

# Potatoes Are the Perfect Vegetable—but You’re Eating Them Wrong

The humble potato is a miraculous vegetable, but Americans are eating less of them than ever before and have ditched fresh potatoes for frozen. Is it time to rebrand the spud?



Photo-Illustration: Rosie Struve; Getty Images

In 1996 the United States hit peak potato. Americans were eating 64 pounds of the vegetables each year—more than at any point since modern records began in 1970. A record-breaking harvest had flooded the country with so many spuds that the government had to pay farmers to give them away. In the White House, the Clintons were foisting potatoes—fried, marinated, boiled, garlicked—onto princesses and presidents at official dinners.

“It was a crazy time,” says Chris Voigt, whose long career as a potato-pusher started in the potato frenzy of the late 1990s. “Literally you could buy buckets of french fries.” But as Voigt made his way up in the potato industry, all the way to executive director of the Washington State Potato Commission, the American potato was undergoing a dramatic shift in fortunes.

The average American is now eating 30 percent fewer potatoes than during the vegetable’s heyday, down to an all-time low of 45 pounds per year. The drop in consumption of fresh potatoes—for boiling, roasting, mashing, and steaming—has been even faster. In 2019, frozen potato consumption overtook fresh potatoes for the first time, opening up a gulf that has continued to widen since the pandemic. Most of those frozen potatoes are eaten as french fries.

This has seen potato fields become battlegrounds for the future of food in America. In December 2023, reports emerged that US dietary guidelines [might change](#) to declassify potatoes as a vegetable, mirroring the approach taken in Britain. There was such an uproar that US Department of Agriculture secretary Thomas Vilsack was forced to write a letter [reassuring senators](#) that his agency had no such plans.

That reclassification may have failed, but the potato has had a spectacular fall from grace. Once this miraculous nutrient-dense vegetable was the fuel of human civilization. Now the spud in the US has become synonymous with a garbage, industrialized food system that pours profits into a handful of companies at the expense of people's health.

America's favorite vegetable is facing a Sophie's Choice moment. Should we accept that fresh spuds have lost the fight against the tide of fries, hash browns, and waffles, or is there hope for a potato renaissance? Can the humble spud achieve the rehabilitation it deserves?

The white potato is a criminally underrated food. Compared with other carb-loaded staples like pasta, white bread, or rice, potatoes are rich in vitamin C, potassium, and fiber. They're also surprisingly high in protein. If you hit your daily calorie goal by eating only potatoes, then you'd also exceed your daily goal for protein, which is 56 grams for a man aged 31–50.

Chris Voigt knows this because for 60 days in 2010 he ate nothing but potatoes. And a little oil. And one time some pickle juice. But the point is, for two months Voigt didn't just survive on potatoes, he *thrived*. By the end of his diet Voigt had lost 21 pounds, his cholesterol was down 41 percent, and he'd stopped snoring. "I think I've personally proven that the potato is highly nutritious, no matter how you eat—whether you boil it or fry it, cook it in the oven, or steam it," Voigt says.

Voigt adopted his unusual diet in protest against a [recommendation](#) from the National Institute of Medicine to exclude white potatoes from a federal voucher program for women and children on low incomes. The institute argued that Americans already ate white potatoes in ample quantities and didn't need any encouragement to eat more. As Washington's potato chief, Voigt, naturally, disagreed. "Nutritionally and scientifically it just didn't make sense," he says—potatoes are loaded with exactly the kinds of vitamins that pregnant women need.

In 2015 the institute came around to Voigt's point of view, concluding that Americans weren't getting enough starchy vegetables, and therefore potatoes should be eligible for the voucher scheme. It was a rare victory for the pro-potato camp at a time when the vegetables have come under increasing fire. "They're pretty amazing in my opinion," says Joanne Slavin, a nutrition professor at the University of Minnesota who helped come up with the 2010 federal dietary guidelines for Americans, which counted potatoes in the recommendation that people eat 2.5 cups of vegetables each day.

Potatoes aren't just amazing from a nutritional point of view—they are one of the original disruptive food technologies. First domesticated in the Andes and then brought to Europe by Spanish colonizers in the mid-1500s, wherever potatoes were grown they supercharged local

societies. Potatoes were well suited to growing in cool, wet, European climates and produced veritable bounties compared with established crops like wheat, barley, and oats.

