

What can organic agriculture contribute to sustainable development?

Long-term farming system comparisons in the tropics

Background

In Europe, numerous studies have proven the advantages of organic agriculture in terms of ecosystem services and economic impacts. Organic farming is now increasingly being taken up by farmers, NGOs, national programmes and agricultural development agencies in tropical countries as a means to improve food security and rural livelihoods in a sustainable way. Demand for reliable data on the environmental and socio-economic performance of organic agriculture is high, but only few attempts have yet been made to systematically assess this farming system alongside conventional practices.

Approach

To fill this gap, FiBL and its partners in the developing world are running long-term farming system comparisons of 10 – 20 years duration in Kenya, India and Bolivia. The replicated field trials now make it possible to monitor the effects of organic agriculture on yield, yield stability, product quality, soil fertility and biodiversity, as well as on natural and economic resource efficiency.



Field trials



Farm surveys

The impacts of organic agriculture on livelihood systems – i.e. on farm income, education, health, gender relations and farmers' social mobility – will be studied in farm surveys.

Strategic objectives

- Place the debate on organic farming in developing countries on a **rational basis**.
- Foster **agricultural policy dialogue** in the developing world.
- Identify the **challenges for organic agriculture** in tropical countries and thus gain the ability to address them in a targeted way.
- Contribute to the **development of organic and sustainable agriculture** in developing countries.

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Kenya



Location: Sub-humid highlands of Central Kenya

Crops: Maize, vegetables

Treatments: Conventional and organic, both on a low-input and a high-input level

Partners: International Centre of Insect Physiology and Ecology ICIPE, Tropical Soil Biology and Fertility Institute of CIAT/TSBF-CIAT, Kenyan Agricultural Research Institute KARI, Kenyatta University KU

Trial start: March 2007

India



Location: Semi-arid Central India

Crops: Cotton, soya, wheat

Treatments: Organic, bio-dynamic, conventional, genetically modified cotton

Partners: bioRe Association India

Trial start: June 2007

Bolivia



Location: Humid Northern Bolivia

Crops: Cacao, agroforestry products

Treatments: Conventional and organic, both in monocrop and agroforestry systems

Partners: Asociación de organizaciones de productores ecológicos de Bolivia AOPEB, Promoción e investigación de productos andinos PROINPA, Universidad La Paz

Trial start: March 2008