyle and Sue Luzum's 170 acres in Driftless Hills Farm, 2264 200th St., Calmar. A program designed for landowners interested in a legacy of sustainable food production. Includes a farm tour, presentations by an appraiser and an attorney and a free, locally-sourced lunch. Landowners are encouraged to bring questions! Lyle and Sue Luzum's 170 acres in Driftless Hills Farm (organic crops, sheep and CRP), with appraiser Dan Dvorak on how mineral rights and buildings affect farm appraisals, and attorney David Bright on estate planning and land donation options. Lunch provided by Driftless Hills Farm. Space is limited. Please RSVP to info@silt.org – please put "Calmar" in the subject line. http://silt.org/silt-announces-first-showcase-farms/

June 14 through Fall, Pasture-Walk Schedule for Southwest WI
http://www.extension.iastate.edu/dairyteam/sites/www.extension.iastate.edu/files/dairyteam/2016%20Great%20River%20Graziers%20Crawford%20County%20Pasture%20Walk%20Schedule.pdf

June 15-16, Four-State Dairy Nutrition and Management Conference, Dubuque
This conference presents the latest research on issues concerning the dairy industry including feed efficiency, calves, and transition cows. For more information, go to: http://www.extension.umn.edu/agriculture/dairy/learning-opportunities/four-state-dairy-conference/index.html

June 17, Corn Silage Conference Webcast
8:15 AM to 4 PM. Free program for those that preregistered by Monday, June 13. The news release, brochure and registration form are at: http://www.iowabeefcenter.org/events/huskercornsilageconference2016.html

June 22-23, Farm Progress Hay & Forage Expo, Boone
Details are available at: http://hayexpo.com/

June 23, ISU Southeast Research Farm Spring Field Day
9:00 to Noon for a special program for Certified Crop Advisors.
1:00 PM start for the annual spring field day.
Details for both programs are available at:
http://www.extension.iastate.edu/Pages/eccrops/meetserc.html.

June 28, ISU Northeast Research Farm Field Day, Nashua
1:00 to 4:15 PM. The field day will emphasize soil and water quality. Speakers include Kristine Tidgren, Attorney from The Center for Ag Law and Taxation, who will give her insights on the latest legal issues on water quality. Rick Cruse, Professor of Agronomy, will share research information on the aspect of soil quality as it pertains to farming practices. Tom Kaspar, USDA-

ARS, will provide the latest up to date information on cover crops for growers. Matt Helmers, Ag Engineer, will address accepted practices that improve soil and water quality and help reduce nutrient losses from farm fields. The program is free and open to the public. CCA's can receive 4 SW credits for a fee.

Brian Lang
Iowa State University Extension
Agronomist
325 Washington St., Suite B
Decorah, IA 52101
Office 563-382-2949
Fax 563-382-2940
Cell 563-387-7058
www.agronext.iastate.edu/

IOWA STATE UNIVERSITY
Extension and Outreach
Healthy People. Environments. Economies.