9-30-2001

GM Food Labeling Policies of the U.S. and Its Trading Partners

Matthew Rousu
Iowa State University

Wallace E. Huffman
Iowa State University, whuffman@iastate.edu

GM Food Labeling Policies of the U.S. and Its Trading Partners

Abstract
Much of the international controversy of GM foods is due to labeling policies. Countries around the wOrld have chosen differentpoliciesto label GM foods. We examinethe labeling policies of several areas: the United States, the EuropeanUnion, Australia, Japan, Canada, andChina. We discuss each country's GMlabeling policy, along with a brief history of how each countryarrived at their current policy. We conclude by discussing how different policies are due to different ethical concerns of GM foods, along with the difference in perceived risks GM foods pose to health, the environment, and trade.

Disciplines
Agribusiness | Agricultural Economics | Food Security | International Business

GM Food Labeling Policies of the U.S. and Its Trading Partners

by

Matthew Rousu and Wallace Huffman

September 30, 2001

Staff Paper #344

September 30, 2001

GM Food Labeling Policies of the U.S. and Its Trading Partners

By Matthew Rousu and Wallace Huffman*

Department of Economics,

Staff Paper No. 344

* The authors are, respectively, graduate student and professor, Department of Economics, Iowa State University.

This work was supported through a grant from the Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture, under Agreement 00-52100-9617 and by the Iowa Agriculture and Home Economics Experiment Station, Ames, IA

Abstract for:

GM Food Labeling Policies of the U.S. and Its Trading Partners

By Matthew Rousu and Wallace Huffman

Much of the international controversy of GM foods is due to labeling policies. Countries around the world have chosen different policies to label GM foods. We examine the labeling policies of several areas: the United States, the European Union, Australia, Japan, Canada, and China. We discuss each country's GM labeling policy, along with a brief history of how each country arrived at their current policy. We conclude by discussing how different policies are due to different ethical concerns of GM foods, along with the difference in perceived risks GM foods pose to health, the environment, and trade.

Key Words: Agricultural policy, GM foods, labeling, trade.

In 1996, genetically modified (GM) foods were relatively unknown. For most circumstances, policies were not in place regarding the labeling of GM foods. Worldwide, there weren't controversies on how to deal with GM foods. In just a short time, things have changed dramatically. Now, countries across the world have different labeling policies regarding GM foods; these differences are causing problems for agricultural producers who are trying to adjust to different labeling standards.

Much of the international controversy of GM foods is due to labeling policies. Labeling of GM foods can serve many purposes. One of the benefits of labels is that labels may reduce the cost of acquiring information for consumers. Another benefit is that labels often increase the average quality of foods because food producers do not want a negative label put on their foods. In addition, if the information on a food label is not used by the consumer at the present time, food labels provide consumers an option to read the label at a later date - this option has value.

Countries must take into account the costs of labels when setting policies. One cost is that adding information to labels dilutes the effectiveness of other information on labels. Secondly, setting up labels on GM foods requires food producers to incur costs, including setting up buffer zones, specialized equipment, cleaning and storage of equipment, and mistakes in handling of deliveries. Labeling may also impact the structure of an industry because fixed costs enable large firms to enjoy smaller per-unit labeling costs than small firms. Also, labeling spreads the costs to all consumers, but less educated consumers (with lower incomes) will not use the labels as much, and will pay a higher proportion of their income dealing with increased food costs. So, labeling acts like a regressive tax.

Countries have different views about which of the benefits are costs of GM labels are most important, and therefore different countries have different policies towards GM foods. This paper examines the GM food labeling policies of the United States and of some of their major trade partners. After a country-by-country analysis, there will be a discussion of some of the differences and how these differences may impact agricultural producers.

United States

The U.S. government has been supportive of biotechnology and has assumed that the regulation of biotechnology should examine the safety of the product and focus less on the process. By examining the product, the U.S. issued regulations in 1992 (Department of Health and Human Services) saying that GM food did not have to be labeled if the food product had the same characteristics as their non-GM counterparts.

