

NEWS COLUMN

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Grain Storage Guidelines

If you are planning to store any of this year's grain a few guidelines to sound storage practices can reduce quality losses from mold and insects.

Moisture content is the most important thing to keep in mind when determining how long to store grain. A moisture level of 15.5% is acceptable for corn that is stored six months or less. For long-term storage of corn, moisture percents of 13.5% or less are needed. Storing corn at too high of a moisture level can lead to formation of molds which result in price discounts and undesirable feed quality.

Short-term moisture levels for soybeans should be 13% and long-term 11% or less.

Prevention is the key to stored grain pest management, and needs to begin long before the grain is in the bin. Use the following sanitation measures prior to harvest:

- Sweep or vacuum floors, walls, and rafters in bins. If any grain kernels remain in the bin, it is not clean enough. Burn or otherwise destroy sweepings.
- Clean out areas below slotted floors to the extent possible.
- Clean spilled grain from around and under the bin. This is a primary source of insect and rodent contamination. Remove the weeds in areas surrounding the bin so residual insecticides are more effective.
- Clean all equipment used during harvest including combines, trucks, wagons, and augers. Small amounts of grain left in these will serve as sources of infestation for new grain.
- Check bin for leaks which allow moisture to enter and spoil grain. Check roof, seal around bottom of bin, and seals around doors and hatches.
- Adjust harvest equipment to prevent damaged and broken kernels-these will enhance survival and development of "bran bugs."
- Apply residual insecticides to bin walls and floors to point of runoff. Also apply insecticides around the outside of the bin and up outside walls to a height of six feet. Malathion mixed at the rate of 1 pint to 3 gallons of water will cover 500 square feet. Tempo is also recommended for use as a residual insecticide.

Additional precautions:

- Never store new grain on top of old grain.
- Store grain at the proper moisture level, high moisture levels are conducive to mold and heating of grains which in turn enhances insect development.
- Level grain surface after filling the bin to allow for easy inspection and surface treatment of grain.
- Use aeration to cool the grain in the fall. This will limit insect activity and reduce moisture migration. Grain insects are inactive at 60 degrees F. and lower.
- If you are considering grain fumigation it is strongly recommended to consider a commercial applicator. Many of the products used may only be applied by the commercial sector as well as the fact there is a safety factor to consider when applying these pesticides.
- Fumigation is not always 100% effective. Bins must be sealed up so that gases remain in the bin. Be sure to follow recommended intervals for feeding, etc.

Monitoring:

Monitor stored grain at least once every two weeks in the summer and monthly in the winter for the presence of insect pests, any mold or hot grain. Never enter a grain bin without a safety line, when by yourself or when augers are emptying a bin.

