

The Myth and Necessity of GM Free Zones

By Jeffrey M. Smith, author of *Seeds of Deception*

Imagine being hired by a new company whose boss says, “You’re an environmentally minded person. That’s why we picked you to organize a recall of our genetically engineered salmon—from the ocean. Good luck.”

While this may seem far fetched, it may not be far off. One company, Aqua Bounty, had hoped for US government approval for their genetically modified (GM) salmon as early as 2002. A study published in June 2004 may prolong their wait. When GM salmon, engineered to be seven times their normal size, were put into tanks with a limited food supply, all hell broke loose. Whether swimming with other GM fish or with natural salmon, the “transgenic salmon experienced population crashes or complete extinctions.”¹ Some of the Frankenfish killed and even ate their rivals.

While organizing a recall of GM fish from the ocean or GM insects from the air (planned for the future) is not yet an issue, widespread contamination by GM plants is. On September 9, 2004, citizen groups announced that tests of nearly 20,000 papaya seeds on the Big Island of Hawaii revealed that half were genetically modified. Eighty percent were taken from organic farms and not *supposed* to be GM. Twenty percent were from home gardens and wild papaya trees. Contamination was also found in Thailand, where the Department of Agriculture had accidentally sold GM papaya seeds.² After foreign buyers cancelled orders for Thai Papaya, the government pledged to destroy any GM tree it finds and quarantine the area.

Many Americans became familiar with GM contamination in September 2000, when StarLink® corn, a potentially allergenic GM variety not approved for human consumption, was found in taco shells and other corn products. Planted to less than 1 percent of the nation’s corn acreage, StarLink was found in 22 percent of the corn samples tested by the USDA and prompted the recall of more than 300 food brands. After an extensive program to remove it, three years later StarLink still showed up in more than 1 percent of corn samples.

In late September 2004, a government study reported that the light-weight pollen of a GM variety of bentgrass had cross pollinated with natural bentgrass nearly 13 miles downwind.³ The GM variety, developed by Monsanto and Scott corporations for use on golf courses, does not die when sprayed with Monsanto’s Roundup® herbicide. Although designed to aid golf course managers control weeds (and Monsanto to sell herbicide) if this hard-to-kill

grass spreads via pollination, it could itself become a weed. The Forest Service opposes its approval and says that the grass “has the potential to adversely impact all 175 national forests and grasslands.”⁴ Scott had expected pollen to travel only about 1000 feet. The 13 miles was described by one researcher as “a paradigm shift in how far pollen might move.”⁵ Responding to the study, a September 30 *New York Times* editorial stated, “We must ensure that the genes from genetically engineered plants do not escape into the wild and wreak havoc in natural ecosystems.” It said that the finding “virtually demands a careful reassessment of how such plants are regulated.”

UK researchers, however, had earlier found that canola pollen can be carried by bees for 16 miles.⁶ And on September 24, 2004, a UK paper described new research indicating that for canola, “most pollination was carried out by bees, rather than windblown pollen.”⁷ Thus, distances of several miles may be common. Canola contamination has been particularly notorious:

Canadian Percy Schmeiser was sued by Monsanto when the company’s herbicide tolerant canola was found in Schmeiser’s field. According to a ruling by the Canadian Supreme Court, irrespective of whether farmers intentionally plant GM seeds without a license or their plants are contaminated by wind blown pollen or insects, a company’s patent on a gene extends to living organisms containing the gene. Therefore, farmers can be sued when their crops are contaminated and their plants can be confiscated.

GM canola has so thoroughly contaminated non-GM varieties, including traditional seeds, Saskatchewan’s organic growers abandoned the crop altogether and are suing Monsanto and Bayer CropScience for damages.

Canola engineered to survive applications of certain herbicides pollinated weedy relatives, turning them into super weeds that withstand the weed killers.

