



30 September 2011

Re: 2011 Organic Listening Session Remarks

Submitted via email to: <http://www.ams.usda.gov/2011OrganicListening>

Center for Food Safety Comments to the National Organic Program Listening Session

These comments are presented on behalf of the Center for Food Safety (CFS), a non-profit membership organization that works to protect human health and the environment by curbing the proliferation of harmful food production technologies and by supporting organic food and agricultural production systems. Our online True Food Network has grown rapidly to include 200,000 people across the country that participate in policy-making discussions on organic, grow organic food, and regularly purchase organic products.

Center for Food Safety's Litmus Test of Organic

CFS believes that the ability to strictly adhere to organic agriculture and food production standards must drive the types of certified organic products that are made available to consumers in the marketplace. And, the desire to create and market a product that is "certified organic" must not compel the contortion or dilution of existing organic standards.

This is our litmus test for ensuring organic integrity.

As the lead government program charged with ensuring organic integrity,ⁱ CFS recognizes the challenges the National Organic Program (NOP) faces trying to balance the diverse needs of stakeholders in its decision-making process. We also understand that issues affecting organic integrity may at times be out of the Program's direct control. Still, we believe that the NOP should be more proactive in its efforts to protect organic integrity with respect to four critical issues: 1) preventing contamination of organic crops and seed by genetically engineered (GE) organisms, 2) directing government-funded organic research to facilitate the sunset of materials on the National List, 3) prohibiting organic aquaculture in open ocean net pens and, 4) prohibiting the use of nanotechnologies and nanomaterials in organic.

1. GE contamination of organic crops and seed.

As rightly stated by NOP Deputy Administrator, Miles McEvoy, in his Policy Memo on Genetically Modified Organisms (GMOs) and Organic:

Since organic certification is a process-based standard, presence of detectable GMO residues alone does not necessarily constitute a violation of the regulation. The NOP relies on organic certifiers and producers to determine preventative practices that most effectively avoid contact with GMOs on an organic operation.ⁱⁱ

Although technically correct, this narrow response to the growing threat of GE contamination of organic is simply not enough to retain public confidence in the USDA organic seal, in the long-run. A fourth generation cattle rancher, Beth Robinette, had this to say to the NOSB at its Seattle Meeting in response to the NOP's recent Policy Memo on GMOs:

I am here today to ask you to stand in solidarity with farmers and ranchers who face the imminent threat that GMOs face to producers...[C]oexistence with GMOs is not possible. There is no way for me to prevent GMOs from contaminating my fields. If nothing is done, then very soon no farmer or rancher who grows alfalfa can make a claim that their crops are GMO-free. In an effort to protect organic producers, the NOSB has stated that GMOs will be allowed in organic food as long as they are the result of contamination and not intentional introduction. This erodes the meaning of "organic."ⁱⁱⁱ

Along with Robinette, nearly 100 other people submitted comments outlining their concerns regarding GE contamination of organic for the NOSB's consideration at its April meeting, even though the issue was not on the agenda. These unsolicited comments were received from the full spectrum of organic stakeholders, from farmers and ranchers, to retailers and consumers. CFS agrees with the sentiment expressed that GE has no place in our nation's organic farming and food systems. That is why they are appealing to the NOSB and NOP to take action.

Research has shown, and it is widely recognized by GE scientists and the biotechnology industry, that GE contamination is inevitable as long as GE crops are grown, unrestricted in open fields.^{iv} This argument is corroborated by research scientists, by the U.S. Government Accountability Office and by the partial list of contamination events listed in Appendix A. In its 2008 report, the GAO concludes: "Unauthorized releases of GE crops in to food, animal, feed, or the environment beyond farm fields have occurred, and *it is likely that such incidents will occur again*" (emphasis added).^v

GE contamination results from a variety of human, animal, and environmental related activities, across the commodity chain, from seed to plate. Once released into the environment, transgenes cannot be recalled. Their traits are uncontrollably passed on to subsequent generations of

commercial crops, wild relatives, and feral plants.^{vi} Yet, the burden for GE contamination prevention rests solely on the shoulders of organic producers, even though they do not benefit from the use of GE technology. On the contrary, organic farmers suffer harm when organic seed, crops, and food become contaminated and they cannot sell their products in markets that restrict GE products. Farmers may also face legal recourse from companies that own the intellectual property rights of the escaped transgenes that contaminate their organic farm. The organic community wants NOP to do more to protect from organic these unintentional and inadvertent GE contamination events. It is not enough to simply state as policy that since “organic is a process-based standard, presence of detectable GMO residues alone does not necessarily constitute a violation of the regulation.” It is the NOP’s job to actively protect organic integrity.

