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# LABELING POLICY FOR GMOS: TO EACH HIS OWN?[1]

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GMO labeling policy for foods is under intense development. Countries are choosing mandatory labeling or adherence to voluntary labeling. Challenges to mandatory labeling are unlikely to be successful under current World Trade Organization (WTO) rules. Marketers and trade negotiators should recognize this and move toward living with diversity in labeling policy.

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We are at another important crossroads on the path that will determine the market acceptance of foods produced with the use of biotechnology. Individual governments are managing a range of policies that affect biotechnology, including those on research and development, intellectual property rights, regulatory approval (safety assessment), and labeling requirements. They are taking divergent policy paths that make for market uncertainty. At the same time, companies are announcing their intentions regarding the use or non-use of genetically modified organisms (GMOs) in their products. These intentions make the market less uncertain for sales to those companies but raise the stakes in predicting the choices of other companies.

Labeling policy for food products is currently under intense development in several countries. What are the basic requirements for such labeling programs and what policies are countries adopting? What are the consequences of each country's pursuit of the policy that best seems to fit its needs? Finally, is it likely that these policies could be successfully challenged under WTO rules?

## Why Labeling Policy?

Labeling is often used to deliver information to consumers on characteristics of products that they are not able to evaluate. Economists refer to this type of characteristic as a credence attribute (Darby & Karni, 1973; Caswell & Mojduszka, 1996). Whether a product is produced with the use of biotechnology or genetic engineering is frequently difficult or impossible for the consumer to judge. Labeling can transform such a credence characteristic into a search attribute that consumers can learn about by inspecting the product's package (Caswell, 1998; Caswell, 2000).

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Labeling affects the entire supply chain for food products. It requires definition of the attribute to be labeled (i.e., what is a "GMO"?) and segregation of products with and without the characteristics throughout the supply chain from seed inputs to the supermarket shelf. Because of this effect, labeling policy can be, and is even more frequently perceived to be, a Trojan horse bearing a broader policy and attitude toward the acceptance of GMOs in food products.

Companies will voluntarily label use or non-use of GMOs if the private benefits of doing so exceed the costs. Thus, a market has developed for non-GMO products with companies incurring the costs of segregation and identity preservation in return for a higher price or sustained market share. Similarly, a GMO product with special characteristics can be voluntarily labeled to allow the sellers to capture the consumers' willingness to pay for those characteristics. Governments may regulate labeling if they believe a certain type of information is important to consumers and is not being adequately supplied by the private market. Governments can choose a wide range of polices from simple prevention of fraud in labeling to instituting standards for voluntary labels or mandating labeling.

## What Labeling Policies Are Countries Choosing?

Labeling policy often appears simple and straightforward. However, the policy is complex, particularly for process attributes (those that relate to how a product was produced rather than its final use characteristics). In choosing GMO labeling policy, a government must address the long series of questions shown in table 1. This list can serve as a useful framework for comparing policies. Broadly speaking, the labeling choices being made by countries fall into two broad camps. One camp, including the European Union, Japan, Australia, and New Zealand, among others, is pursuing mandatory labeling programs for GM food products, although in some cases voluntary labeling is retained for non-GM products. The other camp, which includes the United States (U.S.), has voluntary labeling as its main strategy, with labeling being required if important end characteristics of the product, such as its allergenic potential or nutritional content, are changed.

Genetically modified organism labeling is a prime example of a quick moving policy area where individual countries are not willing to take the time necessary for development of international consensus on the best approaches. The strategy is to regulate now and worry about coordination or harmonization later. The recent record of discord and gridlock in the relevant Codex Alimentarius committees reinforces the "everyone for themselves" approach. An example of the developing differences in policy, even within the mandatory labeling camp, can be seen in provisions on when labeling requirements are triggered. The European Commission is proposing that mandatory labeling be triggered if more than 1% of an ingredient in a product is GM. Japan is proposing to require labeling only for selected products and for those products, only for important ingredients.

Legislation has been introduced in the current session of Congress in the U.S. House of Representatives (Kucinich Bill, H.R. 3377) and Senate (Boxer Bill, S. 2080) to require mandatory GMO labeling in the United States. The Kucinich Bill is more detailed and specifies a self-certification approach to labeling a product's GMO status. While it is unlikely either bill will pass in this session of Congress, they suggest the mix of policy choices being thought about by some U.S. legislators. In early May, the U.S. Food and Drug Administration reconfirmed its policy of voluntary labeling for GMO products, when they are not significantly altered, and for non-GMO products. Voluntary labeling will be actively supported through issuance on labeling guidelines and provision of certification and reference testing services by the U.S. Department of Agriculture.

