



National Organic Coalition

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SUBMITTED ELECTRONICALLY

Regulatory Analysis and Development, PPD
APHIS, Station 3A-03.8
4700 River Road Unit 118
Riverdale, MD 20737-1238

RE: Docket No. APHIS-2007-0044
Comments on the Draft Environmental Impact Statement (EIS) Recommending
Unconditional Release of Genetically Engineered Alfalfa

cc: USDA Secretary, Tom Vilsack
USDA Undersecretary, Kathleen Merrigan
USDA Deputy Administrator, National Organic Program, Miles McEvoy

On behalf of the undersigned members of the U.S. organic community, we are writing to express our serious concerns about damage to organic integrity and to organic markets that would result from the proposed unconditional approval of Genetically Engineered, Roundup Ready Alfalfa (GE alfalfa). Despite its mission to protect *all* American agriculture, the Department of Agriculture (USDA) has unfortunately and fundamentally failed to account for the foreseeable significant harm to the organic community from this proposed action.

USDA's proposed deregulation of GE alfalfa will have far-reaching consequences for the future of organic farmers, consumers, and the entire organic industry. Protecting organic alfalfa is particularly important, given its central role as the main source of forage for the organic dairy industry. Additionally, since this is the first analysis of its kind to be conducted by USDA on any GE crop, we are alarmed at the future prospects of USDA approaching all assessments of the impacts of GE contamination on the organic foods sector in an equally dismissive manner. This EIS process affords USDA an important opportunity to develop and implement an effective strategy to prevent further GE contamination of the organic seed and food supply and it is imperative that the USDA get it right.

The other troubling aspect of the draft EIS is the USDA's complete failure to acknowledge the need for companies responsible for GE contamination to be held liable for their actions and for

mandatory enforcement actions to be taken against liable parties. This indefensible position and the stated assumption that liability for GE contamination should be borne solely by organic and non-GE conventional farmers is absolutely unacceptable. Moreover, it puts the future viability of the entire organic industry at risk.

Accordingly, we, the representatives of environmental, sustainable agriculture, farmer, consumer, food safety, and seed organizations as well as major organic food producing and retail companies, are writing to explain how USDA's proposed deregulation of GE alfalfa will significantly harm our industry, our markets, and undermine consumer confidence in the USDA certified organic label. Based upon our critical assessment of the draft EIS, we urge you to: 1) deny the commercial approval of GE alfalfa because no evidence exists that this novel technology can be contained or that USDA can protect farmers and markets from contamination and, 2) correct the egregious errors and faulty assumptions that underpin your analysis of the impact of GE contamination on organic and non-GE crops and markets for any future GE permit requests.

Organic Consumers Do Not Want And Will Reject GE Contaminated Food

USDA claims that there is no evidence that consumers care about contamination of organic alfalfa and foods derived from Monsanto's GE Roundup Ready (RR) alfalfa. We know better. The prohibition of genetic engineering is a fundamental tenet of the Organic Standard. In fact, USDA's failure to exclude GE crops from the first version of the organic rule was one of the main reasons that 275,000 people spoke up in 1997—at the time, the largest outpouring of public participation in the history of U.S. administrative procedure. Consumers *care deeply* about organic integrity and GE agriculture is fundamentally at odds with organic. Consumers have established an implied zero tolerance for GE material in organic products, and this is reinforced by polling data showing that consumers buy organic food to avoid GE ingredients. One poll indicated that more than 75% of consumers believe that they are purchasing products without GE ingredients when they buy organic.¹ Another public opinion poll of “Consumer Attitudes and Behavior, Five Years Later & Into the Future,” found that one of the top five reasons people buy organic is to avoid genetically modified products.² The organic industry risks losing its credibility and markets if the USDA allows GE material to make its way into organic products.

USDA also claims that consumers will not reject GE contamination of organic alfalfa if the contamination is unintentional or if the GE material is not transmitted to the end milk or meat product. Again, we strongly disagree. The Organic Standard requires that livestock feed fed to animals to produce meat, milk, eggs, and other animal products must be 100 percent organic. Protecting organic alfalfa, the main source of feed for the organic dairy industry, is crucial to the health and survival of this important sector of U.S. agriculture. A farmer, commenting to the U.S. District Court, noted that if his alfalfa forage were contaminated with RR genes, he would not be able get organic or non-GE certification. Because he owns an organic dairy and products business and because he is enrolled in a non-GE labeling and verification program, GE contamination would have a devastating impact on his business.³

In the legal ruling that required USDA's EIS the Court found that to "farmers and consumers organic means not genetically engineered, even if the farmer did not intend for his [or her] crop to be so engineered." Whether or not the end product is impacted is not the issue. Farmers' fundamental right to sow the crop of their choice is eliminated when a crop becomes contaminated with transgenes. So is the public's ability to support meaningful organic food and feed production. Public trust in the integrity of the organic label is essential to the continued vitality of the organic foods industry and we have no doubt that consumers will reject GE contamination of organic by any means or at any stage in organic food production.

