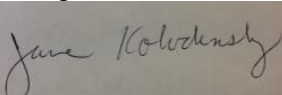


TO: AMS GMOLabeling@ams.usda.gov

FROM: Jane Kolodinsky, Ph.D.



RE: Proposed Rule Questions Under Consideration- National Bioengineered Food Disclosure Standard

DATE: 7/13/17

My name is Jane Kolodinsky. I have been conducting research on the economics of information related to genetically modified and engineered food since the late 1990s. There is no dearth of evidence that indicates consumers wish to see products labeled in the marketplace. The question at hand is how to communicate the information to consumers.

The following pertains to the questions:

12. If a manufacturer chooses to use text to disclose a bioengineered food, what text should AMS require for a text disclosure? (Sec. 293(b)(2)(D))

13. If a manufacturer chooses to use a symbol to disclose a bioengineered food, what symbol should AMS require for disclosure? (Sec. 293(b)(2)(D))

14. If a manufacturer chooses to use an electronic or digital link to disclose a bioengineered food, what requirements should AMS implement for an electronic or digital link disclosure? (Sec. 293(b)(2)(D))

15. Should AMS specify in the regulations the type of electronic or digital disclosure manufacturers, e.g. QR code, can use to disclose bioengineered food? What steps should AMS take if an electronic or digital disclosure method becomes obsolete? (Sec. 293(b)(2)(D))

16. What kind of text, symbol, or electronic or digital disclosure should AMS require for bioengineered food that is not purchased from a grocery store shelf, such as food for sale in bulk (such as fresh produce in a bin or fresh seafood at a fish counter), in a vending machine, or online? (Sec. 293(b)(2)(D))

18. What are the reasonable disclosure options AMS should provide for food contained in very small or small packages? (Sec. 293 (b)(2)(E))

23. Is there other equivalent on-package language that AMS should consider to accompany an electronic or digital disclosure besides “Scan here for more food information”? (Sec. 293(d)(1)(A))

With regard to the questions above, our research (see below under Background) indicates that a large majority of consumers desire to see a simple TEXT disclosure, such as “produced with genetic engineering,” or “partially produced using genetic engineering” on packages of all sizes.

Currently, even individual candy packages are able to include this information on their “small” individual packages.



A majority of consumers DO NOT want to see a QR code, phone number, or website unless it is in CONJUNCTION with a simple disclosure. (See Background, below)

The above information is formed based on research. As a consumer behavior specialist, my expert opinion is that if there is a QR code on a package IN ADDITION to a simple disclosure, the code should lead to a place that specifically allows the reader to know they are considering a purchase of a product produced with genetic engineering. This information should not be hidden in fine print or not available until deep into the link. It is very difficult to scan QR codes, even for those adept with the technology. Overwhelmingly consumers do not desire a QR code. However, this seems to be the foregone conclusion of the Agency. The solicited RFP only requested a study on electronic notification, which is odd.

9. Should AMS consider more than one disclosure category? (Sec. 293(b)(2)(D))

a) are bioengineered, b) contain ingredients that are bioengineered, or c) contain ingredients derived from bioengineered crops or animals.

Consumers would accept these THREE simple disclosures, given that the majority of consumers state they prefer simple disclosures.

3. Which modifications should AMS consider to be found in nature? (Sec. 291(1)(B))

Overwhelmingly, our research shows that for consumers with an answer, they define bioengineering as that that would NOT occur or MIGHT NOT occur in nature. Only 9 percent would define it as “would occur in nature.” In addition, a majority of consumers understand that a “produced using GE” label does not mean the food is safe OR unsafe. Two thirds correctly indicated “neither of these” in our recent study, noted below, in Background.

4. Will AMS require disclosure for food that contains highly refined products, such as oils or sugars derived from bioengineered crops? (Sec. 291(1)(A))

8. What is the amount of a bioengineered substance present in a food that should make it be considered bioengineered? (Sec. 293(b)(2)(B))

To be consistent, the standard might parallel the National Organic Standards:

<https://www.ams.usda.gov/grades-standards/organic-labeling-standards>

“Organic” “Organic” can be used to label any product that contains a minimum of 95 percent organic ingredients (excluding salt and water). Up to 5 percent of the ingredients may be nonorganic agricultural products that are not commercially available as organic and/or nonagricultural products that are on the National List.

Analogy: No label if less than 5% of ingredients are GE.

Partially produced using Genetic Engineering if greater than 70% and less than 95% of ingredients are GE.

Analogy: *Made with or produced* using genetically engineered ingredients if more than 70% of ingredients are GE.

BACKGROUND RESEARCH:

We have early evidence that “symbols” have not worked well in providing consumers the correct information about GE foods. Vermont is the ONLY state in the U.S. that has experienced mandatory labeling of GE foods. In 1994, VT passed a mandatory law labeling milk produced using rBST. The “label” was a blue dot. If a consumer saw the blue dot, they were required to go elsewhere to find out what the dot meant. By 1996 the law had been repealed and consumers were exposed to voluntary labels that stated, “rBST free” or similar. Our research found that the “symbol” approach was correctly interpreted by about 25% of consumers. The “simple language” approach was correctly interpreted by 33% of consumers sampled (Kolodinsky, 1999). (slide attached). The symbol required further steps by a consumer to find out the information they needed, much like a QR code would require on GE products.

