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Mandatory Labeling of Genetically Engineered (GE) Foods: The Showdown Begins

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Genetic engineering involves the manipulation of genes in the lab as contrasted with traditional breeding to create new varieties with desired characteristics. Most U.S. processed foods contain genetically engineered (GE) ingredients. Some 88% of the corn and 93% of the soybeans grown in this country in 2012 were genetically engineered (Food and Drug Administration (FDA), 2013). In addition to GE, the terms genetically modified (GM) and genetically modified organism (GMO) are also frequently used, plus biotech, short for biotechnology.

The first major attempt to require the mandatory labeling of GE food in the United States was Ballot Measure 27 in 2002 in Oregon, which was defeated. The issue of mandatory labeling was revived in 2012 by Proposition 37 in California, which was narrowly voted down on the November ballot. The primary reasons for its defeat are speculated to be the potentially very costly class action lawsuits for violations and the heavy spending by the food industry to oppose it—some \$44 million compared to the proponents' spending of only \$7 million during the campaign (Almendrala, 2013).

Over 25 states are now considering legislative proposals or ballot initiatives requiring the labeling of foods with GE ingredients (Harman and Pollack, 2012). Connecticut passed a mandatory GE labeling law in June 2013, although it will not go into effect until four other states enact similar regulations. The Maine legislature passed a similar bill, which the governor has indicated he will sign. It also will only take effect when other states pass analogous legislation. Ballot initiative I-522, "The People's Right to Know Genetically Engineered Food Act", will be on the

November 2013 ballot in the state of Washington, unless the state legislature chooses to act on it first. I-522 would require raw GE agricultural products to display the words, "Genetically Engineered," and processed foods to display on the front of the package, "Partially Produced with Genetic Engineering," if it applies, or be considered misbranded. Meat from animals fed GE crops would be exempt from labeling (Label It Wa-I-522, 2013).

The following arguments for and against mandatory labeling of GE food benefited from work by Byrne (2010). This paper does not have the space to explore the implications of the complex details of a GE labeling process, such as those involving tolerances or threshold levels (Caswell, 2000). For example, the European Union (EU) requires that if the GE content of any ingredient is above 0.9%, the product must be labeled as GE. Other issues include testing and verification processes. In addition, wording, size, and placement of labels on foods with GE ingredients—and any qualifying statements—could have a substantial impact on consumer perceptions and purchases of such products.

The Case for the Mandatory Labeling of GE Foods

- *Labeling conforms with the principle of the "consumer's right to know"*: The first argument usually made for labeling is that consumers have a right to know what is in the food that they eat, also referred to as transparency. Free market economics assumes purchase decisions are made by well-informed consumers, yet most U.S. consumers are ignorant about the extent of GE ingredients in food (Hensley, 2012). Mandatory labeling functions

best in the context of asymmetric or imperfect information (Golan et al., 2000). This means the producer knows if the product contains a GE ingredient(s), but the consumer does not. In a survey of persons who voted on the 2002 Oregon GE labeling measure, the main reason given by those who voted in favor was the consumers' right to know (Raab and Grobe, 2003).

- *GE crops and foods are still controversial:* Opponents of GE foods see risks to health, the environment, and the concentration of power in the food system (Deloitte, 2010; and Raab and Grobe, 2003). Some do not trust the government regulatory process, which relies on industry testing and generally treats GE products as "substantially equivalent" to their conventional counterparts, hence special regulations are not required (FDA, 2013). Specific labels are only required if there is a distinctive difference in a characteristic between the GE and conventional equivalent, such as the former contains an allergen, a change in nutritional value, taste, smell, or its storage and preparation varies (Conko, 2013).
- *A number of countries already require mandatory labeling:* Over 60 countries require the mandatory labeling of GE food, including Australia, China, India, Japan, and the member states of the EU (Label It Wa-I-522, 2013). The European Union has required the labeling of foods with GE ingredients since 1997.
- *Polls show that the majority of Americans favor mandatory labeling:* Nine out of 10 Americans in a poll of 3,000 persons conducted for National Public Radio (NPR) by Thomas Reuters in 2010 wanted foods with GE ingredients labeled (Hensley, 2010). In a rep-

resentative survey of over 5,000 U.S. residents in 2002, 85% indicated they wanted GE foods to be labeled (Teisl et al., 2003).

