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**How I Got Converted to G.M.O. Food**

By MARK LYNAS APRIL 24, 2015

NAIROBI, Kenya — Mohammed Rahman doesn’t know it yet, but his small farm in central Bangladesh is globally significant. Mr. Rahman, a smallholder farmer in Krishnapur, about 60 miles northwest of the capital, Dhaka, grows eggplant on his meager acre of waterlogged land.

As we squatted in the muddy field, examining the lush green foliage and shiny purple fruits, he explained how, for the first time this season, he had been able to stop using pesticides. This was thanks to a new pest-resistant variety of eggplant supplied by the government-run Bangladesh Agricultural Research Institute.

Despite a recent hailstorm, the weather had been kind, and the new crop flourished. Productivity nearly doubled. Mr. Rahman had already harvested the small plot 10 times, he said, and sold the brinjal (eggplant’s name in the region) labeled “insecticide free” at a small premium in the local market. Now, with increased profits, he looked forward to being able to lift his family further out of poverty. I could see why this was so urgent: Half a dozen shirtless kids gathered around, clamoring for attention. They all looked stunted by malnutrition.

In a rational world, Mr. Rahman would be receiving support from all sides. He is improving the environment and tackling poverty. Yet the visit was rushed, and my escorts from the research institute were nervous about permitting me to speak with him at all.

The new variety had been subjected to incendiary coverage in the local press, and campaign groups based in Dhaka were suing to have the pest-resistant eggplant banned. Activists had visited some of the fields and tried to pressure the farmers to uproot their crops. Our guides from the institute warned that there was a continuing threat of violence — and they were clearly keen to leave.

Why was there such controversy? Because Mr. Rahman’s pest-resistant eggplant was produced using genetic modification. A gene transferred from a soil bacterium, Bacillus thuringiensis (more commonly known by the abbreviation “Bt”), produces a protein that kills the Fruit and Shoot Borer, a species of moth whose larvae feed on the eggplant, without the need for pesticide sprays. (The protein is entirely nontoxic to other insects and indeed humans.)

Conventional eggplant farmers in Bangladesh are forced to spray their crops as many as 140 times during the growing season, and pesticide poisoning is a chronic health problem in rural areas. But because Bt brinjal is a hated G.M.O., or genetically modified organism, it is Public Enemy No.1 to environmental groups everywhere.

The stakes are especially high because Mr. Rahman is one of only 108 farmers in Bangladesh currently permitted to try out the new variety. Moreover, this is among the first genetically modified food crops to be grown by farmers anywhere in the developing world. Virtually every crop, in every other country, has so far been blocked.

In neighboring India, green campaigners managed to secure a nationwide moratorium against the genetically modified eggplant in 2010. In the Philippines, a Greenpeace-led coalition has tied up the variety in litigation for two years. Greenpeace activists took the precaution of wrecking field trials first, by pulling up the plants.

I, too, was once in that activist camp. A lifelong environmentalist, I opposed [genetically modified foods](http://topics.nytimes.com/top/reference/timestopics/subjects/g/genetically_modified_food/index.html?inline=nyt-classifier) in the past. Fifteen years ago, I even participated in vandalizing field trials in Britain. Then I changed my mind.

After writing two books on the science of [climate change](http://topics.nytimes.com/top/news/science/topics/globalwarming/index.html?inline=nyt-classifier), I decided I could no longer continue taking a pro-science position on global warming and an anti-science position on G.M.O.s.

There is an equivalent level of scientific consensus on both issues, I realized, that climate change is real and genetically modified foods are safe. I could not defend the expert consensus on one issue while opposing it on the other.

In Africa, however, countries have fallen like dominoes to anti-G.M. campaigns. I am writing this at a biotechnology conference in Nairobi, where the government slapped a G.M.O. import ban in 2012 after activists brandished pictures of rats with tumors and claimed that G.M. foods caused cancer.

The origin of the scare was a French scientific paper that was later retracted by the journal in which it was originally published because of numerous flaws in methodology. Yet Kenya’s ban remains, creating a food-trade bottleneck that will raise prices, worsening malnutrition and increasing poverty for millions.

In Uganda, the valuable banana crop is being devastated by a new disease called bacterial wilt, while the starchy cassava, a subsistence staple, has been hit by two deadly viruses. Biotech scientists have produced resistant varieties of both crops using genetic modification, but anti-G.M.O. groups have successfully prevented the Ugandan Parliament from passing a biosafety law necessary for their release.

An eminent Ghanaian scientist whom I met recently had received such a high level of harassment from campaigners that he was considering taking a dossier to the police. Activists in his country have also gone to court to stall progress in biotech development.

The environmental movement’s war against genetic engineering has led to a deepening rift with the scientific community. A recent survey by the Pew Research Center and the American Association for the Advancement of Science showed a greater gap between scientists and the public on G.M.O.s than on any other scientific controversy: While 88 percent of association scientists agreed it was safe to eat genetically modified foods, only 37 percent of the public did — a gap in perceptions of 51 points. (The gap on climate change was 37 points; on childhood vaccinations, 18 points.)

On genetic engineering, environmentalists have been markedly more successful than climate change deniers or anti-vaccination campaigners in undermining public understanding of science. The scientific community is losing this battle. If you need visual confirmation of that, try a Google Images search for the term “G.M.O.” Scary pictures proliferate, from an archetypal evil scientist injecting tomatoes with a syringe — an utterly inaccurate representation of the real process of genetic engineering — to tumor-riddled rats and ghoulish chimeras like fish-apples.

In Europe, leaders in Brussels propose to empower all member states of the European Union to ban genetically modified crops, if they so wish. Hungary has even written anti-G.M.O. ideology into its Constitution. Peru has enacted a 10-year moratorium.

As someone who participated in the early anti-G.M.O. movement, I feel I owe a debt to Mr. Rahman and other farmers in developing countries who could benefit from this technology. At Cornell, I am working to amplify the voices of farmers and scientists in a more informed conversation about what biotechnology can bring to food security and environmental protection.

No one claims that biotech is a silver bullet. The technology of genetic modification can’t make the rains come on time or ensure that farmers in Africa have stronger land rights. But improved seed genetics can make a contribution in all sorts of ways: It can increase disease resistance and drought tolerance, which are especially important as climate change continues to bite; and it can help tackle hidden malnutritional problems like vitamin A deficiency.

We need this technology. We must not let the green movement stand in its way.

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