Vermont experienced the second mandatory labeling period in July of 2016. Labels were required to have a simple disclosure such as “partially produced using genetic engineering.” While the law was in place for one month, superseded by the events leading to this comment period I am responding to, labels are still available on several products, as large companies have pledged they would/will label. These include ConAgra, Kellogg’s, Mars, and General Mills and Campbell’s (For more information, various dates). We had the opportunity to collect data from consumers in Vermont post mandatory labeling. Preliminary results were presented in June, 2017 at the annual meetings of the Agriculture and Human Values Society in Los Angeles, CA. (presentation attached).

Some highlights of the survey data include:

9% of the sample defined GM as a transfer of genes that would occur in nature

70% indicated they either search for or pay attention to information about GM foods

89% believe there should be GM labeling

66% indicate that a GM label does NOT indicate the safety of a food (10% did not know)

36% had seen the simple GM label

78% desire a simple GM disclosure nationally, such as the one used in VT

94% DO NOT want to have the information in more than one way if the label does not also include a simple disclosure

27% support QR codes; 73% do not

34% support websites; 66% do not

35% support phone numbers; 65% do not

58% support more than one way to disclose GM information IF the label ALSO includes a simple disclosure

Simple disclosures were the preferred method of labeling regardless of whether a respondent was “knowledgeable with strong opinions,” “label users who oppose GE,” “use food labels and support GE” or “do not use food labels and are neutral towards GE.”

There have been assertions that providing GE information on food labels would “scare” consumers away. To date, I could find three empirical studies in the U.S. and one European study that have directly examined the endogeneity of *preferences* as they relate to GM labeling. Costanigro and Lusk (2014) and Kiaukonyte, Streletskaia and Kaiser (2015) have accounted for the endogeneity of preference formation and GM label information. Using an experimental approach, Costanigro and Lusk (2014) found one of eight treatments using hypothetical labels led to a significant increase in the level of concern for GM food. They conclude, “any (negative) signaling effects, should they exist, are likely to be small... (p. 266). Kiaukonyte, Streletskaia and Kaiser (2015) used an experimental approach to examine hypothetical labels and additional information on consumer willingness to pay (WTP) as their measure of preference. They found that for one segment of consumers, organic shoppers, seeing a labeled product resulted in a decrease in WTP. These results were not found for conventional shoppers. Without a direct measure of preferences, however, one cannot disentangle a decrease in WTP due to labels providing information that help reveal preferences for non-GM products, or WTP decreases due to changes in preferences caused by a label. Kolodinsky (2008) examined whether rBST free labels signaled to consumers that using this production method made milk “better,” in addition to providing information about the production process. Using survey data collected before and after the release of FDA voluntary labeling guidelines for using an rBST free label (n=415), parameters estimated using a hedonic pricing model revealed no evidence that the labels influenced preferences in addition to providing information. While our focus is on the U.S., one European study modeled the demand for information and consumer “dread” of GM technology as an endogenous system (J. Costa-Font & Mossialos, 2005). They found that information is associated with a decrease in “dread” (increased support for GM). In summary, there is scant empirical evidence that concludes providing positive GM food labels will change consumer preferences by increasing already negative or decreasing positive attitudes toward GM-food. A study by Lusk and Rozan (2008) indicated that although they estimated an endogenous model, they estimated beliefs not preferences.

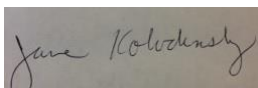
In 2015, I presented a paper at the Agricultural and Applied Economics meetings (Kolodinsky, 2015) that was picked up widely by the media (See, for example, Kolodinsky 2015a). The study

focused on the relationship between two primary questions: whether Vermonters are opposed to GMOs in commercially available food products; and if respondents thought products containing GMOs should be labeled. When analyzed in a way that accounts for the possibility that labels influence opposition, we found no evidence that GMO labeling would act as warning labels and scare consumers away from buying products with GMO ingredients. Results also found that for some demographic groups, GM labels decrease opposition toward GM technology. For people with less education, who live in single-parent households and those earning the highest incomes, a GM label builds more trust in GM technology. Opponents to labeling often refer to [consumers' lack of education](#) on the issue as a reason not to label. In addition, [two studies](#) have shown that higher income households and households with children have been found to be more willing to pay for labeling. Households with children may also be more risk-averse regarding foods. Men are the least opposed demographic overall. The analysis found that for men and people living in middle-income households, desiring a GM label increases opposition. For all of these demographic characteristics, the change in opposition toward GMOs was not larger than three percentage points in the positive or negative direction. **Overall, we found that supporting labeling (including after Vermont's labeling law was passed) has no direct impact on opposition to GM foods.** This conclusion is not what I had expected and runs counter to the reasoning behind the introduction of The Safe and Accurate Food Labeling bill. Using a statistically valid methodology, it seems that for Vermont, where a labeling law has been passed, the law will act as intended: it will provide consumers with the information they want in order to make choices about the food they want to buy and it will not scare them away from GM technology.

