

Debate: Genetically modified food and the WTO ruling

Let them eat precaution: What the WTO decision on GMOs really means

Anti-science hysteria is dominating the debate about GM foods. That is a shame, argues Jon Entine

Call it "the spin wars". In a leaked interim report in February, the World Trade Organisation sided with Canada, Argentina, and the US, ruling that the European-wide ban on bio-engineered crops has more to do with protectionism than precaution. But that's not what you'd believe if you relied on the hysteria-grams flooding the internet.

Greenpeace blasted the WTO as "unqualified to deal with complex scientific and environmental issues". Friends of the Earth scowled "European safeguards" were being "sacrificed to benefit biotech corporations". The Consumers Union lambasted the "pre-emptive effort to chill the development of new policies for regulating GM crops". The WTO, they chorused, is a puppet of nefarious biotechnology corporations aligned with bully nations force-feeding Europe with "Frankenfoods".

Let's separate the chaff from the wheat. If this 1,045-page report is upheld, Europe will not have to alter a single regulation or label. Consumers will not be forced to buy and eat food that they do not want. The WTO will demand the EU observe its own regulations – using sound science to

evaluate new products. That has not been happening. European countries have been exploiting the controversy to protect their farmers and keep prices high.

Anti-GMO campaigners have been on the attack since the first generation of biotech crops – soybeans, wheat, cotton, and canola that generate natural insecticides, making them more resistant to pests and drought and reducing reliance on environmentally harmful chemicals – were introduced more than a decade ago. Why? Primarily because corporations brought them to market.

Solution to malnutrition

We are now entering the second phase of the revolution – addressing malnutrition and aiding smaller farmers. Nutritionenhanced foods such as "Golden Rice" could help millions of malnourished children suffering from vitamin A deficiency. On the horizon are futuristic "farmaceuticals" – medicines made by melding basic agriculture with advanced biotechnology, creating new foods, such as potatoes transformed into edible vaccines against diarrhoea, a leading cause of death in the developing world.

Yet, in a dark, parallel universe of the privileged, egged on by "ethical investors" and funded by the organic and natural product industries, which thrive on food scares, protestors cite the lowest common denominator in fabricated scientific disputes: the "precautionary principle" – the controversial notion that innovations should be shelved unless all risks can be avoided. They assert "Trojan Horse" genes could unleash a "genetic Godzilla", causing environmental havoc.

Slogans like "better safe than sorry" may ring of moderation, but they are simplistic. The WTO acknowledged as much, ruling there is no mainstream scientific support for the precautionary principle, but leaving the door open to handling the GMO issue differently "if new scientific evidence comes to light which conflicts with available scientific evidence".

Every activity involves risk. Conventional farmers use chemicals that have unknown long-term consequences. Should we ban conventionally grown foods? People die and fall ill eating organic foods caused by fecal contamination from dung – a "natural" fertilizer. Should we remove these products from the shelves? We are not about to stop vaccinating infants because of the unfounded fear that inoculations cause harm. Do we really want to make profound decisions not on the basis of what we know but on the basis of what we do not know?

There have been no documented health problems linked to GM crops and no evidence that genetic modification poses greater risks than crossbreeding and gene-splicing, which have given us such products as the tangelo and seedless grape. Noting that biotech crops are just as safe and healthy as conventional crops, and can be grown with less environmental hazard, the United Nations has urged their extension to the developing world.

Back on their heals, anti-GMO groups have attempted to reframe the debate in starkly political terms, citing the Biosafety Protocol, which Greenpeace claims should allow countries "to ban or restrict the import and use of GE [genetically engineered] organisms when there is a lack of scientific knowledge or consensus regarding their safety". But this "international law" is actually only an extra-legal declaration.

The WTO saw through this hyperbole, pointedly writing: "There has been to date no authoritative decision by an international court or tribunal which recognises the precautionary principle as a principle of general or customary international law." Should the Biosafety Protocol become law, studies have shown it would be a disaster for developing countries (and a boon for protectionist-minded Europe).

The hypothetical risk of biotechnology has to be balanced against the lives lost because new products remain trapped in a regulatory maze. In 2002, Zambia and Zimbabwe, wary of offending their major trading partners in the EU, cited the "precautionary principle" in rejecting donations of bio-engineered grain that could have helped feed ten million undernourished people, thousands of whom ultimately died.

Today in the Philippines, where 42% of the diet comes from white rice, a study by UN food experts estimates that "Golden Rice" could avert 879 deaths, 1,925 corneal ulcers, and 15,398 cases of night blindness each year. A Philippine-based anti-biotechnology group with ties to Greenpeace has aggressively lobbied against "Golden Rice" on the grounds that the benefits from beta-carotene are minimal – claims rejected by scientists.

Popular with the people

We should also be sceptical of polls suggesting consumers, particularly in Europe, are dead set against these innovations. "If you really want to understand whether European shoppers will buy genetically modified foods given the opportunity, ignore the agents provocateurs, the media, and the panicked reactions of the big supermarket chains, and look instead at the behaviour of ordinary consumer," says

David Bowe of the European Parliament's committee on environment, public health and consumer policy. "When Safeway and Sainsbury's put GM tomato purée side by side with their non-GM counterparts in 1999 the proof was definitely in the purée. The GM product was seen to offer real added value. It was less expensive and in numerous blind tastings consumers seemed to prefer the flavour. It sold as well as the non-GM product."

Even with this WTO ruling, political realities suggest this subterfuge may not end soon. Greece and Hungary recently announced they would defy EU regulations and broaden their bans on GM-modified maize seeds, citing "toxicity". No scientific research was presented to back up this allegation.

While not a silver bullet, GM technology offers unique tools to address

international food needs. Biotech crops are grown mostly in major farming nations but farmers in developing countries such as Brazil, China, India, and in Eastern Europe, with hungry stomachs to feed, are vigorously embracing the technology. Last year, 8.5 million farmers in 21 countries grew biotech crops on 222 million acres, an 11% year-on-year increase.

There are valid concerns, including the degree to which corporations should be allowed to patent beneficial seeds, keeping in mind that Monsanto, Bayer, Novartis and other firms need to recoup their development costs,

which have multiplied exponentially because of the country-by-country, complex and repetitive approval process.

But years of demagoguery have taken an enormous toll – polluting public opinion, profoundly altering the trajectory of biotechnology applications and damaging the financial wherewithal of corporations and university research projects. The biggest losers are the children, frozen out of the benefits of the green revolution that many of us take for granted.

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All that glitters...

GM remains a bad idea for all sorts of reasons, says Graham Thompson of Greenpeace UK

Why should we be worried about genetically modified food? Last year an Australian project to engineer a GM pea was abandoned because rats developed allergic reactions when fed the experimental peas. Not the biggest food scare in the past few years, admittedly – the problem was picked up and the project abandoned. So where's the danger?

Well, the tests needed to pick up this effect are not part of the European or US food safety regimes. Furthermore, the peas were "substantially equivalent" to



normal peas – "substantial equivalence" means containing the same chemicals in the same quantities – and could have been approved on those grounds.

The problem was picked up through luck, and the pea could have been allowed through Europe's allegedly over-protective, precautionary regime with no-one knowing about the health risk. They had already been deliberately released into the environment in field trials. Do we know that the GM crops already on their way to market could not cause similar problems? The studies have not been done.

The vast majority of European consumers do not want to eat GM food. Unfortunately, as US trade representative Rob Portman recently noted, "public opinion isn't the standard. The standard is