

# Damaged grain cuts profits

DEKALB, Ill — Whether they produce for cash or for feeding, corn and grain sorghum growers have a major stake in the safe storage of their harvested crop. Even the best of harvesting conditions produces grain with some degree of damage that can hasten eventual deterioration of the stored product.

When growing and harvesting conditions are less than ideal, grain damage and potential loss increases. Drought in some southern areas in both 1980 and 1981 made corn grain vulnerable to the fungus that produces aflatoxin under certain conditions. Growers found it necessary to harvest as early as possible and dry the grain promptly to avoid serious loss in grain value and usefulness. While grain of some corn hybrids may be slightly less prone to develop aflatoxin problems, weather and crop management, including insect control, are major factors determining its development.

Some growing areas experienced considerable stalk rot development in 1981. Stalk rot is induced by plant stress during the growing season, by outbreaks of leaf diseases, and by plant damage from insects, machinery, or hail. Growers who became aware of the stalk rot potential were encouraged to harvest their crop early to reduce field losses.

Wet, less mature grain is more

subject to combine damage than drier grain. Also, higher moisture grain may make it necessary to dry at high temperatures in order to maintain dryer capacity. High temperatures drying causes corn kernels to crack and become more subject to breaking when moved.

Although research workers are able to measure slight hybrid differences in tendency for kernels to crack and break, the main differences are due to grain moisture and the setting and operation of harvesting and handling equipment.

Ohio State research shows that, with conventional cylinder combines operated at recommended speed, total damage to corn kernels is lowest at about 24 percent harvest moisture:

% Moisture at Harvest	% Damage
37	45
30	31
26	23
24	19
20	20
13	22

Another factor affecting quality of grain going into storage is insect and bird damage that occurs prior to harvest. Some areas experienced unusual numbers of borers, earworms and armyworms in the summer of 1981. Not only do these pests devour a portion of the crop, their feeding activity sets up

ideal conditions for kernel molds and rots to get started. At harvest, part of the light-weight, moldy and half-eaten kernels are removed but many remain in the grain to create potential storage problems.

Corn hybrids with tight husks that completely cover the ear tip offer some protection against insect and bird damage. Thus, in turn, reduces initial infection by rotting organisms. On the other hand, these same protective husks tend to reduce moisture loss so there's some trade-off between field drying rate and protection from birds, insects and mold. Grain of some hybrids is reported to be more resistant to kernel molds than grain of other hybrids.

Part of the corn and sorghum grain going into storage this fall is in less than perfect shape for storage. Each bin of stored grain represents a sizable investment; no one can afford the loss associated with out-of-condition grain.

Carefully monitor grain in every bin for moisture, insect or mold activity (heating) and other evidence of deterioration. Be extra careful to follow a good aeration schedule and be prepared to move grain if necessary to maintain quality and value. Watch those

heat sensors and thermometers like a hawk.

One tool that deserves special mention is the moisture meter. Recent surveys indicate that many of these instruments are not well calibrated — leading to serious over or under estimates of actual moisture content. Couple this with improper sampling and failure to follow operating instructions and

you have the makings of big storage problems or excessive costs due to overdrying

Every moisture meter should be checked against a drying oven or an instrument that is known to give results comparable to a drying oven. Also, the manufacturer may have revised conversion charts available

## PDA recognizes Martins Potato Chips promotion

HARRISBURG — A certificate of recognition from the Pennsylvania Department of Agriculture was presented to Martins Potato Chips of Thomasville for its efforts in promoting Pennsylvania farm products.

Deputy State Agriculture Secretary E. Chester Heim made the presentation Thursday to the firm's owner, Ken Potter, during ceremonies at the Third Street Market in Harrisburg.

Heim said the York County firm will continue to produce the same top quality Pennsylvania potato chips as it has done for many years but it will now use the state's

"We're Growing Better" logo to promote their products.

The deputy secretary noted that the value of sales of Pennsylvania potato chips totals more than \$220 million each year. Pennsylvania ranks first in the nation in the production of potato chips.

"By promoting Pennsylvania farm products," Heim said, "Martins Potato Chips joins many companies across the state in Governor Dick Thornburgh's campaign to stimulate economic growth, increase sales of state agricultural products and to improve the freshness of goods consumers purchase."

## PACA speeds change process

WASHINGTON, D.C. — A change is being made to speed up hearings under the Perishable Agricultural Commodities Act for cases involving "responsibly connected" individuals who have been associated with produce firms.

According to Jack Gardner, who heads the program for the U.S. Department of Agriculture's Agricultural Marketing Service, the revised rule will allow the agency administrator to designate any person to serve as presiding officer over the hearings. Previously, only certain officials—who were sometimes unavailable—had to be appointed, and this often delayed the hearings, Gardner said.

Under the Perishable Agricultural Commodities Act, responsibly connected persons may not be re-licensed under the act or employed by other licensees when the firms they are connected with fail to satisfy PACA repairation awards or when the firms lose their licenses for cause.


The act requires firms that buy or sell fruits and vegetables in interstate commerce to be licensed by USDA. USDA can suspend or revoke licenses of firms that fail to meet requirements for prompt payment of produce or that otherwise violate the act.

The rule change were published in the Oct. 21 Federal Register.

**HAVING SOIL PROBLEMS?**  
Here's A Timely Tip...

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