While not yet presented, I will be presenting new results based on consumer's actual experiences with labels at the end of July, 2017 at the Agricultural and Applied Economics meetings in Chicago that strengthen the results I presented previously. The new analysis uses ACTUAL consumer experiences with labels in the analysis. Using a simultaneous multivariate model, the results are similar to those I presented in 2015. Seeing a label with a simple disclosure on a food product DOES NOT increase opposition to GE. I would be happy to share these with you after they are presented. They will be presented in a session on July 31, 2017 at 2:45 p.m.

When we triangulate research results, the implication is that consumers desire positive GE labels with a simple disclosure and that providing that disclosure will not "scare" consumers away from purchasing products, nor create negative attitudes toward GE technology. As an applied economist who studies consumer behavior and the economics of information, my best advise based on the body of research to data is to develop a labeling rule that provides consumers information with a simple disclosure such as, "partially produced using genetic engineering" or "produced using genetic engineering."

Sincerely,



Jane Kolodinsky, Ph.D.

Professor and Chair, Department of Community Development and Applied Economics
Director, Center for Rural Studies
University of Vermont

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Costa-Font, J., & Mossialos, E. (2005). Is dread of Genetically Modified food associated with the consumers' demand for information? *Applied Economics Letters*, 12(14), 859-863.

doi:10.1080/1350485050365860

Costanigro, M., & Lusk, J. L. (2014). The signaling effect of mandatory labels on genetically engineered food. *Food Policy*, 49, Part 1(0), 259-267. doi:10.1016/j.foodpol.2014.08.005

For more information about major companies that label their products see:

<https://www.wsj.com/articles/conagra-going-nationwide-with-gmo-labeling-1458683600>

<https://www.wsj.com/articles/conagra-going-nationwide-with-gmo-labeling-1458683600>

<http://www.foodsafetymagazine.com/news/kellogge28099s-and-mars-begin-labeling-gmo-products/>

<https://www.wsj.com/articles/mars-to-add-gmo-labels-to-products-1458588427>

<https://www.usatoday.com/story/money/2016/03/18/general-mills-to-label-gmos-on-products/81981314/>

Kolodinsky, J. (1999), "Biotechnology and Consumer Information," Gershoff Symposium, "Biotechnology and Food Labeling: Should Bio-engineered Foods Be Identified for the Consumer?" Boston, MA, October 29, 1999

Kolodinsky, Jane, (2008). Affect or Information? Labeling Policy and Consumer Valuation of rBST Free and Organic Characteristics of Milk," *Food Policy*.

<http://dx.doi.org/10.1016/j.foodpol.2008.07.002>.

Kolodinsky, J. (2015). GM food labels do not act as a warning to consumers. AAEA annual Meeting, July. Track Session Presentation.

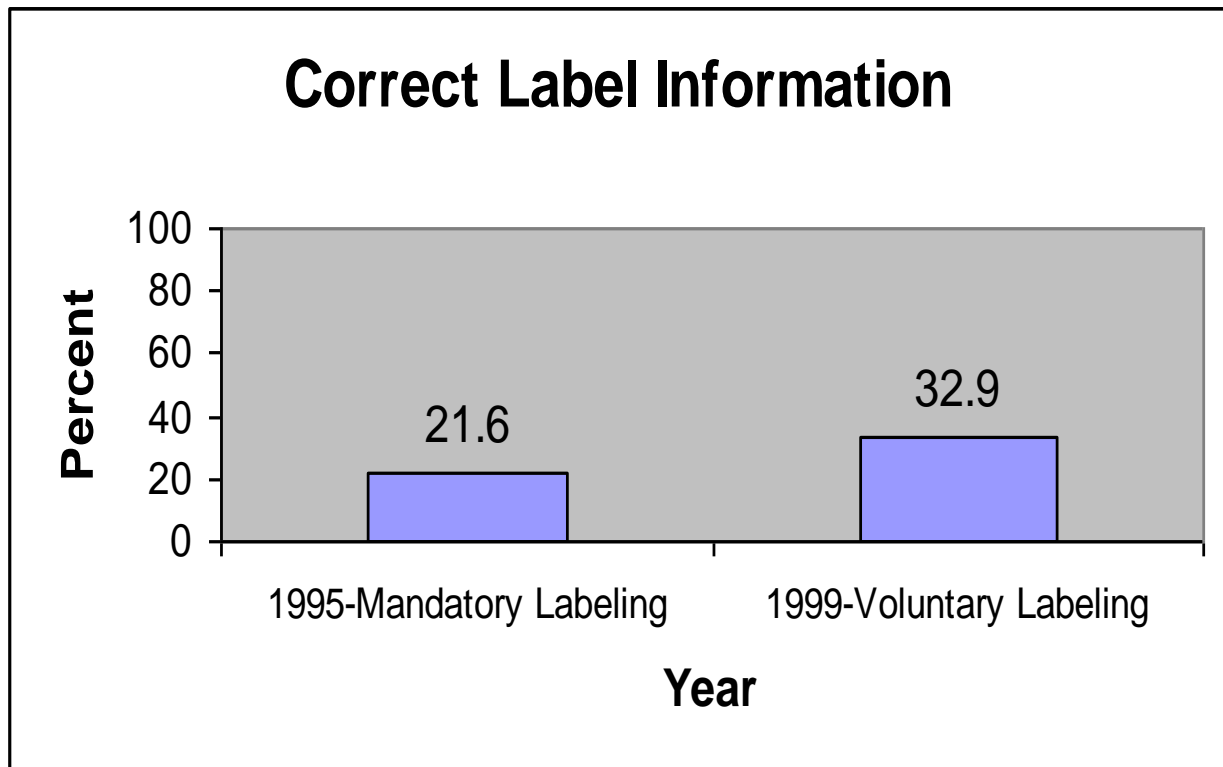
Kolodinsky, J. (2015a). GM food labels do not act as a warning to consumers. *The Conversation*, July 29 Available: <http://theconversation.com/study-gm-food-labels-do-not-act-as-a-warning-to-consumers-45283>

