

The great organic myths rebutted

Rob Johnston argued that organic foods are not as good as supporters claim. His article sparked heated debate. Now Peter Melchett of the Soil Association puts the case for their defence.

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Melchett says numbers of hares on his farm have doubled since he switched to organic © PA

Fact one: Organic farming is good for the environment

Organic farming is not perfect; it was only developed 60 years ago, and we still have much to learn. Over those years, organic research has been starved of funding because most investment went first into developing pesticides and then into GM crops. Organic farming was started by scientists and farmers who wanted to develop what we would now call a more sustainable way of producing food. Their main concern was with the link between healthy soils, healthy food and human health. However, those pioneers did create a farming system that has clear environmental benefits. Organic farming is better for wildlife on farms. The science is clear cut. Scientific literature reviews have found that, overall, organic farms have 30 per cent more wild species, and 50 per cent higher numbers of those species.^{1 2 3} Based on scientific research, the Government says that organic farming has clear environmental benefits – better for wildlife, lower pollution from sprays, produces fewer dangerous wastes and less carbon dioxide.⁴ The Sustainable

Development Commission says that organic certification represents "the gold standard" for sustainable food production.⁵ I farmed non-organically for more than 30 years, and switched to organic, mainly to try to bring back wildlife on the farm. We have far more birds, and data on hares before and after switching to organic show numbers doubled from 20 to 40. This year we found 56.

Fact two: Organic farming is more sustainable

Last week's article contained several errors – for example, the statement that organic tomatoes take double the amount of energy to produce is wrong, as the figures were for different types of tomato.⁶ The information on the climate change impact of organic food omitted one of the key benefits of organic farming: storing carbon in the soil. When this is included, the climate change impact of organic food goes down by between 12 and 80 per cent.⁷ Government-funded studies have shown that across a range of sectors, organic farming uses 26 per cent less energy than non-organic farming to produce

the same amount of food,⁸ and the Government agrees that organic farming is better for climate change.⁹ The article ignored the extraordinary challenges we face. We must drastically reduce greenhouse gas emissions from the farming and food industries – by 80 per cent by 2050. We have to adapt to a world with declining oil and gas supplies. We have to help mitigate the effects of climate change, for example by reducing flooding and cutting demand for fresh water. We have to adapt to a world of more extreme and unpredictable weather. How we do this is the challenge.

Fact three: Organic farming doesn't use pesticides

We've never claimed this! The Soil Association's rules allow farmers to use four pesticides, with permission. Non-organic farming uses more than 300. The vast majority of organic farmers have no need for sprays. If all farming was organic, spraying would fall by 98 per cent.¹⁰ Organic sprays are mainly used on potatoes and in orchards. Those we allow are either of natural origin (rotenone and soft

soap) or simple chemical products – copper compounds and sulphur. The active ingredients in rotenone and soft soap break down rapidly when exposed to sunlight, minimising risk to the environment. Copper and sulphur occur naturally in the soil, and most copper is applied by non-organic farmers to correct copper deficiencies. None is found in organic food.

Despite the wet weather and greatly increased risk of disease last year, only 3 per cent of Soil Association farmers and 2 per cent of organic crops were sprayed. Our goal is to use no sprays at all.

Fact four: Pesticide levels in conventional food are dangerous

I'd say certainly risky, and potentially dangerous. In the EU, one food item in 30 contains levels above European legal limits.¹¹ Nearly 40 pesticides, which we were promised were safe, have been banned or withdrawn from use over the past decade. People who want to reduce their exposure to potentially harmful pesticides can buy organic food. A US study showed that within one day of switching to an organic diet no traces of pesticides could be found in children's urine. When the children switched back to a non-organic diet, pesticides were found immediately.¹²

Cocktails of sprays are not tested when pesticides are passed as "safe", and research has confirmed they pose a risk. Average male fertility has fallen by 50 per cent,¹³ coinciding with the use of pesticides. There are alternative views – a government adviser blamed "too much time riding bikes, sitting down too much and wearing tight underpants".¹⁴ Science cannot prove there is no risk from pesticides. In the absence of clear scientific evidence either way, people who think that the accepted nutritional differences or absence of pesticides and artificial additives in organic food will benefit them or their children, should buy organic.

