

Awareness, not mandatory GMO labels, shifts consumer preference

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Six years ago, the state of Vermont passed what turned out to be a short-lived law mandating disclosure of genetically modified organisms, or GMOs, on all food products. That law's effect? A collective shrug of the

shoulders.

That doesn't mean people don't care about whether GMO ingredients are in their food, according to new Cornell research. Although the mandatory labeling law didn't change consumer purchasing patterns, the researchers found that the increased consumer [awareness](#) caused by the legislation, coupled with existing non-GMO labeling, actually did shift preferences.

"For the consumers who care about this non-GMO attribute, they already have a relevant information signal available in the form of the non-GMO label," said Jura Liaukonyte, the Dake Family Associate Professor in the Charles H. Dyson School of Applied Economics and Management.

"That's when the switching happens," Liaukonyte said, "and this switching is triggered by a heightened awareness through these legislative conversations."

"GMO and non-GMO Labeling Effects: Evidence From a Quasi-Natural Experiment," published Aug. 29 in *Marketing Science*. Liaukonyte's co-authors were Aaron Adalja, assistant professor of food and beverage management in the Cornell Peter and Stephanie Nolan School of Hotel Administration; Emily Wang of the University of Massachusetts, Amherst; and Xinrong Zhu, of Imperial College Business School. Both Dyson and the Nolan School are in the Cornell SC Johnson College of Business.

The group's key finding: An increase in consumer awareness around GMO-related topics—even in states that didn't ultimately pass GMO labeling laws—is linked to an increase in demand for non-GMO products. And that difference can be quantified: They found that 36% of new non-GMO product adoption can be explained by differences in consumer awareness tied to legislative activity.

"What's really interesting is the way legislative activity essentially generates consumer awareness," Adalja said. "In the paper, we differentiate between this 'indirect awareness effect' and the direct effect of labeling, and we show that indirect awareness—in this case, the labeling legislation being discussed in the media—is really the primary mechanism by which we find consumer preferences are shifting."

Over the last three decades, GMO labeling has become an increasingly important topic of public and political debate. The paper cites a 2016 National Academy of Sciences report finding no [scientific evidence](#) that GMO foods are less healthy or safe than non-GMO products; however, on Jan. 1, 2022, the United States mandated disclosure labels on all foods that contain GMOs.

The controversy over GMOs sparked several state-level labeling initiatives over the years, but Vermont was the only state to successfully pass and implement a labeling law. The law took effect July 1, 2016, but was quickly preempted by the National Bioengineered Food Disclosure Standard, signed into law by President Barack Obama on July 29, 2016.

For their study, the researchers analyzed GMO labeling in three steps. They first examined the relationship between the adoption rate of newly introduced non-GMO products and consumer awareness at the time of introduction. These products are identified by the "Non-GMO Project Verified" label, a certification from the third-party nonprofit Non-GMO Project, which has been used since 2010.

Then they analyzed the natural experiment condition created in the run-up to Vermont adopting its GMO labeling law in 2016, to gauge the relationship between product demand and the information available via on-the-ground efforts related to the legislation. The increase in demand tied to increased awareness was significant, the authors found.

And finally, the authors looked into whether actual adoption of the Vermont law—GMO labels appearing on store shelves—resulted in any additional demand for non-GMO or GMO products. It did not.

Previous studies, conducted via questionnaires or in laboratory settings, indicated that GMO labeling would result in big swings in consumer preference, but the Cornell researchers' study in the field found a more subtle change.

"It's difficult to approximate in the lab the complexity of the actual marketplace with its many co-existing information signals," Liaukonyte said.

Adalja said the role of legislative discussion around GMO labeling—even in states that didn't ultimately adopt labeling laws—was compelling.

"That has some important implications," he said. "It's another mechanism lawmakers need to consider when designing and debating policies that aim to change preferences of consumers."

They also suggest that voluntary non-GMO labels—increasingly common over the last dozen years—may have provided a sufficient disclosure mechanism even without mandatory GMO labeling.

More information: Aaron Adalja et al, GMO and Non-GMO Labeling Effects: Evidence from a Quasi-Natural Experiment, *Marketing Science* (2022). [DOI: 10.1287/mksc.2022.1375](https://doi.org/10.1287/mksc.2022.1375)

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