

Organic versus non-organic food: chewing over the facts

The title is rather misleading as there is no such thing as non-organic food – anything that decomposes is an organic substance. The debate really is about whether or not food that is grown organically (biologique or bio in French) is better for you than food produced using modern agricultural methods. **Carolyn Moody** explains what the term ‘organic’ means and how it differs to everything else that is not ‘organic’.

From an historical perspective, traditional farming methods remained virtually unchanged for millennia. Crops were raised in soils that were fertilised by animal dung and composted vegetable matter. They were grown in rotation to avoid the build up of specific crop diseases, and soil was allowed to lie fallow at regular intervals to ‘rest’ and to give it a chance to recuperate its full complement of soil organisms, e.g. bacteria, worms and insects. Their job is to aerate the soil, while the interaction between plants and these organisms keeps the soil healthy and fertile. Crops grown in this way are strong and healthy and able to develop their own resistance to attack by insects and fungal infections.

Farming in the balance

It is only since World War 2 that the face of farming has changed completely. With the advent of artificial fertilisers, herbicides and pesticides, land can now be farmed intensively to grow huge fields full of monoculture crops.

Without traditional crop rotation and natural composting, the soil has no chance of regenerating itself. Natural soil fertility decreases so the need for artificial fertilisers increases. Such fertilisers contain the nutrients necessary to make the plants grow big and healthy looking, but lack some of the trace elements (such as selenium and chromium) needed by human beings for health. Intensive farming means that crops are more susceptible to pests and disease, so the use of pesticides and fungicides increases. Herbicides are used to keep weeds down. Currently, over 400 chemicals can be used on our crops, some of which are having a devastating effect both on wildlife and on our health.

Chemical cocktail

While EU regulations attempt to control the amount and types of chemicals in and on our food, residues are still finding their way into the food chain. The most dangerous of

these chemicals are organophosphate pesticides which have been linked to breast and prostate cancers, decreasing male fertility and foetal abnormalities. Current thinking is that they disrupt hormone balance which results in ‘oestrogen dominance’. Exposure to pesticides is also linked to chronic fatigue syndrome and Parkinson’s disease. Pesticide residues rank among the top three environmental cancer risks cited by the American Government.

While regulators attempt to set ‘safe’ levels of individual toxic chemicals, nobody has assessed the lethal effects on human health of the cocktail of chemicals we consume at most meals.

Organic – all those in favour

Modern organically grown foods avoid the use of chemicals except under extremely restricted circumstances. They maintain the health of the soil through regular composting. In fact, food is grown in a traditional manner,

but with the benefit of advanced knowledge of natural pest control and soil fertility.

As a result, crops contain higher levels of vitamins, minerals, essential fatty acids and antioxidants. UK and US government statistics show that levels of trace minerals in fruit and vegetables fell by up to 76% between 1940 and 1991. By contrast, organically grown food contains, on average, higher levels of vitamin C, calcium, magnesium, iron and chromium. Organic spinach, lettuce, cabbage and potatoes showed particularly high levels of minerals.

A high antioxidant intake is important as protection against cardiovascular disease, cancer and premature ageing. Plants produce more antioxidants when they are exposed to attack by pests. Modern farming protects the plants with pesticides so that they produce anywhere between 10% to 50% less antioxidants than their organically grown cousins.

Levels of CLA (conjugated linoleic acid) have plummeted in our foods. CLA helps turn food into lean muscle instead of fat in the body. Traditionally, it is found in dairy products and meat from grass-fed animals but as animals are mainly fed artificial feed now, we no longer benefit from CLA.

Levels of omega-3 fatty acids, important for brain development in children and memory, as well as for a healthy heart, are also lower in food grown using modern farming methods.

Leaving a bad taste

In a study of Swedish children, those that ate mainly organic food, were given very few antibiotics, had few vaccinations and enjoyed a diet high in live lactobacilli (friendly intestinal bacteria), had a much lower rate of allergies compared with children who ate ‘normal’ food, were vaccinated and had plenty of antibiotics.

There has been a steady deterioration in male fertility in Europe over the last 20 to 30 years due to a reduction in sperm production and abnormalities in sperm development. When Danish researchers compared the sperm density of members of an organic farming association with that of three different occupational groups, they found the former had significantly higher sperm counts.

Other controversial issues in the debate include the growing concern about the high



use of antibiotics on farm animals and the possible adverse effects on human health. And, of course, the highly charged arguments for and against genetically modified food continue on a global scale. With scientists still a long way off fully understanding the effects of manipulating genes, the long-term health implications of GM food remain unknown and untested. Organic food and farming prohibits the growth of GM crops as well as the use of GM products, including animal feedstuff.

Organic farmers claim they work with nature not against it, so a vote for organic food for your family is also good for the environment. And last but not least, most people would agree that organic food tastes better, coming from animals bred in less stressful conditions and plants grown free of artificial fertilisers. Whatever your feelings are on this long-

running argument, one thing is certain – although it has become normal to regularly consume a cocktail of toxic chemicals on plants that have been grown in denatured soils, it certainly isn’t natural!

For more information on where to buy organic food in Belgium:
www.natpro.be/biottin.htm



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