

# How GMO labels affect customer decision making with food purchases

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Researchers from Neoma Business School, Concordia University, and University of Wisconsin-Madison published a new paper in the *Journal of Marketing* that examines how the GMO labeling that policymakers

implement affects consumer choice. The study is authored by Youngju Kim, SunAh Kim, and Neeraj Arora.

Genetically modified (GM) foods are widespread worldwide, but they are also controversial and subject to regulatory oversight. For example, in the United States, all GM foods will be required to display a "Bioengineered" label by 2022, a policy decision that is heavily debated. Most scientists claim that genetically modified organisms (GMOs) in foods are safe for human consumption and offer societal benefits such as better nutritional content. In contrast, many [consumers](#) have an overall negative attitude toward GMOs. These conflicting views create a fundamental tension for policymakers in how GM-foods should be labeled.

To reconcile the diverging views that scientists and consumers have on GMOs, policymakers all over the world adopt either a voluntary or a mandatory GMO labeling policy. In a voluntary labeling regime, food producers who make non-GM products disclose such information through a "non-GMO" label. Conversely, in a mandatory labeling regime, food manufacturers are required to include labels such as "contains GMO" when their foods are genetically modified.

To understand how GMO labeling policies impact consumer choice, this research team conducted four studies.

Study 1 examines whether consumer choice depends on the GMO labeling regime. The results show that each labeling regime greatly affects consumers' demand for GM foods. Labels such as "non-GMO" (absence labeling) and "contains GMO" (presence labeling) serve as negative signals for GM foods and tend to shrink their [market share](#). The market share shrinkage effect is stronger under the mandatory policy (presence labeling) than under voluntary policy (absence labeling).

Study 2 examines the impact of GMO labeling (absence vs. presence) on consumers' sensitivity to the GMO attribute, price, and category purchase. The results show that presence-focused labeling ("contains GMO") makes consumers more sensitive toward the GMO attribute, less sensitive toward price information, and more reluctant to make a purchase in a category. Why? Presence-focused labeling enhances consumers' concerns about GMOs, encourages them to pay greater attention to GMO information, and makes their choice more difficult.

Study 3 finds that the increased preference for non-GM products is amplified when both "non-GMO" and "contains GMO" labels are displayed on the products.

Study 4 shows that the signal policymakers decide to send via the GM label (e.g., a green logo may be viewed as an endorsement and a yellow logo as a cautionary signal) significantly affects consumer choice. To be more specific, participants exposed to positive GMO labels tend to be less negative toward GMOs than those exposed to neutral GMO labels. A GMO label format has a greater impact on consumers who have no strong opinions about GMOs, suggesting that preference for GM foods is highly pliable for a large segment of consumers.

Consumers' willingness to pay (WTP) for non-GM products critically depends on the policy regimes and the label policymakers adopt. Consumers have higher WTP for non-GM products in the mandatory (vs. voluntary) regime and when the adopted GMO label signals a less positive image. Across studies, both the voluntary and mandatory labeling regimes create incentives for firms to add premium-priced, non-GM products to their portfolio of offerings. These incentives are substantially greater in the mandatory labeling regime than in the voluntary regime.

The research teams says that "Our findings provide a clear understanding

of how the GMO labeling that policymakers implement affects consumer choice. Any form of GMO labeling has significant externalities." GMO labeling reduces the demand for GM foods. The signal contained in the GMO label also affects consumer choice. Even a neutral GMO label may lead consumers to focus on the negative aspects of GMOs, pay less attention to price information, and become more reluctant to make a purchase in the product category.

Unlike the positive "Bioengineered" logo that the United States adopted, the [label](#) in Brazil is a yellow triangle resembling a caution sign. Therefore, the externalities of GMO labeling noted in this study will be larger in Brazil. What are the takeaways for marketers? This research reveals that GM labels add an important product feature for consumers to evaluate. The labels draw attention away from factors such as price, allowing firms to charge a premium for non-GM products. GM manufacturers inevitably lose market share when presence-focused labeling is enforced. They face both reduced brand share and reduced category demand. Because mandatory presence-focused labeling makes consumers less price-sensitive, GM food manufacturers may attempt to compensate for their sales loss by considering promotions other than price cuts.

**More information:** Youngju Kim et al, EXPRESS: GMO Labeling Policy and Consumer Choice, *Journal of Marketing* (2021). [DOI: 10.1177/00222429211064901](https://doi.org/10.1177/00222429211064901)

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