Kolodinsky, Jane (2017). Consumer Typologies and GMO Labeling Formats: Evidence from Vermont. *Agriculture and Human Values*, Los Angeles, June.

Liaukonyte, J., Streletskaya, N. A. and Kaiser, H. M (2015). Noisy Information Signals and Endogenous Preferences for Labeled Attributes. *Journal of Agricultural and Resource Economics* 40(2): 179-202.

Lusk, J. L., & Rozan, A. (2008). Public Policy and Endogenous Beliefs: The Case of Genetically Modified Food. *Journal of Agricultural and Resource Economics*, 33(2), 270-289.
doi:10.2307/41220627

Slide from Kolodinsky, J. (1999), "Biotechnology and Consumer Information," Gershoff Symposium, "Biotechnology and Food Labeling: Should Bio-engineered Foods Be Identified for the Consumer?" Boston, MA, October 29, 1999



Consumer Typologies and GMO Labeling Formats: Evidence From Vermont

Jane Kolodinsky, Ph.D.

Professor and Chair

Department of Community Development and
Applied Economics



The University of Vermont



Why is this Important?

- Only the State of Vermont has experience with mandatory GM labeling.
- Although the labels were required for less than one month in the market, they remain present.
- All previous U.S. based research has relied on stated preferences (not revealed) or experimental hypothetical situations.



- While there are numerous studies conclude that consumers desire some type of GM labeling, there is no peer reviewed literature on what and how that information should be provided.



Consumers Want Labeling

- Two Consumer Reports surveys in 2008 and 2014 show a strong majority of consumers favor federal requirements for GM labels (95% and 92% respectively) (Consumer Reports National Research Center, 2008, 2014).
- A 2013 New York Times poll (Kopicki, 2013) found that 93% of consumers supported labeling.
- A 2015 ABC news poll found 93% of consumers support labeling (Langer, 2014).
- Descriptive academic literature has reached the same conclusion. In the late 1990's U.S. researchers found a majority of consumers desired labeling (75-90%) (Hoban & Katic, 1998; Kolodinsky, 2007).
- Overall, 90+ percent of consumers (Brady & Brady, 2003; Bukenya & Wright, 2007; Liukonyte et al., 2013; Radas, Teisl, & Roe, 2008; Wohlers, 2013).



- The Issues surrounding the debate about the labeling of GMOs in the marketplace have not changed substantially since the discussion began in the late 1990s.



Labeling Naysayers

- Opponents of labeling have asserted that providing more information is useless and destructive.
- They claim that the information limits consumer choice in the long run because consumers may be led to believe that biotechnology is “bad.” (Browning, 1993; Carter and Gruère, 2003).
- A major concern about labeling is related to the concept of substantial equivalents. If two products are substantially the same, a negative label (e.g., GM-free) or a positive label (e.g., contains GM) could imply that the presence a GM ingredient is harmful (Smith, 2000), or that the absence of a GM ingredient makes the product better (McClure, 2001).



Labeling Proponents

- Proponents of labeling point to:
 - consumers' right to know (Streiffer and Rubel, 2003),
 - equity issues related to small scale agriculture (Marion and Willis, 1990),
 - “interference” in the natural order of things (Douthitt, 1991; Fallert et al., 1987; Marion et al. 1989; Marion and Willis, 1990),
 - fairness about who derives the benefits from purchase of these goods, business or consumers (Busch, 1992),
 - and values concerning food and its social significance (Busch, 1992; Thompson, 1997; Conner and Kolodinsky, 1998).