The Case Against the Mandatory Labeling of GE Foods

- *Labeling could be viewed as a warning that GE foods pose a health risk:* Based on current knowledge, the broad scientific consensus is that the GE crops and foods approved by the FDA are safe. Some experts argue for an improved testing process. If FDA's position of no real difference is true, mandatory GE labeling could unduly alarm consumers and impede an important technology (Caswell, 1998).
- *Consumers already have the option of GE-free products:* Under the federal certification program, the "organic" label indicates a process has been followed to exclude GE organisms (i.e., GE seeds). However, accidental contamination can occur, for example due to pollen drift from nearby fields planted with a GE variety. Although not routine, allowance is made for testing "organic" products believed to contain prohibited substances, such as pesticides and GE organisms (National Organic Standards Board, 2013). Companies can also voluntarily label foods as non-GE, but the labels must also indicate that there is no significant difference between the non-GE and GE products (FDA, 2001). The USDA recently approved a voluntary labeling protocol for non-GE labeled meat and liquid egg products. The animals must be fed non-GE feed and meet the standards of a third-party certification organization.
- *There is a distinction between the consumer's "right to know" and the "need to know":* The former is virtually unlimited in terms of what it might arguably be applied

to, whereas, if something poses a real risk, consumers have a "need to know." This distinction may ultimately be in the "eyes of the beholder."

- *Labeling may reduce consumer choice:* In many countries with mandatory labeling, retailers no longer sell GE foods so consumers' choices have been reduced (Colin and Gruere, 2003). This is true for most of the EU countries.
- *Mandatory labeling could be costly:* The segregation of GE and non-GE products and identity preservation throughout the supply chain would add to the cost of food. Testing samples from final products for markers of GE ingredients could also be expensive, and literally impossible in some cases. A major expense could also involve lawsuits for mislabeling. Reliable cost estimates of GE labeling are not available. The estimated costs across various studies range from a few dollars per person annually to as much as 10% of the total cost of food (Gruere and Rao, 2007). Most countries with mandated GE labeling produce little, or no, GE crops, which may be imported, usually just as animal feed, so segregation is easier and GE food labeling costs minimal. In the Oregon survey regarding the GE labeling measure, the main reason given for voting against it was the potential cost, which was emphasized in the media campaign by the opposition (Raab and Grobe, 2003). U.S. adults in an economics experiment discounted foods with GE labels by an average of 14% compared to the same items with standard labels, which provide no indication of GE status. In other words, they were willing to pay a 14% premium for what they perceived as non-GE food (Huffman et al., 2007).

Legal Considerations

States may enact food labeling laws concerning issues not regulated by the federal government. However, any state that enacts mandatory GE food labeling is almost certain to face a battle in the courts. Legislation in Vermont to mandate the labeling of GE food passed one house of the legislature, but then was put on the slow track when it was made clear the state was likely to face a costly lawsuit, if a law was enacted (Karlin, 2013). The most likely legal basis of such lawsuits would be the preemption of state law by federal law, in this case the FDA regulations concerning GE foods (Lasker, 2005). The preemption of the laws and regulations addressing the same issue by a higher level of government, for example a city by a county, is an established legal precedent. In addition, the U.S. Supreme Court specifically affirmed the right of federal food labeling laws to preempt state ones in *McDermott vs. Wisconsin* in 1913 (Lasker, 2005).

The U.S. Senate recently voted overwhelming (71-27) against an amendment to a proposed 2013 farm bill that would have allowed states to mandate GE labeling if they chose (Sheets, 2013). The House Agriculture Committee went even further. Its proposed farm bill was passed with an amendment that would specifically prevent states from passing GE food labeling laws (Sheets, 2013). In the end, the proposed 2013 farm bill failed to pass a vote by the full House.

