

"You are what you eat," goes the old saying. And everywhere we are urged to eat organic: it's more nutritious, pesticide-free, and protects animals and the environment. At least, that's what we are being told – or rather, sold. And thanks to a lot of very effective marketing, many people believe it. That's why, when researchers at Cornell University gave study participants a choice between two identical items, one labeled "organic" and one "regular," the participants confidently declared the "organic" choice to be lower in calories and more nutritious. They also said they'd pay 16 to 23 percent more for the organic choice. But these beliefs about organic food have nothing to do with reality.

In 2012, Stanford University's Center for Health Policy did the most comprehensive comparison and found organic foods are not nutritionally superior to conventional alternatives. And a more recent review of 20 years of research into animal products by Italian researchers confirmed these findings. The authors concluded: "Scientific studies do not show that organic products are more nutritious and safer than conventional foods."

That's fine, you might say. You don't eat organic foods just because of the health benefits, but because you care about the treatment of farm animals and of the environment. Unfortunately, the facts don't support these beliefs either.

Animals on organic farms are not generally healthier than animals on regular farms. A five-year US study of dairy farms showed that "health outcomes [for animals on organic farms] are similar to conventional dairies." And the Norwegian Scientific Committee for Food Safety reached a similar conclusion. It found "no difference in objective disease occurrence" on organic dairy farms as compared to conventional dairies. And while pigs and poultry on organic farms may enjoy better access to open areas, this freedom, studies show, also increases their exposure to parasites, pathogens and predators.

As for the environment, yes, organic farming will mean that in any one field, a farmer will use less energy and create fewer greenhouse gases. But there's a problem here. By forgoing fertilizers and pesticides, organic farming is much, much less efficient than standard farming, which means that organic farmers need much more land to grow the same amount of food.

A major study in Europe found that to produce the same gallon of milk organically, you need 59% more land. To produce meat, you need 82% more land. And for crops, it's more than 200%.

And more land for agriculture means less land for nature. If U.S. agricultural production was entirely organic, it would mean we would need to convert an area bigger than the size of



California entirely to farmland. Economically, the lower productivity of organics means we have to commit more resources – land, labor and capital. The total cost to the US economy of going organic would run to about \$200 billion annually.

But, surely organic food means no pesticides, right? Wrong. Organic farming can use any pesticide that is "natural." Natural pesticides include, for example, copper sulphate and Pyreethrin. The former has resulted in liver disease in vineyard sprayers in France, according to a 1996 study; and the latter, a 3.7-fold increase in leukemia among farmers who handled it compared to those who had not, according to a 2002 study.

Yes, it is true that non-organic foods carry a higher risk of pesticide contamination. But that risk is almost non-existent. Rough calculations suggest that all the pesticides on food eaten by Americans may cause around 20 extra cancer deaths per year. You have a similar chance of being mauled to death by a cow.

In sum, organic food is not healthier for you, nor is it better for animals and the environment than conventionally farmed food. I know this goes against everything you have come to believe, but that only proves the power of marketing. Organic food is a First World luxury. And while buying it is just as valid as any other luxury purchase, one should resist any implied moral superiority – as, for example, when fashion designer Vivienne Westwood famously exclaimed that people who can't afford organic food should "eat less."

Unfortunately, a lot of people in the developing world don't have the option of eating less. They worry about eating, period. To do that they need access to cheaper food, which means more access to effective fertilizers and pesticides.

So, next time you see organic produce at the supermarket, don't just swallow the marketing campaign without some critical thought.

I'm Bjorn Lomborg, president of the Copenhagen Consensus Center.

