## BOX 8.5 GMO: What Is the Independent Scientific Consensus?

The National Academies of Science released a report in 2016, confirming their earlier statements on genetically engineered crops.[26]

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The same scientific organizations that most of us trust when it comes to the changes in climate state that the process of genetic engineering is no more risky than other methods of crop genetic improvement:

| Organization | Statement on Climate Change | Statement on GMOs |
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| 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." (Report of the Council on Science and Public Health, 2012) |

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| National Academies of Science (USA) | "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)<br>"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. ... 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) |
| World Health Organization | "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 Goods, 2013) |

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| European Commission | "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) |
| The Royal Society (UK) | "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." (Reaping the Benefits: Science and the Sustainable Intensification of Global Agriculture, 2009) |
| International Science Academies: Joint Statement | "Climate change is real... 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 | "GM technology has shown its potential to address micro-nutrient deficiencies [in developing nations]. . . . GM technology, coupled with important developments in other areas, should be used to increase the production |

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| | 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) | 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) |

From Ryder, D. "Infographic: Climate Change vs. GMOs: Comparing the Independent Global Scientific Consensus." *Genetic Literacy Project*, July 8 2014.