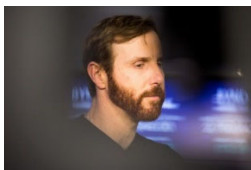


https://www.bloomberg.com/news/features/2023-01-19/beyond-meat-bynd-impossible-foods-burgers-are-just-another-food-fad?utm_campaign=news&utm_medium=bd&utm_source=applenews

Fake meat was supposed to save the world. It became just another fad

Beyond Meat and Impossible Foods wanted to upend the world's \$1 trillion meat industry. But plant-based meat is turning out to be a flop. By Deena Shanker. January 19, 2023

Ever since founding [Beyond Meat Inc.](#) in 2009 with the then fantastical idea of making meat without animals, Ethan Brown has been giving the equivalent of one extremely long TED Talk. In 2013 he [took the stage](#) at the Wired Business conference, explaining that the world had a very real greenhouse gas-emitting meat problem and that venture capitalists could make a bigger impact investing in fake meat than in solar energy. At Toronto's annual Ideacity gathering three years later, he said his goal was to replicate the "[blueprint of meat.](#)" By the time he appeared at Goldman Sachs Group Inc.'s [Builders & Innovators Summit 2019](#), he explained that his mission demanded the urgency and scale the US mustered for World War II and that his products would simultaneously help solve heart disease, diabetes, cancer, climate change, natural resource depletion and animal welfare. Just like technology had rendered the horse-drawn carriage obsolete, he [told the crowd](#) at the *New York Times*' climate conference this past fall, so, too, would his system of breaking down plants transform the protein at the center of the plate. "This," he said, "is something that I feel is inevitable."



Ethan Brown Photo: Bloomberg

Silicon Valley didn't need much convincing that a better veggie burger could become the [next world-changing disruption](#). Whereas the quinoa-and-bean patties of yore were for the crunchy set, Brown's beef facsimile, concocted in a lab to look and taste like the real thing, meant the vast majority of meat eaters could give up their burgers without having to give up anything at all. Along with the venture capitalists came investors from every corner of culture—Leonardo DiCaprio, the [Humane Society of the United States](#) and former [McDonald's Corp.](#) Chief Executive Officer Don Thompson. Even [Tyson Foods Inc.](#), the biggest maker of real meat in the US, [invested and then invested again](#), catapulting the young El Segundo, California-based startup to a \$1.3 billion valuation by 2018.

[Bill Gates](#) wanted in, too, backing not one but two companies with [veggie burgers that "bleed"](#) like real beef—[Beyond](#), as well as its rival [Impossible Foods Inc.](#) Brown had licensed someone else's process, but Impossible was the brainchild of a Stanford University biochemist named Pat Brown (no relation to Ethan). When Pat founded Impossible in 2011, his big breakthrough was realizing that a molecule called heme was the key to meat's meatiness. He [made heme with](#)

[genetically modified yeast](#) and patented the use of what the company called its magic ingredient: soy leghemoglobin.



Bill Gates Photo: Bloomberg

Before Impossible had sold even a single burger, the company managed to raise \$183 million. Pat also worked the circuit, including [an actual TED Talk](#) (technically, it was TEDMed) in 2015. Speaking in slightly more apocalyptic terms than Ethan, Pat referred to the “ongoing wildlife holocaust” caused by the world’s insatiable demand for meat, while an assistant sizzled an Impossible Burger onstage beside him. “I know it sounds insane to replace a deeply entrenched, trillion-dollar-a-year global industry,” he said, “but it has to be done.” Four years later, when the [New Yorker](#) profiled Impossible, Pat predicted his company would “take a double-digit portion of the beef market” by 2024 before sending it into a “death spiral.” Next he would target “the pork industry and the chicken industry and say, ‘You’re next!’ and they’ll go bankrupt even faster.”

But Big Meat is still alive and well. After Beyond went public in 2019—at the time the [most successful major initial public offering since the 2008 financial crisis](#)—competitors [rushed into the space](#), followed by a categorywide pandemic surge. Since then the industry has [plunged](#). Supermarket sales of refrigerated plant-based meat plummeted 14% by volume for the 52 weeks ended Dec. 4, according to retail data company [IRI](#). Orders of plant-based burgers at restaurants and other food-service outlets for the 12 months ended in November were down 9% from three years earlier, according to market researcher [NPD Group](#).



