

7/27/2009 University of Missouri Extension Agronomy Update  
**Predicting Corn Maturity Date, Nitrogen and Potassium Deficiencies in Corn**

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Crop development is being affected by the cool weather conditions. The National Weather Service is predicting that Missouri will have only two days in July of 90 degrees. Crop development is dependent on the number of degree days and will progress slower without normal temperatures.

Corn maturity can be estimated using current and historical weather data. This assumes that the weather will be similar to weather in the past. There is a corn maturity calculator that uses your location, planting date and a hybrid's growing degree day (GDD) information to calculate an estimated black layer (maturity) date. You will need the number of GDD (or GDU's) to silking or maturity or you can use the relative maturity of the hybrid. You can find the calculator at the following website: <http://plantsci.missouri.edu/cornx/calculator/index.cfm>

There are some reports of yellowing in corn, likely due to nitrogen loss. At this stage of growth, it is unlikely that any treatment would be beneficial to the crop. Some of the yellowing is the result of potassium deficiency. There are probably two causes of this. First, there may actually be a deficiency of potassium in the soil. Second, the cause may be due to the season and soil conditions. The wet weather has resulted in the plants rooting shallower than in a drier year and the roots are not deep enough to access the potassium in the soil. Also, with the wet conditions this spring, we may be seeing the effects of compaction where some soil may have been worked too wet. If you have areas in your fields showing yellowing, you may want to check and see what is responsible. Deficiency symptoms for both nitrogen and potassium begin on the lower leaves. Nitrogen deficiency will be indicated by an inverted "V" shape on the leaf while potash deficiency will be indicated by browning on the edge of the lower leaves.

Soybeans are progressing rapidly, with most of the plants flowering at this stage. There have been reports of Japanese beetles in a few areas and fields should be scouted for this pest. I have had a few reports of Phytophthora root rot beginning to show up, but reports have been few and the areas were isolated and small. It is getting close to the time when we would expect to see sudden death syndrome (SDS) to begin showing up, if it is going to. SDS infects the plant in the spring and is favored by cool, moist conditions. It is then expressed when the growing conditions become drier and warmer.