



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

Hardin County Extension News Release

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For Immediate Release – November 1, 2017

Storing Corn in the Grain Bin

Hardin County – Now that corn harvest has begun in the county, it is time to manage the corn in the grain bin. Use integrated pest management practices to protect the corn from mold and insect activity. This year's corn is in good condition compared to last year. Once the corn is in the bin, all that can be done to manage the corn is to control temperature, manage the depth of the grain in the bin to allow for good airflow, and to monitor moisture, mold, and insect populations. Proper management of the grain can prevent the use of insecticides to control insects.

Corn moisture should be held at 15%. Much of this fall's corn is coming off at 17% moisture and people are putting it in the bin without drying and planning to just use air to dry it. Problems with storage can occur when corn has been under-dried or not dried uniformly enough when high levels of trash and fine material may be present. Therefore, it is important to check the top layer in all bins about one week after drying and cooling to make sure no moisture build up has occurred. Elevated temperatures and/or moisture can cause mold and insect damage even in cool weather. The growth of mold and insects will produce heat causing further deterioration of the grain.

Controlling temperature and moisture is the most cost-effective way to prevent spoilage problems. The temperature of the corn should match the average air temperature. It is better to have the grain cooler than warmer. Mold and insect activity are held in check when grain temperatures are below 55° F and relative humidity is below 65%. To keep the molds from growing and producing mycotoxins, the grain should be stored at 36 to 44 degrees F. Clean corn dried to 15% should store for at least 6 months if cooled properly.

Even properly dried corn can spoil if corn is not cooled thoroughly. Uneven grain temperatures can lead to moisture migration to the top center of the bin, promoting mold and insect growth. Moisture migration can be prevented when grain temperature is equalized throughout the bin with aeration. The length of aeration time to remove the moisture depends upon the size of the fan relative to the amount of grain.

If possible, remove the top cone of corn occupying the upper portion of the bin. Removing the corn will reduce the risk of spoilage as most storage problems occur in the upper center of the corn pile due to air traveling through the path of least resistance (lowest corn pile). Removing the top cone will also remove fines leading to better air flow.

Stored grain should be inspected in the fall and spring every one to two weeks and every two to four weeks during the winter. Consider all safety procedures before entering the bin, especially if grain has been removed. Before handling and moving grain with molds be sure to wear a dust mask, goggles, and gloves as mycotoxins produced from the molds are dangerous to human health.

Article written by Jeff Stachler, OSU Extension-Auglaize County and edited by Mark Badertscher, OSU Extension-Hardin County.