jrc Journal of Research for Consumers
Issue: 13, 2007

Consumers and the Case for Labeling Genfoods

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ABSTRACT
Since the mid-1990s, Argentina, Canada, and the United States have surreptitiously introduced genetically engineered food crops in their domestic as well as international markets. Despite the many health uncertainties surrounding these products, the aforementioned countries have not subjected their genfoods to either mandatory safety tests or labeling requirements. Consequently, consumers in these countries have not only been exposed to potentially unsafe food but they have also been unable to differentiate GE from non-GE foods, making it increasingly difficult for them to exercise food choices in accordance with their health, religion, morals, culture, and political views. This regulatory framework, in particular the anti-GE labeling policy, violates a myriad of ethical imperatives that place an onus upon governments to protect the integrity, autonomy, and health of consumers. Given the gravity of this violation, the author argues that the Miami Group countries should label products of agricultural biotechnology.

ARTICLE

Introduction

For more than ten thousand years, humans have modified the genetic traits of crops by selectively breeding the most nutritious, resilient, and disease/pest resistant plants. Through this simple form of agricultural biotechnology, farmers naturally "engineered new combinations of genes" to produce superior plant stocks (Teitel and Wilson 1999, pp. 12-14).[1] However, because undesirable traits were frequently passed along with the desirable traits, this traditional technique required successive generations of plant breeding, making it relatively slow, demanding, and uncontrollable. With the advent of new biotechnologies such as genetic engineering in the late 1980s, these drawbacks were suddenly removed. Utilizing recombinant DNA technology, genetic engineering extracts a known, specific trait from a living donor organism (plant, human, animal, bacteria, or microbe) and splices it into a recipient organism's preexisting DNA.

[1] The Convention on Biological Diversity (CBD) defines biotechnology, broadly speaking, as: "any technological application that uses biological systems, living organisms, or derivates thereof, to make or modify products for a specific or practical use…" *See* the Convention on Biological Diversity (Article 2), *available at* http://www.cbd.int/convention/articles.shtml?a=cbd-02.

With this novel technology, food producers were finally able to modify the genetic makeup of organisms "precisely and predictably, creating improved plant varieties faster and easier than…traditional techniques" (Henkel 1998). Since its application to agriculture in 1993, food crops have acquired the necessary genes to: resist diseases/pests, tolerate drought conditions, increase shelf life, and obviate or reduce the use of herbicides (weed-killers) and pesticides.[2] By reducing excessive reliance on water and chemical agents, the proponents of genetic engineering have touted this technology as a means to protect the environment. More importantly, in maximizing agricultural yields, genetic engineering has universally been hailed as a panacea to end global hunger, malnutrition, and food insecurity.

In spite of its benefits, there is as much opposition to the science as there is support. In recent years, critics have voiced extrinsic or consequentialist objections that such foods pose uncertain, and perhaps unknown, risks that may seriously threaten human health, animal welfare, biodiversity, and environmental safety. In addition, many other critics and consumer advocates have expressed intrinsic or integrity-based concerns that genetically engineered foods, even if proven safe, are incompatible with the fundamental values and beliefs of certain individual moral agents or groups (Pascalev 2003).

Despite these significant objections to genfoods, the governments of Argentina, Canada, and the United States have not regulated these products any differently from their unmodified parental strains.[3] In these countries, collectively called the Miami Group, transgenic crops are not subjected to any mandatory safety tests or labeling requirements; they are evaluated, marketed, and introduced akin to traditional foods.[4] Such a method of regulation not only withholds crucial information from consumers but it also exposes them to potentially unsafe food, compromising their health as well as their ability to make informed market decisions. This regulatory regime, in particular the anti-GE labeling policy, violates a myriad of ethical imperatives that place an onus upon governments to protect the integrity, autonomy, and health of consumers. Given the gravity of this violation, it is argued here that the Miami Group countries should label products of agricultural biotechnology.

GE Foods and Health Concerns

The risks posed by transgenic crops are emblematic of the hazards and dangers that often accompany scientific and technological innovation. Similar to the other risks induced and introduced by modernization (i.e. air and water pollution, nuclear disasters/accidents), the

[2] In 1993, Calgene (a biotech company) introduced the Flavr Savr tomato on the market. This tomato was engineered to inhibit the expression of a gene that normally causes fruit to soften. By delaying the ripening process, the fruit stays firm longer (Diouf 2001).

