

# GMO: What is the independent scientific consensus?

## The big question: Who do you trust?

On any contentious issue like GMOs, **reaching agreement requires finding sources that all parties trust.** This document attempts to locate that common ground.

You trust the national and international science organizations that have stated human-caused climate change is a fact. These statements are issued based on thoroughly scrutinized independent expert reviews of hundreds or thousands of scientific papers, with due attention paid to potential bias. The organizations have stood by their statements in the light of further evidence, which has become only more supportive.

As detailed below, **these organizations that you trust agree that climate change is real and alarming, and also that GMOs are safe for our health and for the environment.** Their statements are careful, nuanced, and unbiased. For example, they point out that RoundUp herbicide tolerance in weeds is currently a problem, and encourage diversifying agricultural approaches (including alternative GMOs) to solve it. They agree that GMOs are not remotely the whole solution to improving the global food supply, although they can be an important part of it, as can organic methods. (Organic GMO anyone?) They agree that safe and beneficial GMOs should be made available at low or zero cost to developing nations. They agree that many herbicides and insecticides have toxic effects. All of these points run counter to Monsanto's interests; these organizations make these claims for the same reason they make all their claims: *because the science supports them.*

Big Oil could not buy these organizations on climate change, or influence them by means of inserting a few biased members. But this means *neither can Monsanto*, with its tiny resources by comparison. (Exxon-Mobil's net profits are 20 to 30 times Monsanto's!)

You are encouraged to consult these sources for yourself, in the hope that we will be able to find common ground and join together in the important struggles ahead: against climate change denial, for independent science, and for food security in the face of climate change and a growing world population-with *all* the healthy and beneficial agricultural methods at our disposal. We'll need them.

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### Sources you trust

Organization	Statement on Climate Change	Statement on GMOs
American Association for the Advancement of Science	"The scientific evidence is clear: global climate change caused by human activities is occurring now, and it is a growing threat to society." (AAAS Board Statement on Climate Change, 2006)	"The science is quite clear: crop improvement by the modern molecular techniques of biotechnology is safe." (AAAS Board Statement on Labeling of Genetically Modified Foods, 2012)
American Medical Association	"Our AMA ... supports the findings of the Intergovernmental Panel on Climate Change's fourth assessment report and concurs with the scientific consensus that the Earth is undergoing adverse global climate change and that anthropogenic contributions are significant." (Global Climate Change and Human Health, 2013)	"Our AMA recognizes that there is no evidence that unique hazards exist either in the use of rDNA (GE) techniques or in the movement of genes between unrelated organisms." "Bioengineered foods have been consumed for close to 20 years, and during that time, no overt consequences on human health have been reported and/or substantiated in the peer-reviewed literature." "To date, no evidence has supported an increased degree of allergenicity of bioengineered foods compared to their non-bioengineered counterparts." (Report of the Council on Science and Public Health, 2012)

Organization	Statement on Climate Change	Statement on GMOs
<b>National Academies of Science (USA)</b>	"The scientific understanding of climate change is now sufficiently clear to justify taking steps to reduce the amount of greenhouse gases in the atmosphere." (Understanding and Responding to Climate Change, 2005)	"Genetic engineering is one of the newer technologies available to produce desired traits in plants and animals used for food, but it poses no health risks that cannot also arise from conventional breeding and other methods used to create new foods." (Expert Consensus Report: Safety of Genetically Modified Foods, 2004)
		"An analysis of the U.S. experience with genetically engineered crops shows that they offer substantial net environmental and economic benefits compared to conventional crops." "The transfer of GE traits from GE crops to other crops or relatives has not been a concern for most non-GE crops." "Generally, GE crops have had fewer adverse effects on the environment than non-GE crops produced conventionally." (Impact of Genetically Engineered Crops on Farm Sustainability in the United States, 2010)
<b>World Health Organization</b>	"There is now widespread agreement that the Earth is warming, due to emissions of greenhouse gases caused by human activity. It is also clear that current trends in energy use, development, and population growth will lead to continuing - and more severe - climate change." (Protecting Health from Climate Change, 2008)	"GM foods currently available on the international market have passed risk assessments and 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." (20 questions on genetically modified foods, 2013)
<b>European Commission</b>	"There is unequivocal evidence that the Earth's climate is warming.... The consensus among climate experts is that it is extremely likely that the main cause of recent warming is the 'greenhouse' gases (GHGs) emitted by human activities, in particular the burning of fossil fuels – coal, oil and gas – and the destruction of forests." (Climate Change Fact Sheet, 2012)	"The main conclusion to be drawn from the efforts of more than 130 research projects, covering a period of more than 25 years of research, and involving more than 500 independent research groups, is that biotechnology, and in particular GMOs, are no more risky than conventional plant breeding technologies." (A decade of EU-funded GMO research, 2010)
<b>The Royal Society (UK)</b>	"There is strong evidence that the warming of the Earth over the last half-century has been caused largely by human activity, such as the burning of fossil fuels and changes in land use, including agriculture and deforestation." (Climate Change: A summary of the science, 2010)	"A previous Royal Society report (2002) and the Government's GM Science Review (2003/2004) assessed the possibilities of health impacts from GM crops and found no evidence of harm. Since then no significant new evidence has appeared. There is therefore no reason to suspect that the process of genetic modification of crops should per se present new allergic or toxic reactions.... Global food insecurity is the product of a set of interrelated local problems of food production and consumption. The diversity of these problems needs to be reflected in the diversity of scientific approaches used to tackle them." (Reaping the benefits: Science and the sustainable intensification of global agriculture, 2009)
<b>International Science Academies: Joint Statement (including the Brazilian Academy of Sciences, the Chinese Academy of Sciences, the Indian National Science Academy, the Mexican Academy of Sciences and the Third World Academy of Sciences)</b>	"Climate change is real. There will always be uncertainty in understanding a system as complex as the world's climate. However there is now strong evidence that significant global warming is occurring. The evidence comes from direct measurements of rising surface air temperatures and subsurface ocean temperatures and from phenomena such as increases in average global sea levels, retreating glaciers, and changes to many physical and biological systems. It is likely that most of the warming in recent decades can be attributed to human activities." (The Science of Climate Change, 2001)	"GM technology has shown its potential to address micronutrient deficiencies [in developing nations]. These nutritional improvements have rarely been achieved previously by traditional methods of plant breeding." "GM technology, coupled with important developments in other areas, should be used to increase the production of main food staples, improve the efficiency of production, reduce the environmental impact of agriculture, and provide access to food for small-scale farmers." "Decisions regarding safety should be based on the nature of the product, rather than on the method by which it was modified. It is important to bear in mind that many of the crop plants we use contain natural toxins and allergens." (Transgenic Plants and World Agriculture, 2000)