

CROPCHAT

ISU Extension information and resources for northeast Iowa

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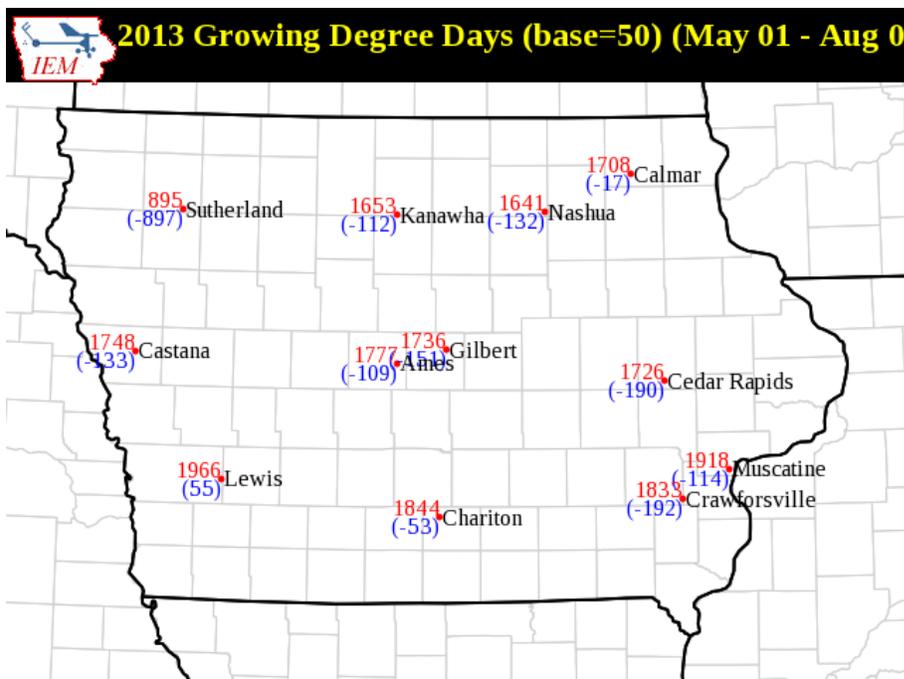
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Crop Update

The Growing Degree Days (GDD's) for corn show that we have accumulated 1641 Growing Degree Days at the research farm here in Nashua from May 1st to Aug 7th. By looking at the chart above, it shows growing degree days to be 132 units below normal. **For more information, go to:**

<http://mesonet.agron.iastate.edu/GIS/apps/agclimate/gplot.phtml>.

Other sites (locations) can be found at the **IEM Ag Weather/Climate Information** web page in which you can look up GDD's, precipitation, soil temperature and moisture, and stress degree days. Historical freeze data, USDA crop reports and state of Iowa climatology data can also be referenced here. Graphs can be created for GDD's, precipitation, and stress degree days at this site for your convenience. For more information, go to: <http://mesonet.agron.iastate.edu/agweather/>

According to the National Agricultural Statistics Service (NASS), crop conditions for corn in Iowa as of Aug 4th, are 5% very poor, 12% poor, 32% fair, 41% good, & 10% excellent (down 4% from the July 11th newsletter). 79% of the corn in NE Iowa is tasseled with 57% of it silking. The state of Iowa (according to NASS) is 88% tasseled and 72% silked. Due to the late planting conditions this spring, it lags behind the 5 year average for Iowa, which is 96% of corn tasseled and 89% silking by this date. There is a small percentage of corn that is in or past the milk stage in Iowa — NE Iowa has 9% and the state as a whole shows to be at 19%.

Surrounding states silking progress, show Illinois, Missouri, Nebraska, and South Dakota at 95%, 89%, and 93%, 87% silking respectively. Ohio is at 93% silking.

Disease pressure in the upper canopy of corn has been light so far with a little common rust showing up. Continue to scout for foliar diseases in corn due to the environmental conditions that have occurred in East Central and NE Iowa the last couple of weeks. Scout corn fields that are at a higher risk for disease development when the corn is at grain fill. Research has shown that if leaf disease severity on the ear leaf at R5 is greater than 5%, the mean yield response was 9.46 bu./acre. However, if it was less than 5%, the mean yield response was 4.83 bu./acre. To help with particular foliar diseases and optimum conditions that favor development of them, Allison Robertson, ISU Extension Plant Pathologist, wrote an ICM article titled: [**It May be a Good Year for a Fungicide Application.**](#)

According to the National Agricultural Statistics Service (NASS), crop conditions for soybeans in Iowa as of Aug. 4th, are 4% very poor, 10% poor, 34% fair, 42% good, & 10% excellent (Down 2% from the July 11th newsletter). For NE Iowa, 81% of the soybeans are blooming with 35% setting pods or R3. 79% of the soybeans in Iowa are blooming with 35% of them setting pods (according to NASS). The 5 year average for soybeans at this date are 92% of the soybeans blooming with 65% setting pods.