Pat Brown Photographer: Zhang Xiaoyu/Alamy

Beyond lost sales in almost every channel last quarter. Over the past year it [laid off](#) more than 20% of its workforce, lost more than half of its C-suite and halted projects including vegan hot dogs and the next alt-protein frontier of [cell-cultured meat](#), according to people with knowledge of the matter, who asked not to be named discussing private information about the company. None of the biggest fast-food chains that had announced partnerships with Beyond—[KFC](#), [Pizza Hut](#) and, most important, [McDonald’s](#)—have put a single permanent item on their US menus. While an index of packaged-food companies on the S&P 500 was up about 4% from a year ago, as of Jan. 17, Beyond’s stock price is now hovering around \$16, down about 76% from a year earlier and roughly 93% from its peak in the summer of 2019.

Impossible, meanwhile, is faring better—but Pat is out at the company. Last April he stepped down to chief visionary officer, [replaced as CEO](#) by a [Chobani Inc.](#) executive, before taking a [leave of absence](#). Under new CEO Peter McGuinness, Impossible has spun up new products such as [animal-shaped faux chicken nuggets](#) and blitzed supermarkets, leading to more than 50% retail sales growth in the US in 2022. While it has added [restaurant partners](#), some of its long-standing ones are finding consumer excitement has either hit a wall or is declining. Shares of Impossible, a private company, are currently trading at around \$12, says Prab Rattan, head of capital markets at Hiive, a marketplace for private stock trading. That’s about half the price during its last fundraising round, based on PitchBook data.

Plant-based meat’s most reliable enthusiasts at this point are those original veggie burger stans, vegans and vegetarians. The all-important meat eaters do partake, but at a much lower frequency. “They’re just not that into it,” says Chris DuBois, head of IRI’s protein practice.

How did an industry with so much riding on it—backed by so much money—suddenly fizzle out? The companies declined to make Ethan Brown and Pat Brown available to talk to *Bloomberg Businessweek*, but at that *New York Times* climate conference in October, Ethan pointed his finger at the actual meat industry for fake meat’s headwinds. “They are doing their very best today to suggest that our process is somehow unhealthy or that our products are full of chemicals,” he said. “These things are not true.”

Whatever critiques the meat industry is lobbying are the same ones plenty of consumers are figuring out for themselves. Like [fat-free Snackwell’s cookies](#) or [Lay’s olestra-laden WOW Chips](#)—or any other glut-without-the-guilt food trend that periodically cycles in and out of the zeitgeist—the incremental benefits are eventually offset by concerns over what else might be in there. Many meat eaters initially excited by fake meat, who didn’t mind the not-quite-there taste or texture, eventually took a closer look at the ingredient list and couldn’t figure out whether they were actually trading up. Were they eating these burgers to curb carbon emissions or lower their blood pressure? Was it a healthier alternative or a sodium-filled, overprocessed substitute? Plant meat still costs more than the real thing, and with inflation pushing up prices across the supermarket, many grocery shoppers have swapped the expensive imitation for chicken or, in some cases, beans and lentils.

Meatless meat, it turns out, seems less a world-changing innovation than another food trend whose novelty is wearing thin. “Before we were seeing this incredible growth rate. But when you lose that momentum, you lose your certainty around how big plant-based meats can be,” says Thomas George, portfolio manager at investment research company Grizzle, who in 2019 predicted plant-based meat could overtake 10% of the meat industry in 10 years if it could match meat’s prices. “The opportunity for this category,” he says now, “is more murky.”

“Nobody should be under the illusion that these are health foods”

Before Beyond Meat unveiled the Beyond Burger, there was the Beast. When Ethan introduced the frozen patty in 2015, the company called it a “[protein shake on a bun](#).” Although he ended up ditching it, the Beast’s health claims, such as high levels of protein and zero gluten or soy, remained front and center on Beyond Burger’s packaging. (Whenever asked, Pat defended the

health cred of Impossible’s product against beef, though he preferred to talk about replacing animal agriculture by 2035.) But nothing preached the virtues of plant-based eating to the masses like [The Game Changers](#), a James Cameron-produced documentary that hit Netflix in 2019.

