



# why is organic

# ECO-FRIENDLY?

## 1 Energy

Currently, we use around 10 calories of fossil energy to produce one calorie of food energy. In a fuel-scarce future, which experts think could arrive as early as 2012, such numbers simply won't stack up.

On average, organically grown crops use 25% less energy than their chemical cousins. When these savings are combined with stringent energy conservation and local distribution and consumption (such as organic box schemes), energy-use dwindles to a fraction of that needed for an intensive, centralised food system.

## 2 Greenhouse gas emissions and climate change

The production of ammonium nitrate fertiliser, which is indispensable to conventional farming, produces vast quantities of nitrous oxide – a greenhouse gas with a global warming potential some 320 times greater than that of CO<sub>2</sub>. The techniques used in organic agriculture to enhance soil fertility in turn encourage crops to develop deeper roots, which increase the amount of organic matter in the soil, locking up carbon underground and keeping it out of the atmosphere.

## 3 Water use

Agriculture is officially the most thirsty industry on the planet, consuming a staggering 72 per cent of all global freshwater. Organic agriculture is different. Due to its emphasis on healthy soil structure, organic farming avoids many of the problems associated with compaction, erosion, salinisation and soil degradation, which are prevalent in intensive systems.

## 4 Localisation

Food transport accounted for more than 30 billion vehicle kilometres, 25 per cent of all HGV journeys and 19 million tonnes of carbon dioxide emissions in 2002 alone.

The organic movement was born out of a commitment to provide local food for local people, and so it is logical that organic marketing encourages localisation through veg boxes, farm shops and stalls. As we enter an age of unprecedented food insecurity, it is essential that our consumption reflects not only what is desirable, but also what is ultimately sustainable.

## 4 Pesticides

A spiralling dependence on pesticides throughout recent decades has resulted in a catalogue of repercussions, including pest resistance, disease susceptibility, loss of natural biological controls and reduced nutrient-cycling.

Organic farmers, on the other hand, believe that a healthy plant grown in a healthy soil will ultimately be more resistant to pest damage. Organic systems encourage a variety of natural methods to enhance soil and plant health, in turn reducing incidences of pests, weeds and disease.

## 5 Ecosystem impact

Organic farms actively encourage biodiversity in order to maintain soil fertility and aid natural pest control. Mixed farming systems ensure that a diversity of food and nesting sites are available throughout the year, compared with conventional farms where autumn sow crops leave little winter vegetation available.

Biodiversity is enhanced at every level of the food chain under organic management practices, from soil micro-biota right through to farmland birds and the largest mammals.

## 6 Food Biodiversity

Seeds are not simply a source of food; they are living testimony to more than 10,000 years of agricultural domestication. Tragically, 75% of the genetic diversity of agricultural crops has been lost over the past 100 years.

Modern intensive agriculture depends on relatively few crops – only about 150 species are cultivated on any significant scale worldwide.

Seed-saving and the development of local varieties is a key component of organic farming, giving crops the potential to evolve in response to what could be rapidly changing climatic conditions. This will help agriculture keep pace with climate change in the field, rather than in the laboratory.

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