

Docket No. APHIS-2010-0047  
Regulatory Analysis and Development  
PPD, APHIS, Station 3A-03.8, 4700  
River Road Unit 118, Riverdale, MD  
20737-1238

**RE: Docket No. APHIS-2010-0047**

Organic Seed Alliance (OSA) strongly opposes USDA's proposal to allow the partial deregulation, and therefore sale and planting, of genetically engineered (GE) Roundup Ready (RR) sugar beets before the agency has completed the court-ordered Environmental Impact Statement (EIS).

We believe the Environmental Assessment (EA) dismisses the adverse economic effects that contamination by RR sugar beets will have on organic and non-GE seeds and crops. This is a threat USDA-APHIS continues to minimize. The presence of GE traits in organic and other non-GE seed and food products harms the integrity of this valuable market and causes customers to lose confidence in the organic label.

Organic consumers demand seed and food products free of GE traits. In absence of labels on GE food ingredients, consumers continue to rely on organic products as alternatives to products with GE ingredients. They reasonably assume organic products do not contain GE material. In fact, in the 2007 decision to require a full EIS on Roundup Ready alfalfa, Federal District Court Judge Charles Breyer wrote that to "farmers and consumers organic means not genetically engineered, even if the farmer did not intend for his crop to be so engineered." Judge Breyer understood well that contamination of organic products by GE traits removes choice from organic farmers and consumers alike, and that farmers and consumers have the right to produce and consume food that is GE-free.

OSA has an active organic breeding program focused on improving several vegetable crops, including beets and chard, for organic systems. We work collaboratively with farmers in the western U.S. on participatory breeding projects to develop regionally adapted crop varieties that will serve organic agriculture. Many of the crops we work on will be affected by the release and widespread use of GE sugar beets. This poses a significant risk to the genetic integrity of the seed we develop and the markets for which they are produced, since our partners' customers expect products to be free of GE traits.

Our organization works hard to create economic opportunities for farmers through participation in healthy, regional seed production and marketing systems that add value to their farm. USDA-APHIS' proposal affects current and future opportunities for farmers. The reality is simple: When farmers lose the genetic purity of their seed, they lose their freedom to operate free of GE contamination.

The species at issue (*Beta vulgaris*) is one of the few vegetable crop species that is wind pollinated. Some insect pollination occurs in beets, but wind accounts for most pollination events. Furthermore, beets are self-incompatible, meaning each plant must have pollen from a genetically different individual to produce viable seed. Table beets and chard have large numbers of flowers per plant and produce large amounts of pollen. Crops within the *Beta*

*vulgaris* species are fully sexually compatible and mating between any two of these crops will occur if they flower in proximity to one another, as pollen from one will readily fertilize any of the other's flowers, resulting in viable offspring that produce viable seed. Research shows that beet pollen in particular can travel over 12 miles (Meier and Artschwager). There's no realistic distance that completely isolates two cross-pollinating crops 100 percent of the time, especially in a highly concentrated seed production location like the Willamette Valley.

Maintaining the genetic purity and proper isolation distances with these crops is difficult as it is without introducing a novel, engineered trait that is outright rejected by various markets. Cross-pollination between a GE crop and a non-GE crop of the same species causes a number of problems. Contaminated seed will not be acceptable for many farmers' use because:

1. The contaminated seed cannot be sold into countries that do not allow GE crops or products, regardless of how it was grown.
2. The contaminated seed will not comply with USDA standards for organic certification, which does not permit GE content in organic seed. It can therefore not be sold as organically certified seed in the U.S. or into any international organic seed market that adheres to the standards established by the International Foundation of Organic Agricultural Movements.

Once contamination occurs, farmers can neither detect the presence of a transgenic trait without testing, nor can they remove the foreign DNA sequence from the crop. If contaminated seed is planted unknowingly, contamination will spread. For example:

1. The contaminated seed could be used as stock for a subsequent seed crop. As soon as contaminated seed is in the hands of farmers or gardeners scattered geographically, it could cause a wider distribution of GE contamination, especially if they are in or near seed production areas for any of the *Beta vulgaris* crops.
2. Contamination can also spread through unintentional flowering when crops encounter stress – called “bolting” – releasing pollen to other *Beta vulgaris* populations within pollination proximity.
3. When seed crops from this species are grown during the first year of the biennial cycle they flower prematurely if exposed to excessive cold temperatures, producing pollen from plots that are not normally considered in calculating isolation distances.
4. “Weedy” sugar beets growing in roadside ditches and other areas not under cultivation can spread pollen with GE traits and further contamination events.
5. Human error is also a factor, as mistakes regarding the physical mixing of roots in breeding programs spreads genetic traits from one seed lot to another.

The proposal to allow commercial planting of GE sugar beets – even under special measures – puts the integrity of these organic seed and food crops and products at risk.