The Game Changers followed world-class vegan athletes, with cameos by doctors, scientists and even Arnold Schwarzenegger, who, before he became mostly vegan, once told Sylvester Stallone that he “hit like a vegetarian.” Veganism, according to the film, would make a person not only healthier but also stronger, with better endurance and even longer, harder erections.

Ethan added the film to his arsenal. “If you look at movies like *Game Changers*, etc.,” he [told Bloomberg Television](#) in 2019, “you can affect even individual day performance, from a student-athlete, for example, through the consumption of our products over animal protein.” He said Beyond’s own athlete ambassadors, including NBA stars Kyrie Irving and Chris Paul—also investors in the startup—were “adopting our products in their training regimes, and they’re seeing great results.”



Chris Paul Photographer: Christian Petersen/Getty Images

The Beyond Burger originally was sold in supermarkets, while Impossible went with celebrity chefs such as David Chang. By the end of 2019, [Carl’s Jr.](#), [Dunkin’](#) and [White Castle](#) were all selling some Beyond or Impossible product or other—and [Burger King](#) had launched the Impossible Whopper nationwide. The food giants didn’t want to get left behind either. Tyson had shown an interest in buying Beyond, according to former Beyond board member Greg Bohlen. When that didn’t pan out, the meat company announced plans for its own plant-based “[billion-dollar brand](#).” (Tyson declined to comment.) [Nestlé SA](#) introduced an [Awesome Burger](#), and [Conagra Brands Inc.](#)’s CEO said it would create “the next generation of beefless burger.”

At first, fake burgers and sausages seemed like a potential solution to Americans’ obsession with red and processed meats, which have been [linked to cancer](#) and other chronic diseases. But over the years, skepticism about their healthfulness grew. Within months of Beyond’s IPO, onetime fan and whole-foods maven Mark Bittman criticized the fake meat products for their “[hyperprocessing](#).” [Chipotle Mexican Grill Inc.](#)’s CEO said they [didn’t fit](#) with the fast-casual chain’s “food with integrity” mantra. Even John Mackey, co-founder of [Whole Foods Market Inc.](#)—the grocer that had been instrumental in introducing the category—went [on the record](#) calling plant-based meat “super, highly processed foods.” (The [Center for Consumer Freedom](#), a front group that represents tobacco, alcohol and meat companies, ran a Super Bowl ad in February 2020 attacking fake meat’s ingredients with a mock spelling bee that repeated long-held health advice: “If you can’t spell it or pronounce it, maybe you shouldn’t be eating it.”)



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Photographer: AKIRA for Bloomberg Businessweek

Still, that criticism hadn't yet made its way to people such as Michelle Darby, a mother stuck at home with four kids, in Marlton, New Jersey, during the early days of the pandemic. She found *The Game Changers* on Netflix. "It gave a very compelling argument," she says. "And I'm on the borderline of high cholesterol."

Darby, like many others in lockdown, started buying faux meats. The real thing was scarce, and people had extra cash to try out this buzzy new product. Americans bought 5.3 million units of fresh-meat alternatives in the eight weeks ended April 25, 2020—three times the amount from a year earlier, according to [Nielsen Holdings Ltd.](#) Suddenly, Beyond's prediction in one of its investor pitch decks that fake meat was on track to become the new fake milk was looking increasingly plausible: Just as the alt-milk companies could claim to be 13% the size of the \$16.1 billion dairy milk category with new products such as [oat milk](#), alt-meat would similarly undercut the even bigger \$270 billion US meat industry. ("That's the floor," Ethan said at a 2019 Barclays Plc conference.)

As Darby stocked up, she noticed that she and her family were gobbling up the chickenless nuggets at a much faster pace and that the imitation hot dogs left her feeling uncomfortable. At a checkup with her doctor she mentioned the diet changes they'd made—the fake chicken nuggets, the Impossible sausage sandwich at [Starbucks](#)—and their disappointment with the lack of results. The doctor had a simple explanation: "You are eating processed foods."