**Table 1: Elements Of GMO Labeling Policy.**

| Policy Questions | Some Policy Options |
|---|---|
| How are genetic engineering, genetic modification, or biotechnology defined? | Broadly<br>By specific techniques used |
| Is program voluntary or mandatory? | Voluntary for non-GMO and/or GMO<br>Mandatory for GMO<br>Mandatory for GMO and non-GMO |
| Which products are covered by the policy? | All food products<br>Only key food products<br>Only certain food categories |
| Which ingredients are covered? | All ingredients<br>Only most important ingredients<br>All ingredients except preservatives, additives, etc. |
| When are labeling requirements triggered? | X% of product is GM<br>Most important ingredients are GM<br>Important characteristics are altered |
| How are products made from animals fed with GM inputs handled? | Labeling required if feed is GM<br>Labeling not required if feed is GM |
| How are restaurant, take-out, bulk, and institutional foods handled? | Included in labeling requirements<br>Excluded from labeling requirements |
| What label statements must/can be made? | Does contain GMOs (genetically modified)<br>May contain GMOs (may be genetically modified)<br>Non-GMO<br>Does not contain GMOs |
| How are companies required to verify GM status? | Self-certification by seller is acceptable<br>Testing<br>Third-party certification |
| Can non-GMO labeling be used on products where there are no GM alternatives? | Yes<br>No |

## To Each His Own? Implications Of Differing Labeling Policy

What are likely to be the benefits, costs, and market implications as each country pursues its own labeling policy in the short run? Proponents of biotechnology fear that the diverse labeling requirements, and particularly the mandatory requirements, will harm market acceptance of GMOs. They argue that in this uncertain environment companies may choose an "easy" route of simply going

non-GMO. However, going non-GMO is not simpler than going GM if both require certification and labeling. Certifying the absence of GMOs in a product may, in fact, be more costly. Thus, the market-level acceptance rather than the labeling itself determines whether companies choose to use GMOs.

Each country is making complex decisions about the use of biotechnology and its labeling based on its perceptions of benefits and costs. A key tenet in countries that have adopted mandatory labeling policies is that consumers have a right to know whether biotechnology was used to produce the foods they consume. The extent of this right to know is defined based on a country's culture, economics, and politics. If a country feels there is a right to know, it often believes that benefit/cost analysis is not really relevant or assumes that the benefits of consumers knowing will be so large that they will outweigh the costs. In their view, the right to know is not circumscribed by safety considerations or notions of "sound science." A country may believe consumers have a right to know regardless of safety concerns. If safety concerns are unresolved, the right to know argument is strengthened.

Policy makers and analysts want to know whether the benefits of labeling outweigh the costs. We know that this balance depends on the type of program adopted and market conditions. For example, voluntary labeling programs may deliver benefits more efficiently when a small segment of the population is interested in the GM status of food products and is willing to pay more for products carrying this information. On the other hand, if most people want to know, then mandatory programs may be more effective. On the cost side, the supply chain requirements for segregating product will be the main determinant of costs. Overall, identity preservation is becoming a much more frequent and integral part of quality assurance in the supply chain. The issue is not whether this segregation is feasible for GMOs but how costly it is, which in turn will depend on how much of the supply chain needs to be segregated for both domestic and export markets. Of course, these costs will also differ depending on the time frame for adoption of segregation and the rigor of the certification process.

Few studies have yet appeared regarding the costs of GM labeling. In a study commissioned from KPMG by the Australia New Zealand Food Authority (ANZFA), the cost to industry of the proposed mandatory labeling program was estimated to be 6% of turnover (sales) in the first year of implementation and 3% in subsequent years (ANZFA, 1999). However, ANZFA did not accept these estimates because the study assumed a much more elaborate system of private certification/testing and government oversight than ANZFA envisioned (ANZFA, 1999). An updated economic and financial assessment is being prepared.

An important issue in the ultimate benefits and costs is how effectively labels convey information that consumers want (Runge & Jackson, 2000). This depends on the certainty of the labeling (e.g., "does contain" versus "may contain") and the actual ability of the supply chain to provide high levels of integrity in the segregation process. Effective labeling, whether voluntary or mandatory, can facilitate product differentiation and efficient specialization of different segments of industry within or across countries in producing GM or non-GM products.

## The Trade Environment

Labeling programs allow countries to tailor policies to their own needs. For example, a country can go slow in allowing genetically engineered crops to be grown within its boundaries, while allowing such crops and food products grown elsewhere to be imported as long as they are labeled. As noted, several key trading partners of the U.S. are instituting mandatory labeling policies.

There has been much discussion of whether these policies might be challenged under the WTO as illegitimate nontariff barriers to trade. A WTO challenge is unlikely to be successful as long as it is feasible to comply with the regulations and they are applied equally to domestic and foreign products.

If mandatory labeling policies were challenged under the Agreement on the Application of Sanitary and Phytosanitary Measures as a food safety-related policy, the challenged country would argue that the policy is warranted in the short run in the absence of definitive evidence of the technology's safety and while further evidence in being developed. However, if this defense were unsuccessful, the country would have a very strong fall back position under the Agreement on Technical Barriers to Trade, which has less rigorous rules. The country would only have to show that the policy is intended and designed to achieve a specific legitimate objective and the costs of implementing the labeling are proportional to the purpose of the standard. In this case, the country would argue that the objective is the consumer's right to know and the mandatory labeling policy is effectively designed to achieve the goal. Thus, labeling programs for GMOs are unlikely to be subject to successful challenge under the WTO.

For the United States, the current voluntary labeling policy may well deliver the best balance of benefits and costs. Certainly FDA's recent policy announcements reconfirm its commitment to voluntary labeling. However, given their own circumstances, mandatory labeling is viewed to be the best choice for trading partners such as the European Union. Marketers and trade negotiators should recognize this and move toward living with diversity in labeling policy. In the longer run, labeling policy may converge but this will not occur any time soon. It is also important to consider that labeling might enhance market acceptance of GMOs. Consumers increasingly want to buy food products based on a wide variety of food attributes, including how the product was produced. The marketing system has to provide this choice, either through effective voluntary or mandatory labeling.

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