Fact five: Organic farming is healthier

In terms of food safety, the Food Standards Agency says there is no difference between organic and non-organic food. The animal welfare organisation Compassion in World Farming says: "Organic farming has the potential to offer the very highest standards of animal welfare".¹⁵ It believes that the Soil Association's welfare standards are "leaders in the

field". Because animals are kept in better conditions, always free range, there is no need for the routine use of antibiotics, and such use is banned. The World Health Organisation says that: "There is growing concern that antibiotic residues in meat and dairy products could result in antibiotic resistance in bacteria prevalent in humans, reducing the effectiveness of antibiotics used to treat human disease."¹⁶ The most bizarre claim in last week's piece was that "Disease is the major reason why organic animals are half the weight of conventionally reared animals – so organic farming is not necessarily a boon to animal welfare." There is no truth in this. An organic steak or chicken are the same size as non-organic – have a look in the shops! Organic animals suffer no more disease, and frequently less, than non-organic.

Fact six: Organic food contains more nutrients

Published research shows that, on average, organic food contains higher levels of vitamin C and essential minerals such as calcium, magnesium, iron and chromium, as well as cancer-fighting antioxidants.¹⁷
^{18 19 20 21 22} Organic milk is naturally higher in Omega 3 fatty acids, Vitamin E, Vitamin A (beta-carotene) and some other antioxidants than non-organic milk.^{23 24 25}

Diseases such as eczema, asthma and allergies are affecting more and more children. Ten per cent of children in the EU now suffer from eczema. Following research in Sweden, a Dutch government-funded study published last November showed a 36 per cent lower incidence of eczema in children fed on organic dairy products compared with children consuming non-organic dairy products.²⁶

Organic standards prohibit a host of additives that researchers say may be harmful to our health, such as hydrogenated fat, monosodium glutamate and artificial flavourings and colourings. Recent Food Standards Agency-funded research found that some common additives can cause hyperactivity in children.²⁷ You can avoid a wide range and large quantity of potentially allergenic or harmful additives if you eat organic food.

Fact seven: The demand for organic food is growing

Organic is still small. But local and direct organic sales are growing at 32 per cent per annum.²⁸ In 2006 (the

latest figures available) retail and catering sales were worth £1,937m – on average the retail market has grown 27 per cent per year over the past decade, and over the past few years, the proportion of the market supplied by UK farmers has grown. This is no longer simply a middle-class market. Over 50 per cent of people in lower income groups are buying organic food,²⁹ and if they buy direct from farmers via box schemes or farm shops, it need not be more expensive than the same non-organic food in supermarkets. Three quarters of parents buy organic baby food, which makes up about half the total sold.³⁰ Many parents and school governors have opted for at least part of school dinners being sourced from organic farms.

Organic farming is helping to reverse the decline in the UK's agricultural workforce, which has fallen by 80 per cent over the past 50 years.³¹ Organic farms in the UK provide on average more than 30 per cent more jobs per farm than equivalent non-organic farms – organic farmers tend to be younger, more optimistic and include more women.³² The choice we face is between oil-based farming with nitrogen fertiliser, or solar-powered organic systems. Producing one ton of nitrogen releases the equivalent of 6.7 tons of CO₂.³³ The raw material used to produce nitrogen fertiliser is, currently, increasingly scarce natural gas. UK farming uses three million tons of nitrogen fertiliser annually, half of which is imported. Organic farming is based on renewable processes on the farm, using clover to fix nitrogen and to build soil organic matter.

Recent research suggests that if all farming was organic, the slight decrease in yields in the northern hemisphere would be more than matched by overall increases elsewhere, leading to a slight increase in total food production.^{34 35} Long-term trials in the US found organic yields matching those from non-organic systems, with organic farming outperforming non-organic in drought years.³⁶ Even with the uncertainties, in a world of increasing scarcity of fossil fuels, organic farming provides the only environmentally, or economically, sustainable system of feeding the world. Organic farming and food do not have all the answers. But solar-powered, animal and wildlife friendly, pesticide- and additive-free farming and food, is where we're heading.

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