Unharvested GM canola seeds fall to the ground and then grow (and reseed) in subsequent years. Thus, if GM canola is grown in a field during one season and non-GM varieties are grown thereafter, GM contamination levels will be at 1 percent or higher for an estimated 16 years.⁸

Contamination from a previous years’ crop was responsible for a pharmaceutical corn planted in 2002

contaminating soybeans planted in the same field in 2003. The “pharm” corn, genetically engineered to produce a pig vaccine, got mixed into half a million bushels of soybeans that had to be destroyed. Prodigene, the makers of the pharm corn, tried to introduce another drug-making variety recently. USDA rules require a buffer zone of at least one mile between pharm corn and food grade corn. But in Illinois last year, after a farmer planted blue corn in his field, blue kernels appeared in cornfields as far as three miles away. Sierra Club air pollution expert Neil Carman, however, argues that particles with the molecular weight of corn pollen can be swooped up in certain weather conditions and theoretically travel hundreds of miles during the 24 hours that the pollen remains viable.⁹

Seeds also travel. Consider Hawaii, once pure lava rock, now a lush tropical paradise. It is more than 2000 miles away from the nearest mainland.

Even if we could stop pollen or seeds from traveling, accidental mixing occurs in harvesting equipment, during storage or transport, or through human error. Soybeans, for example, do not cross pollinate, yet at least half of the bags of supposedly non-GM soybean seeds purchased by the Union of Concerned Scientists were contaminated by GM seeds.¹⁰

Studies show that the more people learn about GM foods, the less they trust them. Consequently, the world market for GM food is shrinking. Because of the threat of contamination, buyers often reject *all* crops from a region where GM varieties of that species are grown. Thus, even though about 60 percent of US corn is not GM, US corn growers have lost 99.4 percent of their European corn market. Similarly, Canada lost its European markets for GM and non-GM canola, and for their honey which may contain canola pollen. The world market share for US soy dropped from 57 to 46 percent, and is expected to further decline as Europeans reject products from animals fed GM soy. The economic impact from GM crops has been a disaster for the US, where increased farm subsidies due to lost markets are estimated at an extra \$2-\$3 billion per year.

When Monsanto threatened to introduce herbicide tolerant wheat, 87 percent of Canada’s foreign wheat buyers said they would go elsewhere if the GM variety was grown.¹¹ In the US, a loss of 30-50 percent of foreign wheat markets was projected, with an expected drop in prices by about a third.¹² The wheat industry lobbied hard for North America to be a GM-wheat-free-zone. While no laws were passed, Monsanto responded to pressure by temporarily curtailing their efforts.

Citizens around the world seeking to protect their economy, environment, and/or health are establishing “GM free zones”—tracts of land, even whole countries, where GM crops cannot be planted. Nearly two thousand jurisdictions¹³ in 22 countries¹⁴ in Europe have declared themselves GM free zones and the same holds true for parts of New Zealand, most states in Australia, Venezuela, most of Brazil, Angola, Sudan, and Zambia. And on March 2, 2004, Mendocino County, California became a GM free zone after voters there passed a ballot initiative. On November 2, citizens in other counties will vote on similar measures. County supervisors in Trinity County didn’t wait for a vote. They passed an ordinance banning GM crops in August.

GM free zones have the unenviable distinction of being inadequate to prevent contamination in the long term (see Hawaii) and absolutely necessary to slow it down in the short term. In California, for example, the biotech industry hopes to soon introduce GM rice, lettuce, and strawberries. This threatens to close doors to both foreign markets and a growing number of non-GM US brands.

Mexico is home to corn’s original and diverse genetic resources. To protect these vital indigenous varieties, there has been a ban on planting GM corn there since 1998. But corn imported from the US for use as food is often planted by farmers. Consequently, recent studies in Mexico reveal widespread contamination from GM varieties, including the outlawed StarLink. On September 29, 2004, the *Chicago Tribune* reported that an expert panel of the North American Commission for Environmental Cooperation issued a report recommending that US corn be milled into flour before it is exported into Mexico, to prevent further contamination.¹⁵ The controversial report has not been made public and some believe it will not officially surface until after the November election.¹⁶ Its recommendations are bound to anger the US government, which last year refused requests by African countries to mill the GM corn being given as food aid. The US has been pressuring other governments for years to accept GM food and crops, and many believe that the U.S. Agency for International Development (USAID) consciously uses contamination as a means to promote that acceptance. Indeed, University of Washington professor Phil Bereano reported in the *Seattle Times* in 2002 that Emmy Simmons, assistant administrator of USAID, “said to me after the cameras stopped rolling on a vigorous debate we had on South Africa TV, ‘In four years, enough GE [genetically engineered] crops will have been planted in South Africa that the pollen will have contaminated the entire continent.’”¹⁷

(References available at www.seedsofdeception.com)

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