

# Manage Grain Bins To Maintain Quality, Profit

LEXINGTON, KY.

While the 2012 growing season was a struggle for many Kentucky grain crops producers, most grain was harvested. Producers may have stored some of this grain or they may have grain from the 2011 harvest still in the bin. With high grain prices, it's important to monitor stored grain to retain its maximum value, said Sam McNeill, agricultural engineer with the University of Kentucky College of Agriculture.

On Nov. 21, the average statewide grain contract prices for January delivery were around \$7.72 per bushel for corn and about \$14.20 per bushel for soybeans. With the average-size bin in Kentucky holding about 30,000 bushels of grain, the total value of grain in the bin is around \$232,000 for corn and \$426,000 for soybeans.

"Discounts of even a few cents can really add up for bins that size," McNeill said. "For example, a discount of 5 cents per bushel could cost the producer \$1,500."

The following tips can help producers preserve grain quality and retain profits.

1. Hot spots and moisture in the bin can cause mold and attract insects. Check several spots inside storage bins for these. If a hot spot is found, run an aeration fan to cool it down. After that, monitor the area weekly until the grain is sold.

2. Check outside bins for any evidence of rodents or insects. Clean up any spilled grain, as it is an attractive food source for them.

3. Grain should be kept within 5 to 10 degrees of the average monthly outside temperature. December's temperature averages around 37 degrees. The average temperature for January is around 33 degrees, and February's average temperature is around 37 degrees. Running aeration fans once a month can help keep the grain cool.

4. After a precipitation event, check for moisture to ensure there are no leaks or additional moisture caused by blowing rain or snow in the bin. Two places to keep a close eye on are roof vents and entryways.

5. Inspect grain bins every two to four weeks to make sure the temperature and moisture within the bin remain stable. Moisture on the bin's roof could be a sign of trouble.

6. Keep grain out of the bin's cone as it

can interfere with airflow.

7. Use temperature cables to monitor areas where a grain probe can't reach.

While inspecting grain bins, producers should make sure safety is a top priority for themselves and their employees, said Mark Purschwitz, UK extension professor and agricultural safety and health specialist.

Those entering a bin should wear a fall protection harness to protect against entrapment and suffocation, and should tie themselves off before descending into the bin. A dust respirator should be worn to protect against exposure to grain dust and mold spores. Before entering the bin, grain inspectors should make sure the power to the unloading auger is off and locked out so no one can turn it on while someone is inside.

Workers should also remember there may be a shallow pocket beneath crusted grain, especially if grain was recently unloaded. Inspectors should use a pole from the outside of the bin to break up the crusted grain, as it may not hold a person's weight and could cause an individual to become trapped or suffocate. Finally, it is always best to have another individual outside the bin monitoring the person inside, available to provide assistance or go for help in an emergency.

Individuals wanting more information on grain bin safety should view UK Biosystems and Agricultural Engineering extension publications AEN 45 and AEN 39. These are available online <http://www.bae.uky.edu/BAEHome.asp> or at local offices of the UK Cooperative Extension Service. △



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