

## **Beneath the Label: Uncovering the Politics of GMO Labeling**



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## **Executive Summary**

As research continues to advance in health and nutrition, controversies in the industry inevitably arise. Food manufacturing is a particularly contentious source of debate considering its significant and widespread impact on public health. Currently, much of the debate concerns genetic modification of food. Many argue that food labels embody the principle of a consumer's right-to-know; therefore, packaging should display information that could influence its relative appeal to the public. Others claim that the alarming nature of such labels would deter and confuse consumers, and needlessly so given the unlikelihood of associated health-risks. In response to the dispute, legislators composed The Safe and Accurate Food Labeling Act of 2015 (SAFLA). This act offers a standardized procedure and clear criteria for labeling foods that contain genetically modified organisms (GMOs). The act aims to prevent marketers from capitalizing on less informed consumers through frivolously labeling products as "GMO free." Still, those who oppose the act maintain that potential health implications have not been disproven, and thus should not be dismissed. Scientific data, however, has consistently suggested that proposed dangers associated with GMO consumption are largely unfounded. The opposition explains that this is due to an inability to collect thorough data, as nutritional science is insufficiently funded. Advanced testing made possible by more funding and the removal of proprietary restriction, they suggest, may reveal previously unapparent consequences of GMO consumption. Hence, this proposal aims to elicit discussion among scientific and agricultural communities, and their consumers, by presenting current research, expert opinions, and customer perception regarding GMOs and the call for definitive food labeling.

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#### **4a: Background**

In July 2015, Congressman Mike Pompeo (R-Kan.) introduced The Safe and Accurate Food Labeling Act of 2015 (SAFLA) to create a federal standard for voluntarily labeling food with genetically modified organism (GMO) ingredients (Wheeler and Marcos). The Food and Drug Administration (FDA) would be directed to conduct safety checks on plants used for genetically engineered food (Pompeo). If approved, the FDA would develop a new framework to regulate label claims regarding the content of GMO food ingredients (Pompeo). Lastly, to label products as GMO, companies would undergo an accredited certification process governed by the United States Department of Agriculture (USDA) (Pompeo). The House of Representatives (HOR) passed SAFLA in 2015, only to be later rejected by the Senate in March 2016.

At first, the issue of GMO labeling was a matter of determining the presence of health risks. There has been insufficient evidence to support any these claims, yet those who support GMO labeling insist that uncertainty warrants regulation, advocating for the consumer's right-to-know (Kaste). Opponents believe the absence of proven health risks discredits the purported benefits of GMO labeling, and warn that the public would likely develop an unnecessary bias against foods that contain them (Chu). The nutritional content of genetically-modified foods is often superior to its non-modified counterpart, therefore, aversion to genetically-modified foods could have a negative impact on public health.

The negative consequences of GMO labeling extend far beyond the financial impact on the industry from decreased sales. The claim that genetically-modified food may be harmful is implied by an apparent need to warn consumers of its presence. Our food products may become undesirable to countries with whom we trade as a result (Chu). Depleting the industry of income limits the amount they are able to allocate for research. It impedes advancing progress on related technologies that could produce more food for less cost. Lastly, denying funding for such innovations prevents their potential use in the fight against world hunger.

#### **What does it mean to support SAFLA?**

SAFLA supporters believe that state governments should not be permitted to label products that contain GMOs because inconsistent regulations across state governments complicates the industry on a national level. Therefore, supporters of SAFLA generally advocate for a centralized authority, in this case, the FDA. The implications of this act best reflect conservative Republican ideologies. Notable organizations who support SAFLA include the American Farm Bureau Federation, the Biotechnology Industry Organization, and the American Soybean Association (Akagi).

#### **What does it mean to oppose SAFLA?**

SAFLA opponents do not necessarily believe that food labeling is a matter best left to the authority of individual states but that the suggestions of SAFLA are problematic. They criticize its strict adherence to current FDA regulations, warning that American consumers will ultimately be denied of their right-to-know. Preventing state governments and companies from labeling GMO products is a matter of transparency for opponents of SAFLA. Notable organizations who oppose SAFLA are the Center for Food Safety, the American Nurses Association, and the Environmental Working Group (Hopkinson; Just Label It; Daniels).

