Utilize Low-Cost, Low-Quality Grains For Hog Producers

ALLENTOWN (Lehigh Co.) — Any factor that can damage grain or stress the plant can have a detrimental effect on grain quality. For example, during the summer of 1988, which happened to be an extremely dry year, many laboratories observed an increase in the incidence of mycotoxin contamination. Most of the mycotoxin problems were due to aflatoxin, a mycotoxin produced by a mold that thrives in hot dry climates. But excessively wet weather, especially near harvest time, can also lead to mold growth and the production of other mycotoxins. Ken Kephart, Penn State Extension Swine Specialist, offers the following brief summary of problems that swine producers may encounter with grains that have been damaged, diseased or subjected to mold growth.

LOW TEST-WEIGHT GRAINS

A potential result of dry growing conditions is a low test weight (low bushel weight) for grain. While low test-weight grains often have normal or higher protein contents, they're usually lower in energy. When feeding low-test grains, studies at Kansas State University and the University of Kentucky show that growth rate is not affected, but pigs have to consume more feed, so feed efficiency drops (usually five to seven percent).

It's also possible that drought stress may have no effect on test-weight or hog performance, even though the effects on corn crop yield are dramatic, studies at the University of Kentucky show. Two drought stressed varieties of corn there following the drought of '83 had normal bushel weights and higher than normal protein. The drought-stressed corn supported performance that was slightly superior to that of normal corn.

When feeding suspect grains, check bushel weights and protein contents. If these two values are normal, hog performance should not change.

SPROUTED GRAINS

The protein level in sprouted grains is usually similar to that of undamaged grains. But the energy content and bushel weights are usually less, which should depress feed efficiency. However, researchers from Canada feeding sprouted (seven to 19 percent) and frost-damaged (75 percent) barley to pigs found that growth rate and feed conversion were normal. Reports from the University of Missouri and Texas Tech University show that sprouted milo (17 to 28 percent) had no detrimental effect on performance.

None of the experiments reported above had mold problems in their sprouted grains. But producers should be aware that sprouted grains can be moldy.

MOLDS AND MYCOTOXINS

Warm and wet conditions can lead to fusarium molds (also called scab in small grains) which produce zearalenone, vomitoxin and T-2. This type of mold can also occur when grains are neglected or abused during storage. With a lengthy storage time, there's often more opportunity for insect growth, bin condensation, and damaged kernels (from shuffling corn from one location to another).

Aspergillus, a type of mold that thrives in hot dry weather, is the one that producers aflatoxin. Moisture levels of 18 to 20 percent in corn are ideal for Aspergillus growth. Normally, aflatoxin is most prevalent in the Southeast but was more widespread following the 1988 growing season.

Still another mold that can be especially troublesome in small grains is Claviceps. This type of mold produces ergot and is found most often in rye, but is common in the other small grains during periods of excessive rainfall. Ergot is characterized by abnormally small kernels.

Corn smut, like Aspergillus, is more common during dry weather and temperatures between 80 and 95 degrees F. Smut occurs most often when the corn plant is subjected to insect injury, or if the corn variety has exposed ear tips.

Some grains that would be considered unacceptable to the flour industry may be a bargain for the hog producer. But others that look and smell fine could spell disaster. Here are some rough guidelines.

Sprouted grains. If you can be certain that no molds are present (and that's a big if), hog performance on the sprouted grains should be similar to that of normal grain. For the buyer, a 25 to 30 percent deduction from the standard bushel price would be reasonable. If mold is present, the grain may be worth nothing for hog production.

Low test-weight grains. These grains will depress feed conversion. Again, if you're buying, a discount of 25 to 30 percent should be fair. Be sure, expecially with small grains, that the low-test weight is not due to mold.

Scab- and ergot-contaminated grains. Avoid them if possible. If there is no alternative, feed these grains only to the grower and finisher pigs. Incorporate into the formula at a rate of 250 pounds per ton, and increase gradually only if hogs are eating and growing well. Any grain known to contain a harmful level of mycotoxins should be discounted by at least 50 percent.

Hot and dry weather, and warm and wet weather can lead to mold growth in grains. If test weights and protein levels from grains grown under these conditions are normal, then the grain may be okay. If a chemical test shows the grains are negative for mycotoxins, then it's even a safer bet that the grain is usable. But you can never be sure until you feed it. If you see any of the following symptoms in your pigs, be suspicious of mycotoxin poisoning.

- Feed refusal.
- Swollen vulvas.
- Prolapsed rectums.
- Convulsions.
- Death.
- General reduction in performance.

Maryland Gov. Schaefer Announces $960,000 For Farm Preservation

FOR FARM LAND PRESERVATION

ANNAPOLIS, MD — Governor William Donald Schaefer has announced Board of Public Works approval of $960,000 for Maryland's agricultural preservation easements in four parcels of land totaling more than 969 acres in Queen Anne's County.

Chaired by the governor, the Board of Public Works also is comprised of Comptroller Louis L. Goldstein and Treasurer Lucille Maurer. The board is authorized by the General Assembly to approve major consultant and construction contracts, equipment purchases, property transactions, and other procurement actions.

"The purchase of this land is part of Maryland's continuing commitment to preserve agricultural land," Governor Schaefer said.

The Maryland Agricultural Land Preservation Foundation was created in 1977 to preserve agricultural land and woodland in order to provide sources of agriculture products within the state for its citizens, to control urban expansion and provide open space land.

Entry into the program requires the establishment of agricultural preservation districts. Landowners sign a voluntary district agreement which restricts the use of their land to agriculture. Once in a district a landowner may apply to sell a permanent development rights easement to the foundation.

To date, Maryland has recorded 1,195 agricultural preservation districts totaling in excess of 170,000 acres. The state has secured perpetual easements on more than 78,000 of these acres, the highest amount of protected agricultural acreage in any state.

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Lawrence E. Ewing Jr. and Muriel E. Ewing - 359.33 acres.

Herbert A. Willis and Chestertown Bank of Maryland - 226 acres.

Jabez F. and Betty A. Brown - 167 acres.

Mary C. Whitby - 216.763 acres.