

Productivity on ecological organic farms in the Tropics

Producing good yields using the ecological approach

Ecological organic farming provides many benefits for health, the environment and societal welfare, but is generally perceived as not productive enough to meet growing food demands. However, research has demonstrated that farm productivity on well-managed organic farms can match that of conventional – this requires active, holistic management practices, e.g., crop diversification via crop rotations, intercropping, agroforestry, effective pest and disease control, water management among other practices.

This factsheet discusses some best organic practices for good yields in ecological organic systems, the role of diversity, and highlights some opportunities and challenges with selected crops in organic production. The information is based on long-term experiments and on-farm research conducted in the scope of three projects across different countries in Africa, as well as Bolivia and India. Further products in the series, e.g., posters, videos and more, are linked in the 'Further information' section on the last page of this factsheet.



Key messages from the research

- Farm productivity in ecological organic systems can **match or exceed** those in conventional production systems. This is dependent on the type of crop, management practices and design of the system.
- In cacao production systems, research results show that **increasing the diversity** of the system (e.g., agroforestry) can **increase farm productivity**.
- Although cacao monocultures produce higher cocoa beans yields, agroforestry systems achieve higher total productivity as well as a higher diversity of products, e.g. fruit trees, like bananas, tuber crops, spices, herbs, etc.

Agricultural productivity is, simply speaking, the ratio of the agricultural yields (output) to inputs needed for production. In ecological organic systems, this definition goes beyond that to include the productivity of the whole farming system: the soil, crops, animals, labour and financial productivity.

