

# Quality and safety in organic food



Eating organic is not sufficient in itself to make us healthier. But organic products are an important part of a sustainable and healthy lifestyle. This 2006 study sets out the facts about the quality of organic products and shows how organic products differ from non-organic products in terms of quality and safety.

“No pesticide residues; better taste; healthier for us and better for the environment”. These are the expectations stated most often by consumers regarding organically produced food. Because of the different methods of production and processing, one can expect that there will be a difference in quality compared to conventionally produced foods.

Numerous studies have analysed the impact of organic production methods on product quality and drawn comparisons with products from conventional farming. It is however difficult to generalise on the basis of individual studies. This is because food quality is not determined solely by the method of production; it is also influenced by crop variety, location, climate and post-harvest factors. Comparative reviews that collate and evaluate the results of several individual studies are therefore of particular value.

The FiBL study, Quality and Safety of Organic Products examines the various aspects of food quality, sets out the facts about the quality of organic produce and highlights how organic products differ from nonorganic products in terms of quality and safety.

In brief, the evidence shows:

## **More beneficial nutritional profile**

In terms of desirable substances, organic products stand out as having higher levels of secondary plant compounds and vitamin C. In the case of milk and meat, the fatty acid profile is often better from a nutritional point of view. As

regards carbohydrates and minerals, organic products are no different from conventional products. As regards undesirable substances such as nitrate and pesticide residues, organic products have a clear advantage. Other undesirable attributes can be influenced to some extent, including mycotoxins, heavy metal content, environmental pollutants and contamination with pathological microorganisms.

## **Greater enjoyment**

Organic vegetables and fruit tend to have a higher sensory quality.

## **Functional suitability**

Organic products have better storage performance. However, in the case of organic wheat and potatoes, some technical challenges remain. Due to the lower protein content of organic wheat, bread-making methods need to be adapted. In the case of potatoes, functional suitability may be impaired by damage caused by disease and pests, and by difficulties arising in long-term storage.

## **Promising outlook for inner quality**

Holistic methods are used in addition to the standard methods of analysis to arrive at a more comprehensive representation of quality. Both image-forming methods and fluorescence excitation spectroscopy enable a distinction to be made between coded samples from organic and conventional farming systems. Intensive research is currently under way to validate these methods.

## **More careful processing**

To retain their natural, authentic and original qualities, the processing of organic products requires special care. Regulations defining permitted processing methods and prohibiting the use of many additives and processing aids have resulted in the development of special formulas and the use of high-quality ingredients. 

SOURCE: WWW.FIBL.ORG