The National Organic Standards Board’s (NOSB) “Principles of Organic Production and Handling,” which guide the creation and implementation of organic standards, further underscores the incompatibility of GE with organic production systems:

Genetic engineering (recombinant DNA technology) is a synthetic process designed to control nature at the molecular level, with the potential for unseen consequences. As such, it is not compatible with the principles of organic agriculture (either production or handling). Genetically engineered/ modified organisms (GEO/GMOs) and products produced by or through the use of genetic engineering are prohibited.^{vii}

The organic community understands this incompatibility and recognizes the inevitability of GE seeds and crops to migrate beyond their intended destination of the farm. That is why they expect the NOP to do more to prevent GE contamination to ensure organic integrity with respect to GE contamination prevention.

To that end, CFS urges the NOP and APHIS to adopt a Memorandum of Understanding (MOU) of “shared responsibility” for preventing GE contamination of organic seed and crops. This MOU would outline the joint responsibility of the NOP and APHIS in preventing GE contamination and would require GE technology users to jointly share responsibility for contamination prevention along with organic farmers, who are already doing so. It would also set the stage for USDA to develop a set of mandatory contamination prevention practices for all who grow GE crops and for establishing training and education programs to ensure implementation of those practices.

We further urge the NOP to support the institution of liability regulations whereby GE patent holders justly compensate organic farmers for contamination. We believe that the Plant Protection Act (PPA) affords USDA the appropriate authority to prevent contamination and to establish policies for contamination prevention.

2. Influencing the Direction of Government Funding of Organic Research.

As an advocate of organic integrity, CFS finds it discouraging to see the NOP repeatedly extending approvals for substances on the National List (NL), instead of sunseting them, due to a lack of

available alternatives. Antibiotic use in organic apple and pear production is a case in point. After remaining on the NL for more than ten years the NOP, again, extended their use until 2014. Unfortunately, we are already hearing from organic apple and pear growers that they are not likely to meet this deadline, due to the absence of viable alternatives.

Consumers view organic as the healthy alternative for the many highly processed foods on the market today. Once they decide to purchase organic foods, they do not expect them to be grown with antibiotics, much like they do not expect them to be irradiated or genetically engineered. The continued approval of antibiotics, and the long list of other synthetics approved for use in organics, is another area where we believe the NOP can do more to ensure organic integrity. A whole systems approach is needed to research and troubleshoot problems in organic production systems and to find solutions that are not mere input substitutions. The NOP needs to combat this trend towards expanding and entrenching materials on the NL which threatens organic integrity.

We urge the NOP to initiate a collaborative process with Research, Education, and Economics (REE) Mission Area staff whereby the NOP communicates to them the organic sector's pressing research needs on a regular basis. That way, government-funded organic research would be directed towards solving entrenched issues within the NOP and factored into the Request for Applications development process for both OREI and the Organic Transition Program. This would also facilitate the sunseting of materials on the National List, which is sorely needed.

3. Prohibiting Organic Aquaculture in Open Ocean Net Pens.

CFS believes that farmed, carnivorous fish can never be certified organic because they cannot be grown in open ocean net pens without escapes or without significantly and adversely impacting aquatic ecosystems. Therefore, we do not support the NOSB's recommendation for the NOP to draft organic carnivorous fish farming standards.

The NOSB's recommendation to allow wild caught fish, fish meal, and fish oil to be used in carnivorous organic aquaculture contravenes the spirit and intent of OFPA, which requires all certified organic species to be fed a 100% organic diet. Feeding wild caught fish and fish products to farmed fish would increase pressure on already over-exploited or recovering fisheries that form the base of the aquatic food web, affecting a wide range of species from seabirds to fish to sea mammals. It would also undermine OFPA's biological diversity conservation requirements, a centerpiece of organic production systems.

CFS urges the NOP to take a proactive stance on organic aquaculture to ensure organic integrity by rejecting the NOSB's recommendations. Instead, we urge the NOP to direct the NOSB to return to the drawing board and to develop recommendations for land based recirculating systems of organic herbivorous aquaculture. Such farmed fish would then be grown in highly controlled systems where inputs, outputs, and fish health and welfare can be monitored and regulated to meet environmental standards.

