

GRAIN HANDLING SPECIALIST OFFERS TIPS FOR PROTECTING STORED GRAIN

The lowest corn prices in recent years mean farmers are likely to store a large portion of the crop on the farm into the late spring or summer of 2014, a Purdue Extension grain handling specialist says.

Anytime growers decide to put corn into storage, and especially when they plan to store it for several months, they need to manage the grain properly to keep it from spoiling. That includes drying corn to a safer moisture level when it comes out of the field and then properly cleaning, loading, aerating and monitoring it.

"This will require adequately drying to 14 to 14.5 percent for long-term storage," Klein Ileleji said. "Think of grain in the bin as cash in the bank. Without good management, this cash can go out of condition, quickly eroding your investment."

Ileleji offered some tips for farmers to keep their grain in top shape:

SANITATION

Growers need to remove all of the food sources and harboring spots for rodents and insects around their storage facilities. This includes cleaning up grain spills and mowing surrounding vegetation. It also means cleaning handling equipment, including augers, cleaners and dryers, at the end of each use.

LOADING

When grain is being loaded into a bin, farmers need to use loading methods that minimize broken kernels and fine material and remove foreign material. Leaving

broken kernels, fines and foreign material can make stored grain more susceptible to insect infestation, mold and spoilage because it reduces initial grain quality and aeration efficiency.

According to Purdue Extension's Agricultural Safety Program, out-of-condition grain is the most frequent cause of grain entrapments and engulfment.

"Cleaning grain and coring the bin to remove fines, leveling binned grain and using appropriate drying and handling methods all reduce broken kernels and fines, and reduce the chance you will need to enter the bin when you unload the grain," Ileleji said.

AERATION

This is the method of cooling grain with ambient air after drying it to decrease insect activity and mold development. Growers need to run bin fans to reduce grain temperature to below 40 degrees Fahrenheit, and maintain cool temperatures into the late spring and summer. Using exhaust vents also will help control condensation on the inside roof and headspace walls of grain bins.

MONITOR

Farmers need to monitor their stored grain at a frequency determined by the initial grain quality, moisture content, temperature and whether there has been extreme weather. The higher the ambient temperature, the more frequently bins should be checked. In fall, spring and summer, they need to be checked every 1-2 weeks. In winter, that can be reduced to once a month.

When checking stored grain, growers with temperature cables should monitor for gradual temperature increases over time, rather than absolute temperature. If there are no temperature cables or CO2 sensors available, Ileleji said the smell of spoilage when fans are running is a good indicator that there's a problem.

"Keep detailed records with dates and what was monitored," he said. "Remember, it is the trends in data that help diagnose a problem and not the data collected at a given time."

