

One thing might keep the Impossible Burger from saving the planet: Steak

By **Tamar Haspel**

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It was a veggie-burger tasting, sometime in the late 1990s, that made me swear off veggie burgers. In the Clinton era, they were enough to shake anyone's confidence in the category, and mine was shaken to the tune of two decades of abstinence.

But it's a new day in plant-based meat substitutes. The two versions making headlines — in both food and business news — are the Beyond Burger, made mostly from pea protein, and the Impossible Burger, mostly soy. The news is pretty good. They're very convincing impostors, and people who have given up meat — or want to eat less of it — are flocking to such chains as Umami Burger and Red Robin to give the Impossible a try. And once Burger King rolls out the Impossible Whopper countrywide, I think it's safe to use the word “mainstream.”

But the companies behind these products are looking to do more than offer a meaty experience without the meat. They're out to save the planet. Bruce Friedrich, executive director of the Good Food Institute, a nonprofit organization that supports and promotes meat substitutes, doesn't foresee the complete replacement of meat, but he predicts transformation on the order of cellphones replacing landlines. Sure, some dinosaurs still have landlines, but the way we communicate has changed.

Pat Brown, CEO of Impossible Foods, which makes the Impossible Burger, aims higher. “We're dead serious about completely replacing beef,” he told me. The company plans to do it “by completely eliminating the economic incentive for animal farming and fishing,” and it plans to do it by 2035.

Is that possible? Is it desirable? Even though I'd answer both questions with a resounding “probably not,” I'm a big fan of the category, and I believe it will change the market for meat — a market that could use some changing.

Some of the wins are unequivocal. Although people certainly disagree about the extent to which animals suffer in our system — on farms and in slaughterhouses — all those problems go away. So does risk for food-borne illnesses from fecal contamination. Eating plants, rather than feeding them to animals and eating the animals, is inherently more efficient. No antibiotics are required. I still think cattle play an important role turning grass that's grown on unfarmable land into high-quality protein and providing milk, farm labor and transportation to some of the world's poorest farmers, but we need to cut back on beef in the developed world and try to flatten the curve on increasing demand as more people worldwide are brought into the middle class.

The biggest issue, though, and the one that seems to motivate a lot of the people working in the sector, is climate change. Replacing beef is a big carbon win.

How big is, of course, hotly debated. Richard Waite is a researcher at the World Resources Institute, and it's his job to do the math on greenhouse gases. According to him, beef is responsible for about 6 percent of total greenhouse gas emissions (add dairy, and cattle's total comes to 10 percent). Methane from their digestive systems, gases from their manure breaking down, and deforestation either to create pasture or grow feed are the biggest factors. As we talk about beef, it's important to remember that it's a much smaller factor than fossil fuels, but it's the biggest of dietary factors.

Plant-based meats aren't emissions-free, of course, and we don't have good independent life-cycle analyses, but when Beyond Burger commissioned University of Michigan scientists to do one, they found that the Beyond had about 10 percent of the greenhouse-gas impact of beef. I think it's safe to say the decrease will be significant.

But a couple of issues stand between plant-based meats and greenhouse-gas reductions. The first is the question of what they're going to replace. If vegans eat them instead of seitan, or carnivores eat them instead of carrots (hey, there's one of my five a day!), nobody wins.

According to Brown, his company's research indicates that "probably at least half of the customers are explicitly buying our product instead of the cow-derived version." In supermarkets, it's probably too early to tell. As Friedrich points out, "people are trying it for novelty," and that will inevitably change. According to Scott Grove, category manager in Giant Foods' meat department, although the segment is growing, "plant-based sales are not making a significant impact on actual meat sales."

Then there's price. Everyone I spoke with agreed that customers aren't going to buy this to save the planet; they're going to buy it because it's a tasty alternative to beef that competes on price. Brown says such competition is imminent — in the two- to three-year vicinity. I'm a believer in economies of scale, and given the off-the-charts demand for Impossible and Beyonds, it's reasonable to foresee price drops.

The biggest obstacle, though, and the one that makes me think the gains are not just around the corner, is steak. We've got convincing substitutes for hamburger, but whole-muscle cuts like steaks and roasts are a lot harder to duplicate. According to Sara Place, senior director of sustainable beef production research for the National Cattlemen's Beef Association, those whole-muscle cuts are more than half a steer's carcass, and the biggest share of the profits. What happens if demand for hamburger goes down, but demand for steak doesn't? We'll still need the cattle to satisfy the whole-muscle market.

Brown is confident that won't happen. "We are already at work making whole cuts," he said. "It's in our interest, mission-wise, to have products that compete. . . . We're on track to do that."

I'm less sanguine. I suspect our best hope for whole cuts comes not from the plant-based sector but the cell-based sector, where companies are growing actual meat from cells of actual animals, and if I hauled out my crystal ball, I'd have to say that whole-muscle cuts are at least a decade away, conceivably much longer.

But here's what could happen. If hamburger demand drops and steak demand doesn't, hamburgers will get cheaper (and possibly exported) and steak will get more expensive. And when that happens, steak demand will go down (both here and in the developing world, where the appetite for meat is on the rise), and with it cattle herds.

There are a gajillion ancillary issues. We could talk about how cattle can sometimes sequester carbon in soil. We could talk about the fact that plant-based meats are highly processed foods with genetically modified ingredients. We could ask why we can't just replace beef with pork and chicken, for about the same greenhouse-gas impact. But since my

editor courteously declined my offer to write 25,000 words on the subject, there's just one more thing I'd like to touch on: human health.

It's one thing to make a convincing plant-based burger. It's another to make a convincing plant-based burger that's better for you than beef. Nutritionally, they're not very different. An [Impossible Burger](#) has less fat than an [80/20 beef burger](#) (I compared them raw), and the same amount of saturated fat. It's got the same amount of protein, and a few grams of fiber, and slightly fewer calories (a difference that may go away with some cooking methods, as some beef fat will render out). It's got no cholesterol, while the beef burger has 80 milligrams. Yes, the Impossible's got salt, but people tend to add salt to ground beef when they cook it. It's only slightly better than a wash.

Humans, however, have a long track record of hearing what they want to hear when it comes to food. Snackwells is always my case in point. They're cookies. But when people saw "low-fat," they didn't see the need to read farther, or engage their common sense. Likewise, when people see "plant-based" they think, "well this is way better than spinach, please pass the Whopper."

Friedrich isn't buying it. I asked him whether Impossible Whoppers will get an undeserved health halo, and he said, "It's odd to talk about any version of the Whopper as health food." And of course it is, in a sense. But we're not rational when it comes to food. This is even playing out in my house, where my husband, a lifelong Whopper fan who stopped eating them because fast food is bad for you, can't wait for the Impossible version to come to our neck of the woods. He's intelligent and well-informed, he's married to a journalist whose job it is to parse these issues, he's read this column and he's still raring to go.

Me, I'm going with him.

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