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Organic food is marketing hype

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Introduction

Organic food has become a staple of the aspirational and upwardly mobile. But critics say that it's a marketing ploy to persuade people to pay over the odds for food that has no health benefits and for a technology that provides no answers to world problems.

Whereas most farming relies heavily on artificial chemical fertilizers and pesticides, organic food is grown to a set of legally defined standards which strictly limit their use. Organic farming emphasises methods such as crop rotation to keep the soil healthy, together with the use of natural fertilisers and pest-control systems. Organic bodies also demand more space for animals and higher welfare standards. Antibiotics for animals are kept to an absolute minimum. Currently, the European Union, the United States, Canada, Japan and many other countries require producers to obtain special certification in order to market food as "organic" within their borders. Genetically modified crops are forbidden on organic farms.

Historically, organic farms have been relatively small family-run operations. However, since the early 1990s, organic food production has had growth rates of around 20% a year, far ahead of the rest of the food industry, in both developed and developing nations, attracting commercial giants such as General Mills, Heinz and Danone into the organic marketplace. As of April 2008, organic food accounted for 1-2% of food sales worldwide (organic baby food does far better - accounting for 70% of sales in the UK alone). Generally, organic food costs an average of 60% more than ordinary produce. But there are huge variations: it may be as much as three times higher.

A Organic food is marketing hype

+ Agree

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Organic food is no better for your health

People who believe organic is healthier are wasting their money, according to a July 2009 review of scientific evidence led by Alan Dangour, a public health nutritionist from the London School of Hygiene and Tropical Medicine. For this, [researchers looked at 50 years of studies](#) into organic food and found that while organic food had higher levels of acidity and phosphorus, and conventional food had more nitrates, these results had no relevance to public health.

Dangour's analysis turned up no "statistically significant" differences between organic and non-organic food in 20 of 23 nutritional categories, including vitamin C and iron. Though pesticides have been widely demonised, there is no evidence that the minuscule amounts of them found in conventional food are actually harmful. In the past 50 years, since synthetic chemicals have come into wide use, average life expectancy has increased by more than seven years. Since 1950, when pesticides and industrial farming took an increasing role in food production, stomach cancer rates have declined by 60% in western countries. In 2004, a peer-reviewed paper by Professor Anthony Trewavas, a leading molecular biologist, revealed that, "of 12 separate

Peer-reviewed science shows that organic food is healthier than conventional food

In 2008, the Journal of the Science of Food and Agriculture posted a report stating that cows able to graze on fresh grass [produce milk that is higher in good fatty acids](#) such as Omega 3s. Although the authors did not trace the effects of this good milk on human health, they were confident enough to make these general statements: "Our work has not looked at the impact on human health, but I would say organic milk should be better for health from what we know of the benefits of these good fatty acids...They are effective in combating cancer, coronary heart disease and type II diabetes." Peter Melchett, an organic farmer and former Greenpeace director, has pointed out that even Alan Dangour's critical report [shows higher levels of some beneficial nutrients](#) in organic compared with non-organic foods. In organic vegetables the research recorded 53.2% more beta-carotene and 38% more flavonoids - both of which are believed to help protect against heart disease and cancer - as well as 12.7% more proteins and 11.3% more zinc. Dangour's sceptical report argued that these were not relevant because of the overall level of statistical error in the

investigations involving farmers in total about 300,000 people, 11 found that farmers had overall cancer rates very substantially lower than the general public". Trewavas concludes that "the reasons why farming is so healthy are not known, but these data indicate not only a null result for the hypothesis relating pesticide exposure to cancer, but a consistent result for the alternative, that pesticide exposure may protect against cancer."

"Organic" chemicals, however, can cause serious harm

Organic farming, its critics argue, leads to the risk of contamination with potentially dangerous bacteria and mould toxins, and increased levels of "natural pesticide" found in organic produce could even be as dangerous as synthetic chemicals. Raw manure applied to soil can contaminate crops with potentially lethal pathogens such as E. coli, shigella and salmonella, according to Mike Doyle, a microbiologist at the University of Georgia. Some of these pathogens can persist in soil for months and even get into the plants themselves. With organic produce, the risk from mycotoxins (toxic chemical products produced by fungi) is much higher - because organic farmers use fungicides that are not as effective as the conventional equivalents. What's more, organic farmers tend not to use any fungicides once the harvested crop is stored. British journalist Dominic Lawson had first-hand experience of the dangers when his wife decided to have an organic vegetable garden: "To this end she refused all man-made fertilisers and ordered a truckload of pigeon droppings. What could be more natural? Neither was there anything unnatural in the germs I inhaled through the spores of our organic manure, thereby contracting psittacosis. This developed into 'atypical' pneumonia, which was of course resistant to all standard antibiotics. Had a hospital doctor not guessed the cause and put me on a drip with the appropriate drugs - ooh, chemicals! - I could have become a fatal casualty of the organic movement." Commenting on a University of Minnesota study purporting to show the safety of organics, Alex Avery, a director with the Center for Global Food Issues at the Hudson Institute, writes: "the study found Salmonella on 0.4 percent of organic samples (2 out of 476), making the organic foods in this study a 1 in 250 Salmonella crap shoot...er, lottery. Want to play? The jackpot is diarrhea, typhoid fever, and Reiter's Syndrome that causes joint pain and painful urination that can last for years after the initial Salmonella infection."