In January 2001, the U.S. Food and Drug Administration (FDA) issued a "Guidance for Industry" statement for labeling GM products. In this the FDA stated that the only GM foods that need to be labeled are foods that have different characteristics from the non-GM version. Labeling for GM foods is not required for any other GM foods. Firms need to notify the FDA at least four months before putting a new GM food on the market, and the scientific description of the product is posted on the Internet for review during this time (AgBiotech Reporter, February 2001).

Firms also have the option of voluntarily indicating whether or not their food is genetically modified. For firms that choose to label their GM foods, the FDA has mandated certain guidelines that must be followed. Foods that are labeled cannot use the phrase, "genetically modified." Consumer surveys by the FDA found that this misleads

consumers into thinking the product has different characteristics. The FDA prefers that foods be labeled as "genetically engineered" or "made through biotechnology" instead.

Europe

For countries in the European Union (EU), the EU sets the minimum standards that any country should implement. Some countries have implemented stricter standards, but no country has more lenient standards (Bernauer). The European Union has a de facto moratorium on the approval of any new GM foods which has been in place since April 1998.

The European Union first implemented a mandatory labeling policy on GM foods in 1997 with the Novel Foods Regulation. The standards defined by this act required that any GM food on the market be shown to not harm human health and required labeling if GM content could be detected. The Novel Foods Regulation left several exemptions to labeling and did not define a standard for the percentage of a product that could be made with GM material before it must be labeled. For these reasons, the Commission of the Council modified this standard in January 2000 by requiring that all foods require the label "genetically modified" if any ingredient in the food is at least one percent GM.

In February 2001, the European Parliament voted for stricter regulations. The new regulations call for stricter labeling and monitoring of GM products, and allow for the tracing of GM products all through the food chain (CNN). These new regulations do not eliminate the moratorium on new approvals, and the moratorium will not be removed until voted upon. Six countries, Austria, Denmark, France, Greece, Italy, and Luxembourg claim that they will veto any approval of new GM products until stricter rules are enacted.

Australia (and New Zealand)

Several years ago, Australia, like much of the rest of the world, had no labeling policy for GM foods. In order to assess some of the costs that would accompany a labeling policy, the food governing board for Australia and New Zealand, Australia New Zealand Food Authority (ANZFA), commissioned a study by the U.S. firm KPMG to determine what effects a mandatory labeling policy would have on consumer costs for foods. KPMG concluded that consumers would have to pay from 0.5 percent to 15 percent more for products with such a policy (Phillips and Smith). Despite commissioning this study, ANZFA disregarded it, citing two flaws (Tambling).

Australia and New Zealand implemented standards that take effect in December 2001 (Australia New Zealand Food Authority, October 2000). The new standards require "labeling of food and food ingredients where novel DNA and/or novel protein is present in the final food." Similar to the policy of the European Union, labeling is not required if no ingredient in a food product is more than one percent genetically modified. Labeling is also not required for highly refined foods, foods that used GM processing aids that are not present in the final food, or food served in restaurants. If it is an ingredient in a product that is genetically engineered, the ingredient that is modified must be labeled as "genetically modified" in the list of ingredients. For a single ingredient GM food, the phrase "genetically modified" must be listed on the front of the packet, next to the name.

While Australia has a nationwide food standard, states within Australia are suing to develop their own stricter policies to handle GM foods (AgBiotech Reporter, May 2001). If successful, the system in Australia could be similar to that of Europe, where the

nationwide standard for GM foods is the minimum regulations in place regarding GM foods; and many areas have stricter regulations.

Japan

Before April 2001, no labeling was required for GM products. On April 1, 2001, a new policy was implemented. This new policy requires labeling for twenty-eight products, including a number of soy products, a number of corn products, and unprocessed tomatoes and potatoes. Products do not have to be labeled if the GM content is less than five percent, but could voluntarily be labeled as GM if the producer chooses (this would be unlikely). For products that are labeled, producers must label the product as "genetically modified," "inseparable," or "no GMOs present" (Bernauer).

While Japan has allowed many GM products to be approved, it is strict in dealing with unapproved GM foods. Changes to the Food Sanitation Law now make it illegal to either sell or import GM foods that have not been approved, or inspected. In June 2001, there were three recalls of food products that tested positive for unapproved GM foods (Hur). Despite the new Japanese policy, Americans remain hopeful that trade with Japan will continue to run smoothly. U.S. Agriculture Secretary Ann Veneman said she was "hopeful there will be no disruption of trade" between the two countries (AgBiotech Reporter, May 2001). This would be good for the U.S. since Japan is it's number one agricultural trading partner.

