

Aflatoxins

By Andy Luke, regional agronomy specialist

Several farmers in the area have been concerned about aflatoxin levels in their corn this year. While I have not heard reports of aflatoxins being present yet, weather conditions this summer do increase the possibility that this could be an issue during harvest.

Aflatoxins are a group of chemicals that are produced by fungi in the *Aspergillus* family that grow on corn kernels. The fungi is a gray-green mold found commonly in nature that can grow on both white and yellow corn varieties. Corn plants stressed from drought, insect damage or weather conditions are more likely to be infected with the fungus. With the right conditions, it can then produce aflatoxins inside the kernel, which makes the corn toxic to humans and livestock. The high temperatures we had during pollination and kernel fill, along with the drought stressed corn, were optimum for *Aspergillus* growth and aflatoxin production. However, the presence of the fungus does not guarantee that aflatoxins will be present.

Typically, aflatoxins are not distributed uniformly throughout a field or trailer, which makes sampling and testing for them difficult. Many elevators will not accept samples of corn with over 20 parts per billion aflatoxin. To put that into perspective, that is the equivalent of the weight of 2 kernels of corn in a 1,250 bushel load.

If you suspect that your corn may have aflatoxins, there are things you can do to lower the levels in the corn. Typically, aflatoxin levels will be higher in lightweight, broken kernels. Adjusting your combine to remove more of these kernels will reduce the retained aflatoxin. Reducing the moisture of harvested corn to 15% within 24 hours will slow or stop the growth of the organisms in the grain. For long term storage, it is recommended to dry the corn to 13% moisture. In the bin, aerate the grain to safe and equalized temperatures throughout, and check stored grain regularly to ensure low moisture and proper temperatures. Also be aware that corn that collects in pits and auger wells will likely contain aflatoxins. Be sure to clean these areas and all equipment before beginning a new field.

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