In any case, organic farmers use pesticides and antibiotics too

As the green website Grist makes clear, "pesticides are allowed under USDA organic standards, given that they are from organic (naturally occurring) substances rather than synthetic (lab-made) ones." So, organic farmers do make regular use of a number of pesticides such as copper sulphate to deal with diseases and pests. They also use antibiotics in livestock production when required for animal welfare reasons. Moreover, only a small percentage of the feed given to organic livestock is produced organically. There have also been concerns that not all organic food is as free of chemicals as claimed. A recent EU report found pesticides in some organic products. Most of the organically grown cereals, fruit and vegetables tested contained traces of pesticides below or at the legal limit, but 1.24% were contaminated with toxic residue above the limit, and posed a potential threat to health.

Organic farming is worse for the environment

The reason organic food is more expensive is because, per acre, yield is usually lower than for standard crops, and because smaller farms are often less efficient in harvesting, processing and transporting, which means that their carbon emissions are relatively high. Organically reared livestock provide less meat per acre, and their impact is greater than that of vegetables. According to the UK's Department for Environment and Food, 75% of the greenhouse gas methane on farms is emitted directly by ruminants - cattle and sheep. But feed for organic animals is higher in roughage and low in concentrates, resulting in higher methane output per

research. "The review," Melchett says, "rejected almost all of the existing studies of comparisons between organic and non-organic nutritional differences. This was because these studies did not meet particular criteria fixed by the London School of Hygiene and Tropical Medicine."

Conventional food can make you seriously ill

There is a huge amount of research that confirms that organic food is better for you, says Craig Sams, President of Whole Earth Foods and Green & Blacks. "Organic food regulations prohibit hydrogenated fat (cause of heart disease, cancer, diabetes and obesity), aspartame (neurotoxin), phosphoric acid (in cola drinks - causes osteoporosis), antibiotics (reduced immunity), hormones (gender confusion, obesity, multigenerational cancer), pesticides (mutagenic, carcinogenic and with unknown 'cocktail effects'), BSE (human vCJD), GMOs (Puztai's research suppressed, but probably IBS, Crohn's disease, autism, other gutbased disease), or any of the 7,000 artificial colourings, flavourings, preservatives and processing aids that are permitted in conventional food (cancer, liver disease, gut problems)...Organic farming also keeps animals healthy as the use of drugs is restricted, so salmonella, cryptosporidium and listeria are rare in organic foods. E.coli O157:H7 kills over 200 Americans and Britons each year and arises directly from intensive cattle-rearing. It is virtually nonexistent in organic beef.

Organic food will make you healthier

A peer-reviewed study by Carlo Leifert, professor of ecological agriculture at Newcastle University in England, found, among other things, that organic milk contained 60% more antioxidants and healthy fatty acids than normal milk and that vitamin levels are up to a fifth higher in organic tomatoes, wheat and onions. According to organics.org, a US-based activist group, researchers at the University of California, Davis, recently found that organic tomatoes had higher levels of phytochemicals - compounds made by plants - and vitamin C than conventional tomatoes.

Organic food is good for the environment

Even if organic food had no significant nutritional benefits, campaigners argue, organic food would still be better because it does not poison the environment. Leading figures from the Organic Trade Association, the Organic Farming Research Foundation, and the Fresh Ideas Group note that "pesticide drift" - the slow dissipation of pesticide chemicals from industrial farms to every corner of the environment - "is the main culprit for dead zones in delicate ocean environments, such as the Gulf of Mexico, where its dead zone is now larger than 22,000 square kilometers, an area larger than New Jersey". They go on to argue that "native plants, birds and hawks return usually after the first season of organic practices; beneficial insects allow for a greater balance, and indigenous animals find these farms a safe haven."

