

## Recommendations

There appears to be tremendous opportunity for cost effective agricultural growth in East Africa through an ecosystem approach to agricultural intensification. Keys to realizing this potential are:

- Consistent and effective training of smallholders, extension support and establishment of stable market linkages to give farmers the confidence to further invest in their farms and go beyond subsistence approaches to farming. This can be achieved through integrating Organic Agriculture practices and systems into extension and training programs, as well as into policies on climate change, food security, land degradation and drought, biodiversity and sustainable development.
- Strategic partnerships with key stakeholders in East Africa and internationally to implement Organic Agriculture based sustainable development that addresses hunger, rural poverty, climate change and land degradation. The recently established AU-led African Ecological Organic Agriculture Initiative for Africa, which seeks to mainstream ecological Organic Agriculture into the African Development Agenda, could be an ideal vehicle for realizing this approach not only in East Africa, but also across the continent. The AU Commission therefore should also be a key partner going forward, especially within the context of existing important policy frameworks such as their Comprehensive African Agriculture Development Programme (CAADP).
- Advocacy for much greater support of research into Organic Agriculture practices and systems. Given the global shift towards more sustainable agriculture and the need to strengthen smallholders, greater support of research into the economic, environmental and social benefits of organic systems is warranted.



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## PRODUCTIVITY AND PROFITABILITY OF ORGANIC FARMING SYSTEMS IN EAST AFRICA

### Introduction

The use of biodiversity, ecosystems services and the greater integration of affordable and people-centered ecological agriculture practices and systems are now widely recognized as a sustainable and appropriate option to address the current food insecurity, and optimize the climate resilience of farming systems.

For example, the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) report outlined the needs for agro-ecological approaches, the use of appropriate and low-cost technologies, and a focus on capacity building for small holding farmers including women. The African Union Summit decision on Organic Farming requested the African Union Commission (AUC) and the New Part-

nership for Africa's Development (NEPAD) Planning and Coordinating Agency to initiate and provide guidance for an African organic farming platform based on available best practices; and to provide guidance in support of the development of sustainable organic farming systems and improve seed quality. Despite this increased recognition, mainstream solutions proposed for increasing food security in Africa are still based on economically and environmentally unsustainable imported input products.

This literature review assesses what organic agriculture might hold for smallholders in East Africa (Kenya, Tanzania, Uganda, Burundi and Rwanda) in terms of productivity and profitability.



## Understanding of Organic Agriculture, Productivity & Profitability

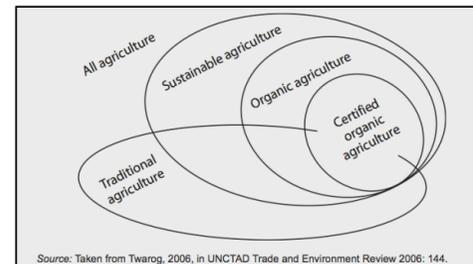
THE INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS (IFOAM) DEFINES ORGANIC AGRICULTURE AS "A PRODUCTION SYSTEM THAT SUSTAINS THE HEALTH OF SOILS, ECOSYSTEMS AND PEOPLE. IT RELIES ON ECOLOGICAL PROCESSES, BIODIVERSITY AND CYCLES ADAPTED TO LOCAL CONDITIONS, RATHER THAN THE USE OF INPUTS WITH ADVERSE EFFECTS. ORGANIC AGRICULTURE COMBINES TRADITION, INNOVATION AND SCIENCE TO BENEFIT THE SHARED ENVIRONMENT AND PROMOTE FAIR RELATIONSHIPS AND A GOOD QUALITY OF LIFE FOR ALL INVOLVED."

Productivity measures yield compared to production factors such as land (yield per hectare), labor (yield per labor hour) and capital (other production costs). Profitability is about the net margin for a certain crop, but from a livelihood perspective also net income is relevant.



### 2. Detailed, independent, academic research on the productivity and the profitability of Organic Agriculture in East Africa (certified or not) is very limited and in-depth organic comparative research is even scarcer.

