



ARE GMOS GOOD OR BAD?

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We are all genetically modified organisms, all 7 billion of us and every other creature on earth produced by sexual reproduction. I point this out because “genetically modified” has become a loaded term that is misused to describe recombinant DNA biotechnology, one of the most important technological advances in the 10,000-year history of agriculture. Throw in bogus, Hollywood-inspired terms like Franken Foods, Killer Tomatoes, and Terminator Seeds, and you have the makings of one of the most groundless anti-science campaigns in the history of anti-science campaigns.

We have been modifying the genetics of plants and animals since agriculture and the domestication of animals began. The anti-GMO activists counter, “Nature never moves DNA from one species to another; therefore GMOs are ‘unnatural’.” Not so. Genes have been moving across species’ boundaries since life began. Bacteria routinely carry fragments of DNA from one species to another, and that DNA is sometimes incorporated into the genes of the host species.

This random movement of genetic material has been one of the driving forces in the development of species. The human genome, for example, has 70 percent of its genes in common with the sea urchin. Why wouldn’t we harness this naturally occurring phenomenon to improve the makeup of our food and fiber crops?

Today 18 million farmers in 28 countries are growing genetically modified crops on 448 million acres, 12 percent of the world’s farmland, or about the same area as all US cropland. It would be at least three times that if not for bans and restrictions in many countries – bans and restrictions that are irrational, anti-science, and terribly harmful to the world’s poor.

Every credible science, health, and nutrition organization in the world says the genetically modified food available today is safe – without reservation. This includes the World Health Organization, the European Commission, and the Society for Toxicology.

How many people know, for example, that the Durum Wheat used to make most of our pasta had its DNA modified by exposing seeds to high-level gamma radiation? And there is no labeling required!

But what about those supposedly evil seed companies like Monsanto? Aren’t they trying to “control the world’s food supply?”

First, let’s remember that these companies are not weapons manufacturers or drug cartels; they are trying to make better seeds for agriculture. Second, the seed companies don’t decide

which seeds to plant; farmers make that decision. The fact is these companies have done massive good. Millions of people have nutritious food to eat thanks to their innovative work, work that has also reduced the use of pesticides.

Recently the first comprehensive study of genetically modified crop performance reported some surprising numbers. On average, GM crops increased yield by 22 percent, reduced pesticide use 37 percent, and increased farmer profits by 68 percent.

In addition, new varieties of GM crops offer nutritional benefits that are not present in the conventional varieties of crops. The best known of these is Golden Rice, a GM rice variety that, unlike conventional rice, has beta-carotene in the grain. The human body converts beta-carotene into vitamin A. Without enough vitamin A, children go blind, and many die – about 2 million every year in poor countries of Africa and Asia. In fact, lack of vitamin A is the biggest killer of children in the world today.

Invented 15 years ago, Golden Rice alone has the potential to end all vitamin A deficiency. Yet the anti-GMO movement is vehemently opposed to it just because it's a GMO. As a result no country has approved Golden Rice for commercial farming. So, while children continue to go blind and die, the anti-GMO crowd celebrates a victory. And we're supposed to be angry at Monsanto?

It's time to put an end to the debate over the safety of genetically modified crops and foods. Today nearly all of our beer, wine, cheese and yogurt are made with GM yeast and culture. Most of our livestock are fed genetically modified corn and soybeans, and most of our prepared foods contain GM ingredients.

Here's a simple solution:

People who want to believe there is something sinister or unhealthy about GM plants should either buy food that is labeled non-GM or pay more for so-called "organic" food. The rest of us, the ones who embrace science, can get on with healthy and productive lives.

I'm Patrick Moore, co-founder of Greenpeace, for Prager University.