IN THE SENATE OF THE UNITED STATES

_____ introduced the following bill; which was read twice
and referred to the Committee on _____

A BILL

To amend the Agricultural Marketing Act of 1946 to require the Secretary of Agriculture to establish a national disclosure standard for bioengineered foods, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. NATIONAL BIOENGINEERED FOOD DISCLO-**
4 **SURE STANDARD.**

5 The Agricultural Marketing Act of 1946 (7 U.S.C.
6 1621 et seq.) is amended by adding at the end the fol-
7 lowing:

Signed into law by President Obama on July 29, 2016—S-764



- in accordance with subsection require that the form of a food disclosure under this section **be a text, symbol, or electronic or digital link**, but excluding Internet website Uniform Resource Locators not embedded in the link, **with the disclosure option to be selected by the food manufacture**
- **provide alternative reasonable disclosure** options for food contained in small or very small packages; in the case of small food manufacturers,
- provide an implementation date that is not earlier than 1 year after the implementation date for regulations promulgated in accordance with this section; and
- on-package disclosure options, to be selected by the small food manufacturer, that consist of a telephone number accompanied by appropriate language to indicate that the phone number provides access to additional information; and an Internet website maintained by the small food manufacturer in a manner consistent with subsection
- and exclude food served in a restaurant or similar retail food establishment; and very small food manufacturers.



What is GM under the new law?

- BIOENGINEERING.—The term ‘bio-engineering’, and any similar term, as determined by the Secretary, with respect to a food, refers to a food—
 - “(A) that contains genetic material that has been modified through in vitro recombinant deoxyribonucleic acid (DNA) techniques; and
 - for which the modification could not otherwise be obtained through conventional breeding or found in nature.



- ESTABLISHMENT OF MANDATORY STANDARD
Not later than 2 years after the date of enactment of this subtitle, the Secretary shall—
 - establish a national mandatory bioengineered food disclosure standard with respect to any bioengineered food and any food that may be bio-engineered;
 - and establish such requirements and procedures as the Secretary determines necessary to carry out the standard.



Waiting for the comment period



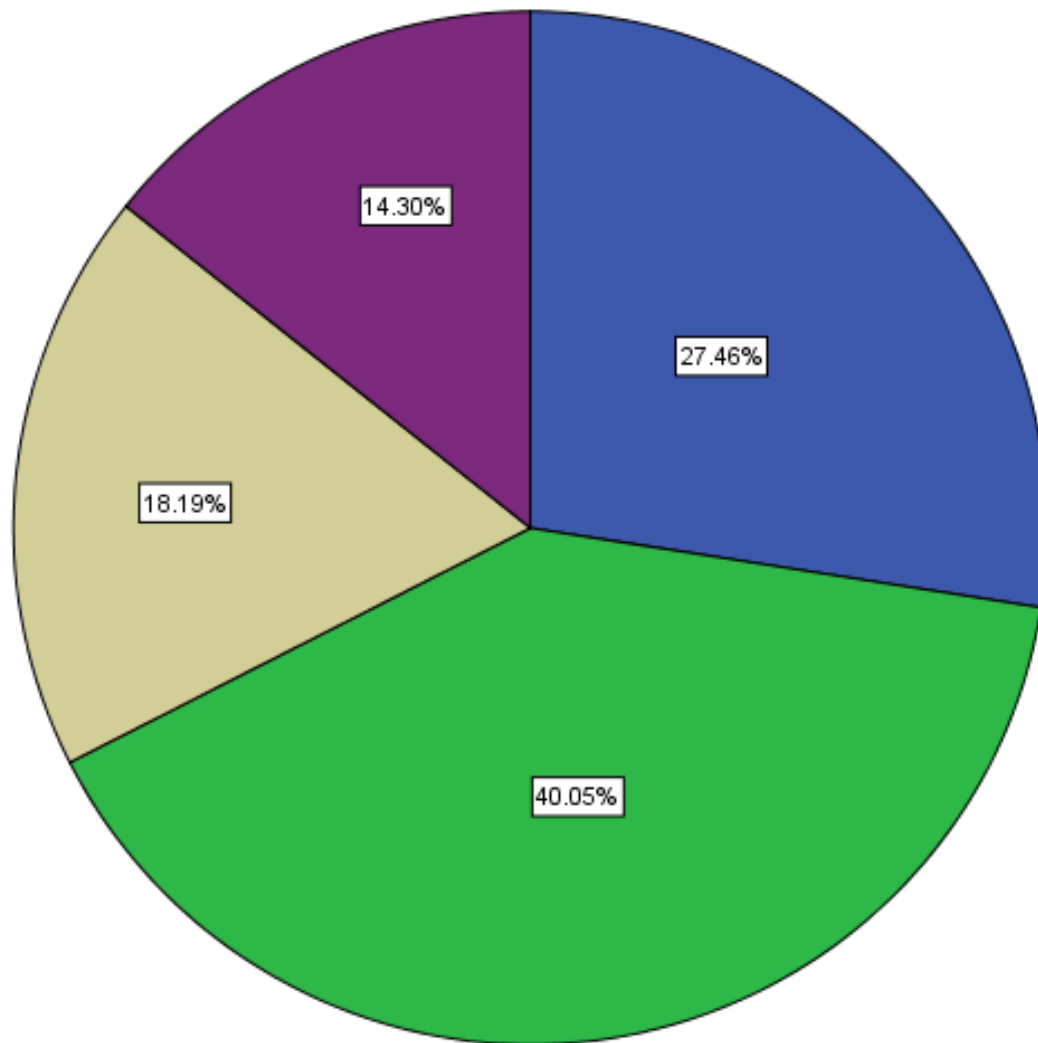
EXAMPLE OF A GMO LABEL



Two surveys

- November 2016
 - March 2017
-
- Are there typologies of consumers based on search behavior for GMOS, other label reading behaviors, and attitudes, knowledge and perceptions surrounding GMOs?





