

# Organic Food

## **Introduction**

Today, as more people choose to live healthier lifestyles and awareness of environmental issues increases, the demand for organic food and drink is growing. But do these foods really offer benefits over conventionally grown foods?

## **What Is Organic Food?**

The scientific definition of 'organic compound' is a chemical compound containing carbon combined with hydrogen, oxygen, nitrogen and other elements. This is not, however, the common understanding of organic food, which is synonymous with terms like 'biological', 'natural' and 'ecological'.

Organic food is produced without the use of artificial fertilisers, chemicals, pesticides, growth regulators and livestock feed additives. Organic food, for this reason, is likely to contain lower residues of agricultural chemicals than conventionally farmed food, but due to general environmental pollution these products cannot be completely free of residues. Organic farming makes use of traditional methods, such as crop rotation, composting, recycling of farm produced material such as animal manure, hand weeding, environmentally friendly biological pest control, homeopathic remedies and free range animal rearing. The primary goal of organic farming is to ensure the optimal interdependent functioning of the soil, plants, animals and people in the ecosystem.

It is important to realize that the production of organic foods requires the same good manufacturing practices, production practices, compositional standards, labelling and regard for food safety as the rest of the food industry, including conventional farming.

## **Is Organic Food Better For You?**

While fresh fruit and vegetables boast the biggest market share, many consumers are starting to buy organic food and drinks as they are seen to be healthier and more natural than their non-organic counterparts. The EUFIC review confirms that organic food has enjoyed a three-fold increase in demand for the period from 2000 to 2010. This was largely due to health and environmental concerns.

In answering this question it is important to consider 3 main areas, including the safety of the food, its nutritional contribution and whether there are any health benefits in using organic foods to replace conventionally farmed foods.

- **Food Safety:**

Because synthetic pesticides are prohibited in organic farming, consumer perceptions dictate that these should be lower in organic produce. However, biopesticides are still present as well as some environmental pollutants. The use of animal waste as fertilizer is a major source of disease-causing pathogenic micro-organism contamination in organic foods and possible contamination of ground and surface water. Thorough cooking and washing prior to eating food is essential, as is the management of composting and manure application. Best practice for compost and manure management is now practiced in many countries producing organic foods. More extensive insect damage of organic plants may result in mould growth and toxin

production. Scientific evidence shows that these can cause food poisoning. However, the EUFIC review concludes that the risk is no greater in organically produced foods than in their conventional counterparts.

- **Nutritional Contribution:**

There is no conclusive scientific research to recommend the use of organic food as a superior source of nutrients to conventionally farmed food. A recent systematic review in the American Journal of Clinical Nutrition shows that while there are small differences in nutrient content, these are due to production methods and are biologically plausible. The responsible application of biotechnology used in conventional farming, can significantly increase the nutrient density of many foods.

- **Health Benefits:**

Scientific evidence indicates that the health risks associated with disease-causing pathogens are far greater than the negligible health risks associated with ingesting traces of pesticides. Additionally, minimizing residues should be the focus of good agricultural practice, whatever the method of cultivation used. Consumers should not be fooled by clever marketing, into believing that if it says organic, it is necessarily healthy. It is important to remember that many food components found naturally in food, whether farmed through organic methods or via conventional means, can be unhealthy. For instance the saturated fat found in organic cheese has the same cholesterol raising effects as that found in cheese produced from non-organic milk. The stimulant effect on the central nervous system and diuretic effect of caffeine, whether from organic coffee beans or from conventionally farmed coffee beans, remains identical. We know that positive changes to our diets bring about real health benefits. It is thus the overall nutritional balance of our diets that is more important than the differences of nutrient content of individual foods.

By virtue of the definition, the term 'organic' describes the method of cultivation, rather than specific characteristics possessed by the food. It then follows that flavour; nutritional content and health aspects of organic foods cannot be superior to conventionally grown foods, as the scientific evidence shows.

## **Legislation & Labelling**

For a product to be called 'organic', the food must comply with the standards specific to organic agriculture, from production, processing, packaging to transport and distribution.

There is no legislation available at present governing the production of organic food in South Africa. The Department of Agriculture has been trying to set separate regulations for production systems under section 15 of the Agricultural Products Standards Act (Act No 119 of 1990). However this requires changes to the Act and legal processes are slow and challenging. The South African organic produce industry thus makes use of international regulations governed by the International Federation of Organic Agricultural Movements (IFOAM) and all farmers have to be certified by international bodies such as SGS, Ecocert, or the British Soil Association. These authorities inspect these farmers on a regular basis to ensure that they conform to the strict international regulations governing organic farming. In addition, every organic product carries an official organic certification number on the back of the product's packaging, which means that you can have complete confidence that the product is indeed organic.

