



# In Our Fields and On Our Plates: Ten Dangers of Genetically Engineered Foods

**Seed and Crop Contamination**—GE and non-GE seeds cannot coexist. Once released into the environment, pollen from GE crops can contaminate organic and non-GE crops. As a result, farmers of organic canola—a crop at particularly high risk of contamination—have stopped growing this important crop. Corn, cotton, sugar beets, and alfalfa are also at risk, not only from pollen drift, but also from contamination during storage, transport, and processing.

**Organic Farmers at Risk**—Because GE crops are prohibited under the organic label, if organic fields are contaminated by cross-fertilization or organic livestock consume contaminated feed, a farmer cannot sell those products as organic. Alfalfa contamination is particularly dangerous for organic farmers. Alfalfa is a perennial used in many organic farmers' crop rotations and as a key feed for livestock.

**Consolidation of the Seed Industry**—A handful of multinational corporations control the vast majority of the commercial seed supply, exerting tremendous influence over what we eat. Moreover, GE foods are not labeled, making it difficult for consumers to know which foods contain GE ingredients. Industry consolidation is also associated with declining rates of seed saving, research tilted toward proprietary crops, and reduced seed diversity. Recent mergers show a trend toward increased control over seed varieties.

**Ownership of Nature**—Genetically engineered foods raise ethical questions. Seed, once common property of past, present, and future generations, has been privatized, patented, and made into a corporate intellectual property right. GE seed commodifies life and turns a renewable resource into a non-renewable, non-reproducing product. Furthermore, many people believe that the transfer of genes between species is unnatural and unethical.

**GE Foods: Safe to Eat?**—The scientific literature on long-term safety is scarce and contradictory, but many of the studies arguing the safety of GE food were conducted by biotechnology companies. Monsanto has systematically prevented rigorous independent scientific research by using patent rights to restrict access to seed. In 2015, 300 independent researchers signed a statement confirming that the health effects of GE foods are unknown and that claims of consensus on GE safety are not supported by research.

**GE Foods Fail to Feed the World**—Despite promises that GE food would help feed a hungry world, recent studies show little evidence that biotechnology has increased yields at all, while they have led to increased pesticide use. These results are not surprising, given that GE seeds were developed with herbicide resistance in mind, not yields, drought tolerance, or disease resistance. Furthermore, many GE crops have been developed for livestock feed, biofuel, and for use in high fructose corn syrup, not to improve human nutrition.

**Pesticides, Herbicides, and Human Health**—GE seeds are directly responsible for the increased use of pesticides and herbicides. GE crops require over 26 percent more pounds of pesticides per acre than conventional varieties. A common herbicide, glyphosate, has been linked to non-Hodgkin lymphoma, endocrine disruption, multiple myeloma, DNA damage, immune suppression, and miscarriage.

**The Rise of Super Weeds**—Much like the overuse of antibiotics has created antibiotic-resistant super germs, the pervasive use of glyphosate has created weeds resistant to glyphosate, including pigweed, horseweed, and giant ragweed. Farmers are now having to resort to more labor-intensive weed management strategies and more toxic and complex mixtures of herbicides to combat these weeds, creating a dangerous chemical treadmill.

**Global Economic Market Impacts**—While most countries allow GE foods to be imported, many do not allow for the cultivation of GE crops within their borders. As a result, seed contamination has threatened seed industry exports, such as the grass seed industry in Oregon, which is in constant peril of contamination by GE creeping bentgrass. If contamination is detected, many foreign buyers simply refuse to purchase seed from these U.S. suppliers, resulting in significant export losses.

**GE Seeds Encourage Reliance on Fossil Fuels**—GE seeds are tightly linked to the use of herbicides and pesticides made from petroleum products which contribute to global climate change. At a time when diversity and resiliency are needed to adapt to the effects of climate change, including extreme and unpredictable changes in weather, GE technology offers just the opposite—a reduction in crop diversity.