The complicated nature of this topic warrants increased awareness among the scientific community as well as the general public. SAFLA is tentatively scheduled to be voted on again. The significant outcome of this vote on the community and economy renders further research in the topic urgent and crucial. The symposium will benefit from a discussion elucidating on the complicated nature of the debate surrounding GMOs and the possible benefits and consequences of an U.S. federal mandate requiring GMO food labels.

#### **4b: Research Outline**

##### **GMOs**

Genetically modified foods are produced from organisms that have undergone a procedure which selectively replaces certain genes with DNA from other plants, bacteria, or viruses. They can be grown faster, made to have a longer-shelf life and taste, and better resist bugs, disease, or environmental threats. Currently, approved genetically modified foods grown in the U.S. include alfalfa, canola, corn, cotton,

papaya, soy, sugar beets, zucchini, and yellow summer squash (Johnson and O'Connor).

### **GMO Food Labeling**

Before the FDA and USDA monitored the use of marketing on food labels with more scrutiny, food manufacturers displayed labels with little nutritional definition. Many disagreed with this free for all behavior bringing about new regulations banning certain labeling tactics, such as crediting bananas with cholesterol-free stickers, despite the fact that bananas do not naturally contain cholesterol. Words and phrases, such as “lite” or “natural” once arbitrarily placed on food labels, were newly required to meet certain criteria in order to be advertised as such. GMO labeling has re-emerged, arguably, as a marketing tactic used to appeal to uninformed but health-conscious consumers. Currently, only 64 countries require GMO labeling; those include 28 nations in the EU, Japan, Australia, Brazil, Russia, and China (Labeling Around the World). The U.S. does not currently require nationally mandated GMO food labeling though many U.S. states are seeking change. SAFLA intends to unionize GMO labeling laws throughout the U.S. and set stricter guidelines for manufacturers who wish to add the Non-GMO label.

### **The Food Labeling Argument**

Some argue current FDA food labeling guidelines are misleading, so much so that it would seem they are intended to advertise rather than inform. Inconsistencies in labeling laws across state governments further complicate consumers’ understanding of nutritional content in products. SAFLA intends to standardize the procedure by granting the authority over labeling laws to the federal government.

### **Proponents of SAFLA**

Proponents claim that there is no tangible data to conclude that GMO ingredients are harmful over time (Medaris). They also argue that blocking SAFLA would mislead consumers on food safety and destroy for farmers to innovate (Pompeo). They claim that food manufacturers and companies like Chipotle are exploiting current food labeling loopholes as a marketing tactic to attract customers, yet there is no data to show that genetically modified foods were dangerous at any point in time (Storrs). Congressman Pompeo, like many other Republicans and SAFLA proponents, supports growing genetically modified crops because the scientific community has, overall, agreed that GMOs are safe. Lastly, proponents argue that strict GMO labeling and government mandates would create economic implications for countries outside the United States and thus limit the trading and growth of third world and economically rising countries (Caswell).

### **Opponents of SAFLA**

Opponents refer to SAFLA as the “Deny Americans the Right to Know Act” (DARK Act). They argue that research on GMOs has been restrained due to proprietary rights. They claim that the FDA requires clear labeling of over 3,000 ingredients and to deny GMO labeling would be a step backwards for government and consumer transparency (Wheeler and Marcos). Farm state Democrats believe that mandatory laws would increase food prices and hamper food producers. Democrats, such as Bernie Sanders, predominantly advocate for mandatory food labeling laws. In May 2013, Sanders showed strong support for GMO labeling by introducing legislation that would permit states to require that any food, beverage, or edible products have a label indicating if the product contains a genetically engineered ingredient, however, the bill failed to pass (Associated Press). Other opponents such as Jane Goodall, a primatologist known for her work with chimpanzees, is opposed to GMOs due in large part to her lifelong work and compassion for animals. Goodall claims genetically modified food have adverse effects on animals, ranging from diarrhea to cancerous tumors (Medaris). Chefs across the United States largely favor mandatory labeling too. Tom Colicchio, reality TV show judge, joined more than 4,000 chefs in signing a petition urging lawmakers to support legislation requiring genetically modified food be labeled citing the American consumer’s right to know what is in their food (Lo). Lastly, opponents argue that SAFLA would create a “patchwork of confusing state specific laws related to GMO labeling,” that would only add “confusion to the marketplace and rising food costs” (Wheeler and Marcos).

