Q: I may be asked to segregate GMO and non-GMO grain next fall. I know the possible sources of contamination during harvesting and storage. Should I be concerned about possible contamination in the seed that I purchase?

A: There is a distinct possibility that the seed you purchase, even if represented by your dealer as non-GMO, will contain a few genetically engineered seeds. The American Seed Trade Association (ASTA), a organization representing numerous seed companies, has requested that the US Department of Agriculture set a standard that would allow a small amount of genetically engineered material in seedlots and still have those seeds considered free of modification. The standard proposed by ASTA to the USDA is 1%. That standard would allow up to 800 genetically engineered kernels in a typical bag of seed corn and up to 1500 seeds in a soybean seed bag (assuming 3000 seeds per pound). Currently no standard exists and the ASTA members are concerned that a lack of standards could result in major disruptions in seed sales if rumors of small amounts of contamination occurred.

The request from ASTA for allowable limits of genetically engineered contamination illustrates how difficult it will be for farmers to guarantee GMO free grain. Seed producers are experts in controlling contamination. Their businesses depend on maintaining purity and preventing contamination. Standards set by the Missouri Seed Improvement Association for certified soybean seed are some of the strictest in the nation and allow for no more than 0.25% other varieties. To obtain this purity, soybean fields are visited during the growing season and off-types are removed. If seed producers admit that it is nearly impossible to prevent contamination in seed sold to farmers how can farmers be expected to prevent contamination in their grain?

Farmers that want to produce non-GMO grain for identity preserved markets or believe that they may be required by their grain purchaser to segregate grain should be concerned about sources of contamination all the way from seed purchase through grain delivery. In some instances, producers may want to test their seed in the spring as well as their grain in the fall for GMO contamination. Farmers can request seed dealers to test and certify grain free of specific GMO events or purchase test kits for their own use. The test materials I discussed in an earlier column for grain can also be used for testing seed.

The contamination in corn seed may be more problematic than contamination in soybean seed because corn is cross-pollinated and pollen from the plants grown from GMO seed can pollinate and produce contaminated kernels on the non-GMO plants. Soybeans are self-pollinated so pollen usually does not move from plant to plant. But, the grain produced on a plant grown from the contaminated seed will contain the GMO trait. That GMO grain will contaminate all of the grain harvested from that field. Whether or not this contamination is important will depend on standards set by grain end-users and how grain-purchasers interpret these standards.

Requirements for grain segregation are uncertain and this uncertainty is part of the problem. However, the action by ASTA is an important reminder that farmers should be extremely careful as to what they say about their grain. As we've recommended in the

past, you should never swear in writing that grain is free of contamination. Representatives of seed companies will attempt to honestly represent what is in their seed bag. Unfortunately they cannot completely control contamination and the buyer must be aware of the possibility of contamination.