USDA's Analysis Is Fundamentally Flawed

Although USDA says it supports "coexistence" of all types of agriculture, USDA fails to account for or adequately assess the direct and indirect impacts of GE contamination on both domestic⁴ and export⁵ food markets. The Agency's draft EIS fails to even consider any future scenarios that would include *regulatory and/or statutory* protections from GE contamination for organic and conventional farmers and exporters leaving the organic industry and consumers of organic foods with no protections from GE contamination whatsoever.

Research has shown that transgenes cannot be recalled once released into the environment.⁶ Acknowledgement of this simple yet important fact has been omitted from USDA's draft EIS along with an assessment of what measures, if any, can be taken to fully protect organic and conventional agriculture from contamination, loss of markets, and a farm's right to sow the crop of her or his choice, provided that it does not impinge upon the rights of others.

Harm To Small And/Or Organic Farmers And Businesses Is Significant

USDA concludes that GE alfalfa will cause production to shift to larger farms (that can afford built-in isolation distances) and conventional growers who are not threatened by GE contamination, but it erroneously concludes that these economic shifts are not significant. This is simply not the case. For example, Cropp Cooperative is comprised of 941 organic farmers located in 28 states, 669 of which are organic dairies and 163 of which are organic meat or pork producers. They market nationally and internationally under the brand name Organic Valley. With annual sales of \$333 million, and a growth rate of 38% between 2005 and 2007, they are the number one selling organic brand in the Natural Food Retail Channel.⁷ In a court declaration on the economic impacts of GE alfalfa, Organic Valley's CEO, George Siemon states: "If Roundup Ready alfalfa is permitted to be sold commercially, and this causes contamination of certified organic alfalfa stands, or seed stock, this will devastate the organic farmers who market their milk through CROPP Cooperative." The same situation holds true for all other organic dairies across the country.⁸

Small and family farms are the backbone and future of American agriculture and must be protected. In many communities, they provide the freshest food available to local residents. Such farms also serve as the gateway for new generations of farmers to grow our nation's food and offer opportunities for young people to remain in rural communities, actively contributing to local economies and the cultural fabric of rural America. Moreover, organic farms provide

multiple benefit to the communities in which they are located including: healthy food, economic opportunities for family farmers and urban and rural communities, and a farming system that improves the quality of the environment for present and future generations.

Monsanto Does Not Protect Farmers From Contamination

USDA claims that “best practice” requirements contained in Monsanto’s seed contracts are sufficient to prevent GE contamination and the EIS asserts that there is no evidence to the contrary. This is simply not true. The Agency itself acknowledges that GE contamination may occur and it includes studies that show how honey bees can cross-pollinate at distances over 6 miles. Alkali bees cross-pollinate at 4-5 miles.⁹ All of those distances are much further than those included in Monsanto’s “best practices.”

In cases where GE crops were approved, contamination of organic and conventional seeds and crops has been widespread and this has been documented around the world.¹⁰ A recent study of GE contamination described 39 cases of contamination in 2007 alone, and more than 200 within the last decade.¹¹ Harm incurred by organic farmers and food companies from GE contamination include: lost markets, lost sales, lower prices, negative publicity, withdrawal of organic certification, expensive testing and prevention measures, and product recalls, among other things.¹² In at least one case —canola — pervasive GE contamination eliminated an entire organic sector. According to an article in the journal *Nature Biotechnology*: “[T]he introduction of GE herbicide-tolerant canola in Western Canada destroyed the growing, albeit limited, market for organic canola.”¹³

In another instance, the alfalfa seed fields of Dairyland Seed Company, Inc., a major alfalfa seed producer, were contaminated at eleven to sixteen sites at distances up to 1.5 miles; this contamination occurred despite the required 900 foot isolation distance. The seed fields of Cal/West Seeds, a farmer (seed grower) owned cooperative and major alfalfa seed exporter, were contaminated in a California foundation seed field and in a Wyoming seed field.¹⁴