Canada

Canada currently only requires labeling for GM foods if those foods have health or safety issues. The Canadian government is considering implementing a voluntary labeling policy, and many Canadians think that this labeling policy could be passed as

early as 2001. At the Codex-Alimentarius Meetings in May of 2001, Canadian government officials reiterated their position but also talked of compromises in order to make trade easier. Margaret Kenny from the Canadian Food Inspection Agency said "Canada supports mandatory labeling for health and safety matters." She also said, "we're also very supportive of the need for uniform international standard. We're certainly hopeful at this meeting there's going to be some ideas on the table, where we can talk about getting the best of both proposals" (CBC News).

China

Up until early 2001, China supported biotechnology. Many thought that China was more supportive of biotechnological crops than any other country, except the U.S. In 2001, China's policy towards GM foods became more reserved. First, China banned GM rice, wheat, maize, tomato, cotton, and soybeans (AgBiotech Reporter, May 2001). China did this to avoid having their crops banned from other nations, according to Chen Zhangliang, Vice President of Peking University.

On May 23, 2001, China issued a new, 56-article regulation policy on biotechnology. This article aimed at strengthening control over all aspects of agricultural biotechnology. A report by the U.S. Foreign Agricultural Service stated that "the regulation is vaguely worded, leaving a great deal to the discretion of the department responsible for drafting and enforcing the implementing regulations." The report goes on to say that there will be safety certification for all GM food, and all GM foods will have to be labeled (AgBiotech Reporter, July 2001).

Why do different countries have different policies?

Different countries have different experiences regarding food and food safety. Because of these experiences it should not be surprising that countries have developed different policies to deal with GM foods. There are four main reasons why countries and individuals could oppose GM foods. There are ethical reasons, environmental concerns, human health concerns, or worries about trading with other countries. Different countries emphasize different concerns, which also causes different policies.

Europeans are more likely than Americans (and the rest of the world) to oppose GM foods on ethical grounds. Among those who oppose GM foods for ethical reasons is Prince Charles, who has said that God is the only one who should be allowed to genetically engineer food. Europeans are also more likely to avoid GM foods due to environmental concerns. Environmental groups have more power in European politics, and the biggest environmental groups have expressed their opposition to GM foods (Friends of the Earth, Greenpeace).

The safety of GM foods is a major concern for many countries. Australia, China and Japan are requiring labeling of GM foods to allow consumers to decide whether or not they wish to consume genetically engineered foods. This indicates that these countries are worried about health issues. European consumers are also worried about the safety of GM foods. Many human safety scandals have arisen recently in Europe where the governments did not do a good job, including the BSE (bovine spongiform encephalopathy) crisis, the HIV/AIDS tainted blood scandal in France, and the dioxin scandal in Belgium. These issues, and the recent foot-and-mouth disease outbreak, have caused Europeans to distrust regulators. Now when scientists and regulators try to assure

the European public that GM foods are safe, many Europeans have doubts. The Starlink controversy, where GM corn that was unapproved for human consumption got into the food supply, added to the European's GM food safety concerns.

China seems to be banning GM crops in large part because they are afraid that they may lose Europe as an export market. While there are individual farmers who have decided to go GM-free to enhance trade possibilities, it seems unusual that a whole country would ban planting of GM crops due to export worries.

Canada has approximately the same standards as the U.S., which seems logical due to the close proximity of the two countries, and NAFTA allowing products to flow freely from the U.S. to Canada and vice versa. Both Canada and the U.S. view potential threats from genetic modification as minor compared to the potential rewards.

The United States' policies towards GM foods are far less stringent than the standards in Europe and most of the rest of the world. What is odd is that the U.S. has had far stricter standards than Europe in areas of food safety and environmental protection in the past. It is only a recent occurrence that Europe is catching up to the U.S. in terms of safety regulations, and Europe still has more lenient regulations than the U.S. does for many things (Vogel). Are Europeans being irrational for doubting the United States lack of concern for GM foods? Are Americans being hypocritical by telling Europeans that they are focusing on the wrong indicators of food and environmental safety? For American GM-food producers, it does not matter if European fears are unfounded; food producers will have to learn to deal with European food regulations. In addition, GM food producers will also have to convince Europe to eliminate the moratorium on approving GM foods if they want to increase their market size.