- TwoStep Cluster Number
- Knowledgeable with strong opinions
 - Label users who oppose GMOs
 - Use some labels and support GMOs
 - Do not use labels and neutral toward GMOs



Variable	Definition	Consumer Cluster				Chi Sq.
		Cluster 1: Knowledgeable with strong opinions (n=240)	Cluster 2: Label users who oppose GMOs (n=350)	Cluster 3: Use some labels and support GMOs (n=159)	Cluster 4: Do not use labels and neutral toward GMOs(n=125)	
Definition	Which of the following options most closely aligns with how you define GMOs?					
.63	Transfer of genes that would NOT occur in nature	0.846	0.560	0.447	0.616	
.09	Transfer of genes that would occur in nature	0.042	0.103	0.113	0.104	
.28	Transfer of genes that might occur in nature	0.113	0.337	0.440	0.280	19.33***
searchbeh	Please choose only one of the following					
.23	I seek information on genetically-modified foods	0.592	0.106	0.113	0.184	
.47	I pay attention to information on genetically-modified foods if it catches my eye	0.379	0.703	0.440	0.248	
.22	I have heard or seen information on genetically-modified foods, but I don't pay attention	0.017	0.151	0.403	0.496	
.07	I have never heard or seen any information on genetically-modified foods	0.013	0.040	0.044	0.072	340.63***
Supp/opp	Overall, do you strongly support, somewhat support, have no opinion, somewhat oppose or strongly oppose the use of GMOs in food?					
.06	Strongly support	0.021	0.020	0.145	0.136	
.15	Somewhat support	0.000	0.200	0.396	0.056	
.24	have no opinion	0.021	0.206	0.314	0.416	
.23	Somewhat oppose	0.013	0.474	0.132	0.152	
.32	Strongly oppose	0.946	0.100	0.013	0.240	749.01***



Variable	Definition	Consumer Cluster				
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Labelwhat?	In your opinion, which products should be labeled?					
.35	Products containing GMOs should be labeled	0.388	0.360	0.346	0.368	
.04	Products that do not contain GMOs should be labeled	0.046	0.031	0.082	0.032	
.49	Both products should be labeled	0.563	0.577	0.220	0.424	
.08	Neither products should be labeled	0.040	0.011	0.321	0.120	
.03	Don't Know	0.000	0.020	0.031	0.056	206.07** *
Labinform	In your opinion, do GMO labels enable consumers to make more informed decisions about the food they buy?					
.09	No	0.008	0.043	0.296	0.136	
.85	Yes	0.979	0.937	0.648	0.776	
.05	Have never thought of this	0.000	0.000	0.000	0.000	
.09	Don't' know	0.013	0.020	0.057	0.088	131.41** *
SafetyL	In your opinion, does a GMO label indicate that...					
.12	The food is safe	0.096	0.151	0.031	0.152	
.13	The food is unsafe or	0.346	0.063	0.031	0.080	
.66	Neither of these	0.471	0.731	0.925	0.640	
.09	Don't know	0.088	0.054	0.013	0.128	169.59** *
GMOPR	In your opinion, should foods that contain GMOs be...					
.47	Priced the same as non-GMO food	0.375	0.529	0.679	0.384	
.17	Priced lower than non-GMO food or	0.154	0.151	0.132	0.232	
.13	Priced higher than non-GMO food	0.254	0.083	0.082	0.144	
.23	Don't know	0.217	0.237	0.107	0.240	71.58***



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SawLabel	Have you seen any labels on food that indicated they were "produced or partially produced with genetic engineering?"					
.64	No	0.525	0.609	0.698	0.680	
.36	Yes	0.475	0.391	0.302	0.320	15.06** *
Income	Income group in quantiles					
1		0.163	0.108	0.097	0.265	
2		0.215	0.191	0.224	0.265	
3		0.215	0.210	0.276	0.133	
4		0.177	0.197	0.157	0.163	
5		0.230	0.293	0.246	0.173	29.13** *
GenFem	With which gender do you identify					
.48	Male	0.333	0.477	0.610	0.568	
.51	Female	0.667	0.523	0.390	0.432	35.39** *
BachPlus	Has earned a bachelor's degree or higher					
.51	No	0.492	0.423	0.503	0.656	
.49	Yes	0.508	0.577	0.497	0.344	21.81** *
FamWCh	Household has children under age 18					
.70	No	0.695	0.659	0.711	0.680	
.30	Yes	0.305	0.341	0.289	0.320	1.62



