

# CROPCHAT

ISU Extension and Outreach information and resources for northeast Iowa

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To view this and previous issues of the Crop Chat newsletter, please go to <http://www.extension.iastate.edu/blackhawk/news/crop-chat-terry-basol>.



## Planting and Field Activity Shows Great Progress for Last Week!

Northeast Iowa corn planting has progressed very well so far. Last week, favorable weather conditions created perfect planting conditions for Northeast Iowa farmers. This certainly helped make up for the week before, in which there were only 2.7 days that were suitable for fieldwork across the state of Iowa.

According to the National Agricultural Statistics Service (NASS), 68 and 72 percent of the corn is planted in northeast and northcentral Iowa respectively as of May 3rd. The state average of corn planted is 68 percent, which is reflected in the chart below (blue line). According to NASS, "Over one-half of Iowa's corn acreage was planted last week, the largest percentage planted during this week in over 20 years". Our state's 5 year average (green line on the chart) is only 39% of the corn crop planted by this date.

Iowa farmers also got a good start on soybean planting as well. As of May 3rd, NASS estimates that 18% of the acres in northeast Iowa and 13 percent of the acres in northcentral Iowa are planted to soybeans.

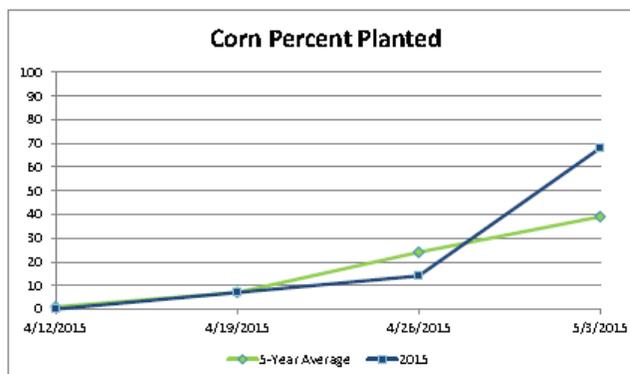


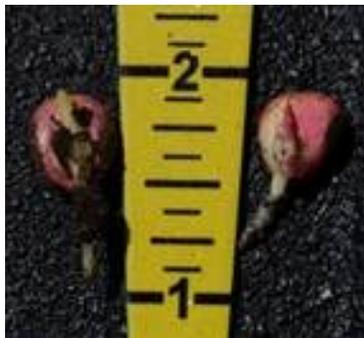
Figure 1.  
Source: NASS May 4 IA Crop Progress Report

## Early Planted Corn

So what does the cold weather effects have on corn that was planted the week of April 11? We sometimes get concerned that a condition called imbibitional chilling (IB) can occur. Imbibitional chilling refers to the chilling effect seeds may experience when they imbibe, or absorb water especially when soil temperatures are less than 55 F for an extended time. Brittle shoot cell membranes rupture in cold soils. The most critical time for imbibition to happen, is within 24 hours after planting. Seedlings may “corkscrew” and may not emerge when exposed to these cool soil temperatures. This may also happen when there are rapid swings in air temperatures. Growers and advisors are encouraged to scout the early planted corn fields and evaluate for the symptoms described in case management decisions need to be made. The good news so far, is that I’m not aware of any corn fields that have needed to be replanted.

We have some corn here on the NE research farm that was planted on April 15th and 18th, and after digging some up and evaluating it, no visual signs of IB was apparent.

Below, are pictures of the April 15th corn planting (Planting Date Trials at NE Iowa research farm) that shows the growth progress of the corn seedlings. Brian Lang, ISU field agronomist, dug these up on April 22nd (Figure 2) and 28th (Figure 3).