International law requires strict labelling of organic products and outlined below are the different tolerances allowed in the United States of America (USA) and the European Union (EU).

American law allows the classification of products according to the proportion of organic ingredients a food contains. There are 4 categories:

- 100% organic, can carry the voluntary USDA (United States Department of Agriculture) organic seal.
- At least 95% organic, can carry the voluntary USDA (United States Department of Agriculture) organic seal.
- Foods made with 70 – 95% organic ingredients can be labeled as “made with organic...” naming the specific ingredients that comply. This claim can be made on the front of the packaging
- food containing less than 70% organic ingredients may list specific organically produced ingredients on the side of the packaging, but not on the front panel
- ‘Organic in conversion’ means that the production system of the food has adhered to organic standards for at least one year but which does not qualify as fully organic yet. The process of converting to fully certified organic production could take up to three years.

In the EU a similar situation exists, but using only 2 of these categories:

- At least 95% organic, can carry the label ‘organic’.
- Foods made with 70 – 95% organic ingredients by weight can be labeled as “made with organic ingredients.

### **What Is The Difference Between Organic And Free Range?**

Free-range is a term given to animals that are free to roam in wide, open space. Their living conditions are similar to the standards required for organic farming, but the animals may be treated with veterinary medicines and the food provided may contain additives. Organic farmers use 100% plant food and sick animals are treated with homeopathic remedies only. Should the animals require veterinary medicines or plants be found to contain traces of chemicals, pesticides or genetically modified material, they lose their organic status.

### **Consumer Issues**

The growing interest in organic food is likely to be a reaction to consumer unease over pesticide and veterinary drug use, food scares, lack of trust in the food industry and a growing need to consume healthier, safer food. Some of these issues have been touched on, while others are listed below:

- **Cost:**Foods farmed through organic methods are more expensive for a number of reasons, including lower yields, labour intensity, higher start-up costs, requirements for land to remain fallow for long periods and the costs of the accreditation of the process. This makes organic food inaccessible to many consumers.
- **Consumer choice:**Organic foods provide an alternate to foods which may be produced by conventional methods and making use of modern biotechnology. Although organic food is a growing part of the worlds total food production, it plays an important role in providing something for everyone.
- **Environmental protection:**The management practices used in organic farming, which aim to minimize damage to the environment and animal life, are appealing to those with a strong sense of responsibility toward these issues. However, it must be emphasized that farming is inherently bad for the environment and is a land space competitor to industries like forestry that are good for the environment. All sectors of the food industry are obligated to conform to food safety standards and good manufacturing practices aimed to minimize pollution of water, soil and air. If measured by hectare organic food production is more environmentally friendly, but this effect is smaller when expressed per production unit.
- **Animal welfare:**Animal health management is based on disease prevention. While organic meat production focusses on the assumption that if housing, care and feeding of animals is

conducted in a certain manner, this will ensure optimal natural resistance to disease. Some practices include larger housing areas (including outdoor access), obligatory straw bedding, organic feed, restricted use of antibiotics, longer waiting times before delivery of products after medical treatments, longer weaning periods (pigs), the prohibition of tail, teeth and beak clipping and the selection of appropriate breeds. Conventional meat production makes use of all of the latest technology to ensure disease prevention and many government policies are focusing on a reduction in the routine use of antibiotics as well as increasing the size of cages and stock pens. At present disease prevention remains the main focus in meat production whether from organic or conventional farming production.

- **Food security:**the question remains as to how we will sustainably continue to feed our growing population. While organic farming may be more environmentally sustainable, it makes no use of biotechnologies that can increase yields and reduce pre- and post-harvest losses. The answer is not simple and at present there is a place for both production methods in our food supply

### The FACS Message

There is no credible evidence that a diet rich in organic food is safer or more nutritious than conventionally produced food. Organic food differs only in the way it is grown, handled and processed. Despite this, there is still a large group of people who prefer organic foods to their non-organic counterparts and for this reason producers have ensured that this choice remains available to them. Although some disagreement still exists, everyone agrees that we should be including at least 5 servings of fruit and vegetables, and sufficient grains into our daily diets, whether from an organic or inorganic source.

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