[3] Hereafter, genetically engineered food may also be called genfood, GE food, transgenic crops, genetically modified food.

[4] In most literature, "Miami Group" refers to the powerful bloc of GE-producing countries - Argentina, Australia, Canada, Chile, the United States, and Uruguay – who advocate the free flow of agricultural commodities, particularly transgenic crops, in international commerce. The Miami Group is an organization of like-minded countries who promote their economic interests (the marketing of transgenic crops) by organizing themselves into a single political bloc (Devonchik 2000; Duall 2004). As used in this paper, however, "Miami Group" will only refer to Argentina, Canada, and the US, the leaders of this six nation bloc. Aside from their opposition to international regulation, these countries strongly oppose regulating GE foods in their domestic or home markets. And so, for the purpose of simplicity, the author has borrowed this term to group the aforementioned countries on the basis of their domestic regulation (or lack thereof) of transgenic crops.

risks of GE foods (i.e. allergic reactions, antibiotic resistance) are “localized in a sphere of physical and chemical formulas,” meaning they are largely invisible and imperceptible to consumers (Beck 1992, p. 21). Although scientific experts have the technical knowledge to evaluate the dangers of transgenic crops, the non-localized nature of the risks in addition to the unknown long-term effects of GE food consumption has reduced the overall efficacy of traditional risk assessments. This has made risk calculation all the more challenging, giving rise to conflicting evaluations over the safety of genetically engineered crops. Because scientists are still debating the safety of GE foods, consumers have remained wary about accepting these products.

Ethical Concerns: Why GE Food labeling is needed

As the dangers of GE foods are still relatively uncertain, it seems that consumers are much like the subjects of medical research in the sense that they are part of an on-going experiment which may pose considerable risk to their health. However, while their circumstances may be identical, the procedure or rules guiding each experiment seems to be completely different. Unlike food producers, medical researchers usually provide information to their subjects so that they can give informed consent. This principle, important as it is for any experimental design, is currently absent from the GE regulatory regime of the Miami Group countries (Rich 2004). The assumption here is that through labeling, food suppliers discharge some of their ethical responsibilities by providing consumers information so that they can avoid potentially unsafe food products.

Labeling theoretically allows those consumers who have qualms and concerns about genfoods to withhold consent and exit the GE food market altogether. In this way, labeling protects what is commonly known as exit rights, the ability of consumers to avoid the market if they desire to do so (Thompson 1997; Burgess and Walsh 1999; Thompson 2000). If one accepts this presupposition, the anti-GE labeling policy is unethical since consumers are buying and consuming potentially harmful food without their knowledge and without their choice. By withholding crucial information, Argentina, Canada, and the United States have made their consumers unknowing and unsuspecting subjects of a food experiment with uncertain health effects.

Even if food safety was no longer a concern, the current regulatory regime would still be unethical since it would violate the principle of “consumer sovereignty”. Consumer sovereignty is a very broad concept premised upon the belief that the integrity and autonomy of consumers should be respected in all market transactions. In order for this to happen, consumer sovereignty requires sufficient information be made available to consumers so that they can exercise food choices consistent with their deeply held beliefs and/or values. In this respect, consumer sovereignty is significant because it does not condition food information simply upon the possibility of harm. On the contrary, information is obligatory, regardless of the product’s safety, so that individuals, especially those of different religions and cultures, can make decisions compatible with their identity and lifestyle (Burgess and Walsh 1999; Kysar 2004; Thompson 1997). The Miami Group’s anti-GE labeling policy violates consumer sovereignty in that it hinders the ability of consumers to act according to their beliefs.

Apart from restricting information, the anti-GE labeling policy is also unethical because it goes against what Rubel and Streiffer (2005) call “citizen autonomy.” This is an important part of consumer autonomy and it is based on the Rawlsian view that the political autonomy of citizens favors the making of collective decisions - such as whether or not to label GE

foods- in accordance with the majority's will. Consequently, if the majority of citizens desire positive labeling, respecting their autonomy thus supports a positive labeling schema. With respect to the GE labeling debate, numerous surveys have revealed that the majority of Americans want genfoods to be labeled. For instance, in 2004 the Pew Initiative on Food and Biotechnology found that 92% of those polled favor the labeling of foods that are genetically modified (Pew Initiative 2004).

