7 Really Good Reasons to Rethink GMOs

In the 1990s, GMOs took off in the US without public debate, and soon this country became the world's biggest producer and consumer of GM crops. Today, 70% of our processed food is derived from GMO crops. (CA Food and Ag, *Food Research Int'l*, 2010) As the debate over GMOs intensifies, we invite you to weigh seven points. Throughout, you'll find sources in brief. Complete citations: www.smallplanet.org/content/small-planet-institute-fact-sheets. We're eager for your feedback.

1 IN A 2013 PUBLIC STATEMENT, 297 SCIENTISTS, ACADEMICS AND OTHERS KNOWLEDGEABLE ABOUT GMOs EMPHASIZE THAT THERE IS "NO SCIENTIFIC CONSENSUS" ON GMO SAFETY AND CALL FOR "FURTHER INDEPENDENT SCIENTIFIC INQUIRY." *(ENSSER,* 2013*)*

In the US, GMOs producing their own pesticide must be approved by the Environmental Protection Agency — but with less stringent testing than required for chemical pesticides. (Union of Concerned Scientists, 2012) The review process for new GMO plant foods by the Food and Drug Administration— relying on the biotech industry's own safety assessments— is voluntary. (*NY Times,* 2014*; Biotech. Genetic Eng. Rev.,* 2004) Tests of GMOs prepared as people actually eat them are lacking entirely, although recommended in internationally accepted standards. (CODEX) Post-release monitoring of environmental and health impacts of GMOs is also lacking. (*Env. Int'l,* 2012)

2 SOME EXPERIMENTS FEEDING GMOs TO ANIMALS HAVE FOUND EVIDENCE OF HARM.

In several peer-reviewed studies, mammals fed GMO corn and soy developed "liver and kidney problems" that could mark the "onset of chronic diseases." (*Environmental Sciences Europe*, 2011). In another, pigs on the GM diet were 2.6 times more likely to get severe stomach inflammation than control pigs. (*J. of Organic Systems*, 2013) GMO advocates dismiss such studies, claiming experimenters used inappropriate lab animals or feeding methods, even though the industry's own studies use the same, or similar, protocols. (*Independent Science News*, 2012) Even in GMO studies where significant harm is not indicated, scientists express concern, noting, for example, that "much more scientific effort and investigation is necessary" before the authors can be "satisfied" that GMOs cause no harm. (*Nutrition and Health,* 2003*; Env. Int'l,* 2011)

3 THE CONSEQUENCES OF GMO TECHNOLOGY ARE INHERENTLY UNPREDICTABLE.

Inserting a gene into another organism can result in multiple, unintended DNA changes and mutations, note scientists: "Unintended effects," they report, "are common in all cases where GE [genetic engineering] techniques are used." (*Biotechnology and Genetic Engineering Reviews,* 2004) In addition, the release of GMOs into the environment can cause unintended environmental and commercial harm, including documented GMO genetic contamination of other plants. (*Biotechnology and Genetic Engineering Reviews*, 2004) Note, moreover, that as a class GMOs cannot be proven safe because each new GMO presents a new harm-benefit profile that requires adequate testing. In weighing our choices, it is also useful to recall that substances ranging from lead to tobacco to asbestos to DDT were in wide use for some time before proven dangerous.

4 GMO MAKERS INFLUENCE GOVERNMENT POLICY AND BLOCK TRANSPARENCY, THUS HEIGHTENING THE RISK OF INADEQUATE SAFETY PROTECTIONS.

Acceding to biotech industry requests, in 1992 the FDA declared GMOs "substantially equivalent" to conventionally bred crops, thus avoiding independent, long-term testing and monitoring prior to release — despite strong doubts expressed by some of its own scientists, and with no period for public comment. (FDA documents) Although 64 countries require GMO labeling (Center for Food Safety) and 93 percent of Americans favor labeling (*NY Times*), the biotech industry has spent millions to successfully block mandatory labeling here. (*The Guardian,* 2012) After scientists publicly complained about denial of access to GM seeds for research in 2009 (*NY Times*), biotech companies developed research contracts with certain universities. However, notes Cornell Professor E. Shields, we still "can't work with seeds before they come on the market" (*Grist*, 2013*)*.

