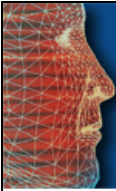




## Case Study: The EU-US Dispute over Regulation of Genetically Modified Organisms, Plants, Feeds, and Foods

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# International Dimensions of Ethics Education in Science & Engineering

Science, Technology & Society Initiative @ the University of Massachusetts Amherst

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## The EU-US Dispute over Regulation of Genetically Modified Organisms, Plants, Feeds, and Foods

[Modified from [material](#) by MJ Peterson with research and drafting assistance from Paul A. White]

### What are the Ethical Concerns about Genetically-Modified Foods?

High ethical concern about GM organisms has two sources: concerns for the integrity and sustainability of the natural environment and concern about the social consequences of allowing the supply of seeds or breeding stock to be controlled by developers (mainly though not exclusively large multinational corporations) having 20-year monopolies over the distribution of any particular genetic material as a consequence of patent rights.



### Differing Views on GMOs in the EU & US

Scientific uncertainty and ethical concern have played out differently in the European Union and the United States since the mid 1990s because of differences in initial assumptions about genetic modification technologies.

The EU treats genetically modified organisms, plants, feeds, and foods as very different from “conventional” varieties developed with traditional crossbreeding and hybridization techniques. The EU also relies very heavily on the precautionary principle as the guide to decision-making. This principle mandates avoiding a new activity or technology while its long-term consequences remain unknown.

The US treats genetically modified organisms, plants, feeds, and foods as basically similar to varieties produced by traditional breeding methods unless there is solid proof of a significant difference. The US does not rely as extensively on the precautionary principle; most policy decisions are guided by the rule that a new activity may proceed until it is shown to cause significant harm.

The US government’s decision that genetically modified plants, animal feeds, and human foods are basically similar to conventionally-bred products requires regulators to demonstrate that they are notably less safe before they can block cultivation or sale. In the EU, a largely opposite dynamic has prevailed since 1998. European regulations, incorporating the precautionary principle, start from the proposition that GM plants, feeds, and foods are significantly different from conventionally-bred ones and those who want to plant or sell them must prove to regulatory agencies that the product is safe.

### How have differing attitudes towards GM foods been reflected in policy?

In the late 1980s, before these regulatory differences developed, business leaders and policy-makers in the EU and the US agreed that coordinated policy approaches on a range of trade issues would be helpful to both industry and consumers. In 1995 European and American business leaders created the Transatlantic Business Dialogue (TABD) to push for the liberalization and harmonization of trade laws on both continents. From its beginnings the TABD urged the United States and the European Union to adhere to a shared policy on genetically modified food. Its recommendations were forwarded to the Transatlantic Economic Partnership (TEP), an EU-US governmental

working group charged with developing common policies. In 1998 the TEP created a Biotechnology Working Group that attempted to create a process for the simultaneous regulation of particular GMOs on both sides of the Atlantic.

Before the TEP's project got underway, however, such an alignment was undermined by the rise of anti-genetically modified food protests in Europe that sent the EU policy process in a different direction and prevented convergence on a common position. Strong protests from consumer and environmental groups persuaded some EU governments to adopt more restrictive national policies. US biotech firms were aware of these sentiments, and Monsanto (one of the largest of these companies) sought in vain to counter them with a public relations campaign that, by suggesting critics were irrational and anti-science, only strengthened opposition to GM foods by allowing environmental groups to present the controversy as one of an embattled civil society against big business. All agricultural applications of GM technology were cast into doubt as environmentalists deployed a combination of worst-case scenarios about environmental damage, fears about the unknown health consequences of GM foods, and arguments that GM technology primarily benefits those engaged in large-scale "industrial" farming to raise effective technical and ethical concerns among the public.

Austria led the way to policy divergence in February 1997 by invoking a "safeguard clause" allowing member states to ban growing plants from particular GM seeds if they judge that growing them will threaten the country's environment. Austria's decision covered one GM plant: Novartis Bt 176 maize (corn). Austria's decision inspired other governments to take similar steps and between 1997 and 2000, six EU members – Austria, Luxembourg, France, Greece, Italy, and Germany – invoked the safeguard clause on 12 occasions to ban particular GM plants.

Responding to the public discontent, the European Commission announced in November 1997 that it would amend its policies to address the concerns of its member states and place a moratorium on further approvals of GM products until new regulations were in place. This decision was reaffirmed in June 1999 when the EU Council outlined its thinking on a new, more restrictive regulatory scheme. Previously issued permits remained valid, but strong consumer resistance meant that sales of GM seeds and GM-containing feeds and foods fell drastically. The value of American GM corn exports to EU countries fell from around \$211 million in 1997 to \$200,000 in 2005, while GM soybean exports fell from \$2.3 billion to \$511 million over the same period.

The EU adopted new regulations on GM products in 2001 and 2003, but did not start considering new approvals because public opposition to GM foods remained strong. US firms and food distributors, who believed strongly that their products were both safe and beneficial, were irritated by what they saw as an effort to keep the moratorium on new GM food products in place even though new policies had been adopted. Many of them also thought that the EU was using public opinion as a smokescreen for policies actually meant to protect European seed companies, farmers, and food wholesalers from foreign competition. Such suspicion was not entirely unreasonable; the EU has a long record of maintaining high trade barriers against foreign agricultural and food products.

