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ORGANIC EQUALS CONVENTIONAL AGRICULTURE IN THE TROPICS

Organic agriculture improves soil fertility and farmer incomes in tropical Sub-Saharan Africa. At the same time, the yields of organic fields level off conventional fields. These are the most important findings of first 6 years of a long-term field study in Kenya, run by the Swiss Research Institute FiBL together with local partners (International Centre of Insect Physiology & Ecology – icipe, Kenya Agricultural & Livestock Research Organization – KALRO, Kenyatta University – KU, Kenya Organic Agriculture Network – KOAN and Kenya Institute of Organic Farming - KIOF).

The study shows that the organic systems start to deliver substantial economic advantage over conventional systems as soon as the initial conversion phase is over. Presenting the results of field trials being carried out since 2007 on two locations Thika and Chuka in Kenya, coordinator of the project Dr. Noah Adamtey says, “Our findings show that yields of maize – an important staple and cash crop – under organic production are similar to that under conventional production in high-input systems representing commercial scale farming.”

“Furthermore, the profitability was similar in both systems from the third year in the absence of premium price, but when premium price was considered, organic farming was more profitable starting from the fifth year. At low input levels, maize yields were similar in both systems, especially under intercropping regimes and there were no differences for pest and disease incidence and damage.”

“Our results show that soil fertility improved significantly in calcium, magnesium, potassium and soil pH (acidity) levels under the organic approach.”

The field experiments in Kenya are part of a large long-term Farming Systems Comparison (SysCom) programme, which is aimed at obtaining scientific evidence on the benefits and drawbacks of organic versus conventional farming systems in the Tropics. Parallel studies in India on the production of cotton and Bolivia on the production of cacao showed similarly positive for the organic approach. Though organic agriculture has also been proven to have the ecological benefits such as promotion of biodiversity and climate change mitigation under temperate environments, these aspects are yet to be evaluated in tropics. SysCom programme is foreseen to continue in the next several years and further studies are focussing on these aspects.

In addition to the long-term research, SysCom Programme uses the approach of participatory on-farm research to develop and promote locally adapted agricultural practices for organic farming. “The involvement of farmers is of high value”, explains Dr. Gurbir Bhullar, overall coordinator of the SysCom programme. “Because only by involving the farmers, we are able to find practical and adoptable solutions to farming challenges and for this the SysCom project sites offer suitable platforms for innovation development. This year, 60 farmers are participating in the on-farm research in Kenya. We have already developed farming technologies for compost making, best uses of biomass and hundreds of farmers have been trained on sustainable farming practices since 2009.”

The ultimate objective is to support the development of policies and strategies that foster the adoption of sustainable land use practices at a local, regional and international level. “Organic farming offers a huge potential for promoting sustainable agriculture in Kenya, however the necessary policy framework needs to be put in place, the market differentiated between organic and conventional and certification made more affordable for local farmers” says Dr Anne Muriuki, from KALRO.

For additional information, downloadable graphs and pictures please logon to:

<http://www.systems-comparison.fibl.org/>

Project Donors



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