Two other court decisions suggest that a state GE-labeling mandate might be overturned by a legal challenge. A federal appeals court in 1996 ruled that a statute enacted by Vermont that required dairy product labeling from cows given the GE recombinant bovine growth hormone (rBHG, also called recombinant bovine somatotropine or rBST) was in violation of the First Amendment. The basis of the decision was that dairy farmers could not be involuntarily

forced to label their products, since the FDA had ruled that there was no substantial difference in products from cows treated with rBGH and not treated (Conko, 2012).

A U.S. district court in California in 2011 dismissed a class action lawsuit against ConAgra Foods, Inc., which labeled a product “natural” that contained oil from GE canola on procedural grounds. The court allowed for the case to be re-filed since there is no federal definition of “natural,” so preemption would not be a factor. In addition, the plaintiffs had requested that ConAgra be required to reveal if the product contained GE ingredients, which the judge indicated would be preempted by FDA’s regulations (Conko, 2012). The preemption provision is sufficiently nuanced and complex that legal experts disagree on how the courts might rule in such a situation (Bracken, 2012; and Food Law Firm, 2012). Any decision by a lower court is likely to be appealed.

The mandatory labeling of foods with GE ingredients could likely require action by the federal government. The “Genetically Engineered Right-to-Know Act” was introduced in Congress in April 2013 by Senator Boxer of California and Representative DeFazio from Oregon with a number of cosponsors. If enacted, it would reverse the two-decades-old policy of the FDA toward GE foods and would mandate the labeling of GE foods nationally (Center for Food Safety, 2013). The bill faces an uphill battle and its only chance of passage would likely be with the kind of strong grassroots advocacy that occurred for the passage of National Organic Standards (Huff Post Green, 2013). FDA already actually has the authority to mandate the labeling of GE foods. Even without Congressional action, some supporters hope the “Right-to-Know Act,” along with widespread expressions of strong public support for GE labeling, will

pressure President Obama and the FDA to decide to require GE labeling (Huff Post Green, 2013).

GE Food Labeling by Food Companies

More food products are appearing in grocery stores certified as GE-free, following the FDA voluntary labeling guidelines. Producers and processors can pay to have their products verified non-GE, but not necessarily organic, by the Non-GMO Project. Whole Foods, a national grocery chain, has a mayonnaise made with canola oil that has a Non-GMO Project label, for example. In North America, GE canola (rapeseed) is prevalent. The Non-GMO Project is a non-profit organization that certifies ingredients are non-GE based on a verification or testing process, with a threshold of no more than 0.9% GE content for its certification, the same as the EU. The potential role of such third-party certification was predicted (Golan et al., 2000).

Most companies that make products for, or sell them to, consumers are very sensitive to protecting their public image by being on the right side of issues with broad public support. Retailers can be especially responsive to feedback from customers or lobbying by organizations that represent consumer and public interests. In March 2013, Whole Foods announced all products it sells with GE ingredients must be labeled by their suppliers within five years (Strom, 2013b). Companies could, of course, stop supplying Whole Foods if they chose. Chipotle Mexican Grill, with over 1,400 U.S. stores, already indicates in the ingredients statement of its online menu the GE items, which are limited to just ground corn and soybean oil.

Executives from several major food companies, such as ConAgra and PepsiCo, as well as Wal-Mart, attended a meeting in January 2013 with advocacy groups for labeling

GE foods (Strom, 2013a). Moreover, Wal-Mart was reported to be discussing lobbying for national GE labeling regulations. If Wal-Mart, the largest U.S. food retailer, were to require its suppliers to label either GE food or non-GE foods, and advocated for a change in the FDA's labeling policy nationally, this alone could be a game changer. Other grocery chains and food companies would likely feel compelled to move in the same direction.

Implications

State laws mandating the labeling of foods with GE ingredients appear to be vulnerable to challenge in the courts; action by Congress faces an uphill fight; and a change in FDA policy is doubtful. The most predictable likely action on this issue lies with the food industry. Since 85-90% of their customers indicate in polls that they would like GE foods labeled and would pay a premium for non-GE foods, more products will almost certainly be appearing with certified non-GMO labels. There is also the likelihood that additional retailers, especially ones that emphasize natural and organic foods, will follow Whole Foods and require their suppliers label foods with GE ingredients.

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