

GENETICALLY ENGINEERED ALFALFA COULD BE GROWING IN US FIELDS BY SPRING¹

Leah Zerbe[©]

A genetically engineered crop used in conjunction with a common pesticide that's known to reduce a plant's ability to take up micronutrients essential for human life may be approved and in the ground by the spring 2011 growing season. The United States Department of Agriculture (USDA) last week released the Final Environmental Impact Statement (FEIS) investigating potential negative environmental effects that could occur if the agency allows farmers to start planting Monsanto's genetically engineered (GE) Roundup Ready alfalfa seeds. Just like the Roundup Ready corn, soy, and canola already being grown all over the country, the GE alfalfa would allow farmers to spray the weed-killing pesticide Roundup over alfalfa without killing the crop. Since GE corn, soy, and canola have the ability to cross-pollinate and contaminate organic crops, sustainable farmers are worried that the same will happen with GE alfalfa, threatening organic grass-fed beef and dairy operations. "Just from the gene flow, within five years of Roundup Ready alfalfa, there will be no such thing as non-Roundup Ready alfalfa, regardless of restrictions government puts on it," says Don Huber, PhD, professor emeritus at Purdue University and APS coordinator for the USDA's National Plant Disease Recovery System.

Besides the threat to organic farmers and human health, expanding the genetically engineered, chemical farming system threatens to wipe out America's farmland. Despite a growing number of reports finding that Roundup (also known as glyphosate) creates superweeds that force farmers to abandon millions of acres of land or use more toxic pesticide combinations, Secretary of Agriculture Tom Vilsack repeatedly emphasized last week that USDA plans to meet the needs not just of farmers, but also of the companies and researchers investing in the creation of biotech seeds. He also explained his desire to give farmers the choice of growing whichever type of alfalfa crop (GE, conventional, or organic) they choose in 2011, meaning a decision on GE alfalfa will likely come very soon, given that farmers buy their seeds for the upcoming season at this time of year.

Interestingly, there doesn't appear to be a crushing demand for GE alfalfa. "I've never been to a farm meeting where I've heard a farmer say, 'Now, what we really need is GE alfalfa to make our lives easier,'" says Jeff Moyer, farm director at Rodale Institute, an organic research farm in Pennsylvania.

THE DETAILS: While the FEIS report does not approve GE alfalfa use, it does lay out three USDA options for Roundup Ready alfalfa use. The two preferred options are to completely deregulate the crop, allowing it be grown anywhere, or to impose geographic restrictions and isolation requirements limiting where the crop can be grown, in an attempt to protect organic farmers. Another possible option is to continue the ban on the crop because of its environmental and economic impacts. "It's a breakthrough that the USDA is considering putting restrictions on planting a GM [genetically modified] crop. This is a first, and I'm glad the agency has considered the concerns of organic and non-GMO farmers," says Ken Roseboro, editor of The Organic & Non-GMO Report and author of the 2011 Non-GMO Source Book. "But many organic agriculture experts say 'coexistence' between GMO and organic won't work, and I don't think it will, either. It basically means how much GMO contamination are organic farmers willing to put up with, when they don't want any."

¹ Rodale News, December 21, 2010

Monsanto has been fighting for approval of its GE alfalfa for about seven years, and the report issued last week was the result of a 2007 lawsuit in which a federal court ruled that the USDA's approval of GE alfalfa violated environmental laws by failing to analyze risks such as the contamination of conventional and organic alfalfa and the development of superweeds, which has been well documented in other GE crop systems. "The only option that will protect organic and conventional alfalfa growers and dairies is for the USDA to deny any approval of GE alfalfa," Andrew Kimbrell, executive director of the Center for Food Safety, said in a statement. "We are disappointed that the agency has not made this one of its preferred options, but are encouraged that it remains an option being considered by the agency."

In June 2010, the U.S. Supreme Court upheld the ban on Monsanto's GE alfalfa unless future deregulation status occurred. The next step is for USDA's Animal and Plant Health Inspection Service to submit the FEIS to the Environmental Protection Agency for publication in the Federal Register, which is likely to occur on Dec. 23. That will be followed by a 30-day comment period before USDA makes its final decision.

WHAT IT MEANS: The question many environmental and food safety groups are asking is "Why do we even need GE Roundup Ready alfalfa?" The authors of the FEIS outline that production practices for alfalfa mean that less glyphosate is needed compared to other crops. So if current, non-GE alfalfa doesn't require much Roundup, why would farmers want a GE crop that can resist Roundup, particularly at a time when weeds are growing resistant to that very chemical because millions of pounds of the chemical are dumped on farmland every year? "If [Roundup] was used judiciously and with common sense, it could have been a useful tool," explains Huber. "But we've abused it to the nth degree, and it's coming back to haunt us now in both our animal and crop production, and the implication is pretty strong for all animals' health and physiological functioning, including humans."

Roundup Ready crops are strongly linked to infertility in farm animals, according to Huber, who notes that just the gene in Roundup Ready crops can impact a plant's enzymatic functioning and reduce its micronutrient content by 10 to 70 percent. Add toxic Roundup to the mix, which has been linked to hormone disruption, certain cancers, and liver cell damage, and you've got a recipe for a major public-health problem.

There are also legal issues involved—like who pays when organic crops are contaminated by GE pollen? "European Union nations, such as Germany, are putting the burden of liability on GE farmers," explains Roseboro. But in the U.S., the biotech companies that produce the GE seeds and the farmers who plant them have no liability, and organic farmers who suffer contamination and lose the value of their crop have no recourse for compensation for their losses. "Biotech companies need to be held responsible for their wayward genes when they harm organic and non-GMO farmers," says Roseboro.

Here's how to put the brakes on bringing more GE crops into the market:

- (1) **Eat what the doctors (and President) order.** Food-safety advocates, doctors (including The American Academy of Environmental Medicine), and sustainable-farming advocates forecast several problems associated with the approval of GE alfalfa. For starters, genetically modified foods have been linked to accelerated aging, immune problems, infertility, changes in organs and the GI tract, and faulty insulin regulation. The American Academy of Environmental Medicine recommends eating a diet free of GE (also referred to as genetically modified organism, or GMO) ingredients. The President's Cancer Panel

earlier this year also instructed Americans to eat organic food to lower their risk of cancer and other diseases.

- (2) **Vote against GMOs with your food dollars.** "If we get a tipping point soon, we solve everything," says bestselling author Jeffrey Smith, executive director of the Institute for Responsible Technology. He believes consumer demand for non-GMO products is the No. 1 way to put Monsanto out of business and force farmers to plant organic, or at least conventional non-GMO, crops. To avoid eating genetically manipulated food, buy organic—it's the easiest way to avoid harmful pesticide exposure as well as GMO ingredients. The Non-GMO Shopping Guide and free iPhone APP can also help keep GE ingredients out of your belly.
- (3) **Demand a choice.** Polls have consistently found that the majority of American people do not want to eat genetically engineered crops or animals, and 90 percent think GE ingredients should be, at the very least, labeled.