4. Prohibiting Nanotechnologies and Nanomaterials in Organic Production Systems.

Consumers who want to eat the healthiest food on the market buy organic because they feel confident that certified organic food has not been produced using harmful food production technologies. The role of the NOP is to ensure that such technologies, and their associated products, are not allowed in organic production systems. Nanotechnology and nanomaterials fall into that “harmful” category and we are pleased that the NOSB recognized the dangers associated with nanotechnology, categorized nanomaterials as synthetic, and recommended that they are both prohibited in accordance with OFPA. We are not so pleased with the NOP’s vague response to the NOSB’s recommendation, in the NOP Deputy Administrator’s December 17, 2010 Memo to the Chair of the NOSB.^{viii}

Although we believe that the NOP memo accepts the NOSB’s recommendation that nanomaterials are synthetic and that the products of nanotechnology are prohibited under OFPA, we urge the NOP to be more explicit on this matter and provide clear guidance in support of its decision. CFS is concerned that in the absence of a strong public statement by the NOP, with supporting guidance on nanotechnology, organic integrity could be undermined or the NOP’s intent misinterpreted by certain sectors of the organic industry.

It is imperative that the NOP provide clarity on the prohibition of nano in organic by adopting a definition that ensures protections for human, animal health, and the environment. We do not believe that the NOP needs to wait for “legal agreement across regulatory agencies”^{ix} before it adopts its own definition for the purposes of organic regulation and certification. In fact, the NOSB’s definition is based upon sound scientific research and debate, and it accurately reflects current scientific thinking about what constitutes nanotechnology, as the NOP’s Memo argues is necessary to reinforce the prohibition.

CFS urges NOP to adopt the NOSB’s recommended definition of engineered nanomaterials and include the definition in its guidance on nanotechnology. The NOSB defines a nanoparticle in the 1-300 nm range because that is the largest size particle demonstrated to cross animal cell walls. A 2006 study by Dr. Warheit and others found that marked ‘nano’ properties of nano-titanium dioxide (TiO₂) remained even at 300 nm.^x Additionally, a study published in *Environmental Health Perspectives* this year demonstrates that nanoparticles – specifically nano-polystyrene, which is currently being tested for use in poultry feed – can cross the placental barrier at 240 nm and pass from pregnant mice to the fetus.^{xi} Excluding traditional food processing techniques as well as naturally occurring nanoparticles, which clearly differ from those deliberately manufactured, as outlined in the NOSB’s recommendations, will help to ameliorate NOP concerns about what is included and excluded in the definition.

The use of nano substances in primary food packaging and in food contact substances represents a major and growing source of concern for organic consumers. Packaging is a predominant category where food-related nanotechnologies are being deployed to extend a product’s shelf life, particularly through the use of antimicrobials like nano-silver. This type of nano packaging is designed as a delivery system whereby the nanoparticles embedded in the packaging act as a

preservative, anti-microbial or anti-fungal, among other things. As such, we believe that the authority already exists within the organic rule to prohibit nano antimicrobials in packaging in section 205.272 (b) (1). The rule specifically states that packaging materials and storage containers or bins containing a synthetic fungicide, preservative or fumigant are prohibited for use in the handling of any organically produced agricultural product and ingredient. This may be an area where the NOP may need to cooperate with other agencies, such as FDA, which regulates food contact substances, and the EPA, which regulates anti-microbial substances. However, the NOP should insist that nanomaterials that can migrate into food should not come into contact with organic food.

The Woodrow Wilson Center's Nanotechnology Consumer Product Inventory finds that over 1,300 manufacturer-identified nanotechnology-enabled consumer products have entered the marketplace to date.^{xii} Consumers who wish to avoid foods produced, packaged or incorporating nanotechnologies and nanomaterials will look organic as a way to avoid the use of harmful food production technologies. CFS urges the NOP to quickly implement the NOSB's recommendations on nanotechnologies and nanomaterials and adopt its definition to avoid confusion within the organic sector and to ensure organic integrity.

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Appendix A

Roundup Ready Alfalfa Contamination Events

Year [Ref.]	No. of episodes	Testing firm	Description	Notes
2006 [1]	11 seed fields	Dairyland farmers	11 of 16 seed production fields tested by farmers were positive for RR gene: MT (9), ID (1), WY (1). Seed to seed gene flow occurred at distances of 950 feet to 1.5 miles	RR gene levels from 0.2%-0.9%, with 1 "trace"
2008 [1, 2]	6 seed lots (3% of seed lots tested)*	Cal/West	Testing conducted in CA, OR, WA, ID, NV, MT, WY, Canada, Australia. Not specified where contaminated lots found.	Strip tests, no levels given
2008 [1, 2]	6 research seed lots	Cal/West	Woodland, CA, in Yolo County, where there is no commercial alfalfa seed production. All 6 lots tested were positive for RR	RR hay-to-seed gene flow
2008 [3]	9 feral alfalfa populations	Phil Geertson	Feral alfalfa plants in various locations in Twin Falls & Canyon County, ID and Malheur County, OR. 9 of 10 plants tested were positive for the RR gene	PCR testing
2009 [1, 2]	> 24 seed lots (> 12% of > 200 seed lots)	Cal/West	Testing conducted in CA, OR, WA, ID, NV, MT, WY, Canada, Australia. Not specified where contaminated lots found.	Strip tests, no levels given
2009 [1, 2]	3 research seed lots	Cal/West	Woodland, CA, in Yolo County, where there is no commercial alfalfa seed production. 3 of 10 seed lots positive for RR (preliminary results)	RR hay-to-seed gene flow
NR [1]	1 seed field	Cal/West	Foundation seed, California	0.01-0.03% RR
NR [1]	2 seed fields	Cal/West	Washington, 2 of 3 seed fields seeded from the CA foundation seed lot noted directly above.	0.01% RR
NR [1]	1 or more seed fields	Cal/West contractor	"Fields in proximity" cited as source, perhaps RR alfalfa hay fields, though not specified	RR gene levels 0.5%-1.5%
TOTAL	> 63 episodes			

