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Confidence-Building Measures for Genetically Modified Foods

by

Gary E. Marchant

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CONFIDENCE-BUILDING MEASURES FOR GENETICALLY MODIFIED FOODS

Gary E. Marchant*

"Confidence-building measures" (CBMs) are concrete, incremental steps, acceptable to all parties, that can be implemented relatively easily to reduce tensions and build trust in a time of conflict. The concept of CBMs arose in the sphere of international relations, and such measures are frequently used in international conflicts as the initial steps for reducing hostilities between enemies. In this international context, CBMs usually involve some mix of communication, constraint, transparency, or verification measures. CBMs are not intended to provide an ultimate solution to a conflict, but rather to reduce tensions and increase trust. This promotes a climate that is more conducive to negotiations and cooperation on a longer-term solution. CBMs are thus intended as pragmatic steps toward more substantial and enduring objectives.

The concept of CBMs may be useful for conflicts over genetically modified (GM) foods and other biotechnology products. Biotechnology has the potential to provide many health, environmental, and economic benefits to society, but the realization of those benefits is called into question by public mistrust of this nascent technology. While the American public has not shown the widespread hostility to GM products that has been experienced in Europe, public opinion polls consistently show a strong undercurrent of concern and lack of confidence in the governmental and industry institutions controlling the development of biotechnology.

The lack of trust and confidence in GM foods has several adverse impacts on the development and use of biotechnology. Biotechnology companies are deterred from developing potentially beneficial products, venture capitalists and other

*Professor of Law and Executive Director, Center for the Study of Law, Science, and Technology, Arizona State University College of Law.

potential financiers under-invest in the technology, farmers face uncertainty about potential markets and restrictions on GM products, and food distribution companies face competing pressures in their selection of source ingredients. Meanwhile, most of the general public remains uncertain, confused and conflicted about those GM products that do reach the market.

Most public interest groups that lead campaigns against GM products, and consumers uneasy about GM foods, claim they are not opposed to GM products *per se*, but rather lack confidence in the ways that GM products have been introduced into the market. While no comprehensive solutions to bridge the disputes over GM products are on the horizon, there may be pragmatic CBMs available in the short term that can reduce controversy and build trust, thereby creating an atmosphere more conducive to reaching consensus on longer-term solutions.

Given the potential of CBMs for building trust in GM foods, the Center for the Study of Law, Science, and Technology convened a one-day conference on December 6, 2002 to explore some innovative new proposals for CBMs. Despite an ice storm on the east coast that prevented the arrival of several speakers and other participants, the conference was attended by over 100 participants. Eleven specific proposals for CBMs for GM foods were presented, divided into three categories of (i) unilateral industry initiatives, (ii) new regulatory models, and (iii) public participation approaches. The papers in this volume present several of these proposals.

The first paper is by Thomas Redick, who reviews a decade of voluntary stewardship programs by biotechnology companies.[1] Redick attributes much of the general acceptance of GM products in the United States to these voluntary industry initiatives, notwithstanding some high-visibility failures such as the Starlink fiasco. He describes how existing stewardship initiatives might be strengthened as a unilateral industry confidence-building measure and advocates stronger product stewardship programs by biotechnology companies to avoid future episodes like Starlink that rapidly destroy confidence in the biotechnology industry. He further suggests that the potential for litigation provides additional incentives for industry stewardship programs.

The next three papers present innovative regulatory initiatives to build confidence in GM foods. Gregory Mandel proposes a new form of regulatory development in which industry, public interest organizations, and public representatives meet in an ongoing, collaborative process to develop a proposed set of guidelines for improving regulation for GM products.[2] This scheme would be similar to negotiated rulemakings (or "Reg-neg") currently undertaken by many federal agencies when developing regulations, with the important difference that the relevant regulatory agencies would not participate. Rather, the process would

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1. Thomas P. Redick, *Stewardship for Biotech Crops: Strategies for Improving Global Consumer Confidence*, 44 JURIMETRICS J. 5 (2003).

2. Gregory N. Mandel, *Confidence-Building Measures for Genetically Modified Products: Stakeholder Teamwork on Regulatory Proposals*, 44 JURIMETRICS J. 41 (2003).

be limited to nongovernmental stakeholders. Professor Mandel suggests that the adversarial nature of the current GM debate and the sensational media coverage of specific controversies involving GM foods has degraded public trust in existing regulatory systems. The collaborative process he proposes can help rebuild confidence directly by producing recommendations for better regulatory systems and indirectly by creating an ongoing process to enhance communication and understanding between diverse interests.