The extent to which conventional and organic seed has been contaminated by GE material is unknown because it has not been comprehensively examined. Even so, studies indicate that GE contaminated conventional seeds, which at times are used by organic producers (i.e., corn, soybeans, canola) are pervasively contaminated with GE material. A 2008 US Government Accountability Office (GAO) Report documents six events of GE crops contaminating the food and feed supply:

- 2000 StarLink Corn incident, causing \$26 to \$288 million in economic damages;
- 2002 Prodigene Corn incident where a GE corn designed to create a pig vaccine protein contaminated non-GE corn;
- 2004 Syngenta Bt Corn never approved for commercial use was illegally sold for several years and planted on 37,000 acres;
- 2006 Event 32 Corn incident where 72,000 acres were planted with an unapproved GE pesticidal corn; and

- 2006 Liberty Link Rice 601 and 604 episodes where unapproved GE rice contaminated export rice stocks.

These contamination events are not isolated incidents, as many biotechnology proponents argue. Rather, as the GAO explains, “the ease with which genetic material from crops can be spread makes future releases likely,”¹⁵ contaminating the seed supply and supplanting all forms of non-GE agriculture.

USDA Claims To Support “Coexistence,” But Places The Entire Burden on Organic Farmers

USDA does not provide adequate protections from seed contamination and sets a dangerous precedent that would undermine the integrity of the organic seed supply for all crop types for which there are GE crop counterparts. The entire burden for protecting the integrity of organic products rests on the shoulders of organic and non-GE farmers whose practices have been the mainstay of U.S. agriculture and that have successfully fed our nation and contributed to the global food supply for centuries. Since the current regulatory framework for GE crops fails to prevent contamination, to duly assign liability to technology owners, and does not require segregation of GE and non-GE crops it, by default, puts our entire food system at the mercy of this new and experimental GE technology. Thus, contrary to USDA claims of supporting “co-existence,” the EIS allows GE to trump rather than to “co-exist” with existing, proven agricultural technologies.

USDA says that non-GE farmers simply need to change their planting practices and harvesting practices to “avoid simultaneous flowering” with the GE alfalfa planted in a neighbor’s field. It also puts the burden on existing non-GE and organic farmers to “disallow or remove commercial beekeepers’ hives anywhere near your alfalfa field.”¹⁶ This is an unreasonable expectation of non-GE farmers, particularly since the burden for preventing contamination should rest with the growers and owners of this novel GE variety, and not with those who have been planting conventional and organic varieties for centuries. USDA has completely ignored our desire – and right – to grow GE-free seed and raise GE-free agricultural products.

USDA dismisses the potential for GE alfalfa to cross-pollinate with feral alfalfa or for GE alfalfa volunteers to escape and establish feral populations.¹⁷ In both cases, this feral GE alfalfa can serve as a bridge for transferring the RR trait back to conventional or organic alfalfa years later. The agency states that if such feral RR alfalfa does arise, it can be controlled with non-glyphosate herbicide, a tool that is unlikely to be available to organic farmers whose desire and ability to use herbicides is strictly limited in the Organic Rule.

The burden of protecting organic seeds rests with the organic seed producer. There is no mandatory regulation, inspection or enforcement of Monsanto’s so called “best practices” for growers and patent holders of GE alfalfa seeds. USDA dismisses any cause for concern about GE seed contamination¹⁸ in the absence of any concrete evidence to support the claim. To the contrary, USDA specifically states that it does not have economic data or related information to demonstrate the full range of economic ramifications to organic producers due to market losses

and increased production costs for protecting the integrity of organic crops and seeds from GE gene flow.¹⁹

GE Alfalfa Will Increase Pesticide Use To The Detriment Of Human Health And The Environment

USDA acknowledges that introduction of RR alfalfa will increase the use of the herbicide, Roundup. However, USDA claims that the increase is insignificant and that Roundup will replace other, more toxic herbicides. They are wrong and evidence exists to the contrary.

The majority of GE crops grown today are RR and their widespread introduction on farms has vastly increased Roundup use, fostering an epidemic of Roundup-resistant weeds. To kill Roundup-resistant weeds requires higher doses of Roundup, often in combination with other even more toxic herbicides. Over the past 13 years, the planting of RR crops has *significantly* increased overall herbicide use on corn, soybeans and cotton - by 383 million pounds.²⁰ The wholesale deregulation of RR alfalfa will only make matters worse by substantially increasing Roundup's use across the country

As USDA's own studies show, *the great majority of alfalfa is currently grown without the use of any herbicides at all.*²¹ Therefore, the planting of RR alfalfa will increase Roundup applications and exacerbate the resistant weed epidemic without displacing the use of other herbicides.