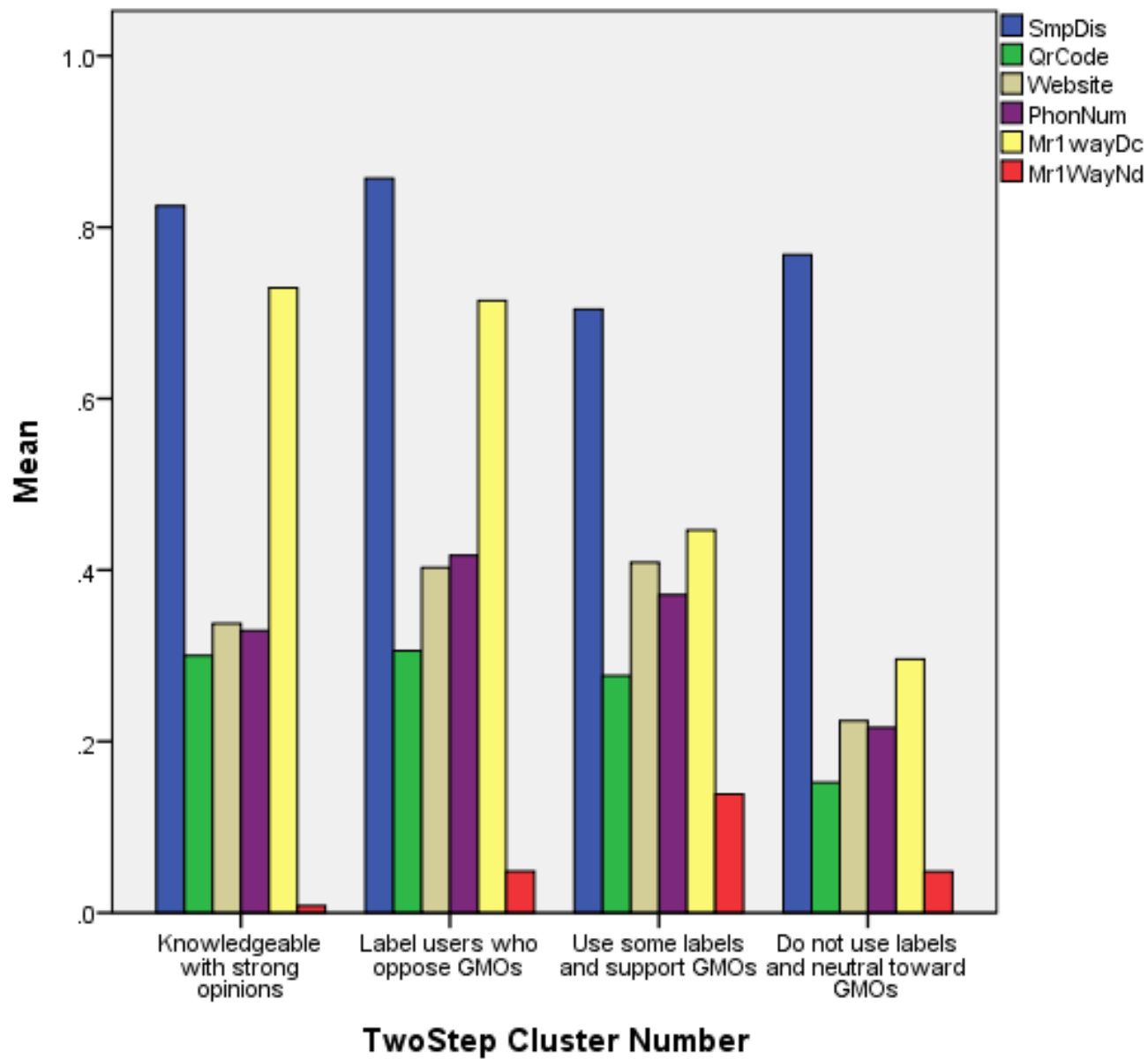
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LIngrdnt	Please tell me if you look at food labels for the following information:					
.20	No	0.063	0.071	0.157	0.744	
.80	Yes	0.938	0.929	0.843	0.256	319.27* **
LNutrinf	Nutrition Facts Panel					
.20	No	0.158	0.049	0.069	0.824	
.80	Yes	0.842	0.951	0.931	0.176	383.77* **
LOrganic	Organic Label					
.40	No	0.063	0.177	0.836	0.960	
.60	Yes	0.938	0.823	0.164	0.040	484.11* **
FrntPkgL						
.49	No	0.458	0.334	0.585	0.848	
.51	Yes	0.542	0.666	0.415	0.152	104.76* **
LNatural	Natural Label					
.49	No	0.283	0.280	0.830	0.936	
.51	Yes	0.717	0.720	0.170	0.064	275.80* **

