



# **Are you ready for the new wave of genetic engineering?**

**Synthetic biology**

**Gene-edited  
animals**

**CRISPR crops**

**Genetically  
engineered  
flavors**

**GMO meat and  
dairy substitutes**

**A SHOPPER'S GUIDE TO GMOs**

# EXPANDING THE GMO EXPERIMENT

The first wave of genetically modified organisms (GMOs) in food production has **increased corporate control** of our food system, **driven up costs** for farmers, **failed to increase yields**, and **accelerated the use of pesticides** linked to cancer, birth defects and reproductive problems.

Now, corporations are tinkering with nature in new and riskier ways with CRISPR “gene editing,” synthetic biology and other experimental methods of altering DNA.

**These GMOs by other names are still GMOs.**

Companies are rushing patented new genetic engineering technologies into food, cosmetics and supplements with no precaution and no transparency.



To date, genetic engineering has been used primarily as a tool to force plants to tolerate weed killing chemicals. In the U.S., 94% of soybean and 89% of corn acres were engineered for use with glyphosate, a pesticide linked to cancer.

# COMING TO A STORE NEAR YOU?

**Arctic Apples™** with genes silenced so apples don't turn brown are now being sold as dried apples on Amazon.com.



**AquAdvantage™ Salmon** genetically engineered with the genes of an eel to grow faster is now being sold in undisclosed locations in Canada.



**Impossible™ Burger** is made with genetically engineered proteins, including some that have never been in the human food supply before.



**Thrive Algae Oil** is produced from genetically engineered algae.

**Canola Oil** has been “gene-edited” with CRISPR technology to tolerate herbicides.

**EverSweet™ sweetener** is made with genetically engineered yeast to mimic stevia.

**Artificial cow's milk proteins** are made with genetically engineered yeast.

**Resveratrol** made from genetically engineered yeast replaces a compound used in traditional Chinese and Japanese medicine.

## **GMO animals and other experiments in the pipeline:**

- ✓ Hornless cattle
- ✓ Genetically castrated pigs
- ✓ Chicken eggs engineered to contain a pharmaceutical agent
- ✓ CRISPR “terminator cattle” that will father only male offspring
- ✓ Gene drives that force an entire population to become genetically altered



***What could go wrong?***

# THE PROBLEM WITH GMOs

**Consumers are kept in the dark.** Many of us are eating products from genetic engineering without knowing it. Some countries require no labels, while others allow loopholes.

**GMOs are untested and unpredictable.** Many studies show that the process of genetic engineering routinely produces surprise problems for organisms or ecosystems. Yet governments require little to no testing to assure safety.

**20 years of failed promises.** GMOs do not increase yields, do not provide food security, lock farmers into high-cost inputs and to date have provided no consumer benefits.

**Endanger farmers and communities.** The first generation of GMOs were herbicide-resistant crops that drove up the use of pesticides and endangered farmers and communities. The next generation will be linked to big data and automated farming systems that displace real farmers.

**Give corporations control over seeds and crops.** Four big agrichemical corporations now own more than two thirds of the world's commercial seeds and pesticides.

**Do you trust these corporations to control our food system?**

 +  **中国化工集团公司**  
China National Chemical Corporation



**Bayer CropScience** (formerly also Monsanto)

 **BASF**  
The Chemical Company



**CORTEVA™** (formerly DowDuPont)  
agriscience



## **Producing food from genetically engineered microbes is not a solution for sustainability. GMO yeast, bacteria and algae:**

- ✓ rely on polluting feedstocks such as pesticide-intensive sugar or GMO corn
- ✓ produce a new generation of biotech waste, the leftover living byproducts of production
- ✓ could escape into the air, water and soil to become “living pollution”
- ✓ drive farmers off the land with unfair competition and false marketing of GMO products as “natural”



# TRUSTING FARMERS

For generations, farmers in Latin America, Africa and Asia have cultivated traditional, ecological and organic vanilla, shea butter and stevia. These farmers worry that genetically engineered foods marketed as “natural” could put them out of business.

Indigenous peoples in Paraguay have used and nurtured stevia over centuries using traditional knowledge. Now agribusiness giant Cargill is co-opting this cultural wisdom to profit from a genetically engineered sweetener called EverSweet™ that can be marketed as “natural.”



*Diverse, resilient, decentralized local food systems – not GMO mono crops and private biotech vats – are the key to world food security.*

# TRUSTING CONSUMERS

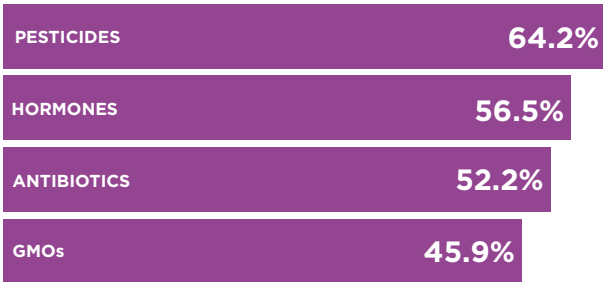
People want real, natural food made with authentic ingredients that come from real plants, not corporate labs.

Organic is the fastest growing sector of the food industry.

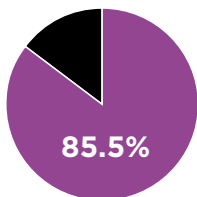


## CONSUMERS WANT THEIR FOOD AS PURE AS POSSIBLE

Food shoppers are “very” or “extremely” concerned about:



The majority of consumers think GMO labeling should be required.



**Source:** *Fortune* teamed up with SurveyMonkey in a poll to gauge the changing tastes of the American public's palate. The message: Consumers are seeking whole and unadulterated foods. [fortune.com/2015/05/21/the-war-on-big-food](http://fortune.com/2015/05/21/the-war-on-big-food)

# KEEPING IT REAL

**Corporations are rushing untested, unlabeled new genetically engineered products to market as fast as they can. How can you avoid them?**

**1. Choose organic:** GMOs, synthetic pesticides and artificial chemicals are not allowed in organic food and the international organic movement has taken a stand against new GMOs.



Or choose foods with these seals to avoid GMOs:



**2. Take Action to protect our families, communities and the planet.**

**Join the Global Declaration on GMOs!**



Sign up here: [www.synbiowatch.org/declaration](http://www.synbiowatch.org/declaration)

*SynBioWatch.org* is a collaboration of public interest groups, including *ETC Group* and *Friends of the Earth*, working for a safe, healthy, natural food future.

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Natural Food  
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Association**

*INFRA membership enhances independent retailers' ability to assist customers in making informed product choices by supporting farmers and manufacturers who are committed to organic, non-GMO, regenerative agriculture and healthy communities.*