Roundup has been associated with increased rates of several cancers in pesticide applicators (e.g. non-Hodgkin's & multiple myeloma),²² and it is highly toxic to frogs at field-relevant concentrations.²³ The Environmental Protection Agency (EPA) is currently re-assessing the safety of glyphosate, the active ingredient in Roundup, for the first time in over 15 years. USDA should wait for this new EPA assessment before it considers approving RR alfalfa.

Finally, USDA has failed to assess the foreseeable impacts on organic farmers of pesticide drift from the dramatic increase in Roundup used on Monsanto's RR alfalfa.

Conclusion

Organic agriculture provides multiple benefits to society at this critical moment when solutions to address the global and economic crisis are so desperately needed. Notable benefits of organic include: the production of healthy, nutritious, and abundant food; economic opportunities for family, small-scale, and young farmers; increasing contributions to local and regional economies and U.S. export markets; and enhancements to environmental quality, climate change mitigation, biodiversity conservation, and the life opportunities of future generations. Moreover, organic is the fastest growing sector in U.S. agriculture, increasing between 15% and 20% annually for more than a decade.²⁴ To risk tainting organic with GE contamination is irresponsible government policy, particularly in light of USDA Secretary Vilsack's recent commitment to allocate \$234.5 million to "help promote American food and agriculture products overseas" as a way to better our economy.²⁵ In Europe, Japan, and elsewhere, these products must not be GE contaminated not only because of strict EU regulations but also because of widespread consumer rejection of GE agriculture and food.

We strongly urge USDA to:

- Deny the commercial approval of GE alfalfa because no evidence exists that this novel technology can be contained or that USDA can protect farmers and markets from contamination, and
- Correct the egregious errors and faulty assumptions that underpin USDA's analysis of the impact of GE contamination on organic and non-GE crops and markets for any future GE permit requests.

Representatives of the undersigned letter would be happy to meet with you to discuss what constitutes true protections for all aspects of the organic supply chain. There is no more opportune time for the U.S. government to both publicly acknowledge the benefits of organic and to commit to the adoption of concrete policies that ensure organic remains a protected sector of our economy in perpetuity.

Sincerely,

National Organic Coalition
Center for Food Safety

¹ Organic Community Comments to APHIS, *Proposed Rule and Programmatic Environmental Impact Statement for the Introduction of Genetically Engineered Organisms*, APHIS Docket 2008-002, June 29, 2009.

² The Hartman Group. (2006) “Consumer Attitudes & Behavior, Five Years Later & Into the Future.”

³ Straus, Albert. . (April 6, 2007) *Declaration of Albert Straus in Support of Plaintiffs Permanent Injunction*, The United States District Court for the Northern District of California, San Francisco Division, Case No. C06-175 CRB.

⁴ Domestic sales of organic food sales are estimated at \$23 million annually (2008), according to the Organic Trade Association (OTA), http://www.ota.com/pics/documents/01a_OTAExecutiveSummary.pdf (accessed 28 January 2010).

⁵ Organic exports are estimated at \$125 million to \$250 million annually, according to USDA’s Economic Research Service (September 2009), <http://www.ers.usda.gov/briefing/organic/trade.htm>, (accessed 28 January 2010).

⁶ Marvier, Michelle & Rene C. Van Acker. (2005) “Can Transgenes be kept on a Leash?” *Front Ecol Environ*, 3, 2: 96-106.

Altieri, M. A. (2005) “The Myth of Coexistence: Why Transgenic Crops are not Compatible with Agroecologically Based Systems of Production.”, *Bulletin of Science, Technology & Society*, 25, 4: 366.

⁷ Siemon, George. (April 6, 2007) *Declaration of George Siemon in Support of Plaintiffs Permanent Injunction*, The United States District Court for the Northern District of California, San Francisco Division, Case No. C06-175 CRB.

⁸ *Id.* p. 3.

⁹ United States Department of Agriculture. Glyphosate-Tolerant Alfalfa Events J101 and J163: Request for Nonregulated Status. Draft Environmental Impact Statement—November 2009. p. 95.