## **What was the response of GM exporters to EU policies restricting approval of their products?**

On 13 May 2003, the United States, Canada and Argentina filed complaints with the World Trade Organization contending that the European Union moratorium on approving new genetically modified food amounted to unfair protectionist measures against their countries' GM products. The complainants also claimed that African countries were refusing US food aid – which contained GMOs – despite famine and starvation because the African countries feared losing future access to EU markets.

When initial consultations between the EU and the US, Canada, and Argentina failed to resolve the dispute, the WTO Dispute Settlement Body created a panel to settle the matter.

The WTO Panel's final report ruled that the EU's pre-market approval system for GM products violated WTO provisions prohibiting unnecessary delays. The Panel set a date of 21 November 2007 for the EU to lift its moratorium on the approval of GM products, or risk facing WTO sanctions. The Panel also requested that member states with national safeguard measures in place bring their laws into accordance with WTO regulations.

While the ruling could be interpreted as a victory for pro-GM interests, the Dispute Settlement Panel did not offer any opinions that would prevent the EU from continuing to develop stricter regulations on GM products, ruling on neither the legality of the pre-market approval and risk assessment procedures adopted by the EU nor on whether the precautionary principle was a valid part of international law. The Panel also avoided any conclusions on the question of whether GM foods are substantially similar to their conventional counterparts, the position of many in the US who support a less regulated environment. Thus the WTO ruling went against the European Union on the technicalities

of its de facto moratorium, but did not include any ruling that would force the EU into the complete revision of its regulatory system on GM technology.

## Why are GM foods conceived of differently in the EU than in the US?

Public opinion of GM organisms and products is far more negative in Europe than in the US for several reasons:

1. US firms developing agricultural applications of GM technology formed an effective nationwide industry lobby while European GM-development firms did not. As a result, the European GM debate includes fewer advocates for GM agricultural applications than the US debate.
2. Most GM plants are bred for disease resistance, herbicidal properties, or pesticidal properties, and these traits are most useful to farmers engaged in highly mechanized cultivation on large fields. There are more such farmers in the US than in the EU.
3. European food sellers typically purchase much of their food from local or regional suppliers rather than the transcontinental suppliers selling to most US supermarket chains. Genetic modifications that improve the shelf-life or shipping hardiness of vegetables, fruit, and other foods are less important to European than to US suppliers.
4. On average, European consumers place higher value on freshness and local varieties of food than do US consumers. GM organisms and plants are perceived by European consumers as highly standardized "industrial-style" products without character. There is a growing "buy local" movement in the USA but it still accounts for only a small part of US food consumption.
5. The initial US decision that GM organisms and plants are "substantially similar" to conventionally-bred organisms and plants meant that regulatory agencies did not see the need for new rules. Thus neither Congressional debates nor the public comment process involved in agency rulemaking occurred at an early stage of technology use. Because of the economic and consumer attitude differences noted above, agricultural use of GM technology was far less widespread in Europe when opposition arose, so it was easier to interrupt approvals and press for adoption of more restrictive rules.
6. Multiparty political systems, which exist in most EU member states, make it easier for new groups, such as environmentalists, to form political parties than do two-party systems, as exist in the US and the UK. When a country also uses a proportional representation system, in which members of the legislature are elected in large multi-member districts and each party wins seats in proportion to its share of the vote in the district, it is easier for relatively small parties to win seats than in countries where each district elects only one member. These features of European national politics encouraged European environmentalists to put a lot of energy into mobilizing ordinary voters. A two-party system, single-member districts, and greater opportunities for influencing policy through lobbying and litigation in the courts encouraged more US environmentalist energy to flow towards those areas.

## What was the Reaction of the GM Industry to the Regulatory Restrictions and Public Outcry?

Monsanto and other developers of GM products modified their plans after the public hammering they received in the late 1990s. Brian Hinde (1) noted in June 2008 that:

The political battles over genetically modified organisms (GMOs) through the 1990s left the company bruised, profitless, and with scaled-back ambitions on the consumer food front. Out were promises of GMO wheat, rice, and tomatoes. In was a focus on corn, soy, and cotton--big-volume crops destined for industrial uses such as animal feed, ethanol, and textiles. The gambit worked. Since 2003, Monsanto has transformed itself from a money-losing pariah into a \$5 billion agribusiness titan with 20% profit margins and a stock price that is up 1,200%.

Monsanto may not be a pariah these days, but it certainly remains the main bogeyman to many environmentalist and consumer groups. Its ability to recover by taking advantage of the increasingly evident split between acceptance of GM varieties for industrial and feed uses and rejection of GM varieties for direct human consumption is consistent with the growing sentiment among scientists and government regulators that the environmental impacts of GM crops depend on the traits being developed and the particular ecosystems into which they will be introduced. In this view neither blanket opposition to GM technology nor blanket approval is an appropriate attitude.

## Citations:

(1) Brian Hindo, "Monsanto on the menu," *Business Week*, 23 June 2008 (issue no. 4089).

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