Organic promotes better standards of animal welfare

Intensive farming has a brutal impact on the well-being of animals, which in turn undermines both the quality of meat and our own health. According to sustainabledairy.org, a New York based activist organisation, "the average dairy cow produced almost 5,300 pounds of milk a year in 1950; today, a typical cow produces more than 18,000 pounds". This was achieved through the massive use of growth hormones. Turning animals into production machines like this and squeezing them into overcrowded spaces is a sure recipe for the spread of disease against which the only answer is to dish out the antibiotics - the overuse of which is weakening resistance in animals and reducing the effectiveness of antibiotics among humans. Giving animals a decent life through organic, traditional husbandry is better for them - and for us.

There is no risk to health from properly treated organic fertilisers

beast. Not only that, but Nobel-winning American agronomist Norman Borlaug, the architect of the Green Revolution, argued that "if all agriculture were organic, you would have to increase cropland area dramatically, spreading out into marginal areas and cutting down millions of acres of forests." In any case, studies show that environmental effects depend on the style of management, not the system of farming, says Dick Taverne, the author of *The March of Unreason: Science, Democracy and the New Fundamentalism*. In general, integrated farm management achieves the best results. "What is most beneficial to birds and wildlife is low-till farming, which is made possible by cultivating GM crops. Organic farmers depend on the plough, which disturbs the ecology of the soil, releases more carbon dioxide, uses more fossil fuel and drives out nesting birds."

Organic is not necessarily better for animal husbandry

Karl-Erik Hammarberg, a Swedish veterinarian, concedes that there is much that is good about organic methods of animal husbandry in terms of allowing animals to express natural behaviour, but he argues that the ban on chemically synthesised veterinary medicinal products or antibiotics for preventive treatments makes animals more vulnerable to diseases and parasites. In Sweden, he says, conventionally farmed animals are protected from biting insects with chemical repellents, but not organically farmed animals: "When you see animals attacked by blackflies and mosquitoes, you realise that they suffer badly. I have found animals killed that way many times." For similar reasons, they are also more vulnerable to tick born diseases and diseases such as Haemonchosis in sheep and scabies in pigs. "The eradication programs in conventional farms might leave only the animals in organic farming to suffer from these parasites and spread them." In any case, public attitudes have forced the conventional food industry to treat animals better in recent years. By improving animal husbandry, conventional farmers have chipped away at many of the advantages that organic produce is supposed to have.

Organic farming will not feed a hungry world

We mustn't be fooled into falling into nostalgia for a golden age of small-scale and simple farming that never really existed. Before intensive agriculture, pesticides and artificial fertilisers, food supplies were constantly endangered by drought and disease. Agriculture was associated with grinding poverty, intensive labour and low yields. As the global food riots of 2008 demonstrated, the need for reliable, affordable and plentiful food production has never been greater. With the United Nations saying that we need to increase world food production by 70% by 2050, when the global population will have risen from six to nine billion, demand will only increase. Even if other claims made for organic farming could be substantiated, says Dick Taverne, its main disadvantage is its inefficiency. Organic food costs more because average yields are 20-50% lower than those from conventional farms. In many places, the only way inefficient organic farmers can feed an expanding population is by cutting down more tropical forest. Every form of technology that increases efficiency in farming will therefore be needed to contribute to the production of more food. What contribution can organic farming make? In the words of the Indian biologist CJ Prakash, its only contribution to sustainable agriculture will be "to sustain poverty and malnutrition". Or as Alex Avery, a research director at the Hudson Institute puts it: "How much Bambi habitat do you want to plough down?"

If manure is properly composted or aged, then the risk of produce becoming contaminated is likely to be low. If anything, organic produce has a lower risk from bugs like E. coli because organic farmers have to comply with manure-handling standards, whereas conventional farmers do not. Composting - heating heaps of manure to 60°C (140°F) - greatly reduces pathogen loads. As for mycotoxins, organic farmers argue that organic produce is less prone to fungal attack as crops are not fed with chemical nitrates which may make plant cells in conventional crops more vulnerable to fungal growth. The UN Food and Agriculture Organisation, which published a report on food safety in organic farming in July 2000, argued that organic farming does not lead to an increased risk of mycotoxin contamination. It stresses that good agricultural, handling and storage practices minimise the risk in both conventional and organic farming.

