

Walking Your Fields®



July 19, 2010

Northern Illinois growing degree units are ahead of schedule. The 2010 crop continues to progress with heat unit accumulation continuing to surpass the 11-year average.

Location	2010 GDUs Accumulated 4/15 - 7/13	11-Year Average 4/15 - 7/13
Freeport	1449	1277
DeKalb	1410	1320
Monmouth	1568	1367
Peoria	1613	1430

Pollination has progressed and is complete in many areas. This is the unofficial end of the first half of the growing season, as corn has completed its vegetative growth stages and has now entered the reproductive stages. In general, it takes most hybrids about 60 days going from emergence to pollination and then another 60 days to get from pollination to maturity. If normal temperatures continue, many hybrids planted the middle of the April should reach maturity by early-to-mid September.

Pollination success. A quick way to check pollination success is to **CAREFULLY** remove the husks and gently shake the ear. The silks will break free from those kernels that have been fertilized but will remain attached to unfertilized kernels. It may take 24 to 48 hours after pollination for silks attached to fertilized ovules to fall away. Prior to detachment, the pollinated silks collapse about 1/8 to 1/4 of an inch from the cob. After a few days, fertilized kernels will become easily evident as they begin increasing in size. Unfertilized kernels will not enlarge.

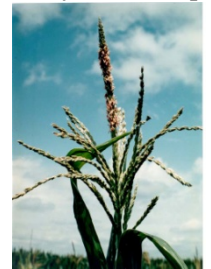


Late-season corn development. Kernel development will be completed over a 50- to 60-day period following pollination. The following table shows days until physiological maturity (black layer) and corresponding grain moisture for the various stages of grain fill. Although pollination is complete in most areas, there is still a great deal of yield to be made in corn. Purdue University data shows that over 40% of the final

yield is made from dent to black layer. Plant stress at this stage will not cause kernel abortion, but rather a reduction in kernel size.

Corn Growth Stage	Days Until Physiological Maturity	% Grain Moisture
Pollination	50	60
Milk	40	80
Dough	30	70
Early Dent	20 - 25	55
1/2 Milk Line	10 - 15	40
Black Layer	0	35

Tasseling stage is a good time to assess the genetic diversity of your hybrid lineup. Even if your lineup includes hybrids from several companies, compare the hybrids for tassel and anther color, silk color, plant height, tassel size and shape, leaf angle, and brace root color. If it is difficult to identify differentiating features between hybrids, ask questions to determine how genetically diverse the hybrids are. A genetically diverse hybrid package helps spread risk and protect against disease and environmental risks.



Protecting the corn and soybean crop from insect and disease damage for the last half of the growing season remains important. Scouting and making decisions based on field-by-field assessment will likely protect valuable bushels that otherwise would be lost with above-threshold levels of insects and disease.

Gray leaf spot (GLS) continues to be the most dominant disease in corn this year. It has been favored by the warm temperatures and high humidity many have experienced. Now is good timing to evaluate a hybrid's tolerance to this disease. A susceptible hybrid will allow more lesions to fully develop as shown in the first picture (top). If a hybrid is moderately resistant to GLS, many of the lesions will be restricted as shown in the bottom picture.



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Soybean aphids have not been detected at economic levels in northern and central Illinois this year, but scouting is still important. Soybean aphids are small yellowish-green insects with piercing/sucking mouthparts that remove important plant juices from leaves.

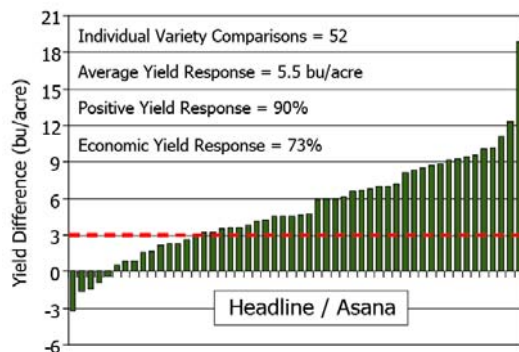


Soybean aphid populations are favored by cool temperatures (72° F to 77° F) and low humidity during the growing season. Soybean aphid populations can be reduced by natural enemies including pathogens, parasites, and predators. To scout for soybean aphids, observe several plants across the field and count the number of soybean aphids present per plant. When 250 aphids are observed per plant on 80% of the plants in the field and populations are continuing to increase, an insecticidal control treatment is warranted from R1 (beginning bloom) through R5 (beginning seed).

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Soybean fungicide and insecticide applications. Research has shown that applying a strobilurin fungicide with an insecticide at growth stage R3 to R4 frequently results in a significant yield response. The graph below illustrates that economic yield gains were achieved 73% of the time. Values above the red line represent a positive return on investment (i.e. an economic response).

Yield Response of Headline®/DuPont™ Asana® (2007-08)
 Data from Pioneer Agronomy Sciences



Livestock producers are still experiencing some of the most challenging economic times ever, despite the improved crop growing conditions compared to last year!

Be sure to get the most value you can *per acre and per ton* by using a research-proven inoculant. This can help you keep more of what you harvest, stretch your feed inventory, and help keep additional out-of-pocket feed supplement costs to a minimum. Potential benefits include:



- A more efficient fermentation conserves valuable water-soluble carbohydrates that on a feed value basis would have to be replaced by grain. Example: At 35% dry matter there are 700 pounds in a ton. Using good management practices, even if you are only losing 3.5%, that is 24.5 pounds of grain. With \$2.75/Bu corn (\$.046/lb) that is \$1.13/ton just in shrink savings alone!
- Using a research-proven inoculant, such as **Pioneer® brand 1177/74** can help improve the overall fermentation process. Optimal preservation can be further enhanced by using **Pioneer brand 11C33**. In addition to better fermentation and aerobic stability, **Pioneer brand 11CFT** has been designed to improve fiber digestibility and dry matter intake using a unique strain of *L. buchneri*.

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