OSGATA
Organic Seed Growers and Trade Association

April 14, 2016

Protecting, promoting and developing the organic seed trade

Ms. Michelle Arsenault
National Organic Standards Board
USDA-AMS-NOP
1400 Independence Avenue, SW
Room 2648-So, Ag Stop 0268
Washington, DC 20250-0268

Docket: **AMS-NOP-15-0085**

Re: Materials Subcommittee− Seed Purity, Next Steps (Discussion)

Dear NOSB and Ms. Arsenault,

Organic Seed Growers and Trade Association (OSGATA) is the farmer-controlled national non-profit membership trade organization of certified organic farmers, certified organic seed companies, organic seed professionals, affiliate organizations and individuals dedicated to the advancement of certified organic seed. OSGATA is committed to protecting, promoting and developing the organic seed trade and its growers, thereby assuring that the organic community has access to excellent quality certified organic seed, free of genetic contaminants and adapted to the diverse needs of local organic agriculture.

OSGATA envisions a strong decentralized organic seed industry which meets the needs of the market by strengthening and growing certified organic farms and independent companies selling certified organic seed. The expansion of a vibrant organic seed trade will result in sovereign seed systems rich in biodiversity which respond to the ecological, economic, and localized challenges and needs of organic agriculture at every scale.

On behalf of its membership, comprised largely of certified organic seed growers and certified organic seed companies and seed handlers, OSGATA respectfully submits the following comments in response to NOSB's potential next steps for improving seed purity.

OSGATA strongly supports the NOSB's dedicated attention to seed purity and the prevention of GE contamination in organics.

Organic seed is the most critical link to producing organic crops with integrity. Contamination of certified organic seed (and non-organic seed allowed for use in certified organic operations) by genetically engineered (GE) traits compromises the livelihoods of seed growers, the viability of *all* organic farmers, and the credibility of the USDA's organic label in the eyes of the consumer.

OSGATA applauds the Materials Subcommittee in their solution-driven approach to moving forward on issues of seed purity. We would like to offer our feedback regarding the prescribed discussion questions.

Discussion

A. Enabling Data Collection.

OSGATA agrees that baseline, crop-specific data collection is important to understanding the magnitude of GE contamination already existent and facing organic, and for prioritizing industry-wide next steps. However, utilizing ACA-collected data, as outlined in the discussion document, is an imperfect approach at best. OSGATA supports the use of ACAs as an initial conduit for data collection, provided it is strategic and relies upon DNA-based testing. However, independent third-party data collection might be preferable in terms of standardized implementation.

The Discussion Document's outlined methodology relies upon strip testing (in the absence of seed tag seed purity declarations) to determine the presence of GE content in non-organic seed of at-risk crops. Strip tests are not adequate for assessing GE content in seed.

Strip tests utilize antibodies to identify specific proteins that GE DNA produce within a plant. As proteins are a product of the gene, they have a tendency to vary in different environments. Furthermore, confidence levels for these assays are unacceptable for testing seed. Part of this is due to the fact that strip tests can be performed in the field, resulting in a higher potential for human error. Importantly, it is also due to the limit of detection (LOD) inherent in the strip test technology itself.

Tangentially, this brings to light another flaw in the outlined ACA data collection system: that the ACA would not "take any action concerning any level stated in the test," presumably, because no action threshold has yet been defined for seed. Gathering data on the premise of analysis to establish a purity standard that meanwhile allows contaminated seed to be planted in organic is illogical.

Here we would also like to point out that planting seed that has been falsely identified as genetically pure (due to inadequate testing modalities or ill-conceived testing methodologies) can act as a multiplier of contamination: resulting in much larger financial costs than the initial perceived savings shaved off in favoring inexpensive testing methods. DNA-based testing (i.e. PCR) is the industry standard for reliable GE testing in seed.

Data collection regarding GE testing needs to be strategic (from sampling method to sample size), and needs to adhere to pre-defined goals. Arguably, the most important goal is defining the threshold of GE presence. This piece of information is critical to statistically sound analysis of adventitious presence in seed.

OSGATA published a comprehensive peer-reviewed guide to GE mitigation in 2014. The following summary is expanded upon in *Protecting Organic Seed Integrity: The Organic Farmer's Handbook to GE Avoidance and Testing.*

> It is important to note that a testing plan really boils down to statistics and that the statistical approach differs when asking if there is any GE contamination detectable as opposed to measuring the amount of contamination present. The limit of detection (LOD) and the limit of quantification (LOQ) have different thresholds: 0.01% and 0.1%, respectively. However, confidence in these limits is a factor of sample size.
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> In terms of LOD, the probability of a PCR test detecting a single GE seed in a 3,000 seed sample is 95%. In other words, there is a 95% chance that if a 3,000 seed sample tests negative, there will be less than 0.1% GE presence in that particular sample. However, this leaves the small

probability (5%) that GE content may remain undetected. The likelihood of detection increases to 99% when the sample size is increased to 10,000 seeds.

Ideally, data collection would not rely upon funding from ACAs, seed companies, seed growers, and contracted buyers. Under the Polluter Pays Principle it is essential that the manufacturers of GE seed pay for **all** costs of testing in order to protect the organic industry. We reject any assertion that placing the financial responsibility of testing on the biotech industry is not a workable option. USDA **must** acknowledge that inextricably linked to the deregulation of GE crops are the issues of GE contamination. As the licensing body for GE crops, USDA **must** establish an indemnity fund to shift the financial burden of testing, and other contamination costs, from the organic community.