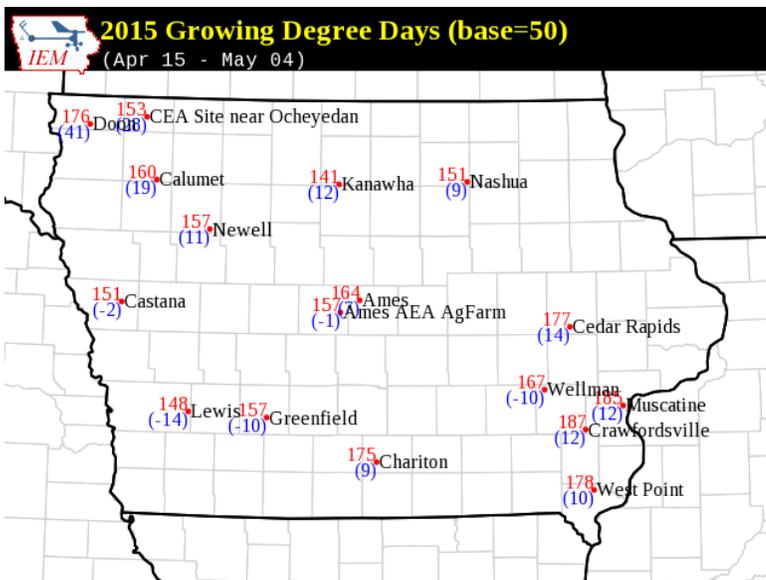


**Figure 2.** Inspected on April 22. About 1/2” Radical with some shoot development. Also, about 64 GDD’s accumulated.



**Figure 3.** Inspected on April 28. About 1” Radical with shoot development up to ~1/4”. About 78 GDD’s accumulated.

Emergence of the seedling occurs approximately 90—120 Growing Degree Days (GDD’s) from when it is planted. We should expect to see the early planted fields begin to emerge this week (as long as the seedling is still viable) due to the GDD’s that were accumulated last week. Since the 15th of April, according to the map generated below, there have been about 150 GDD’s accumulated.



This information can be found at the ISU Soil Moisture Network found [here](#). Scroll down and click on the Growing Season Maps link under Available Tools. Double check to make sure GDD is selected using the base of 50<sup>0</sup> F, and enter the date range you want for 2015. The ISU Soil Moisture Network contains a lot of useful information including; 4 inch soil temperatures, current temperatures, daily high and low temperatures, daily precipitation, wind direction and speed, soil moisture readings at the 12”, 24” and 50” soil depths. Check it out to see more information that’s not listed here.

**Figure 4.** Source: Iowa Mesonet Growing Degree Days Chart

## CRP Ground Needed to Scout for Milkweed

We are looking for your help! Monarch butterflies are very dependent on the presence of milkweed for survival. Populations of milkweed have been decreasing in Iowa due to the rise of acres being farmed. Researchers at Iowa State are looking for CRP acres that can be surveyed (scouted) in June/July for the presence of milkweed. All we need is your contact information and the location of the CRP ground. There won't be any disturbance of the land, only the recording and number of milkweed plants present. If you have CRP acres or know of someone that would be interested in helping participate, please e-mail or call me.

Information on the Iowa Monarch Conservation Consortium can be found at the following links below

1. [Milkweed Planting Encouraged on Iowa CRP Acres to Improve Monarch Habitat](#)
2. [New Consortium Launched to Conserve Monarch Butterfly Habitat in Iowa](#)
3. [ICM News Article: The Iowa Monarch Conservation Consortium](#)



## Iowa State University Partners with Midwest Institutions to bring Free Online Tools to Farmers and Ag Professionals

Useful to Usable, or U2U, aims to improve profitability and longevity of U.S. farms amid a variable and changing climate. The project, funded by the U.S. Department of Agriculture's National Institute of Food and Agriculture, is composed of a team of 50 faculty, staff and students from nine universities who specialize in applied climatology, crop modeling, agronomy, cyber technology, agricultural economics and other social sciences.

The [Useful 2 Usable](#) website includes a suite of tools that have been created to help farmers and agricultural advisors manage increasingly variable weather and climate conditions across the Corn Belt. The tools incorporate historical climate data to help inform purchasing, marketing and activity planning throughout the growing cycle. Data in all tools is updated on a regular basis, even daily in some cases. Click on the link provided in this paragraph to check it out.

In addition to Iowa State University, U2U project partners are Purdue, Michigan State University, South Dakota State University, University of Illinois, University of Michigan, University of Missouri, University of Nebraska, University of Wisconsin, High Plains Regional Climate Center, Midwestern Regional Climate Center and the National Drought Mitigation Center.

### Most Recent Tools Developed for U<sub>2</sub>U

1. **AgClimate View** DST - Provides convenient access to customized historical climate and crop yield data for the U.S. Corn Belt. Users can view graphs of monthly temperature and precipitation, plot corn and soybean yield trends, and compare climate and yields over the past 30 years.
2. **Corn Growing Degree Day** DST - Allows users to track real-time and historical GDD accumulations, assess spring and fall frost risk, and guide decisions related to planting, harvest, and seed selection. This innovative tool integrates corn development stages with weather and climate data for location-specific decision support tailored specifically to agricultural production.
3. **Climate Patterns Viewer** DST - Helps farmers and agricultural advisors assess how climate patterns in other parts of the world can influence local climate conditions and corn yields across the Corn Belt. The tool can help growers make more informed farm management decisions during different phases of the El Niño Southern Oscillation (ENSO) and Arctic Oscillation (AO) by relating historical events to associated precipitation and temperature impacts over the course of a year.
4. **Corn SplitN** DST - Helps farmers and farm advisors manage the application of in-field nitrogen for maximum crop yields and minimum environmental damage. This product combines historical data on crop growth and fieldwork conditions with economic considerations to determine best/worst/average scenarios of successfully completing nitrogen applications within a user-specified time period. Currently available for IA, IL, IN, KA, MO.