Conclusion

The GM labeling policies of different countries are a challenge the agricultural community must confront. There is little hope that an international law body would rule against any country based on the labeling standards (the U.S. has a labeling policy for Dolphin-safe tuna). The best thing for all parties is to understand the policies in place and adapt to them. From 1996 to 2001, GM food labeling went from a vague concept to an idea that is now very common. What the next five years will bring is anybody's guess. Those who can adapt will likely be in the best position to capitalize on these changes.

References

AgBiotech Reporter Vol 18, No. 2. February 2001.

AgBiotech Reporter Vol 18, No. 4. April 2001.

AgBiotech Reporter Vol 18, No. 5. May 2001.

AgBiotech Reporter Vol 18, No. 7. July 2001.

Australia New Zealand Food Authority. "Labelling Genetically Modified Foods." http://www.anzfa.gov.au/documents/fs036.asp. August 2000.

Australia New Zealand Food Authority. "Labelling Genetically Modified Foods: Compliance Guide to Standard A18." http://www.anzfa.gov.au/whatsinfood/gmfoods/complianceguidea18gm.cfm. October 2000.

Australia New Zealand Food Authority. "Genetically Modified Foods." http://www.anzfa.gov.au/GMO. May 2001.

Bernauer, Thomas. "Agricultural Biotechnology: Why do Regulations in the European Union, the United States, and Japan Differ?" Center for International Studies, Swiss Federal Technical Institute, Zurich, June 2001.

CBC News. "Meetings begin on GM food labelling." http://cbc.ca/cgi-bin/templates/view.cgi?category=Consumers&story=/news/2000/05/09/Consumers/gmlabel000509. May 9, 2000.

CNN. "Europe Approves Tough GM Food Rules." http://www.cnn.com/2001/WORLD/europe/02/14/eu.gm/index.html. Feb. 14, 2001.

Department of Health and Human Services, Food and Drug Administration. "Statement of Policy: Foods Derived From New Plant Varieties; Notice." *Federal Register*. 57 May 1992.

Economic Research Service, U.S. Department of Agriculture. "Economics of Food Labeling." *Agricultural Economic Report* No. 793. December 2000.

Friends of the Earth. "The Need for Labeling Genetically Engineered Foods." http://www.foe.org/safefood/factshtgelabel.htm. March 2001.

Greenpeace International. "We Want Natural Food!" http://www.greenpeace.org/~geneng/. March 2001.

Herrmann, Robert O., Rex H. Warland and Arthur Sterngold. "Who Reacts to Food Safety Scares? Examining the Alar Crisis." *Agribusiness* 13 pp. 511-520 1997.

Huffman, Wallace E., Jason F. Shogren, Matthew Rousu, and Abe Tegene. "The Value to Consumers of GM Food Labels in a Market with Asymmetric Information: Evidence from Experimental Auctions." Paper presented at AAEA annual meeting, Chicago IL, Aug 5-8, 2001.

Hur, Jae. "Snack Recalls Exacerbate Biotech Fuss." Reuters. June 23, 2001.

Phillips, Peter W.B. and Heather Foster. "Labeling for GM foods: Theory and Practice." Paper presented to the International Consortium on Agricultural Biotechnology Research (ICABR) on "The Economics of Agricultural Biotechnology" Ravello, (Italy) August 24-28, 2000.

Tambling, Grant. "Labelling of Genetically Modified Food." http://www.anzfa.gov.au/documents/mr24_99.asp. Retrieved May 2001.

U.S. Food and Drug Administration. "Guidance for Industry: Voluntary Labeling Indicating Whether Foods Have or Have Not Been Developed Using Bioengineering." http://vm.cfsan.fda.gov/~dms/biolabgu.html. January 2001.

Vogel, David. "The Regulation of GMOs in Europe and the United States: A Case-Study of Contemporary European Regulatory Politics." Prepared for a workshop on trans-Atlantic differences in GMO regulation sponsored by the Council of Foreign Relations. 2001.