

Crop Production

Avoid the pitfalls of handling wet grain

By TOM J. BECHMAN

MANY grain dryers have only seen light duty during the past few falls. Dan Arnholt believes that could change this year. "Right now we're looking at fairly wet corn, even with today's hybrids that dry down quickly," says Arnholt, Columbus, Ind.

Arnholt's wife, Susan, manages the farm while son Clint and Arnholt, retired from the utility industry, assist her. Arnholt spent two decades helping farmers understand drying principles.

"It's been a while since we've handled wet corn," he says. "We may need to brush up so we keep it in condition and produce a good product."

Bill Field, Purdue University safety specialist, says there are more than monetary reasons for keeping corn in condition. And that starts with binning it properly.

"If you keep grain in condition, you greatly reduce the temptation of getting in the bin when you're loading it out," he says. "That reduces odds for grain bin entrapments."

Field's advice holds even in the far western Corn Belt, where corn shouldn't be as wet coming out of the field. It still must be binned and maintained properly, he says.

Tips for high-temperature drying

Arnholt outlines his battle plan for fall with his own low-temperature drying system in the story below right. If you're running a high-temperature dryer, he offers these suggestions:

Key Points

- Probability is high that corn will come out of the field wetter than normal this year.
- Monitor the holding time for very wet corn closely.
- Consider slowing down harvest hours in the field to match drying capacity.

■ *Don't forget about the grain in the wet holding bin.* If the holding bin is set up to aerate, get air on the corn quickly. Temperature plays a big role in how long you can hold wet corn. At 50 degrees F, you can hold 30% moisture corn for up to 10 days. At 60 degrees F, you can only hold it two to three days.

■ *Leave more time to dry.* It will take longer to get corn through the dryer. This may mean slowing down harvest capacity in the field instead of speeding it up. For example, maybe only combine eight hours a day instead of 10.

■ *Monitor dryer performance.* Make sure the dryer is working and cycling correctly.

■ *Don't turn heat too high.* This is tempting because you will move more corn through faster. But the end result can be heat-damaged corn that cracks, creating more fines.

■ *Adjust for hot grain readings.* Remember, moisture temperatures typically read 1 to 2 points drier for hot grain compared to true moisture content. Take a sample, wait a day and then retest it.

■ *Keep fines out of grain.* Clean grain on the front end if possible.

■ *Consider how a small change in moisture affects shelf life.* Corn at 30% will last about 10 days at 50 degrees F. If you drop it to 24%, it will last 20 days.



READY TO ROLL: Keeping the dryer in top-notch condition in the fall will help prevent bottlenecks during the harvest season.



Cool temperatures, late planting put Midwest crops behind in '09

SOMEONE apparently forgot to tell Mother Nature about global warming. From May 1 through Aug. 31, temperatures averaged below normal in all nine states covered by the Midwestern Regional Climate Center.

Alan Black, service climatologist, reports numbers are based on growing-degree days. Note that Iowa, Michigan, Minnesota and Wisconsin were particularly slow at accumulating GDDs.

July was the coolest on record in several states.

Growing degree days by state

	Actual	Normal	Departure from normal	Percent of normal
Illinois	2,347	2,569	-222	91
Indiana	2,276	2,453	-176	93
Iowa	2,001	2,347	-347	84
Kentucky	2,587	3,692	-105	96
Michigan	1,425	1,727	-302	83
Minnesota	1,447	1,834	-387	79
Missouri	2,583	2,774	-191	93
Ohio	2,183	2,265	-82	96
Wisconsin	1,497	1,795	-297	83

Based on GDD 50 degree F base system; numbers represent GDDs accumulated from May 1 through Aug. 30.

Source: NOAA Midwestern Regional Climate Center, <http://mrcc.isws.illinois.edu>

Keep fines out and help yourself this year

IF there was ever a year for a grain cleaner, this is it. There are two reasons, according to Dan Arnholt of Columbus, Ind.

First, if corn is harvested at 25% or higher, it's likely there will be more fines than normal. Second, airflow inside the bin is critical to keeping grain

in condition. Fines restrict airflow.

Myron, Vern and Matt Schafer of LaCrosse, Ind., use a grain cleaner as standard operating procedure.

"We make use of them [fines] easily, feeding them to the cattle," Myron explains. "They help stretch our feed costs."



NO FINES ALLOWED: Myron Schafer (right) and Chad Martin, Purdue University Extension, explain to visitors that it's crucial to keep fines out of the bin.

Special challenges for in-bin drying

SUSAN, Dan and Clint Arnholt rely on low-temperature, in-bin drying to bring corn down to safe storage levels. That will be more challenging if corn is wetter than normal this year.

In the past few years, corn was dry enough to allow the Arnholts to fill their 30-foot and 36-foot bins and dry them down to acceptable levels. The 30-foot bin is equipped with a 20 horsepower fan, and the 36-foot bin with a 30 hp fan.

"We're still hoping corn may dry down more than we think right now," Dan Arnholt says. "If it doesn't, then we'll have to put in a few feet of grain and dry it before adding more."

When corn is wetter than 24%, he refers to the chart provided by the bin maker. Typically, he can dump in 7 feet of corn above 24% moisture in the 30-foot

bin and 6 feet in the 36-foot bin.

"It looks like we'll have lots of corn, so we won't have enough storage for it. In that case, we'll want to dry the pile down to 15% so we can sell it."

If they're going to fill the bin instead, Arnholt typically waits until the top layer is 2% lower than the beginning moisture before he adds more to the pile. That way he knows the drying front is moving through the grain.

"There's a tendency to overdry the bottom layer. If you sell very dry corn, you're losing money," he notes.

At the very least, Arnholt looks for an interesting fall.

"This may be one of those where we run enough corn to put a layer in the bins, then switch to beans, and back and forth until we're done," he says.