¹⁰ See, e.g., New Study Finds GM Genes in Wild Mexican Maize, *New Scientist*, Feb. 21, 2009; Rex Dalton (2008) Modified genes spread to local maize: findings reignite debate over genetically modified crops, *Nature*, 456 (7219), 2000, at 149; The Institute for Nutrition and Food Technology (INTA), Chile enters the list of countries contaminated with GMOs: A report from INTA has detected transgenic contamination of maize in the fields of central Chile, Oct. 22, 2008; Graeme Smith, *Illegal GM Crops Found In Scotland*, *Herald*, Sept. 13, 2008; Elizabeth Rosenthal, *Questions on Biotech Crops with No Clear Answers*, *N.Y. Times*, June 6, 2006; Gene Flow underscores growing concern over biotech crops, *Associated Press*, Sept. 22, 2004; Andrew Pollack, *Can Biotech Crops be Good Neighbors?*, *N.Y. Times*, Sept. 26, 2004; Lyle F. Friesen et al., Evidence of contamination of pedigreed canola (*Brassica napus*) seedlots in Western Canada with genetically engineered herbicide resistance traits, *95 Agron. J.*, 1342-1347 (2003); Simon Jeffery, *Rogue genes: An unauthorised strain of GM crops has been found across England and Scotland*, *Guardian*, Aug. 16, 2002; Alex Roslin, *Modified Pollen hits organic farms: Genetically altered strains spread by wind*, *Toronto Star*, Sept. 30, 2002; Fred Pearce, *The Great Mexican Maize Scandal*, *New Scientist* 2347, June 15, 2002.

4 Greenpeace International. GM

¹¹ Greenpeace International. GM Contamination Register Report 2007, February 28, 2008, at <http://www.greenpeace.org/international/press/reports/gm-contamination-register-2007>.

¹² See, e.g., K.L. Hewett, *The Economic Impacts of GM Contamination Incidents on the Organic Sector*, 16th IFOAM Organic World Congress, Modena, Italy, June 16-20, 2008.

¹³ Smyth et al. (2002). *Liabilities and Economics of Transgenic Crops*, 20 *Nature Biotechnology*, June 2002, at 537-541.

¹⁴ Letter from Steven A. Strachota, President, Dairyland Seed Co., Inc. to Gregory H. Lowry, Executive Vice President, Idaho Crop Improvement Association, Inc., November 1, 2006.

¹⁵ *Id.*

¹⁶ DEIS at p. 102.

¹⁷ DEIS at p. 98-99.

¹⁸ *Id.* at 133.

¹⁹ *Id.* at 132.

²⁰ <http://truefoodnow.org/2009/11/17/new-report-reveals-dramatic-rise-in-pesticide-use-on-genetically-engineered-crops-due-to-the-spread-of-resistant-weeds/>

²¹ United States Department of Agriculture. Glyphosate-Tolerant Alfalfa Events J101 and J163: Request for Nonregulated Status. Draft Environmental Impact Statement—November 2009. Appendix J, J-25, EIS pp. 34 & 43.

²² Hardell, L., & Eriksson, M. (1999). "A Case-Controlled Study of Non-Hodgkin's Lymphoma and Exposure to Pesticides," *Cancer*, 85(6), 1353–1360; Hardell L, Eriksson M, & Nordstrom M. (2002). "Exposure to pesticides as risk factor for non-Hodgkin's lymphoma and hairy cell leukemia: pooled analysis of two Swedish case-control studies," *Leuk Lymphoma*, 43(5), 1043-1049; De Roos, et al. (2003). "Integrative assessment of multiple pesticides as risk factors for non-Hodgkin's lymphoma among men," *Occup Environ Med*, 60(9); De Roos, A. J. D., Blair, A., Rusiecki, J. A., Hoppin, J. A., Svec, M., Dosemeci, M., Sandler, D. P., & Alavanja, MC .2005. Cancer Incidence among Glyphosate-Exposed Pesticide Applicators in the Agricultural Health Study. *Environmental Health Perspectives*, 113(1), 49-54.

²³ Relyea, R.A. (2005a). "The lethal impact of Roundup on aquatic and terrestrial amphibians," *Ecological Applications* 15(4): 1118–1124; Relyea et al (2005). "Pesticides and amphibians: The importance of community context," *Ecological Adaptations* 15: 1125-1134; Relyea, R.A. (2005b). "The lethal impacts of Roundup and predatory stress on six species of North American tadpoles," *Archives of Environmental Contamination and Toxicology* 48: 351-57.

²⁴ Domestic sales of organic food sales are estimated at \$23 million annually (2008), according to the Organic Trade Association (OTA), http://www.ota.com/pics/documents/01a_OTAExecutiveSummary.pdf (accessed 28 January 2010).

²⁵ United States Department of Agriculture. (Jan. 26, 2010) "Agriculture Secretary Tom Vilsack Announces Millions to Promote U.S. Food and Agricultural Exports," Washington, DC, Press Release No. 003310. <http://www.usda.gov/wps/portal/usdahome> (accessed 28 Jan. 2010).