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An Environmentalist's Conversion

Posted by [Michael Specter](#)

<http://www.newyorker.com/online/blogs/comment/2013/01/whats-changing-minds-on-gmos.html?printable=true¤tPage=all>

It has been more than fifteen years since companies like Monsanto began intense efforts to export agricultural biotechnology from the United States to the fields of Europe and the United Kingdom. The battle continues to this day. Few opponents have been more militant or effective than Mark Lynas, one of the first people to break into fields that scientists had planted with genetically modified test crops—and then rip them out of the ground.

In 1999, shortly after a London protest against poverty turned into a riot, Lynas published an [article](#) for the journal of the radical environmental group, EarthFirst!, in which he wrote that, as we entered a new millennium, two forces—a powerful coalition of multinationals and “strong social movements across the Third World”—were on a “global collision course.” The agendas “of these two competing forces,” he wrote, “were utterly irreconcilable.” The title of his article was “Savages Strike a Blow Against Capitalism,” and he was proud to count himself among the savages.

For years, Lynas clung to what can only be described as a religious conviction that g.m. foods were unnatural. It never mattered to him that dozens of scientific organizations, including the British Royal Academy and the National Academy of Sciences in the U.S., had studied the issue and had come to the opposite conclusion. “In my view, the technology moves entirely in the wrong direction,” he wrote in the [Guardian](#), in 2008, “intensifying human technological manipulation of nature when we should be aiming at a more holistic ecological approach instead.”

But Lynas has written widely, and thoughtfully, about climate change, and he came to realize that he would need to rely on science to bolster his positions in a world filled with skeptics. As it turns out, it's hard to limit a firm belief in science to one discipline. So he began to look at the science of agriculture, too. What he found changed his position and his life; and if a sufficient number of environmentalists listen to him, it may help change the lives of millions of others.

Last week, at the Oxford Farming Conference, Lynas described how he reversed himself. [Read his speech or watch the video](#). Better yet, do both, because his urgent statement of support for genetically engineered products was about as likely as the National Rifle Association announcing that it would help the Obama Administration limit access to guns. The speech was exhaustive and heartfelt. “I want to start with some apologies,” he said. “For the record, here and upfront, I apologize for having spent several years ripping up g.m. crops. I am also sorry that I helped to start the anti-g.m. movement back in the mid-nineties, and that I thereby assisted in demonizing an important technological option which

can be used to benefit the environment. As an environmentalist, and someone who believes that everyone in this world has a right to a healthy and nutritious diet of their choosing, I could not have chosen a more counter-productive path. I now regret it completely.”

He added that the opposition to g.m. was explicitly an anti-science movement. “What really threw me were some of the comments underneath my final anti-g.m. *Guardian* article. In particular one critic said to me: so you’re opposed to g.m. on the basis that it is marketed by big corporations. Are you also opposed to the wheel because it is marketed by the big auto companies? So I did some reading. And I discovered that one by one my cherished beliefs about g.m. turned out to be little more than green urban myths.”

He addresses those myths in the speech:

- I’d assumed that it would increase the use of chemicals. It turned out that pest-resistant cotton and maize needed less insecticide.
- I’d assumed that g.m. benefited only the big companies. It turned out that billions of dollars of benefits were accruing to farmers needing fewer inputs.
- I’d assumed that Terminator Technology was robbing farmers of the right to save seed. It turned out that hybrids did that long ago, and that Terminator never happened.

It would not have been hard to discover some of these facts earlier. Many people have written about them. The “Terminator,” for example, was a set of molecular switches with the ability to turn a plant’s genes on and off. The final switch would release a toxic protein that would sterilize the genes and prevent that plant from reproducing. In 2000, in a [Profile of Robert Shapiro](#), then the chairman of Monsanto and the most vocal, eloquent, and detested advocate of g.m. technology, I wrote that “though the technology does not yet exist, and nobody can say for sure whether it would even work, or when, Shapiro announced that Monsanto would not pursue, develop, or ever use the Terminator.” That was more than a decade ago, yet I am still asked constantly how I can support a technology that is essentially devoted to allowing large corporations to make Terminator seeds.

Lynas began his conversion two years ago and he stressed issues that have been written about often. Within the next thirty years we will need to feed at least nine billion people and we will have fewer resources—almost no new arable land, less potable water per person—than we do today. That will require growing more food than has been grown in all of human history. And it will have to be done in a climate that is changing rapidly—and not for the better.

Lynas now refers to the argument that we can only save the earth and feed its people by using organic food as “simplistic nonsense.”

If you think about it, the organic movement is at its heart a rejectionist one,” he continued. “It doesn’t accept many modern technologies on principle. Like the Amish in Pennsylvania, who froze their technology with the horse and cart in 1850, the organic movement essentially freezes its technology in somewhere around 1950, and for no better reason.

Lynas is wrong, I am convinced, about something else he wrote: that the interests of the rich and developing parts of this planet can never be reconciled. They will have to be. Technology alone won't do it; technology has never solved a problem—people solve problems. And we have always done that with the tools we have made. Agricultural biotechnology is one of those tools, one of many. It is essential, but it is not enough. We will need it all, and that includes the optimism to sustain humanity's undeniable history of progress.

But there are plenty of optimists among us. Robert Shapiro, who was essentially deposed from Monsanto for arguing exactly what Lynas did at Oxford last week, is among them. "I remain an unrepentant techno-optimist," he wrote to me yesterday. "I believe that on the whole, over large numbers and long times, truth has a better than random chance of prevailing—and I think that is our only hope."

Lynas has already been attacked for his new views, and I can promise him that the hail has just begun to fall. It's not easy to change your mind fundamentally; it's harder still to do it so publicly. Who is willing to go next?