Alternative grain storage tips

Source: Sam McNeill, extension professor, Biosystems and Agricultural Engineering

Alternative storage structures have become more common across the state in recent years, as producers hold larger amounts of grain in anticipation of better marketing opportunities. Equipment storage buildings, grain bags and covered outdoor piles are some of the more common alternative storage structures we see producers using.

On top of more interest in temporary storage, we expect Kentucky grain producers to harvest 35 million more bushels of corn and soybeans than in 2019, which is an 11% increase. It’s important to keep a watchful eye on stored grain, especially in these alternative structures. Even though the grain is out of the fields, your job isn’t really done until it has passed grade and is sold at the elevator.

If you properly dry and cool grain, protect it from pests, aerate and regularly inspect it, it should store well with little chance of spoilage in temporary structures. It will also help prevent potential price docks at the elevator. Clean, undamaged grain is best for temporary storage when you are using less-than-ideal storage facilities.

Aim for 14% moisture content for corn and 12% for soybeans that you plan to store through February. If you plan to hold the grain through May, reduce moisture levels by 0.5% to 1% to compensate for warmer spring temperatures.

Thoroughly clean storage sheds before putting grain in them. Fill all temporary structures last and empty them first.

A properly designed aeration system is essential for successful grain storage in buildings and piles and is the key to maintaining uniform temperatures, which control moisture accumulation and subsequent grain spoilage. Run aeration fans to cool grain to 35-40 degrees Fahrenheit as soon as possible in the fall. Make sure to run them at least once a month in flat storage buildings and continuously in covered piles to hold down the cover.

Routinely monitor grain in all alternative storage structures for wildlife, rodent, bird and insect damage. These structures are at greater risk for damage due to inherent exposure. Producers should address any issues quickly with approved pest control methods.

Alternative storage costs vary widely depending on the type of structure, its original condition and holding capacity. You can use a spreadsheet available on the University of Kentucky Department of Biosystems and Agricultural Engineering website, <https://www.uky.edu/bae/grain-storage-systems/>, to estimate the amount of grain these structures can hold. Enter the dimensions of the structure, pile or bag to calculate storage capacity in bushels. For example, to hold 10,000 bushels, you’d need a 30-feet bin with an 18-feet wall; a 40-feet by 50-feet shed with a 4-feet wall; a 50-feet diameter pile with a 3-feet wall; or a 10-feet by 160-feet grain bag.

The UK Cooperative Extension Service also has a recent publication, [ID-249: A Comprehensive Guide to Soybean Management in Kentucky](http://www2.ca.uky.edu/agcomm/pubs/ID/ID249/ID249.pdf), which includes chapters on production economics and post-harvest management.

For more grain production information, contact the (COUNTY NAME) office of the University of Kentucky Cooperative Extension Service.

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