B. USDA Task Force.

OSGATA sees the wisdom of USDA striking a Seed Purity Advisory Task Force, provided that the basic principles of operation respect the organic community. The appointees to this task force should be representative of stakeholders in organic seed and the organic community, including: organic seed producers, organic plant breeders, GE testing experts, environmental scientists, organic farming advocacy groups, and organic certification representatives.

Their feasibility study can look for solutions to present barriers in implementing a seed purity standard, including best practices for testing and funding mechanisms that do not burden the organic community.

The 3-5 year action plan, after which testing would occur, is too long to wait.

C. Strengthening the Organic Seed Requirement.

Continuing broad-based exemption by the NOP for the use of conventionally produced seed creates an endless loophole in organic production, as well a persistent inconsistency to the enforcement of the organic standards. First steps to strengthening the organic seed requirement should begin with enforcement: consistent and uniform adherence to reinforcing the present organic seed requirements must be enacted by ACAs.

NOP auditors should provide training and better monitor how ACAs oversee their seed exemptions. Blanket exemptions, after three cited seed sources fail to turn up organic seed, are not acceptable. Complete seed lists of requests for exempted varieties and documented efforts to source and trial organic seed must be included in the farmer's Organic System Plan (OSP).

The ultimate goal should be a requirement for virtual 100% organic seed use on organic farms. However, we understand that exceptions will on occasion arise to allow for seed that is not available as organic, and advocate for necessary allowances to ensure organic farmers have full access to diverse seed genetics.

Compliance with the organic seed requirement and increased usage of organic seed by organic farmers will not only help mitigate GE contamination, but will also benefit the overall economic success of farmers, and the ecological well-being and resilience of organic farms.

D. Start with a Soybean Testing Project.

OSGATA would encourage NOSB to implement a testing mandate for soybean, if this project were to help expedite a seed purity standard.

As with any at-risk crop, the appropriate testing protocol should:

- Be based on scale and pre-determined contamination thresholds.
- Use scale-appropriate sampling methods to collect a representative sample of the largest number of seeds acceptable to the operation.
- Work with a trusted lab to determine which PCR test to use.

To achieve statistically significant test results, we advocate for a 10,000-seed composite sample to achieve a 99% confidence level in detecting GE content to 0.1%. This confidence level drops as the sample size decreases: a 3,000 seed sample will offer a 95% confidence level, a 1,000 seed sample offers a 63% confidence level, and a 300 seed composite sample will yield a 26% confidence level.

As with all at-risk crops, we advocate for a non-detect threshold. Any seed containing GE presence should be diverted from the organic marketplace. It does not meet the expectation of the market.

E. Other Input.

1. Establish a Seed Purity Standard Now. Moving forward, OSGATA would like to see the determination of a non-detect testing threshold for organic and non-organic seed, used in organic production.

The present lack of representative data regarding GE contamination in organic should by no means acts as a barrier to establishing a reasonable and achievable purity standard in seed today. To protect organic seed in perpetuity, action must happen immediately.

OSGATA would like to see the adoption of a non-detect threshold. OSGATA's member-approved policy on **Organic Seed Contaminated by Genetically Engineered Seed states**: *GE contamination of organic seed constitutes irreparable harm to the organic seed industry. Crops grown from contaminated seed will ultimately yield a contaminated product. GE pollution undermines the integrity of organic seed: any detectable level is unacceptable.*

Similarly, OSGATA's policy on **GE Contamination of Seed Used in Organic Production Under Commercial Availability Exemption** states: *Non-organic seed of varieties at-risk of GE contamination, used in organic production, must be demonstrated to be free of detectable GE content. Any detectable level is unacceptable.*

While a zero-tolerance purity standard constitutes a higher rate of producer risk, OSGATA's membership understands that GE contaminated seed allowed in organic systems constitutes irreparable harm to the organic seed industry by undermining the integrity of organic seed. Without genetically pure seed, organic agriculture cannot exist.

No one purchasing certified organic seed expects there to be GE presence as it is an excluded method under organic certification. While we understand that organic is largely a process-based system, similar to practices of pesticide residue sampling already enacted in organic, testing ensures consumer confidence in organic seed.

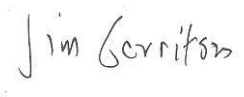
The organic label risks a credibility gap between the consumer's expectation and reality in the absence of a stringent seed purity threshold. Upholding organic seed integrity is imperative to meeting the expectation of the organic farmers and organic gardeners purchasing the seed.

Again, USDA must hold biotech financially responsible for testing.

2. Share the Duty of Maintaining Seeds Free of Contamination. To prevent GE contamination, it has been the sole responsibility of organic seed growers, organic plant breeders, and organic seed suppliers to follow protocols designed to intercept potential GE-contaminants. To this end, organic growers are often ill-equipped due to lack of transparency regarding potential sources of GE contamination. Full traceability of all GE research trials, whether private industry or university funded, and all commercial plantings of GE crops needs to be maintained and made available for public review in order for organic farmers to protect themselves.

Furthermore, protecting organic and non-GE seed integrity needs to be treated as the shared responsibility that it is. The USDA is responsible for protecting the interests of organic farmers, including non-commodity and smaller farmers, in light of threats of GE contamination. With this in mind, measures to prevent contamination need to be adopted by farmers choosing to grow GE seed. USDA must establish and mandate such best practices for those that benefit from the growth of GE crops to prevent unwanted GE contamination pollution from harming the commons as represented by the organic and non-GE sectors.

Respectfully submitted on behalf of OSGATA's certified organic members,



Jim Gerritsen, President
OSGATA