NR = not reported. Sources: [1] Final Environmental Impact Statement on Roundup Ready Alfalfa, USDA APHIS, December 2010, Appendix V, V-64 to V-65; [2] Cal/West Seeds Newsletter, Winter Issue 2010; [3] "Roundup Ready Contamination of Feral Alfalfa," report and affidavit by Phil Geertson, May 28, 2009 (report has description and photographs and GPS coordinates of sites tested, and Genetic ID results of PCR testing of feral alfalfa for the RR gene; Cal/West reports that 3% of tested seed lots were positive for the RR gene, but does not give the number of seed lots tested. We assume 200, based on the number of lots tested in 2009: 3% of 200 = 6.

Of the 63 detected contamination events, 11 were detected in 2006. ***At least 48 contamination episodes were detected in 2008 and 2009, after court-ordered gene flow mitigation measures were imposed (in 2007).*** With complete deregulation, those measures are no longer in place, thus gene flow is still more likely. Detected GE gene flow events are a small fraction of those that actually occurred. Cal/West [2] states: "The significant increase from 2008 to 2009 in seed lots showing the presence of the GMO trait is significant and foreshadowing of what [we] should expect in the future." Cal/West reports that hay-to-seed gene transmission was responsible for the contamination of 9 research seed lots in 2008 and 2009. Cal/West also notes: "It is becoming clear that this gene or any gene can easily spread and that we are going to have to take extraordinary measures when producing foundation seed and commercial seed for GMO sensitive markets."

End Notes

- ⁱ The stated mission of the NOP on its website is: “Ensuring the integrity of USDA organic products in the United States and throughout the world.” <http://www.ams.usda.gov/AMSV1.0/nop>.
- ⁱⁱ McEvoy, Miles. (2011) “Policy Memorandum: Clarification of Existing Regulations Regarding the Use of Genetically Modified Organisms in Organic Production and Handling,” 15 April, p. 1.
- ⁱⁱⁱ Robinette, Beth. (2011) Public testimony presented at the USDA Agriculture Marketing Service Meeting of the National Organic Standards Board, 23 April, Seattle, WA, transcripts, pp. 333-336. <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5091171&acct=nosb>
- ^{iv} Marvier, Michelle & Rene C. Van Acker. (2005) “Can Transgenes be Kept on a Leash?” *Front Ecolo Environ*, 3,2: 96-106.
- ^v Government Accounting Office (GAO). (2008) “Genetically Engineered Crops: Agencies are Proposing Changes to Improve Oversight, but Could Take Additional Steps to Enhance Coordination and Monitoring, November, GAO-09-60, p. 1.
- ^{vi} Alteri, M. A. (2005) “The Myth of Coexistence: Why Transgenic Crops are not Compatible with Agroecologically Based Systems of Production,” *Bulletin of Science, Technology and Society*, 25. N4: 365.
- ^{vii} National Organic Standards Board. (2001) “Principles of Organic Production and Handling,” adopted October 17, 2001, 1.11.
- ^{viii} McEvoy, Miles. (2010) “Memorandum for the Chairperson of the National Organic Standards Board,” 17 December, pp. 9-10.
- ^{ix} Ibid.
- ^x Warheit DB; Webb TR; Sayes CM; Colvin VL; Reed KL. (2006). Pulmonary instillation studies with nanoscale TiO₂ rods and dots in rats: Toxicity is not dependent upon particle size and surface area. *Toxicol Sci* 91: 227-236.
- ^{xi} Wick, et al., (2010). Barrier Capacity of Human Placenta for Nanosized Materials. *Environmental Health Perspectives*. 118: (3).
- ^{xii} The Woodrow Wilson International Center for Scholars Project on Emerging Nanotechnologies “Nanotech-enabled Consumer Products Continue to Rise” <http://www.nanotechproject.org/news/archive/9231/>