Similarly, in October 2003 the Food Policy Institute at Rutgers University released a poll showing that the vast majority of respondents (94%) agreed that food with GE ingredients should be labeled as such (Hallman et al. 2003). Moreover, a 2001 USA Today poll released its finding that 79% of Americans surveyed believe it should not be legal to sell genetically engineered fruits and vegetables without special labels (True Food Network). However, despite popular opinion, the FDA continues to allow food producers and distributors to market transgenic crops without labels.

In other Miami Group countries where public opinion surveys have been taken, most people also prefer labeling. According to Naomi Klein (2001), a noted Canadian journalist and activist, "…more than 90% of Canadians tell pollsters that they want labels… that tell them if their food's genetic makeup has been tampered with". Similar consumer reactions were also reported in a study conducted by Andrea Mucci and Guillermo Hough (2004) from the *Instituto Superior Experimental de Tecnologia Alimentari* in Argentina. Therefore, by adopting a non-GE labeling policy, the Miami Group countries have ignored the policy preferences of their citizens, and in doing so, have altogether dismissed their political autonomy.

Negative vs. Positive Labeling

Proponents of genetic engineering such as Kirsten Hansen have often challenged this labeling argument by reasoning that the currently employed voluntary negative labeling of traditional foods helps consumers make informed choices inasmuch as the hypothetical, positive labeling of GE foods.[5] Consequently, from Hansen's point of view, the current policy is ethical and should be continued well into the future. However, it is argued here that Hansen's argument is mistaken.

Hansen points out that the negative labeling of traditional foods provides consumers with all the information they need to know about genfoods. To a certain extent, this holds true "insofar as consumers…assume that every product not specifically labeled 'GE free' or 'organic' may be genetically engineered or may contain GE ingredients" (Rubel and Streiffer 2005, p.77). If consumers assume that all foods without a 'GE free' or 'organic' label are genetically engineered or contain genetically engineered ingredients, then they have all the information they need to know. However, as Rubel and Streiffer (2005) correctly concluded, consumers simply do not assume that all foods without the negative labels might be genetically engineered. This was indicated in a 2003 survey (conducted by the Pew Initiative on Food and Biotechnology) where "sixty percent of American consumers believed that they had never eaten genetically engineered foods, even though seventy percent of foods on grocery store shelves contain genetically engineered ingredients" (Rubel and Streiffer 2005, p. 77; Pew Initiative 2003a). Thus, Hansen's argument is most unpersuasive because there

[5] Negative labeling is the labeling of foods as "organic," "GE-free," or "non-genetically engineered" whereas positive labeling involves labeling foods as "genetically engineered"

is considerable reason to think that consumers would not simply assume unlabeled foods might be genetically engineered.

Conclusion: The Future of Biotechnology

While genetic engineering has been used to modify plants, this technology is currently being applied to animals as well. Already, some researchers have implanted spinach genes into pigs in order create animals that are healthier to eat (Young 2002; MacLaughlin 2003). In addition, a 2001 FAO report described attempts to engineer bigger salmon and Tilapia (another kind of fish) by inserting Arctic flounder genes into their DNA (Diouf 2001). Flash forward to the present, now over thirty-five species of transgenic fish have been developed by such biotechnology companies as Aqua Bounty Technologies Inc. and A/F Protein (Center for Food Safety 2006; Eenennaam 2005; Pew Initiative 2003b). Although they have not yet been commercialized, transgenic fish as well as other genetically engineered animals seem to be heading in this general direction. With the expansion of modern biotechnology into more and more foods, including meat, one cannot help but think that this is not "the end, nor the beginning, but the end of the beginning" (Winston Churchill).

Therefore, the future of genfood regulation will concern not only transgenic crops but also transgenic animals. The introduction of genetically altered meat presents many problems since it will indubitably exacerbate the ongoing ethical dilemmas in the Miami Group countries. Anticipating these events, it is imperative for Argentina, Canada, and the United States to react prior to the second phase of genetic engineering and to do so by labeling GE foods as such.

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