National Organic Standards Board
USDA–AMS–NOP
1400 Independence Ave., SW.,
Room 2646-So., Ag Stop 0268
Washington, DC 20250–0268

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March 19, 2013

RE: NOSB GMO ad hoc Subcommittee Agenda items:

- Discussion Document Excluded Methods Terminology (2/6/2013)
- Discussion Document GMOs and Seed Purity (2/6/2013)

MOSA summary statement on Excluded Methods Terminology: Although we agree that the statement should be amended, the subcommittee needs to first address the reality of a rapidly-changing technological landscape while also giving clear guidance to ACAs on how to verify the use of excluded methods. Exploring issues relating to genetic engineering in seed variety development and seed purity should be considered for addition to the NOSB Research Priorities for 2013.

MOSA summary statement on Seed Purity: With many practical challenges to an ACA's ability to verify non-GMO origins of a seed, it is not clear at this time if it is possible to establish a method for ensuring the genetic purity of commercial seed. Exploring issues relating to genetic engineering in seed variety development and seed purity should be considered for addition to the NOSB Research Priorities for 2013

Dear NOSB members:

Thank you for the opportunity to provide comments on the GMO ad hoc Subcommittee's discussion documents.

MOSA applauds the NOSB for taking up issues related to genetic engineering (GE) technology. These are complicated issues with far-reaching implications that extend well beyond organic agriculture. The technology itself is quite difficult for the layperson to understand and the line between what could occur naturally and what could not is surprisingly blurry. One of the most difficult aspects of understanding the impact of GE technology on organic agriculture is the lack of disclosure to the public or public

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awareness about these techniques. Without societal support and increased disclosure, it will be very difficult for organic agriculture to make strides toward greater seed purity.

We would like to structure our comments regarding the GMO ad hoc Discussion Documents around a specific example that may have sparked some of this work.

In 2012, organic farmers and certifiers were faced with the news that popular hybrid brassica varieties had been produced using cell fusion to produce male sterile parent lines. ACAs were unprepared to answer whether or not planting these varieties represented using an excluded method and their use was thus prohibited. When the confusion regarding hybrid brassica seed arose, we turned to the National Organic Standards' definition of excluded methods. A literal interpretation of the definition would prohibit these brassica varieties. However, the National Organic Program clarified in its February 1, 2013 Policy Memorandum on Cell Fusion Techniques Used in Seed Production that cell fusion is not considered an excluded method when donor and recipient organisms are within the same taxonomic plant family and are not themselves derived using recombinant DNA technology.

This guidance was greatly appreciated, however, this is a rapidly-evolving technology and MOSA can foresee the need for additional interpretation of finer points beyond the scope of the excluded methods definition.

The GMO ad hoc Subcommittee took up this possibility in its Discussion Document on Excluded Methods Terminology and requested feedback. It seems clear that the definition needs to be revised; however, this must be done extremely carefully. The NOSB should consult with a wide variety of plant breeders and geneticists to understand the landscape of how these techniques are currently applied before proposing any additional scientific terminology in the definition of excluded methods. We must be careful not to limit the toolbox of the organic farmer without complete information regarding the use of these various technologies. Scientific innovation moves quickly. If the definition is overly specific, how can it be long-lasting and remain relevant? How can it draw a line that is both practical for farmers and certifiers and in line with the spirit of the organic standards? ACAs are not prepared to understand and distinguish between the plethora of terms outlined in the discussion document. Additionally, the NOP chose taxonomic family, as opposed to genus or species, as where to draw a line for allowed genetic exchange in the case of cell fusion in brassicas. NOP Policy and the definition of excluded methods should be consistent.

The last question in the Excluded Methods Terminology Discussion Document reads:

How far back into the development or manufacture of a substance, or in the development of vaccines, or in the lineage of a breeding line, should the excluded methods prohibition apply? How far back is practical and verifiable?

To respond to this question, we would like to return to the example of cell fusion use in hybrid brassica variety development. While the NOP gave guidance for this specific situation, confusion remains surrounding how to react to similar situations in the future.

1) How can ACAs know which parent lines of seeds have been produced using cell fusion or other GE technologies, what type of cell fusion or GE technologies were used, and the taxonomic families involved? In the case of the brassica hybrids, it is our understanding that a seed company requested non-GMO verification from the producer of these varieties and was told that cell fusion was used. The brassica varieties in question had been planted in organic agriculture for many years, yet to our knowledge this information had not previously been disclosed. There is no mandatory public disclosure of this use of GE technology in developing parent lines. From the perspective of an organic certifier, it is not clear what types of seeds require additional verification, aside from the agronomic crops that are known and labeled as GMO. Would all hybrid vegetable varieties require non-GMO verification? This would be extremely taxing, especially for certifiers and diversified vegetable producers who may grow over a hundred varieties of vegetables.

2) It is also not certain if verification of parent lines of hybrids would be disclosed to an ACA by seed producers. If ACAs cannot access the information regarding how seeds are produced, how can we gauge if an acceptable form of cell fusion or some other technology has been used?

3) If ACAs were granted additional information and it became clear that some form of GE technology had been used, could ACAs reasonably determine, without hiring a plant geneticist, if this technology was allowed? ACAs are not prepared to analyze and distinguish between different forms of genetic engineering technology to determine if they are excluded.

4) Typically, non-GMO verification is provided by the seed tag/packet or a statement from the seed provider. The details of the process for developing the seed variety is not described or verified by the ACA. The seed provider may not have any specific knowledge about how the lineage of the seed was developed either, as it may be purchased from the seed company that owns the variety.

ACAs and seed providers may not be granted access to this proprietary information. It would be impractical to require verification further back along the seed's lineage. The same would be true for vaccines.

Due to the challenges noted above, it is not clear at this time if it is possible to establish a method for ensuring the genetic purity of commercial seed. Exploring issues relating to genetic engineering in seed variety development and seed purity should be considered for addition to the NOSB Research Priorities for 2013. MOSA also echoes the comments made by the Accredited Certifiers Association on September 24, 2012 regarding GMOs and Seed Purity.

Respectfully submitted,

The MOSA Certification Team