

Burrus Buzz

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Results From The Drydown Test *by Don Rhoads*

Grain moisture is dropping very fast. The Burrus drydown study managed by Bryan Young was planted May 6th near the Burrus plant at Arenzville, IL. The 51 hybrids, both commercial and experimental, range in maturities from early to full season. The average moisture of the 51 hybrids on August 30th was 25.2%, compared to 30.5% a week earlier. The moistures ranged from 21% to 31.9%. Loose, open husks and warm temperatures will allow rapid drydown into September.

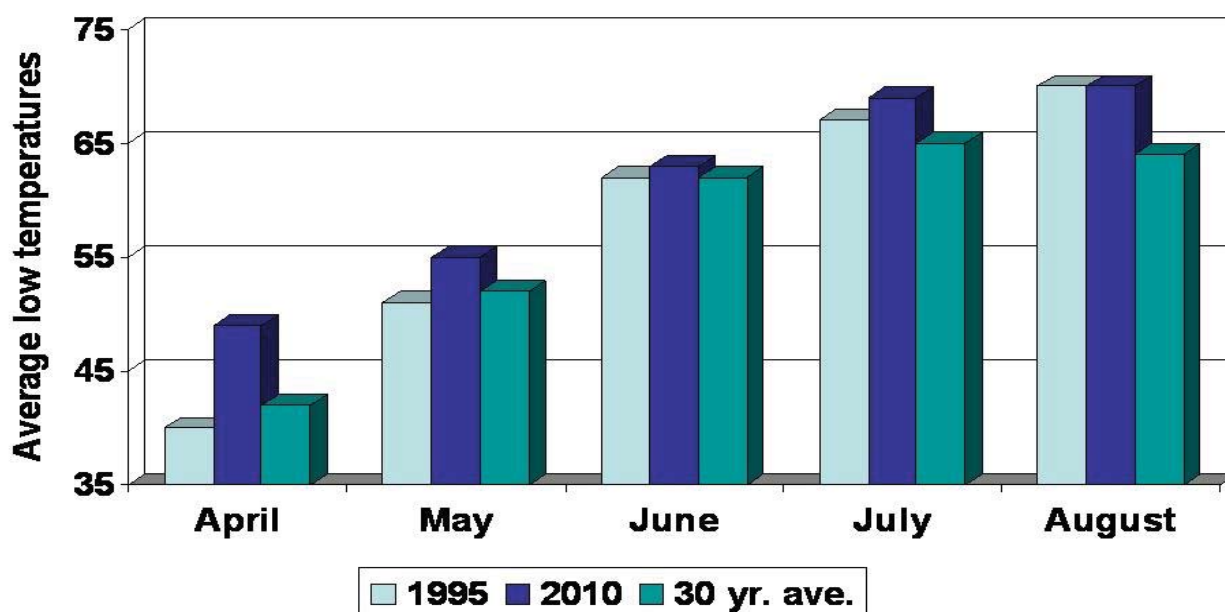
In the Heat of the Night *by Don Rhoads*

High night temperatures have been above average this growing season. The last year such high night temperatures were recorded was 1995. For the period July 1 through Aug. 15th of this year, central Illinois reported 26 nights with temperatures of 70 degrees or greater.

During the grain fill period, warm nights above 70 degrees F cause corn plants to expend more of the sugars they gain during the day for respiration at night; corn plants can't "rest" at night. This lost sugar is not available to developing kernels, resulting in smaller kernels and lower yields.

Another factor of above average temperatures is more rapid grain fill. In general, longer grain fill periods achieve the highest yields. The cool 2009 summer allowed for longer grain fill periods and high yields. For 2010, the grain monitor's may verify that the summer was too hot, especially at night.

Average low temperatures Central Illinois



Sudden Death Syndrome (SDS) by Craig Kilby

We have received many reports of SDS from customers across the Burrus/Hoblit/Hughes area since early August. Recently more SDS reports have come from northern Illinois where August rainfall has been more plentiful. SDS occurs following early plant root infection from the soil borne pathogen *Fusarium virguliforme*. Today the SDS pathogen is present in virtually every Midwestern field, quite an advancement since it was first identified in North Carolina in 2001. Strong evidence links SDS with presence of soybean cyst nematode in the soil.

SDS enters the plant root early but doesn't move up the plant stem very far above the soil line. Eventually SDS produces a toxin that is transported upward in the plant during mid flower through pod fill resulting in symptoms from discolored leaves to very rapid plant death. Evidence of the toxin is a dramatic necrosis of tissue between leaf veins as shown in the photo.

Three main factors are responsible for the severity of damage. 1.) The extent of early infection of plants across a field. 2.) The frequency and amount of rainfall during pod fill to assist toxin transport. 3.) Soybean variety resistance/ tolerance ratings to SDS.



SDS Management:

- Reduce early plant stress from compaction, cool soils.
- Rotate from soybeans more than a single year.
- Plant outstanding Burrus/Hoblit/Hughes varieties rated high for SDS resistance and cyst with Power Shield seed treatment.
- Avoid planting too early in cool soils.

Corn Stalk Rot Potential High by Craig Kilby

The high amount of heat that is pushing corn quickly to maturity is bringing on the potential for stalk rot just as fast. Corn following corn is of particular importance to watch this year.

Nitrogen is the number one nutrient to fight stalk rot. When not available from the soil, corn plants naturally cannibalize roots of nitrogen to place sugars in kernels. 2010 could be a record for soil nitrogen deficiency/loss as heavy rains leached/volatilized large amounts of N in a year N-craving soil bacteria worked overtime to break down record amounts of residue from the 2009 crop. Many corn fields suffered from inadequate N, particularly those corn following corn.

Most stalk rot originates in the soil first infecting roots, next moving up the stalk. With vital sugars gone, stalk rots are free to move into these plant tissues to break down cell wall structures. Moist conditions along with warm temperatures would provide the ideal stalk rot conditions.

Our recommendation:

- Scout hybrids/fields vigilantly for both root & stalk integrity by inspecting the roots and either splitting or pinching the stalk at the lower nodes. Note: A hybrid may be quite different in corn/corn versus corn/soybeans rotation. Therefore scout all fields.
- Don't delay harvest in order to save drying expense. Weather patterns can change quickly, and one week of wet weather could cost plenty in both yield and time to harvest if corn is down. Corn may be farther along than anticipated.

