

New research documents high quality and safety of organic food

Scientists from EU's largest organic research project, QLIF, are ready to present their results on how to improve quality, ensure safety and reduce costs of food from organic and low-input food supply chains.

Organic farming systems hold the potential to produce food of high quality while at the same time considering food safety and environmental benefits. However, controversy and uncertainties regarding the relative quality and safety of organic foods still exist. After four years of research, scientists from the EU project QLIF (QualityLowInputFood) will present and critically evaluate the new and currently available evidence for differences in food quality and safety between foods from organic, low-input and conventional production systems.

As an example of new project results, it was recently shown that grazing cows on organic farms in the UK produce milk that contains significantly higher levels of beneficial fatty acids, antioxidants and vitamins than their conventional counterparts.

Other significant contributions from the QLIF project that will be highlighted are related to:

- Improved nutritional composition of organic foods
- High food safety of organic products
- Lower productivity to benefit product quality and environment
- Challenges of outdoor animal production systems
- Energy efficiency and greenhouse gas emissions

The coordinator of the QLIF project, Prof. Carlo Leifert from the University of Newcastle in UK, looks forward to presenting the QLIF results for a broader audience and interested parties.

"From the scientific evidence gathered by the many project researchers during that last four years it turns out that organic and low-input farming systems give us a food quality and safety that is generally superior to conventional production systems. Based on these results we look forward to an inspired dialogue and feedback from our stakeholders", Prof. Leifert says.

The new results and syntheses will be presented during a series of open workshops at the Organic World Congress in Modena (Italy) during 19-20 June 2008. The workshops will be headed by trained moderators to facilitate a dialogue with the public. QLIF welcomes all interested parties to join the workshops. A detailed programme can be found at www.qlif.org.

Improved nutritional composition of organic foods

There is increasing evidence that organic and low-input farming practices result in an improved nutritional composition of foods. The QLIF workshop will critically evaluate the current scientific knowledge about the nutritional composition of foods from organic and conventional production systems. For crop production it is frequently found that organic farming may have an influence on e.g. the levels of nutritionally desirable secondary metabolites, but these effects are not always consistent. For livestock production systems it has been found that organic farming benefits the quality of e.g. meat and milk. Also, reports showing positive health impacts of organic milk consumption have recently been published.

High food safety of organic products

Recent QLIF research concludes that there is no evidence that organic and low-input production systems pose higher food safety risks than food from conventional systems. In fact, agronomic practices used in organic farming were shown repeatedly to reduce risks associated with veterinary medicine, mycotoxin residues and the development of antibiotic resistant microorganisms in food. Yet, acknowledging that risks can never be eliminated 100 percent, QLIF in its research focuses on the development of improved food safety and quality assurance manuals and training programmes that will contribute to an even higher food safety.

Lower productivity benefits product quality and environment

A challenge for organic production systems is that marketable yield per hectare is generally lower than in conventional systems. While the QLIF project has developed strategies to enhance the yield in e.g. wheat, lettuce and tomato, it has also been pointed out that lower productivity opens niches for higher product quality and ecological services and benefits. Thus, (i) lower nitrogen inputs may reduce N leaching, resulting in higher groundwater quality, (ii) lower density of cereal stands may cause higher density of wild flora, and (iii) diverse organic crop rotations may create favorable habitats for insects, soil microbes, and wild and endangered animals. Thereby organic agriculture offers benefits by on-site nature conservation.

Challenges of outdoor animal production systems

Organic production systems aim to improve the health and welfare of animals, while also considering the environment we live in and the farmer's income. This is not an easy task, as elements of animal welfare and environmental concern do not always complement each other. QLIF results have provided recommendations to farmers and other stakeholders on how to improve organic livestock farming, for example by providing roughage to pigs to improve gut health, and to include dried chicory in the feed to combat nodular worms. In other areas, however, challenges remain and will also be discussed at the facilitated workshop in Modena.

Energy efficiency and greenhouse gas emissions

The results from the QLIF project and other results show that organic crop production systems are normally superior to conventional systems in terms of energy use and greenhouse gas emissions. With animal production systems this is more variable. Where ruminant animals, such as cows, can use extensive areas, organic production may come out with clearly better energy balances than conventional systems. However, the feed use efficiency in organic production is often lower than in conventional production, and if the production is based on cereals and other products from annual crops, this leads to a somewhat better energy balance in the conventional systems.

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About QLIF:

The Integrated Project QualityLowInputFood aims to improve quality, ensure safety and reduce costs along the organic and low-input food supply chains through research, dissemination and training activities. The project focuses on increasing value for both consumers and producers using a fork to farm approach. The project was initiated on March 1, 2004. It is funded by the European Union with a total budget of 18 million Euros. The research involves 31 research institutions, companies and universities throughout Europe and beyond.

See more info at www.qlif.org