### **The Health Concern Argument**

Environmental groups and organic farmers raised concerns over the health and safety implications of GMO crops citing studies that foreshadow increased cancer rates through consumption of

GMO foods (Armenakas and Alexiades). However, biochemists and nutritionists have overwhelmingly shown that GMO crops are innocuous (Fernandez-Cornejo et al. 7). Despite this research, some experts believe that a blanket claim of GMO safety is negligent and should be evaluated on a case-by-case basis (Hilbeck et al.).

Some health concerns surrounding GMO crops are the remaining foreign aspects of this largely complicated field. Inconclusive results returned on long-term health implications of eating genetically modified foods and possible contaminants/additives during transfer processes are worth further investigation. In 1996, Nordlee et al. discovered allergenic proteins can be transferred from a peanut plant to a soybean plant highlighting a potential ramification of genetically modifying foods. Scientist Sheldon Krimsky asserted that because GMO experiments are conducted through short and long-term animal feeding trials they do not always provide the best assessment of human immune system resistance (Krimsky).

However, an additional study conducted on livestock and genetically modified feed yielded no significant health changes or defects. The study found multiple generations of livestock consumed 70 to 90% genetically modified feed for more than 15 years with no health related side-effects (Eenennaam Van & Young).

### **The Fiscal Argument**

Just Label It, a group of 700 organizations advocating for mandatory GMO food labeling, contracted Kai Robertson, an independent consultant, to conduct a study to examine the effects of food labeling changes on food prices. Robertson found that a variety of factors affect the price of food, but shoppers would ultimately see no impact because retailers constantly make changes to labels (Dark Act). Another report by the Consumers Union found it would cost an additional \$2.30 per consumer each year (Entine). Opponents says SAFLA proponents' claims that GMO labeling will raise food prices is misleading because the price increases are reliant on manufacturers switching to non-GMO ingredients (Center for Food Safety). There are no clear answers for how mandatory nationwide GMO labeling would affect food prices and costs.

Companies worry GMO food labels will influence customers' perceptions of GMOs and cause them to perceive GMOs as unsafe, thus causing the customer to not purchase their item and resulting in profit losses (Hemphill & Banerjee 441-444). Another issue with mandatory labeling is the costly separation of GMO and non-GMO foods. In the U.S., 85% of corn, 95% of sugar beets and canola, 91% of soy and up to 75% of processed foods on the market are genetically modified or contain genetically modified ingredients (McWilliams; Johnson and O'Connor). According to the Washington State Academy of Sciences report, it would be a massive and expensive undertaking of \$150 million to \$920 million in annual costs to separate and audit GMO and non-GMO foods (McWilliams). Some researchers state that these advocacy groups might have a hidden agenda (Entine). According to Entine, organic farmers stand to receive significant financial gain if GMO food labeling becomes mandatory by taking some of the GMO growers shares of the market. Entine also states that GMO labeling will increase the price of food in general due to legal issues, testing, and production flow costs. Studies done by the USDA have shown that GMO crops yield 30 to 35% more than traditional crops (Fernandez-Cornejo et al.). GMO crops also cost approximately 20% less in labor, maintenance, and pesticide cost (Fernandez-Cornejo et al.).

### **Consumer Perceptions of GMO Food Labeling**

More than 90 percent of Americans think mandatory GMO labels is necessary. Nearly 60 percent of the population perceive GMOs to be "generally unsafe" (McWilliams). Consequently, it is the right to know and right to choose foods worrying the food industry. According to Steven Savage, a writer for Forbes magazine, many consumers have negative feelings towards GMOs, due to emotional biases created by misinformation from anti-GMO groups.

