So, it's unclear how many Americans will actually be looking to avoid GM food in the future. But even if you want to keep your pantry GMO-free, doing so could prove challenging.

"Can people avoid them? The answer is certainly yes. Especially in the last few years there have been more products on the market that are non-GMO or organic," says Jayson Lusk, an economist at Purdue University who studies the consumer side of GMOs. "Now, those products are more expensive—no one ever said you can avoid them for free. But they can if they're willing and able to pay, and one way they'll pay is in the time to find the products."

Though very few fruits and vegetables are genetically engineered, he points out that almost anything with corn or soybeans will be difficult to get without a GM component. More than 90 percent of both crops are bioengineered in the U.S., and corn and soy derivatives go into many processed foods. Much of the sugar produced derives from sugar beets, nearly all of which are genetically engineered. Somewhere between 60 and 70 percent of processed foods on the market today have a GM ingredient, but many of those foods may not require a label according to the proposed rules.