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USDA-AMS-NOP

RE: Ad-hoc GMO Subcommittee – Discussion Document: GMOs and Seed Purity

CROPP Cooperative/Organic Valley appreciates and commends the Ad hoc GMO Subcommittee for raising and investigating this important issue. We have long recognized that clean seed represents one of the most important factors in our efforts to keep GMOs out of organics. As you will see from our specific comments below, we believe that the NOP should establish a "non-detect" standard for seed used in organic production. Based on extensive discussions with the seed industry we are confident that elite seed genetics that meet such a standard can and will be available to organic producers.

Responses to specific discussion questions:

1. Is there a need to establish a seed purity standard or protocol to ensure that planting seed meets the requirements of the NOP rule? Explain your answer.

We believe there is a need to establish a transgenic purity standard (no detectable GMO traits in the sample) for seed used in organic production for the reasons listed below. We do not believe it is appropriate for the NOP to establish seed production protocols because the seed industry does a very good job of figuring out how to produce seed that meets market expectations. The responsibility of our industry is to establish and communicate such market expectations to the seed industry

2. What is currently known about the level of GMO contamination of seed used by organic farmers and any associated testing of seed on the farm or in the supply chain? Comments from farmers, seed companies, or buyers describing the following would be relevant:
• the scope of testing (e.g. frequency, methods, costs);
• the threshold used for rejection; and
• the outcome of seeds that are rejected.

This question poses a substantial Catch 22 dilemma for respondents because to discuss contamination risks damaging the organic industry while refraining to discuss contamination inhibits progress on this important issue. We do know – from testing seed ourselves and from seeing the test results of others – that unwanted transgenic material has made its way into the supply of seed used in organic production.

Although little corn seed currently meets our proposed standard of "no GMO traits found in a 3000 seed sample as determined by sq-PCR", we remain confident that such a standard is feasible and achievable provided the organic industry coalesces around it and provides a 5 year phase in period to allow seed suppliers time to adapt.

3. What testing methods are appropriate to use in order to determine and label for seed purity and to verify compliance to a seed purity standard?

The appropriate testing method for testing transgenic purity in seed is sq-PCR interpreted by SeedCalc 8. Protein-based strip tests are appropriate for initial screening but lack the level of detection needed to fully verify a non-detect standard. Real time PCR is inappropriate for seed testing because it fails to distinguish between seed content and non-seed contaminants and because it cannot filter out stacked traits and copy number distortions.

4. How would an example, such as proposed in Discussion point #7 above, affect your farm or business?

Absent the universal adoption of such a standard for transgenic purity in seed by the whole organic industry and absent seeing the results of a concerted effort by the seed industry to meet that standard, any response to this question would be highly speculative and unreliable at this point in time. One of the anticipated objections to adopting such a standard will be the fear of further diminishing access to needed genetics. We accept that objection and would argue that advocating for the adoption of a transgenic purity standard for seed such as proposed in Discussion point #7 above requires a simultaneous effort to secure a commitment from the seed industry to insure the market availability of a wide range of genetics that meet that standard.

5. Is there a better suggestion for a seed purity standard than that proposed in Discussion point #7 above? Describe.

We believe the standard proposed in discussion point #7 is the most effective and defensible standard yet proposed to protect organic integrity. Regardless of the final sample size established, a "non-detect" standard is essential to maintaining consumer confidence that all feasible measures have been taken to prevent the contamination of organic seeds with GMO traits.

6. What is known about relevant sampling, testing, and detection level protocol necessary to implement such a standard?

We have conducted an extensive investigation of sampling and testing methodologies. Of particular importance are the distinctions between semi-quantitative PCR analysis (sq-PCR) and real-time PCR analysis (PCR or q-PCR). The implications for potentially mis-stating GMO presence in q-PCR are substantial, and are easily avoided by adopting the widespread use of sq-PCR analysis as the standard test method for seed.

7. What training, guidance, or resources do certifiers need to verify compliance to a seed purity standard?

Ideally, verifying compliance with a seed transgenic purity standard would be performed by an independent third party already employed to verify seed trait purity. For example, independent third party verification of the Purity Plus standard (a non-detect standard very similar to the proposed standard in the discussion paper) is now available through the Association of Official Seed Certifying Agents (AOSCA.)
Absent such independent third party verification for alfalfa seed, one alfalfa seed company has

indicated they will state their compliance with Organic Valley/CROPP Cooperative's non-detect standard on their seed tag. We do not anticipate the need for organic certifiers to become technical experts on seed testing although it will certainly be useful for certifiers to have the guidance of a clear standard and testing methodology.

8. What approach could an organic seed producer use to safeguard against GMO contamination from an adjacent or neighboring conventional farm? Buffer zones, distance, planting time, pollination factors, and contamination possibilities/solutions could be included in your response.

First of all, a distinction must be made between crops. One of the most challenging field crops for which to produce seed that meets a non-detect standard is corn.

- *For corn seed production our understanding is that isolation and access to clean genetics in foundation seed are the two most important factors.*

We continue to have confidence that the seed industry can and will adopt practices and protocols that insure that the commercial seed they produce meets market expectations. Our job is to clearly communicate to them what our needs and expectations are.

Thank you for the opportunity to comment on this very important discussion document.

Sincerely,

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