The soybean plant reaches R3 (Beginning Pod) when the pod is 5 mm (3/16 inches) long at one of the four uppermost nodes on the main stem with a fully developed trifoliate leaf node. At R3, soybean plants can be found to have developing pods, withering flowers, open flowers, and flower buds on the same plant.

Some of the very early planted soybeans have reached the R4 (Full Pod) stage of growth, which occurs when pods are 3/4 of an inch long at one of the four uppermost nodes on the main stem with a fully developed leaf. This is the most critical stage of growth for soybeans in yield determination. As stated in the ISU extension pub. PM 1945 *Soybean Growth and Development*, "Stress (moisture, light, nutrient deficiencies, frost, lodging, or defoliation) occurring anytime from R4 to shortly after R6 will reduce yields more than the same stress at any other period. See Figures 1 & 2 below for R3 & R4 growth stages.



Figure 1. R3 Soybean Plant. Illustration from ISU extension pub. PM 3044 - Staging Soybean Development

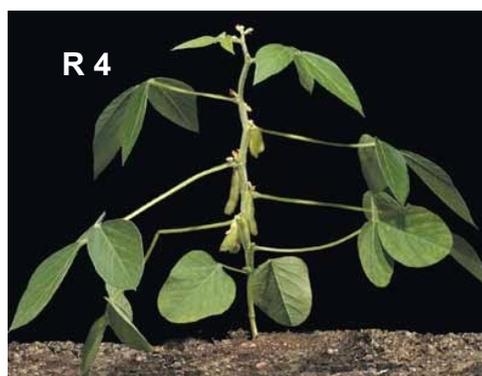


Figure 2. R4 Soybean Plant. Illustration from ISU extension pub. PM 1945 - Soybean Growth and Development

Corn & Soybean Fungicide Efficacy Tables

The Corn Disease Working Group (CDWG), which is a group of corn pathologists from across the United States, have developed a corn fungicide efficacy table to help inform everyone of current fungicides and how well they control diseases. There are a couple versions available. For the chart by itself, please click here: [**Management of Corn Diseases.**](#) For an extension publication version (pub. BP-160-W) from Purdue Extension, please click here: [**Fungicide Efficacy for Control of Corn Diseases**](#) Please remember to always read and follow the manufacturers label and directions for the products.

The North Central Regional Committee on Soybean Diseases and the Regional Committee for Soybean Rust Pathology (NCERA -212 and NCERA-208) have developed a soybean fungicide efficacy table, similar to the corn efficacy table above. For the chart by itself, please click here: [**Management of Soybean Diseases.**](#) For an extension publication version (pub. BP-161-W) from Purdue Extension, please click here: [**Fungicide Efficacy for Control of Soybean Diseases**](#)

Soybean Aphid Update - Populations are Beginning to Increase

Soybean aphid populations have been relatively low so far in NE Iowa for the last one to two weeks, except for a few "HOT" spots. There have been a **few** fields with confirmed reports of around 50 aphids per plant in the past week. Populations are starting to increase, with some fields nearing threshold (250 aphids/plant) in Bremer and Floyd counties according to local crop consultants in the area that scouted these fields today (8-8-2013).

Brian Lang, ISU extension field agronomist reported a field that was sprayed last week near Worthington, Iowa that reached threshold population levels. **Continue to scout soybean fields for potential increase in populations, as we have been having perfect weather conditions for reproduction of soybean aphids.** The optimum temperatures for reproduction and longevity are 72 to 77^o F with relative humidity below 78 percent. Under optimum conditions maintained in a laboratory environment, soybean aphids have the potential to double their populations within 2-3 days. When temperatures exceed 81^o F, the developmental time is lengthened. However, in soybean fields, soybean aphids experience less than ideal conditions. Estimates of soybean aphid population growth in Iowa suggest that doubling time is on the order of 9 to 13 days. Other conditions, besides cool temperatures, that favor increase of aphid populations are; potassium-deficient soils, absence of beneficial insects, and plants under drought stress. Scout soybean fields weekly until plants reach the mid-seed stage (R5.5) or the field is sprayed.

Here is the latest soybean aphid report from Brian Lang, extension field agronomist in Decorah Iowa.

Hot spots have been reported in central Wisconsin, central Minnesota, eastern S. Dakota and the "thumb" region of Michigan.

