



## Task Force

### Grain Quality Issues Related to Genetically Modified Crops

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Harvest is progressing rapidly, and new announcements from grain buyers (including elevators and processors) about accepting or not accepting genetically modified (GMO) corn and soybeans keep coming up. These concerns have arisen primarily due to increased consumer resistance to products containing genetically modified ingredients in Europe and Asia in recent weeks. This sentiment should not be underestimated. U.S. consumers are also becoming more aware of the issue of genetically modified ingredients in human foods. Public awareness has been fueled in part by attacks of environmentalists who have destroyed several GMO crops in research plots around the country and who have threatened to step up attacks.

Key points Indiana producers should keep in mind as they harvest their crops this fall:

- (1) Farmers should check with their buyers regarding their current GMO buying policy and be aware that this policy could change throughout the marketing year. Most of the major processors have specified that products must be kept separate. In turn, many elevators and other first purchasers are requesting the same of producers.
- (2) Farmers should keep GMO and non-GMO corn and beans segregated in their farm storage bins as much as possible in order to (a) take advantage of differential pricing such as premiums for non-GMO beans or STS beans, etc., and (b) avoid being rejected by their buyer should their policy change later in the year. Detailed, complete record keeping will be critical if any disputes arise about crop purity. So farmers should record planting dates, field location and size, seed identity, inputs used, harvest date, crop yield, bin number where

crop is stored, date crop is delivered, and the name of the person who delivered the crop and the number of the vehicle used. Farmers should also consider keeping a sample for every segregated lot delivered.

- (3) Farmers should be aware that there is no reliable, quick test available yet to detect GMO corn or beans at the first point of sale. Thus, actual testing for GMO germplasm for the 1999 crop will be spotty, with heavy reliance on producer representation as to which loads are GMO and which are non-GMO.

Farmers should be careful about what statements they make or DO NOT make orally (or sign) regarding GMO germplasm in the crops they deliver to the buyer! According to Dr. Neil E. Harl, Iowa State University Professor and Member of the Iowa Bar, farmers can realistically:

- State that no seed represented by the seed company as GMO seed was planted.
- State that seed represented by the seed company as non-GMO seed was planted.
- State that care was taken in avoiding contamination in harvesting (combines, grain carts, wagons, trucks), handling (pits, legs, cleaners, bins, augers) and hauling equipment (trucks).

Farmers should be careful NOT to:

- State that the crop in question has no GMO germplasm.
- State that no contamination has occurred from mechanical harvesting, handling, and storage of the crop.
- State that no contamination has occurred from pollen drift.

- (4) Farmers should be aware that there is a Website available to locate buyers of genetically modified grains. The American Seed Trade Association has created a Web database to “help you locate grain handling facilities that have indicated a willingness to purchase, receive, and handle genetically enhanced corn that has not yet been approved for import into the European Union.” The URL for the ASTA Website is <http://asta.farmprogress.com/>
- (5) Farmers should make smart seed buying choices this winter, because the GMO vs. non-GMO issue is unlikely to be resolved in time for next year’s planting season. I expect that next year there will continue to be marketing opportunities for non-GMO crops with premiums. By that time, quick test kits should be available at every point of sale that will detect the difference between GMO and non-GMO loads. Although even non-GMO crops will likely never be completely free of GMO germplasm, the GMO level may be at an acceptably low level. A key problem is that no one has set acceptable tolerances. Without tolerances, no one knows for sure where the line will be drawn.
- (6) Our NIR Grain Composition Analysis Service cannot detect differences between GMO and non-GMO crops. However, it can give the protein, oil, and starch content of corn and the protein, oil, and fiber content of beans. Producers, farm managers, crop consultants, and elevator operators may submit samples for that purpose. More information is available at:

<http://pasture.ecn.purdue.edu/~grainlab>

According to Dr. Harl, the issues concerning harvesting, handling, storage, and delivery of genetically modified crops this season adds up to a “high stakes legal problem for everyone involved.” Eventually, with reliable testing at every point at which the crop is commingled—at the elevator receiving station, at the processor’s bins, or at the export vessel—it will be possible to monitor more closely what is GMO and what is non-GMO (or more likely, what contains only low levels of GMO germplasm). But the system is not there yet and will not be capable of that type and extent of testing during the 1999-2000 crop season.

The following Websites contain additional useful reference material on this subject:

<http://www.bae.umn.edu/extens/postharvest/tempstor.html#SegCrops>

<http://www.extension.iastate.edu/pages/grain>

The following Websites contain information about available GMO test kits:

<http://www.sdix.com>

<http://www.envirologix.com>

Grain Quality Fact Sheets can be accessed on-line through the World Wide Web at: <http://www.agcom.purdue.edu/AgCom/Pubs/grain.htm>

(select) Grain Quality

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