Next, Rebecca Bratspies proposes a regulatory CBM that focuses on a specific problem relating to the refuge area required by the U.S. Environmental Protection Agency (EPA) to be planted around corn genetically modified to express the Bt insecticidal protein.[3] The refuge contains non-Bt corn and is intended to prevent or delay the development of Bt-resistance in insect pests that feed on the Bt corn. The problem is that EPA has regulatory authority only over the biotechnology company that produces the GM crop, not the individual farmers who actually grow the Bt corn in their fields. Professor Bratspies proposes that biotechnology companies work together with public interest organizations to develop educational and compliance verification programs for farmers. She also suggests that the biotechnology industry develop and adhere to a Declaration of Environmental Principles that would be prominently displayed on company websites.

Serena Vandegrift and Christine Gould focus on another specific problem relating to GM crops—the challenge of containing modified seeds and crops to prevent contamination of non-GM products—a problem sometimes termed "adventitious presence."[4] The article reviews the distinctive American, European, and other international regulatory approaches to address adventitious presence, concluding that the various existing approaches are both inconsistent and inadequate. The authors recommend that the United States participate with other national and international entities to establish international standards for adventitious presence, including science-based standards for tolerance levels and sampling procedures.

Providing greater opportunities for meaningful public involvement in decisions about GM foods is another potential approach for building public confidence in this technology. Gary Marchant and Andrew Askland argue that there are strong normative and practical reasons for greater public participation, but that developing mechanisms for receiving both meaningful and informed input from the public is difficult.[5] Many of these difficulties are illustrated by the recently completed national public debate on GM foods in the United Kingdom. Marchant and Askland argue that there is a need for experimentation with

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3. Rebecca M. Bratspies, *Bridging the Genetic Divide: Confidence-Building Measures for Genetically Modified Crops*, 44 JURIMETRICS J. 63 (2003).

4. Serina Vandegrift & Christine Gould, *Addressing the Problem of Adventitious Presence in Biotechnology*, 44 JURIMETRICS J. 81 (2003).

5. Gary E. Marchant & Andrew Askland, *GM Foods: Potential Public Consultation and Participation Mechanisms*, 44 JURIMETRICS J. 99 (2003).

innovative new deliberative approaches including on-line deliberations and citizen juries.

Douglas Powell, Katija Blaine, and Ben Chapman describe an innovative approach for directly involving the public in making choices about GM foods.[6] GM corn and conventional (non-GM) corn were grown next to each other at a vegetable farm in Ontario, Canada, and the harvested crops were segregated, labeled, and displayed along with extensive risk communication and educational materials. Consumers were invited to visit the farm and purchase GM or non-GM corn based on their preferences after reviewing the educational materials provided. This experiment was successful in raising both knowledge levels and confidence in GM foods in a local community.

Finally, Jane Maienschein provides a commentary that puts the conference and the CBMs proposed in this issue in a broader context, probing the goals, effectiveness, and challenges in trying to build public confidence in a new technology such as GM foods.[7] Notwithstanding the many challenges that confront confidence-building approaches, Professor Maienschein concludes we have little choice but to press on and experiment with new confidence-building approaches, recognizing that some will inevitably fail or fall short of our expectations. That is an acceptable price to pay for the societal benefits that CBMs have the potential to bring.

It remains to be seen whether any of the specific confidence-building measures proposed in this volume or elsewhere will ultimately succeed. We are optimistic, however, that the conference and these proceedings will, at a minimum, succeed in helping to advance the goal of developing effective confidence-building measures for GM foods. In that sense, these proceedings represent a beginning, not an end.

The Center for the Study of Law, Science, and Technology thanks the authors of the proposals in this volume and the other conference participants for taking up the challenge to think "outside the box" and propose creative new approaches for building public confidence. We also express our gratitude to the Arizona Biodesign Institute, with particular thanks to Drs. Charles Arntzen and Kathleen Matt, for funding this conference. The Arizona Biodesign Institute is a new research institute at ASU whose mission is "[t]o advance innovations improving human health and quality of life through use-inspired, biosystems research and effective, multidisciplinary partnerships."[8] The papers in this volume hopefully contribute to this worthy objective.

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6. Douglas A. Powell et al., *Enhancing Consumer Confidence in Agricultural Biotechnology and Genetically Engineered Food*, 44 JURIMETRICS J. 139 (2003).

7. Jane Maienschein, *Confidence Building: In What, for Whom, and Why?*, 44 JURIMETRICS J. 153 (2003).

8. The Arizona Biodesign Institute, *at* http://www.azbio.org/.