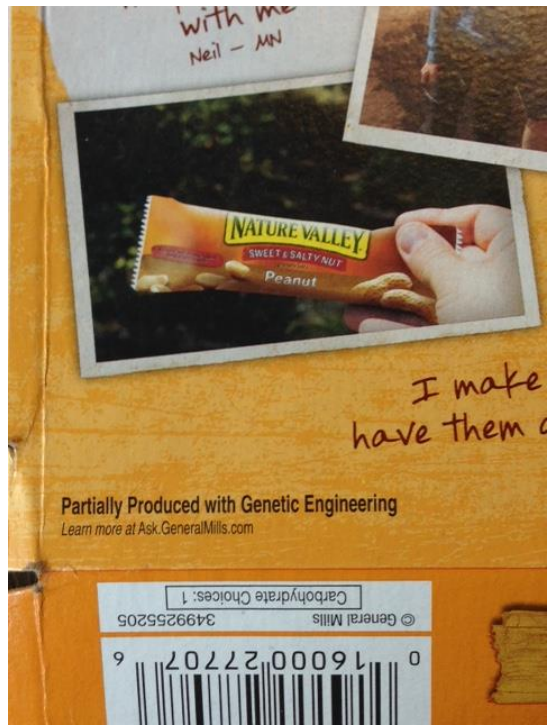


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SmpDis	Which of the following options to inform consumers about GMOs in food products would be acceptable to you? Simple disclosure on the food product as was done in Vermont					
.22	No	0.175	0.143	0.296	0.232	
.78	Yes	0.825	0.857	0.704	0.768	18.16***
QrCode	A QR code on the product					
.73	No	0.700	0.694	0.723	0.848	
.27	Yes	0.300	0.306	0.277	0.152	11.83***
Website	Directions to a website					
.66	No	0.663	0.597	0.591	0.776	
.34	Yes	0.338	0.403	0.409	0.224	14.98***
PhonNum	A telephone number to provide information					
.65	No	0.671	0.583	0.629	0.784	
.35	Yes	0.329	0.417	0.371	0.216	17.31***
Mr1wayDC	More than 1 way but should at least include a disclosure about the use of genetic engineering on the actual product					
.42	No	0.271	0.286	0.553	0.704	
.58	Yes	0.729	0.714	0.447	0.296	99.97***
Mr1WayNd	More than 1 way but the label does not have to provide a disclosure about the use of genetic engineering on the actual product					
.94	No	0.992	0.951	0.862	0.952	
.06	Yes	0.008	0.049	0.138	0.048	32.37***







Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000	2,500
Total Fat	Less than 65g	80g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

INGREDIENTS: ENRICHED WHEAT FLOUR [FLOUR, MALTED BARLEY FLOUR, REDUCED IRON, NIACIN, THIAMIN MONONITRATE (VITAMIN B1), RIBOFLAVIN (VITAMIN B2), FOLIC ACID], WATER, FARINA, YEAST, SALT, SUGAR, CALCIUM PROPIONATE AND SORBIC ACID (TO PRESERVE FRESHNESS), SOYBEAN OIL, WHEAT GLUTEN, GRAIN VINEGAR, SOY LECITHIN, SOY, WHEY (MILK). R16-075

PARTIALLY PRODUCED WITH GENETIC ENGINEERING.

BIMBO BAKERIES USA, INC.
HORSHAM, PA 19044
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 BAKERIES AT: FREDERICK, MD;
 PLACENTIA, CA; GREENWICH, CT;
 ORLANDO, FL; RIVIERA BEACH, FL;
 AND ELKHART, IN.
 SPECIALTY BAKERS SINCE 1880

We welcome your questions or comments about this

Protein 4g

Iron

Not a significant source of vitamin A, vitamin C and calcium.
 * Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Ingredients: Enriched Flour (wheat flour, niacin, iron, thiamin mononitrate, riboflavin, folic acid), Whole Wheat, Degermed Yellow Corn Meal, Vegetable Oil (soybean, canola and/or rice bran), Sugar. Contains 2% or less of: Salt, Rye Flour, Yeast, Maltodextrin, Spices, Color Added, Dextrose, Distilled Monoglycerides, Baking Soda, Trisodium Phosphate, Autolyzed Yeast, Yellow Corn Flour, Calcium Carbonate, Dried Onion, Dried Garlic, Hydrolyzed Soy Protein, Citric Acid, Disodium Inosinate, Disodium Guanylate, Natural Flavor, Barley Malt Syrup. Freshness Preserved by BHT.

CONTAINS WHEAT AND SOY INGREDIENTS.
 DISTRIBUTED BY GENERAL MILLS SALES, INC., MINNEAPOLIS, MN 55440 USA
 Carbohydrate Choices: 2 1/2 © General Mills 3611225170

Partially Produced with Genetic Engineering
 Learn more at Ask.GeneralMills.com



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Take Aways?

- People are still supportive of labeling
- People prefer simple disclosures, regardless of their knowledge, attitudes, and preferences about GM
- A minority of people desire websites, phone numbers, or QR codes.
- QR codes are the least preferred option



It's about to become more complicated!

- **Clean Labels**
- **FDA and “natural”**

From a food science perspective, it is difficult to define a food product that is 'natural' because the food has probably been processed and is no longer the product of the earth. That said, FDA has not developed a definition for use of the term natural or its derivatives. However, the agency has not objected to the use of the term if the food does not contain added color, artificial flavors, or synthetic substances.

Clean label is a consumer driven movement, demanding a return to 'real food' and transparency through authenticity. Food products containing natural, familiar, simple ingredients that are easy to recognize, understand, and pronounce. No artificial ingredients or synthetic chemicals.” — Go Clean Label™



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