

Organic Agriculture Benefits Revealed In New Long-Term Study From Rodale Institute



By [Joe Satran](#)

If you ask most people why they buy organic, they say that they [think organic produce is healthier and tastes better](#). But studies have consistently undercut the backing for both of these motivations. Some studies have shown that [organic fruits and vegetables have higher antioxidant levels](#) than their conventional counterparts, but [others have not](#). Some say that pesticide residue clinging to conventional produce could be dangerous, but others, including the USDA, have said that it's harmless. [Blind taste tests of organic and conventional fruits and vegetables](#) have shown that most people can't reliably tell the two apart. So does it really make sense to buy organic produce — especially given that it often costs so much more than conventional produce?

A [major study on organics](#) says, “Yes, absolutely.” But the study indicates that the best reason to buy organic produce isn't that it's worlds healthier or better-tasting than conventional produce.

Instead, the 30-year comparison of organic and conventional growing methods, carried out by the highly respected [Rodale Institute, in Kutztown, PA](#) shows that there are huge ecological benefits to organic agriculture. The study also goes a long way to disproving the oft-repeated mantra, “Organic agriculture can't feed the world.” Side-by-side match-ups of the yield on organic and conventional plots showed no difference whatsoever in overall corn, soy or wheat production per acre. Indeed, in years of drought conditions, yields in organic plots were 30% higher than those in conventional plots.

On the phone with the Huffington Post, Mark Smallwood, executive director of the Rodale Institute, summed up the findings this way: “If we're looking to feed the world for the next 50 years, conventional can do it. But if we're looking at feeding the world for the next 1500 years, we must switch over to organic.”

There is one caveat. The Rodale Institute's study compared yields in relatively small (50' x 30') plots of land, not entire farms. Macro-scale studies of yields on organic and conventional farms have sometimes [produced dispiriting figures on organic yields](#).

But, especially when it comes to a long-term comparison of the two methods, [the Institute's report](#) supports this conclusion with some eye-opening statistics.

Much of the sustainability gap between conventional and organic systems can be attributed to differences in total petroleum-product use. Both methods call for diesel fuel to power tractors and farm equipment. But 41% of conventional systems' petroleum goes to nitrogen-based fertilizers, which cannot be used on organic farms. This means that organic agriculture uses 45%

less unsustainable energy than conventional agriculture. For similar reasons, organic farms produce 40% less greenhouse gas emissions than conventional farms.

The other key divide between the two systems was related to soil health. Conventional agricultural systems rely on crude-oil-dependent artificial fertilizers for the soil's macronutrient content. This means that, unlike organic systems, they do not support the soil's microbiological community, which can produce the same macronutrients without the use of crude oil. So when oil supplies start to run out, conventional farms will be left without a reliable way to maintain their soil's macronutrient base — while organic farms' soil will be virtually unaffected. That same microbiological community also helps organic soil retain water, which fights erosion and drought.

The study even indicated that organic produce was cheaper for farmers to grow than conventional produce. Organics' marginally higher labor costs are offset by the savings of not buying fertilizer. The cost parity of the two is borne out by national data on farmer incomes. According to census data, organic farms are almost twice as profitable as conventional ones.

So why is organic produce more expensive? "One of the reasons is that there aren't enough organic farms. It's because demand is higher than supply," Smallwood said. "It's simple economics."

This demand may be driven more by overblown health claims than by ecological altruism. But the Rodale Institute study shows that ecologically benefits of organic agriculture are so great that anything that helps encourage it is probably good — even something that could be called a noble lie.