Excerpt from "Why We Should Accept GMO Labels," a Forum Post at Scientific American online at http://www.scientificamerican.com/article/why-we-science-should-accept-gmo-labelings/

It's hard to have an intelligent conversation about how, when and whether to use GMOs when a huckster like alternative medicine guru Joseph Mercola calls them "one of the largest threats that we have against the very sustainability of the human race." Such scaremongering is especially painful to me because even though I do not think that government-approved GMO foods pose meaningful health risks to consumers, and even though I believe strategic genetic engineering can be an important tool to ease human suffering on our warming and resource-constrained planet, I share the concerns of many environmentalists about the homogenization and consolidation of the global food system—trends that are accelerated by the spread of industrially produced GMOs.

There's still plenty of debate focused on whether the monocultures and dependencies fostered by first-generation GMO products like Monsanto's pest-resistant corn and cotton and Roundup Ready soybeans nullify their purported benefits of higher yields and reduced insecticide use. But what is beyond dispute is that those products were introduced not because they were the best way to employ genetic engineering to address critical global food issues, but because they were thought to be the fastest, most reliable route to profits for Monsanto and other producers.

Their adoption of a profits-first strategy was a fateful decision because the seemingly endless furor over Roundup Ready and other first-generation GMOs, fomented by green campaigners and Monsanto's own missteps, have turned world public opiniondecisively against bioengineered foods. Even in the U.S., whose citizens are more open-minded about GMOs than Europeans, the signs are ominous. We are all reaping what Monsanto has sown, and it is a bitter harvest for those of us who think that humanitarian-driven GMO projects such as drought-tolerant maize and vitamin-fortified cassava, developed by nonprofits and thoroughly tested by local researchers, should already be in wide use in countries that want them. Whereas GMOs should never be seen as a panacea, they can do a world of good as important tools within a broader strategy to combat starvation, disease and environmental degradation in places like sub-Saharan Africa.

We can only dream about how different the outlook for GMO foods would be today if the world's first extensive experience with the technology had been a product likegolden rice, engineered specifically to address a critical malnutrition problem, vitamin A deficiency, that blinds hundreds of thousands of children every year in Africa and Southeast Asia. It's no coincidence that golden rice, which has been tragically caught up in the larger uproar over GMOs, was developed not by a private corporation, but by foundation-funded academic researchers and a nonprofit organization supported by governments and philanthropies. (To be fair, Monsanto assisted by giving the rice's developers royalty-free licenses to use some of its patent-protected processes, and its charitable arm has helped to support several of the independent nonprofits.)

It's long past time, then, for those of us who see ourselves as environmentalists *and*technologists to start making some crucial distinctions—and to broadcast those distinctions loudly and proudly. What's good for Monsanto, DuPont or Syngenta is not necessarily what's good for human health and the environment. Just as environmentalists shouldn't worry about propping up pitchmen like Mercola, biotech supporters needn't concern themselves with corporate bottom lines.

In that spirit, the recent editorial from the *Scientific American* board of editors opposing mandatory labeling of GMO foods was disappointing because it was, in my view, another missed opportunity to start laying down some much clearer lines of demarcation. Although I reluctantly agree with the editors that mandatory GMO labeling is bad policy, I'm certain that fighting disclosure is *not* where the scientific community should be putting its energy—especially because it's very likely that North America will soon be swamped by the pro-labeling tide that has already swept across Europe, Asia and much of the rest of the world. Indeed, a recent *New York Times* poll indicates more than 90 percent of Americans already think that products containing GMOs should be labeled as such. It took a $46-million infusion of campaign cash from Monsanto, DuPont and other agribusiness giants to narrowly defeat a ballot initiative in California that would have imposed mandatory labeling. (Proponents spent just $9.2 million; Mercola was the largest contributor on their side.) But for anti-GMO forces, last year's loss in California was just as good as a win because it has stoked a nationwide movement toward labeling that looks unstoppable to me. Washington State voters areup next; a statewide vote is set for November 5.

The editors of *Scientific American* rightly point out that mandatory label laws in Europe and Asia have hardly increased consumers' knowledge. Instead, they haveprovided the absolutists with much more leverage in pressuring retailers to stop carrying *any* GMO products, thus reducing consumer choice and, in some cases, hurting the poor by raising prices. Yet consumers want labels because their food choices are, at least in part, expressions of their affinities, aspirations and fears. Producers of organic, kosher and other foods ought to be able to say so as long as their claims are subject to government verification. So should producers of food that is truly GMO-free. But the coercion of *mandatory* labeling ought to be reserved for information that is relevant to health, not GMO content, because government-sponsored assessments have repeatedly concluded that approved GMOs are at least as safe and nutritious as their conventionally bred counterparts. I say this even knowing that governments already require the disclosure of some information that has no direct impact on health, such as country of origin. They shouldn't, but they do.

But would mandatory labeling, even if unwarranted, really be such a disaster? I don't think so. There are good reasons to believe that the deleterious effects of mandated labels will fall more heavily on commercial producers like Monsanto than on the broader cause of food bioengineering. The most important reason is that secrecy is a key driver of risk perception heuristics: When information is being withheld from us, we immediately assume the worst. That's especially true if the topic is complex and poorly understood, which is why right-to-know is the most powerful argument the anti-GMO forces have. (Journalist and GMO advocate Mark Lynas, who favors labeling, made this point well in a recent speech.) For all their shortcomings, label laws would at least partially disarm the conspiracy theorists and nudge the mainstream debate in the right direction: toward a clear-eyed, case-by-case discussion of the costs and benefits of specific GMOs.

Scientists who spend their time fighting labeling also risk eroding their standing with a distrustful public, especially those in the middle who are suspicious of GMOs but may yet be persuaded the technology is worthwhile—unless they sense that information is being withheld from them. Transparency is a hallmark of good science (and good journalism), but when we push for more of it only when it benefits us directly, yet oppose the types of disclosure the public overwhelmingly wants, we look like hypocrites or worse. History is littered with the consequences of this type of duplicity; I describe a particularly horrifying example in my most recent book about long-hidden pollution in an American town.

So instead of resisting labeling laws that are almost certainly coming anyway, *Scientific American* and the broader science community should respond to the crisis of public confidence in food biotechnology by speaking up much more aggressively in support of GMOs that have obvious humanitarian benefits. For GMOs whose benefits are not as clear, let's be just as aggressive in expressing well-founded reservations instead of acting like any criticism is a betrayal. Of course, science will never be able to speak with one voice on genetic engineering; there will always be disagreements about the merits of specific applications. But that is exactly what the public must understand before the ruinous discourse over GMO foods can shift to more productive ground. For the sake of the world's malnourished billions and its overtaxed soil, water and biota, we need to prove that the absolutists are wrong and that there really is a road between.

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