My field trial near Decorah includes insecticide treated seed and non-insecticide treated seed. The trial was planted on May 16. An adjacent field to the trial was planted on May 25 with non-insecticide treated seed. Below is a tabulation of % plants with aphids and average aphids per plant. Under optimal conditions, aphid populations double every 2 to 3 days. If these populations would double every 3 days we will see 10 aphids on Aug. 1 increase to 20 on Aug. 4, 40 on Aug. 7, 80 on Aug. 10, 160 on Aug. 13, 320 on Aug. 16. But will this happen?

Soybean aphid trial Planted May 16, currently late R3 stage

Date	Untreated	Treated seed
7/05	41%, 3.9	14%, 0.8
7/12	48%, 6.4	19%, 0.8
7/19	68%, 6.3	37%, 1.5
7/26	80%, 6.4	62%, 4.1
8/01	93%, 9.6	83%, 9.9

Adjacent field planted about May 25, untreated seed, currently early R3 stage

Date	Untreated
7/26	70%, 13.1
8/01	85%, 11.0

Discussion, at this time:

- 1) Aphid populations are still very low, but when aphid infestations reach >80% we should be more vigilant in our scouting.
- 2) Hot spot activity is possible, but no one knows why this is limited to some fields, or more typically in some spots within fields.
- 3) The added protection from insecticide treated seed has basically run out as it usually does by August.
- 4) Later planted, less mature soybeans are likely more attractive to migrating winged aphids than a more mature soybean field.
- 5) Beneficial insect activity continues to increase, lead by Orius http://www.ipm.ucdavis.edu/PMG/NE/minute_pirate_bug.html ,
Lady Beetles and larvae http://www.ipm.ucdavis.edu/PMG/NE/convergent_lady_beetle.html ,
Syrphid fly larvae <http://mint.ippc.orst.edu/syrphid.htm> , and Lacewings <http://mint.ippc.orst.edu/laceid.htm>

Other Resources for Soybean Aphid: 1. ISU Soybean Aphid Webpage with a variety of information including weekly podcasts - <http://www.ent.iastate.edu/soybeanaphid/>

2. Soybean aphid publications available from the ISU extension store - <https://store.extension.iastate.edu/ProductList.aspx?CategoryID=116>

3. Visual Guide to Counting Aphids from the Univ. of Wisconsin - Can be downloaded from the Pest Management page - Scroll down to: [Should I Spray for Soybean Aphid](#)

Why is Our Corn Crop Shorter Than Average this Year ?

Due to this spring and early summers' field conditions, our corn crop has evolved to be shorter than average and not as uniform across the field as what we observe in a normal year. Roger Elmore, ISU Extension Corn Specialist, and Mahdi Al-Kaisi, ISU Agronomist, helps explain this in an ICM article titled: [Short Corn and Variable Growth - 2013](#)

It's Time to Assess Corn Rootworm Damage

Now is the time to dig up corn roots and determine how well they fared against corn rootworm feeding. To help address this, Erin Hodgson, ISU Extension Entomologist wrote this ICM article: [Time to Assess Corn Rootworm Activity in Iowa](#)

Ergot

Weather conditions across much of the Midwest this spring and summer have been favorable for development of ergot fungus in pastures, according to specialists at Iowa State University. The fungus, which can affect small grains such as rye, wheat, barley, and oats, and forages grasses such as smooth brome and fescue, produces toxic alkaloids that can lead to poisoning in cattle. In response to the risk of ergot this year, ISU Extension beef veterinarian Grant Dewell and veterinary toxicologist Steve Ensley have put together a two-page fact sheet that describes ergot poisoning, including identifying pasture or hay samples and recognizing clinical signs in cattle, along with diagnosis, treatment and prevention information. The updated version (7-26-2013) is available [here](#).

Upcoming Events:

1. Aug. 10th - Home Demonstration and Garden Field Day at NE Research Farm - Nashua

NASHUA, Iowa — Iowa State University, NE Research Farm will host a Demonstration Garden Field Day on Saturday, August 10, from 4 to 6 pm.

Among the plants featured at the garden will be a colored pepper trial, grafted tomatoes, raised tomato beds and "giant" vegetables and flowers. Cindy Haynes, an associate professor of horticulture, will lead the field day, provide information on the plants and answer general gardening questions. ISU Extension will also feature a Summer Horticulture Showcase Workshop with breakout sessions from 9:30AM until 3PM, sponsored by Bremer, Cerro Gordo & Floyd County Extension.