This lack of research is in line with the general under-representation of organic research in agricultural research programs as a whole.



Conceptual relationship between traditional (organic by default), sustainable agriculture, Organic Agriculture and certified Organic Agriculture in the context of all agriculture.

## Main Findings

### 1. Identifying organic farms beyond those that are certified is difficult, given the current nature of small holding farming in East Africa.

The majority of farms in East Africa are small family farms, which can rarely afford to purchase synthetic inputs. They are therefore sometimes considered as organic by default. Once farmers make a conscious decision to apply organic practices or conventional inputs to enhance agricultural production, defining the type of farming system is easier with a progression from traditional to low input conventional traditional or Organic Agriculture.

### 3. The limited literature available clearly points to significant yield increases when Organic Agriculture practices are used to improve low input conventional traditional agriculture in East Africa.

This finding is in line with experiences in other parts of Africa both for certified and non-certified Organic Agriculture. Hine et al. (2008<sup>1</sup>) found an average crop yield increase of 116% across Africa and 128% for projects in East Africa when farmers switched from low input traditional farming to systems using organic or near organic practices.



### 4. Organic Agriculture in East Africa is dominated by well-established certified organic export-orientated value-chains

in Uganda and Tanzania. Uganda and Tanzania have by far the most developed certified organic sectors in East Africa. The sectors consist of export-orientated value-chains responding to demand from well-established organic markets in Europe, USA and Japan.

In Uganda the number of certified organic farmers was approx. 188,000 in 2008/09 with an export value of USD 42 million in 2010/11. Cotton, sesame and coffee are the most traded crops with other major organic export products being cocoa, dried fruits, frozen fruit/pulp, fresh mainly tropical fruit and spices. Tanzania had an estimated 115,000 ha of certified organic farmland in 2011 with an estimated 145,000 producers in 2013 producing mainly coffee, tea, nuts, spices and vegetables. Organic Agriculture in Kenya is much more limited, with less than 5,000 ha of certified production. However, the local market is more developed and there is a history of promoting Organic Agriculture as a rural development tool lead by NGOs, Community Based Organizations, local organic training institutions etc. A number of horticultural companies grow organic vegetables mainly for export. Certified organic production in Rwanda and Burundi is smaller again.



The East African Organic Mark. It can be used for products produced according to the East African Organic Products Standard.

<sup>1</sup> Hine, J., J. Pretty & S. Twarog (2008), *Organic agriculture and Food security. Capacity Building Task Force on Trade, Environment and Development (CBTF), UNEP-UNCTAD*, 47p.

### 5. Organic Agriculture can have many positive system impacts compared to conventional and under-developed traditional farming

Organically managed soils have a high water storage and retention capacity, which is particularly important during drought periods. Well-managed organic production systems are diverse in terms of the number of species and varieties, as well as in the integration of trees, shrubs, crops and soil cover crops, and the establishment of a multitude of ecosystems at micro-level. Such ecologically intensified systems increase nutritional diversity and marketing options, they minimize the proliferation of pest and disease and significantly reduce risk of crop failure. The integration of livestock and crop production enable the production of valuable livestock products while sustaining the fertility of the production system through the recycling and production of plant absorbable nutrients aided by composting.



### 6. The utilization of organic practices for improving the livelihoods as well as enhancing food access to food and food availability is largely an untapped opportunity in East Africa.

The export value of organic products from Uganda and Tanzania in 2010/11 was USD 42 million and USD 14 million respectively. These sectors have improved the livelihoods of approximately 330,000 farmers through application of organic farming practices and access to premium overseas markets. While these initiatives however are not primarily aimed at increasing local food availability they can contribute to local food security for two reasons. Firstly, significant proportions of the produce end up, for various reasons, being sold in local conventional markets for local consumption and, secondly, the raised incomes of these farmers provide them with the cash to access food – provided it is available.

Organic Agriculture enables farmers to improve their production systems and productivity without the need for significant financial outlay. Therefore, all produce need not necessarily have to be sold at a premium to be profitable for the farmer.