Studies show organic is the answer to world hunger

Study after study has shown that organic techniques can provide much more food per acre in developing countries than conventional chemical-based agriculture. A report published by the United Nations Environment Programme (UNEP) and the UN Conference on Trade and Development (UNCTAD), found that 114 projects, covering nearly two million African farmers, more than doubled their yields by introducing organic or near-organic practices. Another study - led by the University of Essex in the UK - looked at similar projects in 57 developing countries, covering 3% of the entire cultivated area in the Third World, and revealed an average increase of 79%. Research at the University of Michigan concluded that organic farming could increase yields on developing countries' farms three-fold. The reason, veteran environmental correspondent Geoffrey Lean suggests, is that while intensive agricultural techniques certainly produce more food, few Third World farmers can afford to buy that much fertiliser and pesticides - and the amount they do use will shrink as the prices rise with that of oil. In fact, going organic almost always boosts the incomes of small Third World farmers, because they no longer have to buy expensive chemicals. It helps the landless, too, because organic farming employs more people - creating more than 170,000 jobs in 2007 in Mexico alone.

There are good reasons why organic food costs more

High prices for organic food are not primarily about profiteering, they reflect the fact that crop rotations, higher animal welfare standards and restricted use of chemicals, leading to lower yields, all increase production costs. Besides, subsidies from the government are paid mainly to farmers with non-organic farms allowing them to keep their prices low. The pro-organic lobby argue that when buying non-organic food you are in fact paying threefold; once at the counter, second via taxation and third to remedy the environmental pollution. As the sector develops and technologies are improved, the cost of organic food should decrease as yields increase and production costs decrease.

Organic food improved America's eating culture

Whatever the inherent nutritional merits of an organic apple compared with a non-organic one, and however much the industry has been taken over by big corporations in recent times, it would be churlish to discard the important social influence that organic produce has had on affluent Western societies over the

Organic is not about small producers - it's about big business

Organic food simply isn't as ethical as it would like you to believe. Next time you're in the supermarket, suggests *BusinessWeek*, stop and take a look at Stonyfield Farm yogurt. "With its contented cow and green fields, the yellow container evokes a bucolic existence, telegraphing what we've come to expect from organic food: pure, pesticide-free, locally produced ingredients grown on a small family farm." The reality is that Stonyfield's organic farm is long gone. Its main facility is a state-of-the-art industrial plant just off the airport strip in Londonderry, New Hampshire, where it handles milk from other farms and is planning to import some of its raw material in powdered form from New Zealand. Stonyfield is now 85% owned by the French food giant Danone and other big corporations, from Wal-Mart to General Mills to Kellogg, are wading into the organic game, attracted by fat margins that old-fashioned food purveyors can only dream of. "What was once a cottage industry of family farms has become Big Business, with all that that implies, including pressure from Wall Street to scale up and boost profits." As food companies scramble to find enough organically grown ingredients, they are forsaking the pastoral ethos that has defined the organic lifestyle. For some companies, it means keeping thousands of organic cows on industrial-scale feedlots. For others, the scarcity of organic ingredients means looking abroad for new farms, and importing produce - to the detriment of both its freshness and their carbon footprint - from halfway across the globe. Organic food now comes from as far afield as China, Sierra Leone, and Brazil - places where standards may be hard to enforce and workers' wages and living conditions are low.

The success of organics is a classic example of mind-control techniques

Edward Bernays, the father of public relations, drew on theories of crowd psychology and the ideas of his uncle, Sigmund Freud, to manipulate public opinion using the subconscious - a technique he called the "engineering of consent". He used it, most famously, to persuade women that it was cool to smoke. The organic hype is a classic example of Bernays' techniques. Despite repeated evidence from blindfolded taste tests which shows that there is little discernible difference between organic and conventional food, the public perception is that organic is superior. As Dick Taverne says: "Every lifestyle magazine regards organic food as synonymous with healthy living and every TV chef tells us that organic food tastes better." To question claims made by the organic lobby is not just "akin to doubting the virtues of motherhood, but to reveal indifference to the poisoning of the nation and the fate of the planet, perhaps even to be guilty of corruption by American multinationals and of support for George Bush." As Bernays himself observed: "If we understand the mechanism and motives of the group mind, is it not possible to control and regiment the masses according to our will without their knowing about it? The recent practice of propaganda has proved that it is possible."

last 40 years. Before the "organic food revolution" of the 1970s - spearheaded by Californian restaurant owner Alice Waters - encouraged restaurants and delicatessens to champion small local producers, much of the food on sale was dreary and similar. Now though, farmer's markets all over America offer a fantastic choice; even as many as ten different varieties of aubergine. It has been the promotion of organic food - Waters persuaded Michelle Obama to start a vegetable patch in the White House garden - which has been behind this resurgence in the popularity of simple, healthy food. This is an important cultural development.