# Corn Maturity In 2009

**URBANA, ILL.**

One word describes the summer of '09 … cool. A quick review of the Illinois State Water Survey's "Crop Degree-Day" Calculator shows our area accumulation of Growing Degree Days to be behind normal for this time of year. With this comes concern for the corn crop and the question, "Will corn achieve adequate maturity before the first frost?"

Growing degree days (GDDs) are an accumulation of temperature readings that agronomists have found very useful in estimating corn maturity. A growing degree day is determined by adding the highest Fahrenheit temperature, not surpassing 86°, and the lowest Fahrenheit temperature, not below 50°, reached during the day. The resulting number is divided by two, and fifty degrees are subtracted. Corn hybrids need about 1,400 GDDs to tassel, and about 2,700 GDDs to reach full maturity. Not getting close to the "2,700 mark" by frost means plants are not fully mature at that time; and this, in turn, equates to some amount of yield loss. In other words, kernels are not allowed to fill as much as they could because a frost prematurely shuts the plant down.

So how does the situation look this year? Each year, Illinois receives an average of 3,000 GDDs, but the amount of GDDs accumulated for a particular crop in a particular field depends upon when that field was planted. In Illinois, during 2009, only 20-25 percent of corn was planted by mid-May. An additional 65-70 percent was planted by June 1, with about 5-10 percent of the crop planted after that date. From May 15 to August 1, about 1,500 GDDs had been accumulated in our area, so about 20-25 percent of Illinois corn had achieved that many, or more, GDDs as July turned to August. June 1-planted corn achieved about 1,300 GDDs and mid-June corn had achieved about 1,000 GDDs.

A mid-October frost would mean the accumulation of about 1,400-1,500 GDDs which would mean that more than 90 percent of the corn crop in Illinois would reach maturity (2,700 GDDs) by that frost date. A late frost would mean that most of the Illinois corn crop would reach corn maturity with only the very latest of planted corn squeaking through. Δ