

## CASE STUDIES: ORGANIC AGRICULTURE

## **CASE STUDY 1: Certified Organic cotton in Uganda**

Cotton farming was introduced to Uganda in the 1940s, but slowed almost to a halt between 1972 and 1986 due to low prices and an unfavourable policy environment, attributed to armed rebellion and insecurity. Since the end of the civil war in 1986, peace allowed the new government to focus on the modernisation of agriculture. A revival in agriculture and cotton farming followed which opened the way for small-scale organic cotton farmers in certain regions of Uganda. Between 1994 and 2000, the number of cotton farmers in Uganda grew from just 200 to 24,000.

The Export Promotion of Organic Products from Africa (EPOA) works with smallholder farmers – the majority of which are resource poor – through cooperative unions that provide technical advice on organic production methods and marketing. Soil fertility and pest management is maintained with traditional organic practices such as crop rotations and natural pest control, such as push-pull. Organic cotton production from this project achieves yields of 1,000–1,250kg per hectare of seed cotton, giving 300-320kg per hectare of lint.



Organic cotton in Uganda. Credit, Organic Exchange

Organic cotton receives premium prices compared to cotton produced through conventional methods, which translates to a 15-20% premium for farmers on farm gate prices. Finally, famers' social capital has improved through the formation of cooperatives and an increase in farmers' knowledge of organic methods from peer to peer training.

## CASE STUDY 2: Organic vegetables in Mkuranga District, Tanzania

Farmers from the Mkuranga region in Tanzania traditionally earn their income from rice and cassava production. Since 2004, women from the region have formed groups to



Smallholder farmers at market in Tanzania. Credit, Fintrac Inc.

collaborate on organic vegetable production and processing activities. A 2-year project was initiated in the villages of Sotele and Kitomondo in Mkuranga District using participatory approaches to transfer organic vegetable farming technologies. First, 60 women farmers were randomly selected, 30 from each village and trained in organic vegetable production though the use of on-farm demonstration plots. The women learned techniques for seed-bed preparation, sowing, transplanting, plant protection and soil replenishing using natural and locally available materials.





Neemcake was used as a pesticide and marigold and *desmodium* as repellents; farmyard crop residues and crop rotation helped to improve soil fertility.

The women produced okra, sweet pepper, and *Amaranthus* (African spinach). With the support of the project, their average yields increased significantly from 1,225kg per hectare to 11,550kg per hectare. The average area under vegetable production per household increased from 300m² to 10,000m², indicating that women benefitted from the production and sale of organic vegetables. Indeed, their income from vegetable sales in Sotele and Kitomondo villages increased from TSh250,000 (US\$126) to TSh3,365,000 (US\$1,528). Although the marketing system was not well organised, the women were able to see their produce to schools, teachers, at village markets and to neighbouring villagers motivating the women to continue growing organic vegetables.<sup>3</sup>

## CASE STUDY 3: Organic Management practices in Ethiopia

The Tigray Region was once widely considered to be the most degraded area of Ethiopia, contributing to low agricultural production and exacerbating rural poverty. By 1975, the dryland forest and woodland vegetation in the region suffered from overgrazing, demand for fuel wood, and increased cultivation. Tigray also experienced record low rainfalls in the mid-1980s,<sup>4</sup> one of the triggers for the devastating famine from 1983-1985 that led to more than 400,000 deaths.<sup>5</sup>



Field training for farmers in Tigray. Credit, USAID

Originally named 'Sustainable Development and Ecological Land Management with Farming Communities in Tigray,' The Tigray Project was founded by the Institute for Sustainable Development (ISD) in 1996. It is a broad-based, open-ended experiment by farmers and local experts that began in just 4 communities. By 2011, the majority of communities in Tigray were participating in the project with benefits accruing to 6 million of the 12 million smallholder farming households in Ethiopia.<sup>6</sup>