The 4pm garden field day is free and the 9:30AM to 3PM event is \$25 (\$30 at the door), payment and further questions on breakout sessions can be answered by contacting the Floyd County Extension office at 641-228-1453. The events take place rain or shine. Ice cream provided by the NE Research Farm, will be served between 3 - 4pm.

The Summer Horticulture Showcase and Home Demonstration Garden Tour will take place at the Borlaug Learning Center, which is at the [Northeast Research and Demonstration Farm](#) (3321 290th St., Nashua, IA). It is located one mile west of the Highway 218 and B60 intersection at the Nashua exit ramp, one mile south on Windfall Avenue and a quarter mile east on 290th Street.

2. August 28 Field Day to Highlight Fall Preparation of Late Planted Spring Crops

NASHUA -- ISU Extension Specialists emphasize crop production and management of a late maturing crop during the Annual Fall Field Day at the ISU Northeast Research and Demonstration Farm near Nashua.

The program will run from 1:00 to 4:00 p.m. on Wednesday, August 28th featuring five speakers. Ken Pecinovsky, ISU Research Farm Superintendent will briefly review 2013 seasonal weather and trials on the research farm. Charles Hurburgh, Grain Quality and Handling Specialist, will follow Ken and address the key management strategies and considerations to be aware of when handling, drying, and storing grain that has a potential of being wetter than average at harvest. Chad Hart, Economist and Crop Markets Specialist, will highlight the market trends of 2013 and predictions going into the near future. Roger Elmore, Corn Production Specialist, will discuss crop growth and development from the planting date trials and expectations on maturity. Dan Huyser, Agricultural Engi-

neer, will reflect on this past wet spring and discuss the parameters of planning, lay out, and economics of cost and maintenance of tile drainage. .

The field day is free and open to the public. It starts at the Borlaug Learning Center on the ISU Northeast Research Farm near Nashua. 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.

3. Farmland Leasing Meetings Set for NE Iowa

Iowa State University Extension and Outreach offices across northeast Iowa are hosting farmland leasing meetings from August 1 through 21 at selected locations. These meetings will address questions that land owners, tenants, or other interested individuals have about farmland leasing. Workshops are 2 1/2 hours in length with a 100-page book provided, one per registrant. Registration fee of \$20 per person or \$30 per couple. Register at least 2 days prior to meeting to avoid an additional \$5 fee.

Topics Include:

- Current Land Value & Cash Rental Rate Surveys
- Leasing Terminology and Dates
- Calculating Cash and Flexible Leases
- Cost of Production Estimates
- Farmland Leasing Practice Survey
- ISU Extension Web-Based and Other Resources
- Corn Suitability Rating (CSR) update



Locations, Dates, & Times

August 12th - Butler County - Allison, IA - 9:00 a.m. - Butler Cty. Ext. Office - 320 N. Main St - 319-267-2707

<http://www.extension.iastate.edu/butler/news/farmland-leasing-meeting-august-12th>

August 14th - Mitchell County - Osage, IA - 9:00 a.m. - VFW Post #7920 - 3693 Hwy. 218 - 641-732-5574

August 14th - Howard County - Cresco, IA - 1:30 p.m. - Howard Cty. Ext. Office - 132 1st Ave West - 563-547-3001

<http://www.extension.iastate.edu/howard/node/18608>

August 15th - Black Hawk Cty. - Waterloo, IA - 9:00 a.m. - Hawkeye Community College (Tama Hall) - 1501 E Orange Rd - 319-234-6811

<http://www.extension.iastate.edu/blackhawk/news/farm-leasing-meeting-august-15th-900-1100am>

August 15th - Bremer County - Waverly, IA - 1:30 p.m. - Waverly Civic Center - 200 1st St. NE - 319-882-4275

<http://www.extension.iastate.edu/bremer/news/waverly-farmland-leasing-meeting%E2%80%9415th>

August 20th - Buchanan Cty. - Independence, IA - 2 Sessions (9:00 a.m & 1:00 p.m.) - VFW Post #2440 - 128 3rd Ave NE (Corner of 3rd Ave & 2nd St. NE) - Registration is at no cost because of sponsorship by Banklowa - To RSVP to either meeting (indicate which one you would like to attend) please call Banklowa at (319) 334-7181 or the Buchanan County ISU Extension and Outreach office at (319) 334-7161.

<http://www.extension.iastate.edu/buchanan/news/farmland-leasing-value-seminar>

Farmland Leasing Meetings Continued

August 21st - Clayton County - Elkader, IA - 1:30 p.m. - Freedom Bank (Community Room) - 210 S Main St.—
563-245-1451

<http://www.extension.iastate.edu/clayton/node/18608>