

August 25, 2017

To Whom It May Concern:

I would like to submit my input for the questions posted for the National Bioengineered Food Disclosure Standard. Below, I have inserted my professional opinion regarding several of the questions listed. Please note that the opinions below are of my own and are not representative of my employer or other university faculty members.

Sincerely,

Samantha Mosier
Assistant Professor
Missouri State University

1. What terms should AMS consider interchangeable with bioengineering?
 - a. From an average consumer perception there is little difference or knowledge that would truly distinguish bioengineering from other similar terms including genetically modified organisms or genetically engineered organisms, which are more popular terminology. Yet, genetic engineering is a more appropriate and interchangeable term as genetic modification may imply less invasive procedures that do not require advance scientific techniques (e.g. gene splicing).
4. Will AMS require disclosure for food that contains highly refined products, such as oils or sugars derived from bioengineered crops?
 - a. Yes, the AMS should require disclosure of such ingredients. The average consumer equates a certain degree of simplicity and natural-ness to non-GMO products. Yet, "natural" products still contain highly refined or processed ingredients derived from genetically engineered products. It would be appropriate to create a definition for natural labeling, which may include permissive use of a certain percentage of GE ingredients.
7. How should AMS craft language in the regulations acknowledging that the Law prohibits animal products from being considered bioengineered solely because the animal consumed feed products from, containing, or consisting of a bioengineered substance?
 - a. This is a similar concern that arose during the organic debate and for companies that seek to get certified as non-GMO. In one case, limitations were put in place, but in the case of non-GMO certification, this has been a persistent problem. It may be best to state or provide optional labeling guidelines that state "This product may or may not have consumed feed products from, containing, or consisting of genetically engineered substances."
 - b. I would also note that with recent development in GE salmon, AMS may want to REALLY reconsider not requiring a label in cases such as this, where the aquaculture product has, in fact, been engineered. The organic program wasn't as quick to address aquaculture and it led to numerous lawsuits/problems.
8. What is the amount of a bioengineered substance present in a food that should make be considered bioengineered?

- a. From a consumer perspective, a product should be labeled if even 1% of the product had genetically engineered substances. Since this law was truly to provide consumer information, producers should comply with what the average consumer believes. Anything less would lead to potential claims of mislabeling and improper advertising.
9. Should AMS consider more than one disclose category?
 - a. If memory serves correctly, the organic labeling program initially began with varying disclosure labels. It would be very appropriate and more informative to the consumer to provide degrees of differentiation among bioengineered products.
11. Could AMS consider whether a type of food is considered a bioengineered food under the determination process?
 - a. Consistency is best. Medical foods and vitamins should not be exempted from disclosure.
12. If a manufacturer chooses to use text to disclose a bioengineered food, what text should AMS require for a text disclosure?
 - a. Contains genetically engineered/modified ingredients or products
13. If a manufacturer chooses to use a symbol to disclose a bioengineered food, what symbol should AMS require for disclosure?
 - a. The symbol should be clearly placed on the front of the packaging and, as a secondary option, next to or below the nutrition label. Use of green symbols is common among food label symbols and could be extended to GE labels as well. The symbol could incorporate a agricultural product/food (e.g. ear of corn) item with a DNA double helix.
14. If a manufacturer chooses to use an electronic or digital link to disclose a bioengineered food, what requirements should AMS implement for an electronic or digital link disclosure?
 - a. Requirements should be in place to require a symbol be present next to the link. Moreover, link information should clearly indicate if the product contains GE ingredients.
15. Should AMS specify in the regulations the type of electronic or digital disclosure manufacturers, e.g. QR code, can use to disclose bioengineered food? What steps should AMS take if an electronic or digital disclosure method becomes obsolete?
 - a. Yes, clear regulations should be made regarding appropriate type of electronic disclosure. A QR code should not be an acceptable form of electronic disclosure due to limitations related to smartphone use. Additional measures should also require that the producer maintain any websites, digital content for the lifetime of the product label. Failure should result in a penalty. Moreover, language should be included that suggests that if fewer than 25% of all producers use electronic or digital disclosure for three consecutive years, then usage of this labeling method will cease as an option.
16. What kind of text, symbol, or electronic or digital disclosure should AMS require for bioengineered food that is not purchased from a grocery store shelf, such as food for sale in bulk (such as fresh produce in a bin or fresh seafood at a fish counter), in a vending machine, or online?
 - a. A symbol located next to the bulk bin and located on the front of the small packaging would be appropriate. For online food, the seller should provide, at a

minimum, text notification of the product information. Additional online measures could include an image of the product, including any symbols, and a direct electronic web link to additional product information.

17. The Law offers special provisions for disclosure on very small or small packages. How should AMS define very small or small packages?
 - a. It would be very beneficial to coordinate with FDA and have similar standards for small or very small packages. It would also be helpful if that would occur in other areas as well.
18. What are the reasonable disclosure options AMS should provide for food contained in very small or small packages?
 - a. It should be mandated to provide a symbol on the front of the packaging. Obtaining more information elsewhere or an address/phone number is not adequate labeling. If the argument is presented that the package is too small to permit a label, then adding a symbol is the easiest solution, perhaps saving text space, and would clearly communicate such information to a consumer in a vending scenario.
23. Is there other equivalent on-package language that AMS should consider to accompany an electronic or digital disclosure besides “Scan here for more food information”?
 - a. “Scan here for more food information. May contain bioengineered ingredients.”
27. How should AMS ensure that bioengineered food information is located in a consistent and conspicuous manner when consumers use an electronic or digital disclosure?
 - a. It should be located under or next to the nutrition label in bold and of the same text size (at a minimum) to the nutrition label.
28. How should AMS obtain information related to potential non-compliance with these regulations? Is there information USDA should request prior to conducting an examination of non-compliance?
 - a. In part, creating a consumer hotline/email to report potential violations would be of use. It would help prevent mislabeling.
29. How should AMS make public the summary of any examination, audit, or similar activity?
 - a. To maintain transparency and accountability, it would be appropriate to make these audits or other similar activities available online.
30. What should the requirements for imports in the United States of products covered by the Law/regulation be?
 - a. Considering GE/GMO/bioengineering labeling is quite common elsewhere around the world, it would be appropriate to require imports to comply with U.S. regulations by mandating imported products either match U.S. standards or meet equivalency standards. Setting up agreements with other countries (or organizations like the EU) for equivalency agreements would be appropriate.