**Crop Production**

**Turn your focus to stored grain**

By JOHN T. GNADKE

Once harvest is complete, producers must focus on the management of stored grain. The 2008 harvest presented some real challenges. One was drying the highest-moisture corn since the 2004 harvest. Another was filling natural air or low-temperature drying bins with 22% to 24% moisture corn.

This will create some management problems, such as maintaining grain temperatures at 30 to 35 degrees F.

High-temperature dried, low test weight grain (from 49 to 52 pounds per bushel) may have additional cracked and broken kernels, thus creating some storage challenges if this grain is kept until July or August 2009.

When drying with conventional continuous-flow or automatic-batch grain dryers, producers must always operate these units at plenum temperatures that will provide the highest-quality grain (see chart). The plenum temperature is the internal operating temperature of the dryer. Another way to think of it: It’s simply the grain drying temperature.

**Grain storage**

If producers are storing grain without the help of an automated controller, the following checkpoints are necessary:

- Check stored grain once a week for at least six consecutive weeks.
- Before starting the fan, have a second person at the roof manhole who will monitor the condition of that first flush of exhaust air. If it is warm and moist, potential dangers exist.
- Check static pressure with the fan running. An increase in static pressure may indicate a change in the condition of the grain mass.
- After six weeks, if grain remains stable, producers may extend grain checks to every two weeks.

Remain with this schedule until grain is shipped.

Stored grain also can be monitored electronically. In fact, there are Web-based sites that allow growers to view and archive their bin monitor information online, and even give growers the flexibility to share data with prospective buyers. The investment of automated equipment can have a two- or three-year payback — eliminating shrink losses and reducing electrical costs.

Properly dried grain will:

- Have fewer cracked and broken kernels
- Have greater stability
- Eliminate discounts at point of sale
- Maintain test weight

**Corn milling industry**

Corn millers prefer a dense (hard) kernel that will grind to a set micron particle size without dust and powder present.

It’s important to know the end users’ preferences before making seed corn purchases for 2009. The livestock industry alone will use 5 billion bushels of corn.

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**Combination grain drying**

**25% INITIAL MOISTURE, DRYER IN-PROCESS**

<table>
<thead>
<tr>
<th>Moisture (%)</th>
<th>Dryer inlet</th>
<th>Feed</th>
<th>Wet milling and dry-grind ethanol</th>
<th>Dry milling</th>
<th>Snack foods</th>
<th>Dryer discharge</th>
<th>Storage bin</th>
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</thead>
<tbody>
<tr>
<td>Approx. 25%</td>
<td>Ambient</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>16.5%</td>
<td>-14.5%*</td>
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<tr>
<td>20%</td>
<td>Ambient</td>
<td>N/A</td>
<td>190°F to 130°F</td>
<td>130°F to 120°F</td>
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*Note: In-bin steep time may vary based upon ambient air temperature and air flow.

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