CHOOSING GMO-FREE FOODS

AVOID processed foods. It's a simple way to reduce exposure to the four most common GM-derived ingredients: non-organic forms of soy, canola, cottonseed oil & corn, including high-fructose corn syrup.

LOOK for the voluntary "non-GMO" label.

BUY "certified organic," which ensures that no GMO ingredients are used.

VISIT www.NonGMOShoppingGuide.com for a list of non-GMO products & brands.

5 FAIRLY EVALUATING GMOs IS ALSO MADE MORE DIFFICULT AS SOME POSITIVE CLAIMS, EVEN IN RESPECTED PUBLICATIONS, RELY — WITH NO DISCLOSURE — ON SOURCES LINKED TO THE GM0 INDUSTRY.

The 2013 book *Can We Feed the World?* by *Scientific American* editors, for example, includes an article from *Nature*. Its introduction reports without citation that "[a]dvocates say that they [GMOs] have increased agricultural production by more than US $98 billion." The reader is not told that this figure comes from a 2013 study by the consulting firm PG Economics, whose clients include biotech companies. The authors thank Monsanto for funding their study. (*GM Crops and Food, Landes Bioscience,* 2013) The 2010 book *Food Politics: What Everyone Needs to Know* promotes GMOs, but includes no citations. Published by Oxford University Press, the book does not inform readers its author served as an advisor to the CEO of Monsanto. (Correspondence with Oxford University Press)

6 GMOs REINFORCE A MODEL OF AGRICULTURE THAT KEEPS FARMERS AND CONSUMERS DEPENDENT ON CLIMATE-DISRUPTING FOSSIL FUELS AND ON CORPORATIONS WITH MONOPOLY POWER.

In only 12 years (1996-2008), three chemical corporations acquired more than two hundred seed companies (*Sustainability,* 2009), achieving control over half of the commercial seed market worldwide. (Center for Food Safety, 2013) One is Monsanto, whose patented genes are in 90 percent of all US soybean and 80 percent of all US corn acres. (Hubbard, 2009) Patented seeds, including GM0s — along with fossil-fuel based synthetic pesticides and fertilizers — must be purchased each season, and can thus worsen poor farmers' indebtedness and vulnerability to price increases. (World Bank) The cost per acre of soybean and corn seed, most of which is GM, has more than doubled in the US since 1996. (USDA) Imagine the impact on small farmers in poor countries who are the majority of the world's hungry people. (UNCTAD)

7 GMOs ARE NOT NEEDED, SO WHY TAKE ON THEIR RISKS — HOWEVER BIG OR SMALL?

Today the world produces plenty of food—2,800 calories for every person every day. And that's only counting what's left over after half the world's grain goes to livestock feed, fuel and other purposes. (FAO)
As to future needs? Non-GMO, sustainable farming practices are increasing yields, in many cases dramatically (De Schutter, 2010); and applied worldwide, they could enlarge our food supply as much as 50 percent. (*Renewable Agriculture and Food Systems,* 2007) At the same time, GMOs have not generally proven more productive: Note that Western Europe, without GMOs and using less pesticide, has long enjoyed corn and canola yields comparable to the GMO-dependent US. (*Int. J. of Agricultural Sustainability*, 2013)

IN ANY CASE, GMOs distract humanity from the most critical and urgent questions: How can we grow food in ways that bring dignity and decent livelihoods to farmers, as they sustain soil, water, and seed diversity, as well as radically reduce agriculture's huge climate impact? *And* how do all people gain power to secure healthy food? Fortunately, agroecological farming practices help poor farmers to break free of dependency, poverty, and hunger as they grow healthy food. (UNCTAD & UNEP, IAASTD)

ADDITIONAL RESOURCES

See what's happening in your state by visiting the Right to Know GMO website:
http://www.righttoknow-gmo.org/

We'd be happy to customize this fact sheet to highlight efforts in your state. Please contact us if you're interested in this:
info@smallplanet.org

To sort more food myths from facts, visit the: Food MythBusters: the Real Story About What We Eat site at FoodMyths.Org.

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by Frances Moore Lappé