OSA believes that organic food integrity requires organic seed integrity. As such, the quality of organic seed is dependent on its genetic purity, including being free of GE contamination. This is particularly a concern for the seed crops mentioned above (e.g., table beets and chard) that are relatives to sugar beets and grown in the same region. Washington and Oregon account for over 80 percent of U.S. chard and table beet seed production, and 50 percent of world chard and table seed production. These crops are valued at millions of

dollars. It's not just organic markets that will reject seed with GE contamination. This valley is home to a high value specialty seed trade with buyers in the Pacific Rim and European Union who will also reject contaminated seed.

Part of the sugar beet debate has focused on the lack of conventional seed available, a seed supply that is uncertain only because the biotechnology firms controlling the supply keeps this information hidden. If there is not enough conventional sugar beet seed available, this is the fault of seed companies that put profit before farmer choice. Indeed, in the recent case that concluded with a judicial order to destroy Roundup Ready sugar beet stecklings grown under USDA permit, Federal District Court Judge Jeffrey S. White "expressed particular irritation that USDA, Monsanto and its beet partners had not better prepared for the beets' return to regulated status. They waited almost a year after his first ruling before seeking to enact interim measures, a delay that exacerbated the harm that could result from the beets' destruction" (Voosen). We would hope that USDA (and the U.S. Department of Justice for that matter) explore the reasons behind a conventional sugar beet seed shortage (be it real or perceived) and question the role of market power in the seed options available to farmers.

The burden of protecting the integrity of organic seeds, agricultural products, and markets is solely on the shoulders of organic farmers. This is an imbalanced and unfair burden that is exacerbated by USDA's proposal to release a GE crop that the federal court has deemed improperly deregulated.

The special production measures proposed have never been analyzed by our government for any GE crop and are the same measures that the federal court didn't adopt in August 2010. USDA's oversight of GE crop field trials has been seriously criticized by major entities, including USDA's Office of Inspector General (2005) and the U.S. Government Accountability Office (2008). Insufficient oversight is evidenced by numerous contamination events that involve GE pollen escaping field trials. For example, within a year of Roundup Ready alfalfa's initial commercialization, contamination was found in alfalfa seed stock. Contamination was also discovered in a study conducted by Colorado State University Extension, where the RR trait was found in 83% of feral alfalfa samples taken within two miles of alfalfa seed production fields.

Non-organic markets have also been affected. In 2006, GE rice not approved for commercial sale showed up in the U.S. long grain rice supply, half of which is exported. The field trials were abandoned in 2001, yet samples tested positive for the unapproved trait in the five Southern states where long grain rice is grown. The rice industry lost an estimated \$2 billion because of the event and some lawsuits to cover the damage are still pending. More recently, a scientist revealed that USDA failed to disclose that GE bentgrass had contaminated at least 20 square miles in eastern Oregon. GE bentgrass is not commercially approved and the source of contamination is believed to be a field trial that ended more than five years ago.

We have little confidence that USDA's field trial oversight of sugar beet seed production is adequate for protecting the integrity of organic seed. The agency's proposal should not be adopted before the public sees the results of a full EIS.

In the event contamination occurs, farmers have no recourse to recoup damages because the

question of who is liable has not been determined. They are left with the economic and agronomic costs of detecting and eradicating GE material; losing the genetic integrity of seed on which they rely; taking measures to avoid future contamination; and selling contaminated products into the conventional market, losing a premium for organically produced products.

The current regulatory framework for GE crops does not even attempt to contain and segregate GE from organic and other non-GE crops, and instead unfairly places the burden of protecting the integrity of organic products on the shoulders of organic farmers. Farmers and farm groups, including OSA, have had no choice but to turn to the courts for action, to enforce environmental law, and yet even with the federal court on our side, USDA is allowing biotechnology industry interests to trump those of the organic community.

The lack of oversight is particularly apparent in the field trial stages where, as mentioned above, major investigative entities have identified serious problems with how GE crops are regulated and introduced. There is a lack of public disclosure regarding the location, duration and size of field trials. There is also secrecy around commercial production sites. This lack of transparency coupled with evidence of contamination and expert bodies' expressed concerns about containment measures means GE seeds and crops are likely to contaminate organic fields, and indeed they already have.

USDA's draft EA is essentially a means to temporarily commercialize GE sugar beets through the unprecedented use of permits, a process typically only used for experimental field trials. The GE sugar beet stecklings that were planted – and recently ruled to be destroyed – were the first example of research permit misuse for GE seed production.

For all these reasons OSA strongly opposes USDA's proposal to allow the planting and sale of RR sugar beets under a "partial deregulation" status while the agency completes the court-ordered EIS. The threat of contamination to organic seed and crops is real, and risks compromising livelihoods, genetic integrity, and faith in the organic label.

Sincerely,



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