Darby went home and looked at the packaging, taking particular notice of the salt content. "It should have been obvious to me the whole time," she says. She stopped buying plant-based meats, except for an occasional purchase of Impossible ground beef. Meanwhile, she's doing what a lot of consumers are: going back to meat. "If they [her family] want hamburgers, we'll occasionally buy ground meat or we'll make ground chicken, and they don't notice the difference," she says.

In 2020 half of Americans thought faux meats were healthy; now 38% think so, a recent report from Citi Global Insights shows. Dr. David Katz, founding director of Yale University's [Prevention Research Center](#), who appears in *The Game Changers*, says the Beyond Burger and its ilk are "ultraprocessed"—made from processed ingredients such as pea protein, potato starch and potassium chloride. When comparing them with fast-food burgers, he cites the environmental and animal welfare advantages but says that any health benefits are still unclear. "At worst," he says, "it's a lateral move." A Beyond Meat spokesperson told *Bloomberg*

Businessweek that there are “well-accepted health benefits of plant-based meat” and directed *Businessweek* to two health professionals: Stanford’s Christopher Gardner, who’s received funding from Beyond Meat, conducted a small study that pointed to improvements in weight and cholesterol. He says the health benefits he identified, however, have yet to be replicated. “You can’t answer a question with only one study,” Gardner says. And Dr. Michael Greger, author of *How Not to Die*, says that fake meat is a better choice than a fast-food burger, but that doesn’t make it good for you. “Nobody should be under the illusion that these are health foods,” he says.

Nowhere is this more obvious than when you discover that a key ingredient in Beyond Meat has its origins in [Dippin’ Dots](#), the tiny “beads” of ice cream frozen with liquid nitrogen, available in flavors including banana split and cotton candy. Beyond started working with [Dippin’ Dots LLC](#) in 2019. The Dots business was sold in June 2022, but Beyond still works with Scott Fischer, its former CEO, through his company, Cryogenic Processors LLC. Beyond buys fats such as expeller-pressed canola oil and refined coconut oil, which Fischer processes into “little pellets or cryogenically frozen balls of fats,” he says. Cryogenic Processors sends the fatty balls back to Beyond to mix with water, rice protein, cocoa butter, methylcellulose and more than a dozen other ingredients found in the Beyond Burger.

The white globules are meant to give the burgers a meaty juiciness, but plant-based fats can also emit an off-putting smell when some of these products are cooked, says Tom Mastrobuoni, who led the second Tyson investment in Beyond and is now chief investment officer at the food-tech-focused [Big Idea Ventures LLC](#). Commenters online have compared the odor of Beyond’s raw plant meat to that of cat food, and one message board poster said he had to ventilate his kitchen to clear the air after cooking it. “If any other food smelled that way, I would throw it out,” says Jeremy Sklarsky, a former Beyond customer who tried the products out of health and environmental concerns before going back to beef.

In September, Beyond Meat Chief Operating Officer Doug Ramsey was arrested in Arkansas for allegedly biting someone’s nose in an altercation after a college football game. Ramsey, a former Tyson executive, was one of the meat industry vets Ethan had wooed in 2021 to help Beyond expand. By mid-October, Ramsey, along with the company’s chief financial officer, chief growth officer and chief supply chain officer, was [gone](#).

The love affair between Beyond and the fast-food giants has faded, too. Dunkin’—once the company’s biggest-name partner—[pulled the faux sausages in its breakfast sandwiches](#) from almost all the menus nationally in 2021. Beyond’s delayed chicken tenders rollout had no big-name chains in sight. [Taco Bell](#) tested Beyond’s carne asada, but last month its CEO told *Axios* the reviews were “[mixed](#)” and a national rollout isn’t likely coming anytime soon. Meanwhile, photos and documents from Beyond’s plant in Pennsylvania—where both the KFC nuggets and Pizza Hut pepperoni were partially manufactured—revealed that [listeria and foreign materials such as wood and string had been showing up in products](#) made there as late as May 2022. (A spokesperson for Beyond Meat said at the time that the company’s food-safety protocols “go above and beyond industry and regulatory standards.”) Yum! Brands Inc., which owns Taco Bell, KFC and Pizza Hut, didn’t respond to requests for comment.