### **Conclusion**

The GMO labeling reflects a larger issue of the comprehensiveness and accuracy of current food-labeling standards. Whether GMO labeling is justified or over-bearing is an irrelevant matter if current practices are not successfully and accurately informing consumers of the foods they purchase. The impact

could potentially lead a new way we produce and consume food in the future. However, it could also stimulate the next war between consumers and their government over a lack of safety and transparency.

#### 4c: Presentation Outline

We will show Pamela Ronald's, a plant geneticist, TedTalk "The Case for Engineering Our Food" where she advocates for genetically modifying food. We are inviting Tony Yang, GMU associate professor of Health Administration and Policy, to discuss the legislation and policy requirements for GMO labeling requirements and the health, environmental, and legal arguments for and against GMO food labeling.

TIME:	TOPIC:	PURPOSE:
03 min	Introduction	GMOs explained.
10:00	Expert speaker: Pamela Ronald	Excerpts from her TedTalk advocating for GMO foods.
07:00	GMO Food Labeling	Why should we label GMO foods? Show examples of what GMO vs. non-GMO labels are used and marketed now.
03:00	SAFLA	Outline SAFLA and SAFLA pros and cons.
10:00	Expert speaker: Tony Yang	Provides expert opinion on GMO food labeling legislation and policy history, legal arguments for and against GMOs
10:00	SAFLA Proponents and Opponents	Arguments for and against SAFLA and GMOs
07:00	GMO Health Concerns	Arguments for and against GMOs
07:00	Food Industry Fiscal Arguments and Consumer Perceptions	Discuss consumer opinions about GMO vs. Non-GMOs and food labeling. Projections of what food industry businesses face in terms of costs, profit losses or gains, and how it might affect the price of food if GMO labels become nationally mandated?
03:00	Closing statements	Topic summation & research symposium benefit.
15:00	Questions	Allow time for Q&A; give app survey
<b>TOTAL TIME: 60:00 followed by a 15:00 Q&amp;A session</b>		

Figure 1. Presentation Outline

#### 4d: Personnel

- *Colleen Kilday* studies psychology and creative writing and currently works in the marketing department of a flooring company. This background warrants her contribution as these factors combined reveal insight of human response to various methods of persuasion, both individually and in business.
- *Jessica Miers* has a background in environmental and computer sciences. She is also pursuing a career in business and trademark law making her an expert on the legal and ethical choices businesses can make with regards to food labeling.
- *William Biegenwald* has a background in behavioral and I/O psychology. His knowledge of human and industry behavior will help the audience understand the motivations behind business and consumer behavior.
- *Kristen Shifflett* has a background in nonfiction writing, journalism, and psychology giving her insight and skills to research and evaluate the media and public perceptions of this controversial issue. Her work as a legal assistant and a sales associate contribute knowledge of the human response to controversial issues.

#### Budget and Budget Justification

The presentation will hand out business cards and pamphlets which will highlight both sides of the GMO and SAFLA debate. The pamphlets will also provide an overview of the presentation and include information on its main talking points. A projector will be used to show statistical data and graphs for the audience. Existing and proposed examples of GMO food labeling will be brought in for demonstration purposes. The presentation will also include lawyer, policy analyst, and health services researcher Tony Yang, to discuss the complications and legal hurdles GMO litigation will create.

<b>Item</b>	<b>Description</b>	<b>Purpose/Justification</b>	<b>Approximate Cost</b>
Projection Screen Rental	A large flat surface used to project an image on	To create a flat surface for our graphs and statistics to be displayed on	\$44
Projection Rental	Optical device that projects image on a surface	To display our presentation to our audience	\$58
Projection Stand Rental	A small sturdy table structure	To hold the projector so we can present to our audience	\$17
Food	Different food products with GMO and non-GMO labels	To show audience how these labels appear or may appear on food packages	\$50
Tony Yang	A lawyer, policy analyst and health services researcher	To discuss GMO food labeling legislation and policy history, legal arguments for and against GMOs	\$300
1000 Business Cards	Small cards with numbers and other contact information	To provide our audience with our contact information if they have additional questions	\$20
1000 Brochures	Informative trifold pieces of paper	To provide overview of presentation and reminder of main talking points	\$325
			\$814

*Figure 2. Budget Outline*

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