An acre of field could serve up over 10 metric tons of potatoes, according to the diary of an 18th-century British farmer. The same area of wheat would yield only 650 kilograms, so it's little wonder that leading thinkers started singing the potato's praises. "No food can afford a more decisive proof of its nourishing quality, or of its being peculiarly suitable to the health of the human constitution," wrote the philosopher Adam Smith in his influential treatise *The Wealth of Nations*.

"Potatoes can be grown in really small plots and marginal land," says Nathan Nunn, an economist at the University of British Columbia who wrote a paper concluding that the introduction of the potato accounted for about a quarter of the population growth in the Old World between 1700 and 1900. Settlements close to areas that were suitable for potato cultivation grew and urbanized more quickly. French soldiers born in villages that could grow potatoes were a half-inch taller in the years after the potato came to the country.

Nowhere in Europe was the promise of the potato more evident than in Ireland. The potato probably reached its shores in the early 17th century. A century later the population had doubled to 2 million, and by 1845 it had soared to 8.5 million people—more than 90 percent of whom were utterly dependent on the potato, writes John Reader in *Potato: A History of the Propitious Esculent*. When a fungal disease wiped out nearly all of Ireland's potato harvest in 1845, over a million people died in what became known as the Great Famine, and a similar number emigrated to North America, Australia, or to Great Britain—where the government continued to export grain, meat, and even potatoes from Ireland despite the raging famine.

The same qualities that made potatoes a runaway success in Europe—their cheapness, ubiquity, and nutritional density—are a large part of why in recent years they have acquired the status of a second-class vegetable. One Danish observational study found that eating a [lot of potatoes](#)—unlike other vegetables—was associated with a higher risk of type 2 diabetes. Other studies have found that potato consumption is linked to cardio-metabolic risk factors like [high blood pressure and cholesterol](#), but the evidence on whether this leads to more disease and deaths is murky.

The issue is that the way we eat potatoes has changed. Americans now eat 21 pounds of frozen (mostly fried) potatoes and a further 3.7 pounds of potato chips each year. And while deep-frying potatoes doesn't deplete their nutritional content (it actually increases levels of dietary fiber), it does add a whole bunch of fat and salt, which we know are bad. The problem is that the potato industry is dependent on these deep-fried products, which are a major growth area, while fresh potato sales continue to decline.

"I hate it when we try to simplify things and put healthy foods over here and unhealthy foods over there," says Voigt. "You really have to look at the entire diet that you're consuming. That's my philosophy on it." But recent growth in frozen potatoes is buoyed by all-day breakfasts and a vogue for loaded fries, which skews the equation firmly to the unhealthy side of the balance.

The shift in consumption also means that the frozen potato processors have a lot of sway over how potatoes are perceived in the US. “French fries are a huge source of fiber, because that’s what people actually eat,” says Slavin, who points out that some of her work has been [sponsored by the potato industry](#). Voigt, of the Washington Potato Commission, where frozen french fries are the [state’s top agricultural export](#), tried to convince me that deep-fried and salted potatoes don’t meet the [definition of ultra-processed food](#). Slavin disagreed, saying that french fries are “without question” ultra-processed.

The demands of the frozen potato industry have also shaped which potatoes make it into fields, says Mark Taylor, a retired potato researcher. Potatoes destined for potato chips need to be relatively dry and low in sugar, which helps them take up oil and stops them from browning too quickly as they’re deep-fried. McDonald’s is picky about which potato it uses for its fries, which is partly why a single variety—the Russet Burbank—accounts for about 70–80 percent of all frozen French fry production in the [US and Canada](#).

This dominance of a few potato varieties is one reason why spuds have also lagged behind other staple crops in terms of development. Yield is a measure of how much crop is produced in a given hectare of farmland. Improvements in fertilizer, equipment, farming techniques, and crop varieties all push yields upwards, which means we can grow more food on less land.

