

GE Food: Feeding the Hungry or Corporate Profits?

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The U.S. Embassy to the Holy See, in cooperation with the Pontifical Academy of Sciences, are hosting a seminar at the Gregorian University in Rome on September 23, 2004. The theme of the seminar is Feeding a Hungry World: The Moral Imperative of Biotechnology. The flyer promoting the event begins with the UN statistic that one person dies from hunger and malnutrition every six seconds. It goes on to state that 1.5 billion people live in poverty and humankind have developed the ability to create crops that resist extreme weather, disease and pests, use less water and require fewer chemicals. These genetically engineered plants could banish hunger and starvation so there is a moral imperative on everyone, especially the Vatican, to promote GE food as widely and quickly as possible. In 1992 Monsanto's chief executive, Robert Shapiro spoke along similar lines in a long interview with Joan Magretta in the Harvard Business Review (1). He argued that genetic engineering of food crops is a further improvement on the Green Revolution that saved Asia from starvation in the 1960s and 1970s.

Critics of genetic engineering reject the argument that GE foods will stave off global famine. They also question the accepted wisdom that the impact of the Green Revolution has been entirely positive. The Indian scientist, Dr. Vandana Shiva, in correspondence with Norman Borlaug, considered by many to be the father of the Green Revolution, debunks many of the myths surrounding the Green Revolution. Dr. Shiva challenges the first myth that India was unable to feed itself until the Green Revolution was launched. She points out that the last famine in India took place in 1942 during British rule. She admits that India experienced a severe drought in 1966 and was forced to import grain from the US. She indicts the US for using the food shortage to push non-sustainable, resource-inefficient, capital and chemical-intensive agriculture on one of the most ancient agricultural civilisations in the world. American agricultural experts like Borlaug did not introduce the Green Revolution to 'buy time' for India. They introduced it to sell chemicals to India (2). Proponents of the Green Revolution gloss over the fact that it has contributed to the loss of three-quarters of the genetic diversity of major food crops and that the rate of erosion continues at close to 2 per cent per annum (3).

In reality famine and hunger around the world have more to do with the absence of land reform, social inequality, biases against women in many cultures, a lack of access to cheap credit, and basic agricultural technologies, rather than with a scarcity of super seeds. This fact was recognized accepted at the World Food Summit in Rome in November 1996. The participants acknowledged that the main causes of hunger are economic and social. People are hungry either, because they do not have access to food production processes or do not have enough money to buy food. Do the proponents of GE food think that agribusiness companies will distribute genetically engineered food free to the hungry poor who have no money? There was plenty of food in Ireland during the famine in the 1840s but those who were starving did not have access to it or money to buy it.

Who currently benefits from GE crops? At the moment the bulk of the GE corn and soya harvest is fed to animals not people. In 1990, the World Food Program at Brown University calculated that, if the world harvest over the previous few years was distributed fairly to all the people of the world, it could provide an adequate vegetarian diet for 6 billion people. In contrast, a meat rich-diet could only manage to feed 2.6 billion. Human society is increasingly going to be faced with the option of getting its protein from animals or plants. If we opt for animals it will mean a more inequitable world with increasing levels of malnutrition, hunger and starvation. The tragedy is that many countries, as they become richer, are adopting the Western meat-rich diet. In 1960, for example, Mexico fed only 5% of its grain harvest to animals. By 2004 the figure has climbed to 45%. Similarly, Egypt has gone from 3% to 31% in the same period. Most worrying of all is that China, with one sixth of the world's population, has gone from feeding 8% of its grain to animals to 26% in the same 40 years. In all of these countries poor people could use this grain to stave off malnutrition and improve their health. Unfortunately, they cannot afford to buy the grain (4). So growing GE grain to feed to animals is, in fact, contributing to world hunger, not solving it.

If the Catholic Church really wants to play a part in alleviating world hunger it could achieve that goal much more efficiently by promoting abstinence from meat on a number of days each week rather than pushing GE crops. The Church could also try stem the present mass extinction that threatens to wipe out one third to a half of all the species in the world in the next 40 years. The bio-geographer Chris Park, of Lancaster University, estimates that there are possibly 75,000 edible plants in the world. Many of these are highly nutritious and could be added to the larder of a much greater proportion of humankind with a minimum amount of research and funding. Don't expect the U.S. Embassy to sponsor a seminar on the extinction of species. Sadly, there is very little money to be made in protecting the biosphere. The U.S. has not yet signed either the Convention on Biodiversity (CBD) or the Cartagena Protocol on Bio-safety and we are expected to believe that the U.S. interest in GE food is purely altruistic!

There are also much cheaper ways of improving crop yield than resorting to genetic engineering. Early in 2003 a researcher at the Institute of Development Studies at Sussex University published an analysis of the GE crops which biotech companies are developing for Africa. Among the plants studied by the researcher, Aaron de Grassi, were cotton, maize and sweet potato. He discovered that conventional breeding procedures and good ecological management produced a far higher yield at a fraction of the cost. The GE research on sweet potato is now approaching its 12th year and has involved the work of 19 scientists. To date it has cost \$6 million. Results indicate that yield has increased by 18 percent. On the other hand conventional sweet potato breeding working with a small budget has produced a virus-resistant variety with a 100 percent yield increase (5).

Support for GM crops also means supporting the patenting of living organisms - seeds and animals. It is strange to find the Vatican, with its pro-life policies, approving the patenting of life. In my book *Patenting Life? Stop!* (6) I argue that patenting life is a fundamental attack on the understanding of life as a gift from God which is meant to be shared with everyone. It opts instead for an atomized, isolated understanding of life which is ultimately controlled by money (6).

My main concern about GE crops is that it will give enormous control of the staple foods of the world to a handful of Northern agribusiness companies.. Margot Wallstrom, the European environment commissioner, hit the nail on the head when she said, at a conference in London in October 2003, that, far from developing GE crops to solve the problem of starvation in the world, as they claimed, the biotech companies did so to 'solve starvation amongst their shareholders .

It will be a tragedy if the Vatican listens to the corporate voice rather than the voice of countless Christian communities and their leaders in Third World countries. I worked with the T'boli people in Mindanao for over ten years during which I came to know and respect the bishop of the diocese of Marbel, Dinualdo Gutierrez. He has led a vigorous campaign against sowing Bt. corn in his diocese because he sees what the impact will be on the people and the land. If the Vatican supports GE foods he and many others around the world will feel that the Catholic Church has abandoned them in favour of giant biotech corporations who are poised to make billions of dollars selling patented GE seeds.

1. Robert Shapiro, "Growth Through Global Sustainability", *Harvard Business Review*, March 2, 1992, pages 79-88.
2. *Ecologist*, Vol 27, No 5, September/October 1997, pages.
3. Pat Roy Mooney, "First Parts: Putting the Particulars Together", *Development Dialogue*, April 1998, page 70.
4. Richard Manning, "The Oil We Eat", *Harper's Magazine*, February 2004, page 45.
5. George Monbiot, "Force-fed a diet of hype", *The Guardian*, October 7, 2003, page 25.
6. Sean McDonagh, 2003, *Patenting Life? Stop!*, Dominical Publications, Dublin. page 192.
7. Michael McCarthy, "US firms 'tried to lie' over GM crops, says EU", *The Independent*, October 14, 2003, page one.