Beyond also trialed its burger at about 600 US locations with McDonald's, its most important customer, with little to show for it. For a brief moment in April it looked like the McPlant meatless burger would stay for good. *Fast Company* misreported that the McPlant would become a permanent menu item, sending Beyond's stock price up as much as 34%—until McDonald's disputed the news, causing shares to fall just as quickly. In July a [JPMorgan Chase & Co.](#) analyst said he'd checked with 25 Mickey D's: None were offering the McPlant anymore. “Not surprisingly, the reason sometimes being cited is that the product did not sell well enough,” he said. Then came the nose-biting fiasco. “Negative PR around a senior member of management with key MCD relationships likely hurts whatever slim chances may have remained,” [Piper Sandler Cos.](#)' Michael Lavery wrote in a note. McDonald's still sells the McPlant internationally, but it hasn't confirmed results of the US test or future plans.

When Beyond hired the world's biggest influencer, Kim Kardashian, it managed to flub that, too. In the spring of 2022 the company announced its splashy new “[chief taste consultant](#).” But it quickly led to viral mockery when online sleuths noticed she didn't seem to actually be eating the Beyond Burger in a commercial. (Kardashian later released footage from the set showing she had, in fact, [swallowed the food](#).)

Impossible, meanwhile, is discovering that upending animal agriculture is difficult. Burger King has added another Impossible Burger to its mix, but after trying the company's faux chicken nuggets, a chicken sandwich and sausage patties, it didn't put any in its regular lineup. [FAT Brands Inc.](#) restaurants are selling a steady million Impossible Burgers a year—which is good, but not as good as beef, whose sales are climbing. At [Bareburger](#), also an Impossible early adopter, the burger's sales went from “astronomical” to about 6% of all burgers and sandwiches in 2021 to 4% in 2022, says Euripides Pelekanos, the chain's CEO. “The fanfare has definitely subsided,” he says. The price of the burger—more than that of the beef, elk and black bean versions—doesn't help.

Pat Brown's replacement at Impossible, McGuinness, an ad industry veteran who left yogurt maker Chobani last year, says he has new growth plans for the Redwood City, California-based startup. “I don't want to talk about the category declining—it doesn't exist,” he says, even though Impossible has been trying to lead it for the better part of the past decade.

This time, though, McGuinness's plan is to “operate like a food company.” Instead of predicting the end of the meat industry, the new CEO talks about reaching carnivores by boosting total distribution points, doubling consumer awareness and bundling promotions for his faux chicken nuggets with faux pork products, so shoppers who like one will try the other. Just like a yogurt shelf grabs customer attention with variety, so, too, will Impossible products. In October he laid off 6% of the staff as part of a broader restructuring, telling employees the company was focused on its “R&D and innovation pipeline.” Pricing, which has already come down, could match beef as early as the end of the year, he says, as his costs continue to improve with increased efficiency. Then there's the burger's nutritional profile. “The cake for us is to make a delicious product,” McGuinness says. “The icing—it's better for you, better for the planet.”



Kim Kardashian, taste consultant. Source: Beyond Meat

Three and a half years ago, New York’s Javits Center hosted the first [Plant Based World Expo](#). Amid hawkers of seitan corned beef, pea-and-tomato-based chorizo and mold-based dog treats, the real excitement was Beyond. Fresh off its IPO, the company’s executive chair was a keynote speaker. “I wish I had invested in them,” Andy Levitt, founder of vegan meal-kit startup [Purple Carrot](#), said at the time. When Levitt started his company in 2014, vegans were the “tattooed girl with Birkenstocks in Vermont,” he said. Beyond’s products had catapulted an entire generation of startups, becoming the “gateway drug to plant-based foods.”

The 2022 Expo felt a lot more like a regular old trade show. There were no signs of Beyond, unless it was from an exhibitor answering a question to differentiate itself from the onetime star. Booth after booth showcased products such as *Shark Tank*-backed faux deli slices and textured soy protein “jerky,” but few were good enough to go back for seconds, many more so unpalatable that this meat-eschewing Bloomberg reporter spit them out. By far the best-tasting food at the event was in the Italian Pavilion, where chefs served cheeseless vegetable pizzas and pasta puttanesca sans the anchovies—no imitation animal protein to be found. Asked what he was doing at the fake meat show, Italian chef and restaurateur Fabrizio Facchini was taken aback. “We also have a lot of plant-based,” he said, relying on the literal meaning of the phrase more than on the marketing term. “We don’t use cheese on everything.”

