

Food for Thought on GM Crops

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COPENHAGEN – As the world continues to debate the impact of climate-change while seeking a new global treaty to prevent it, Kenya has endured a prolonged drought followed by heavy flooding. Maize plants have withered, hitting poor rural families hard. People are starving, and many of those who survive are grossly malnourished.

There is hope: next year, the Kenyan authorities will begin testing maize varieties that they hope will provide high yields and prove more resistant to drought. But why did farmers in Kenya and other African countries not have access to drought-resistant crop varieties before catastrophe struck?

One reason is that such crops rely on research tools used in molecular biology, including genetic engineering. African governments have been told that genetic engineering is dangerous, with many Europeans and their national governments – as well as transnational NGOs such as Greenpeace – determined to stay away from it.

Unfortunately, Kenya's government listened and did not permit their farmers to grow genetically modified (GM) maize, even though it has been approved, sown, harvested, and eaten by both humans and animals in South Africa, Argentina, Brazil, the United States, and other countries for many years. Although Kenya has a well-functioning and well-funded agricultural research system, the government has not even permitted field tests of GM crop varieties.

Molecular biology has provided excellent tools to address health, environmental, and food problems such as those seen in Kenya. The question is whether decision-makers are prepared to use them. Obviously, most EU countries' governments are not. But why are developing-country governments dragging their feet? Are the risks so high that they justify the suffering that could have been avoided?

GM foods have now been on the market in the US for more than 12 years. Most of the food consumed by Americans is either genetically modified or exposed to genetic modification somewhere in the production process. There is no evidence of even a single case of illness or death as a result – in the US or anywhere else where GM foods are consumed. Similarly, GM feed has not resulted in any illness or death in animals. And no environmental damage has been detected.

It is unusual that a new technology has no negative side effects. Just think of all the deaths that the wheel has caused, not to mention the side effects of much of the medicine we take. What, then, is the danger of GM foods?

Opponents of genetic engineering in food and agriculture have several arguments, none of which appears to be valid. First, "genetic engineering cannot solve the hunger and food insecurity problem." This is correct: GM foods cannot singlehandedly solve the problem, but they can be an important part of the solution.

A second argument is that “we do not know enough about the effects and side effects.” Since some of the groups opposing GM organisms destroy the field trials that could give us more knowledge, a more pertinent argument might be that many opponents do not want us to know more.

Third, “we should not play God.” But if God gave us brains, it was so that we should use them to ensure a balance between people and nature to help eliminate hunger and protect the environment.

Fourth, pollen from GM crops may “contaminate” organically produced food. This, of course, would be an issue only with open pollinating plants, and only if the definition of “organically produced” excludes GM, something that is difficult to justify, since genes are as organic as anything.

Lastly, some argue that if farmers are permitted to sow GM varieties, they become dependent on large seed producers such as Monsanto, which have patent protection – and thus a monopoly – on the seed. But private corporations undertake only about half of all agricultural research, whether or not it involves genetic engineering. The other half is done by public research systems using public funds. Results from such research would not be subject to private-sector monopoly power. The fact that virtually all US maize and soybean farmers, and all papaya farmers, use GM seed indicates that it is good business for them.

Similarly, a large share of farmers – most of them smallholders – in Argentina, Brazil, South Africa, China, India, and other countries, prefer GM seed because they make more money from the resulting crops. Large reductions in the use of insecticides cut costs for growers of GM varieties, while providing an important health and ecological benefit.

But maybe those who oppose private seed corporations are really against capitalism and the market economy rather than GM seed. If so, they should choose an issue for their campaign that would be less damaging to the poor and hungry in developing countries.

The global food crisis of 2007-2008 was a warning of what the future may hold in store if we continue with business as usual, including misplaced opposition to the use of modern science in food and agriculture. European and developing-country governments urgently need to reverse their current adverse position on GM organisms in order to help ensure sustainable food security for all.

Such a reversal would reduce hunger, poverty, and malnutrition; help protect our planet’s natural resources; and slow the emission of greenhouse gases from agriculture. All that is needed is political will.