Girls school Ethiopia. Credit, DFID

The project is farmer-led and builds on local technologies and knowledge, supported by the Tigray Agricultural Development Bureau that deploys more than 3,000 extension officers to provide support. Their main activities include soil conservation through terracing and agroforestry consisting of compost making, restricting free-range grazing, water conservation, bee keeping and the use of bio-pesticides developed with local knowledge. Each adult community member offers 40 days of free labour to help with water and soil conservation,

gully rehabilitation, and improving community infrastructure. Women-headed and elderly families have benefitted particularly from receiving seeds to grow spice plants and training in how to raise fruit







trees and sell the saplings. Girls are also supported by the project to complete their formal schooling.

More than 6 million formerly degraded hectares are now considered rehabilitated. Water table levels and permanent springs have improved and soil fertility and biodiversity have increased. Furthermore, data collected in 2002, 2003 and 2004 showed that on average, composted fields produced higher yields, sometimes double, than those treated with chemical fertilisers. The FAO continues to support more than 32 different farmers organisations in the Tigray region to implement a wide range of fruit nurseries. §

The FAO now considers Tigray to be approaching household and regional food security, although there is still progress to be made. A 2009 World Food Programme report on food security in Tigray in found that 14.5% of households had poor food consumption, 28.3% had borderline food consumption and 57% acceptable food consumption.<sup>9</sup>



<sup>&</sup>lt;sup>7</sup> Kjær, AM & Joughin, J 2010, <u>'The politics of agricultural policy reforms: the case of Uganda'</u> Forum for Development Studies vol. 37, no.1, pp. 61-78.

<sup>&</sup>lt;sup>2</sup> UNEP-UNTCAD Task Force on Trade, Environment and Development 2008, <u>Organic Agriculture and Food Security in Africa</u>. United Nations, New York and Geneva.

<sup>&</sup>lt;sup>3</sup> UNEP-UNTCAD Task Force on Trade, Environment and Development 2008, <u>Organic Agriculture and Food Security in Africa</u>, United Nations, New York and Geneva.

<sup>&</sup>lt;sup>4</sup>Webb. P & von Braun, J 1994, *Famine and Food Security in Ethiopia: Lessons for Africa* John Wiley and Sons, Chichester.

<sup>&</sup>lt;sup>5</sup> Edwards, S, Egziabher, TBG & Araya, H 2010 '<u>Successes and challenges in ecological agriculture, experiences from Tigray, Ethiopia' in Food Systems Resilience in Sub-Saharan Africa</u>, eds LL Ching, S Edwards & N El-Hague Schialabba, Food and Agruicultre Organisation of the United Nations (FAO), Rome pp. 231-298.

<sup>&</sup>lt;sup>6</sup> Food and Agruicultre Organisation of the United Nations (FAO) 2014, <u>Sustainability Pathways, selected topics of interest to sustainable food and agriculture.</u> Food and Agruicultre Organisation of the United Nations (FAO), Rome.

<sup>&</sup>lt;sup>7</sup> Food and Agruicultre Organisation of the United Nations (FAO) 2014, <u>Sustainability Pathways</u>, <u>selected topics of interest to sustainable food and agriculture</u>. Food and Agruicultre Organisation of the United Nations (FAO), Rome.

<sup>&</sup>lt;sup>8</sup> FAO's Fruit Nurseries in Amhara and Tigray Regions- Vibrant Projects Full of Promise, 2009. Focus Magazine March 2009 pp. 40-66 Available from: <a href="http://www.fao.org/uploads/media/FocusMagazine8.pdf">http://www.fao.org/uploads/media/FocusMagazine8.pdf</a> [25 June 2015].

<sup>&</sup>lt;sup>9</sup> World Food Programme (WFP) 2009, <u>Food Security and Vulnerability in Selected towns of Tigray Region, Ethiopia: Vulnerability Assessment and Mapping (VAM)</u> WFP-Ethiopia, Addis Ababa.