When industry watchers were still figuring out whether plant-based meat might pull an alt-milk-size disruption, many missed two key differences: lactose-intolerant consumers and milk’s primary use as an ingredient, not a main course. Many soy, almond and oat milk drinkers add it to their coffee because real milk simply isn’t an option. But they’re mostly not drinking it by the glass. Even predictions of a sales rebound for plant-based meat are dwarfed by what’s happening in dairy. Bloomberg Intelligence’s Jennifer Bartashus wrote in November that in the second half of 2023, “we expect plant-based dairy sales to rise 6-8% and meat alternatives 1-2%.”

Beyond Meat’s current market capitalization is about \$1 billion—down from its peak of more than \$14 billion. Bringing costs down is the company’s priority as it pledges to finally become cash-flow positive in the second half of this year and tries to keep up its dwindling cash reserves. In the company’s November earnings call, Ethan Brown talked up another limited-time offer with [Panda Express Inc.](#) and the company’s [2022 food award](#) from *People* magazine. The analysts, though, peppered him with questions about high inventory levels and why Beyond was making only ingredients instead of prepared meals. Brown blamed inflation and shifting consumer tastes as blips in his long-term mission. “I am certain that as we hit price parity with that, as the products become indistinguishable, as the climate situation worsens, as people get a clear sense of what the real health benefits are,” he said, “this conversion will happen.”

The big food companies have cooled on the category, too. Tyson scrapped its plant-ish burger—a half-beef, half-pea-protein concoction that was supposed to launch its future “billion-dollar

brand.” Products from [Kellogg’s](#) Morningstar Farms, Conagra Brands’ Gardein and Nestlé’s Sweet Earth are all still selling, some well, but none are breakout hits.

What remains looks more like a niche category than a meaningful displacement of an entrenched industry. After Beyond, Impossible and their copycats spent years trying to seduce everyone away from meat, it appears their best customers are, well, the 5% of the population who didn’t eat meat in the first place. Kevin Lindgren, director of merchandising at food distributor [Baldor Specialty Foods Inc.](#) in New York, says more restaurants are ordering plant-based burgers simply to make sure they have something to serve vegetarians “that’s not a salad or cauliflower.” Alt-burgers’ continued expansion into restaurants is largely being propped up by establishments protecting themselves against this “veto vote”—the lone nonmeat eater in a group of diners who can thwart a destination decision if there’s not a suitable meatless entrée. “It’s frozen, throw it in the freezer,” Lindgren says, summarizing restaurants’ enthusiasm. But even that’s not a sure shot. Plenty of vegetarians would prefer a veggie burger made of actual vegetables, and definitely not one that “bleeds.”



Leonardo DiCaprio Photographer: John Angelillo/Alamy

Impossible is now venturing beyond the coasts, where many have already moved on from fake meat, hoping to jump-start interest in the rest of the country. (Lindgren says he recently spotted an Impossible Burger on a menu in a South Dakota sports bar.) But when Impossible sausage was added to the menus of more than 600 [Cracker Barrels](#) last summer, the company quickly got a taste of this new customer base. “YOU CAN TAKE MY PORK SAUSAGE WHEN YOU PRY IT FROM MY COLD, DEAD HANDS,” one of the thousands of angry commenters wrote when the Southern country-themed chain posted the new offering on Facebook.

Meanwhile, a new meat alternative has found its way into the next hype cycle: [cellular meat](#). Grown in giant tanks from cells harvested from living animals, lab-grown beef, chicken and fish are theoretically better for the environment than the real thing and should taste as good. Startups in this space have raked in \$2.6 billion in funding from investors including, once again, [Bill Gates](#) and [Leonardo DiCaprio](#). The category will have to overcome even bigger hurdles than plant-based meat, from the massive amount of energy required to make the products to exorbitant costs. But for boosters, its potential is already limitless. “This,” Whole Foods co-founder Mackey said after investing in cellular startup [Upside Foods Inc.](#), “could change the world.” —*With Agnieszka de Sousa and Michael Hirtzer*