

A Tale of Two Scientific Consensuses

Look who's letting ideology overrule science.

[Ronald Bailey](#) | April 6, 2007

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Environmentalists constantly reference the [scientific consensus](#) that human activity is changing the global climate.

"You have the strongest consensus we have seen in the science community about global climate change since the conclusion that tobacco caused lung cancer," asserts [Union of Concerned Scientists](#) (UCS) president Kevin Knobloch. [Greenpeace](#) also argues, "There is, in fact, a broad and overwhelming scientific consensus that climate change is occurring, is caused in large part by human activities." And [Friends of the Earth](#) has gone after Exxon Mobil because it "has repeatedly attempted to undermine the scientific consensus on climate change and actively resisted attempts to limit carbon dioxide emissions through law."

Clearly when it comes to climate change, environmentalists righteously wrap themselves in the cloak of scientific "consensus." They excoriate scientists and others who doubt that man-made climate change will necessarily be disastrous, accusing some of being essentially paid liars for the fossil fuel industry. But for many environmentalist groups not all scientific consensuses are equal. Consider the case of genetically enhanced crops.

"GMOs [genetically modified organisms] should not be released into the environment as there is not adequate scientific understanding of their impact on the environment and human health," warns [Greenpeace](#). "Genetic engineering is imprecise and unpredictable. But most testing is carried out by the very biotech companies that have the most to gain from results that say GM food is safe," [says](#) Friends of the Earth. The Union of Concerned Scientists [acknowledges](#) that "there have been no serious environmental impacts-certainly no catastrophes-associated with the use of engineered crops in the United States." In addition, the UCS admits, "No major human health problems have emerged in connection with genetically modified food crops, which have been consumed by significant numbers of U.S. consumers." In fact, no--not just "no major"--human health problems have emerged. Nevertheless, the UCS concludes "the scientific evidence available to date, while encouraging, does not support the conclusion that genetically modified crops are intrinsically safe for health or the environment." What does "intrinsically safe" mean? On what evidence can the UCS conclude that even conventional crops are "intrinsically safe"?

The scientific consensus about current varieties of genetically improved crops stands in stark contrast to these dire environmentalist assertions.

As evidence, consider a recent report issued by the International Council for Science (ICSU). The ICSU is an organization whose membership consists of 111 national academies of science and 29 scientific unions. In 2005, the ICSU issued a report based on a comprehensive [analysis of 50-science based reviews](#) of genetically modified crops. The ICSU concluded: "Currently available genetically modified foods are safe to eat." Some environmentalist critics claim that genes from genetically modified crops will "[contaminate](#)" the natural environment and conventional crops. The ICSU found, "there is no evidence of any deleterious environmental effects having occurred from the trait/species combinations currently available." The [World Health Organization](#) agrees that current varieties of GM foods "are not likely to present risks for human health. In addition, no effects on human health have been shown as a result of the consumption of such foods by the general population in the countries where they have been approved."

A 2003 position paper by the [Society of Toxicology](#) found, "The level of safety of current BD [biotechnology-derived] foods to consumers appears to be equivalent to that of traditional foods." In 2002, the U.S. Government Accountability Office (GAO) reviewed the scientific literature and sought expert advice about the safety of genetically modified foods. The GAO [concluded](#), "Biotechnology experts believe that the current regimen of tests has been adequate for ensuring that GM (genetically modified) foods marketed to consumers are as safe as conventional foods." The experts with whom the GAO consulted also pointed out "there is no scientific evidence that GM foods cause long-term harm, such as increased cancer rates," and that "there is no plausible hypothesis of harm." GM foods might have adverse effects if they produced harmful proteins that that remained stable during digestion. However, the GAO noted that the proteins produced through genetic enhancement are in fact rapidly digested.

In 2000 the report [Transgenic Plants and World Agriculture](#), issued under the auspices of seven national academies of science, including U.S. National Academy of Sciences and the British Royal Academy, found that "no human health problems associated specifically with the ingestion of transgenic crops or their products have been identified." Also in 2000, a [American Medical Association](#) report noted, "Worldwide, many people are eating GM foods with no overt adverse effects on human health reported in the peer-reviewed scientific literature and according to regulatory agencies."

Almost all of the previously analyses cited do suggest that more stringent regulations might be necessary if future genetic modifications significantly change the nutrition of foods. But here are a couple of rules of thumb for reasonable regulation of genetically improved crops. If a regulatory system would cover a specific trait were it in a conventionally bred crop, then it should also regulate that same trait in a GM crop. If not, then it should not be regulated in a GM crop either. Secondly, once a trait has been approved, it should be approved for all varieties and all crops. There is no need to make a trait that already been scientifically determined to be safe go through the regulatory system again and again and again.

In any case, the overwhelming scientific consensus is that current varieties of genetically enhanced crops are safe to eat and don't pose unusual risks to the natural environment.

But that isn't stopping Greenpeace from waging a global "Say no to genetic engineering" campaign or the Friends of the Earth from demanding a [GM Freeze](#). Perhaps the idea of scientific consensus is not all that it's cracked up to be. After all, scientific consensus does not mean "certain truth." Whatever the current consensus of any scientific issue is can change in the light of new research. Nevertheless, environmentalist ideologues accuse those who question the climate change consensus of bad faith and worse. But aren't they exhibiting a similar bad faith when they reject the broad scientific consensus on genetically modified crops?

Disclosure: [Ralph Waldo Emerson](#) wrote: "A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines." Nevertheless, I accept both the scientific consensus on climate change and the consensus on genetically enhanced crops.

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