Global yields of wheat, maize, and rice have all risen by more than 150 percent since the 1960s, but potato yields have only increased by around 72 percent. A big part of the problem is that potatoes’ genetics make it fiendishly difficult to breed more productive varieties. “It’s a nightmare to breed,” says Taylor, but pressure from climate change and new diseases means that we’ll have to try harder to unlock new potential from this maybe-miraculous crop. Yet at the same time, frozen potato producers continue to put their finger on the scale, bending breeder’s attention towards varieties that fry and freeze better than before.

Today the potato is at a crossroads. The history of the potato is the history of humanity, say Tom and Meredith Hughes, who have a collection of 8,000 potato-related artifacts. The married couple have curated exhibitions at the Smithsonian, the United States Botanic Garden, and Canada’s National Museum of Science and Industry. “We saw a path forward with a mission to explore the world through the eyes of the potato, and that’s what we’ve been doing for 50 years,” says Tom on a video call.

“Everywhere we’ve gone, we’ve collected potato things,” Meredith says, as Tom holds up to the screen a small Chinese horse bell shaped like a tuber and then a chunk of Chuño—potato prepared the ancient South American way, frozen overnight and then dried in the Andean sun. But now the bulk of the Potato Museum collection is in storage in New Mexico and the Hughes are looking to sell. “This has become a real burden for us, financially and physically,” says Tom.

Tom and Meredith discuss potato toys in their collection.

So far they’ve had no takers, although they say an auctioneer valued the collection at \$1 million. In the meantime they’re putting it online in a series of YouTube videos, each one exploring a different aspect of their collection: [potato toys](#), [tools](#), [T-shirts](#), and [tunes](#).

The potato too is struggling to generate the enthusiasm it once did in the anglophone world. At the same time as becoming synonymous with its least healthy preparations, the potato has been squeezed at the margins by the rise of pasta and rice in the Western diet, as well as being a victim of the low-carb diets popularized in the 1990s and 2000s.

A few people are still plugging the potato's potential benefits. The pseudonymous science bloggers behind [Slime Mold Time Mold](#) are running an informal trial where they invite readers to try their own riffs on Chris Voigt's potato-only diet. A few participants who ate only potatoes and dairy—almost a replica of the 19th-century Irish diet—reported that they'd lost weight over the month. Another who tried [potatoes, eggs, and olive oil](#) had less success.

The potato industry is also arming itself to fight back against what it sees as nutritional misinformation. The marketing and promotion board Potatoes USA is using AI social media listening tools to find examples of "inaccurate nutrition information" online and respond. A human always reviews any dubious information, but the system speeds the whole process up, says chief marketing officer Kim Breshears.

The potato is ripe for a rebrand, says Voigt, but the industry has nothing like the marketing resources of the beef or dairy industry, which have poured money into efforts to remain central to the American diets. Potatoes USA has its AI listening tools, and is trying to nudge amateur athletes to join "[Team Potato](#)" with branded jackets and running gear. Compare that with the iconic long-running campaign from the National Cattlemen's Beef Association: "[Beef—it's what's for dinner.](#)"

If these efforts to buoy potato enthusiasm feel lackluster, perhaps we need a tastier spud. In the early 2000s Mark Taylor, the potato breeder, helped create a new variety called Mayan Gold, which tapped into the genetic diversity of the original Andean potatoes. Nutty and flaxen-fleshed, the idea was to appeal to the same gourmet market that gets excited about heirloom tomatoes. It was tasty, Taylor says, but sales struggled thanks to the financial crisis. "The bottom fell out of that one quite quickly."

The future of the American potato might be outside of its borders. A large portion of the potatoes grown in Washington, one of the leading potato-producing states, are sold as french fries in Japan, which is increasingly a major destination for American potatoes. In late 2021, McDonald's Japan flew in three [Boeing 747s](#) laden with frozen french fries to ease shortages caused by shipping bottlenecks.

Back on home soil things look less rosy. "One of the biggest reasons why in-home potato consumption has dropped off is because we're just no longer cooking potatoes," says Voigt.

Even the potato faithfuls, Tom and Meredith, admit that they don't eat as many potatoes as they once used to.

Once in the 1980s, Tom says he had a business call with a potato marketing organization where he mentioned in passing that french fries shouldn't be the *only* way to consume potatoes. They didn't call again. "That destroyed 50 years of income for us," Meredith jokes. The future of the potato—it turns out—is an extremely serious business.