



## Sustaining African Agriculture Organic Production

***Agriculture has returned to the centre of international policy debates. Years of declining investment, inadequate extension services and the availability of subsidized food exports from the developed world have undermined agricultural production in many developing countries, particularly in Africa. This Policy Brief examines the potential contribution of organic agriculture.***

The International Assessment of Agricultural Knowledge, Science and Technology for Development – an inter-governmental process supported by over 400 experts and many United Nations Agencies – concluded that “the way the world grows its food will have to change radically to better serve the poor and hungry if the world is to cope with growing population and climate change while avoiding social breakdown and environmental collapse”. Nowhere is this truer than in Africa, whose food insecurity problems will only get worse as it bears the brunt of global climate change.

It is often argued that Africa needs to follow the agro-industrial “Green Revolution” model implemented in many parts of Asia and Latin America in previous decades. Using strains of crops that required agrochemical fertilizer, pesticides and irrigation, these methods increased yields. But they also damaged the environment, caused dramatic loss of agrobiodiversity and associated traditional knowledge, favoured wealthier farmers and left some poorer ones deeper in debt.

This can not be sustainable in Africa, a continent that imports 90 per cent of its agrochemicals, which most of the small-scale farmers cannot afford. It will increase dependencies on foreign inputs (agrochemical and seeds of protected plant varieties) and foreign aid. Africa should build on its strengths – its land, local resources, indigenous plant varieties, indigenous knowledge, biologically diverse smallholder farms and limited use (to date) of agrochemicals.

It is time for the African Sustainable Green Revolution – to increase agricultural productivity by using sustainable agricultural practices that minimize harm to the environment and build soil fertility.

### **Organic agriculture**

UNCTAD has been working closely with the United Nations Environment Programme (UNEP), the Food and Agriculture Organization of the United Nations, and the International Trade Centre UNCTAD/World Trade Organization (ITC) over the past five years on harnessing the potential of organic agriculture for development – one of the most promising options to meet these challenges.

### **What is organic agriculture?**

Organic agriculture is a holistic production system based on active agroecosystem management rather than on external inputs. It builds on traditional agriculture and utilizes both traditional and scientific knowledge. It is a form of sustainable or ecological agriculture that involves production according to precise standards.

Organic agriculture offers a wide range of food security, economic, environmental and social benefits.<sup>1</sup>

### **Increased productivity and improved food security**

Organic agriculture builds soil fertility and structure by restoring carbon and nutrients to the soil through sustainable land and water management techniques such as composting, cover crops, mulching and crop rotation. According to soil scientists, this can help African crops reach their full genetic potential of yielding two to four times more than they currently do.

UNEP–UNCTAD research<sup>2</sup> shows that organic agriculture is a good option for food security in Africa – equal or better than most conventional systems and more likely to be sustainable in the longer term. The study’s analysis of 114 cases in Africa revealed that a conversion of farms to organic or near-organic production methods increased agricultural productivity of 116 per cent. Moreover, a shift towards organic production systems has enduring impact, as it builds up levels of natural, human, social, financial and physical capital in farming communities.

For example, under the Environmental Action Team project in Kenya, maize yields increased by 71 per cent and bean yields by 158 per cent. Moreover, increased diversity in food crops available to farmers resulted in more varied diets and thus improved nutrition.<sup>3</sup> For 20,000 farmers in Tigray, previously one of the most degraded regions of Ethiopia, crop yields of major cereals and pulses have almost doubled through the use of ecological agricultural practices such as composting, water and soil conservation activities, agroforestry and crop diversification.<sup>4</sup>

<sup>1</sup> For a more complete overview, see article by Sophia Twarog in UNCTAD Trade and Environment Review 2006 (UNCTAD/DITC/TED/2007/15). All UNCTAD publications on organic agriculture are available on [www.unctad.org/trade\\_env](http://www.unctad.org/trade_env).

<sup>2</sup> UNCTAD–UNEP (2008). *Organic Agriculture and Food Security in Africa*. (UNCTAD/DITC/TED/2007/15).

<sup>3</sup> *Ibid.*

<sup>4</sup> Report of the African Union Conference on Ecological Agriculture: Mitigating Climate Change, Providing Food Security and Self-Reliance for Rural Livelihoods in Africa. Addis Ababa: 26–28 November 2008.



## Reduced dependence on external inputs

Organic agriculture relies on local renewable resources instead of external inputs. This reduces rural communities' vulnerability to external price volatility caused by factors far beyond their control. Moreover, organic agriculture builds on and keeps alive farmers' rich heritage of traditional knowledge and traditional agricultural varieties.

## Increased earnings

The potential to export to consumers willing to pay premium prices for certified organic products generates significant income possibilities for African organic farmers. Global markets have been growing at rates of over 15 per cent a year over the past two decades. Between 2002 and 2007, global certified organic sales doubled to reach \$46 billion<sup>5</sup> and are expected to increase to \$67 billion by 2012. Even in this current economic crisis, where demand for most products is dropping fast, demand for organic products continues to grow. While sales are concentrated in North America and Europe, production is global, with developing countries producing and exporting large and ever-increasing shares. Africa is home to some 20–24 per cent of the world's certified organic farms. Exports of organic products from Africa are increasing fast. E.g., organic exports from Uganda quintupled in five years – from \$4.6 million in 2002/03 to \$22.8 million in 2007/08. Price premiums for farmers range from 30 to 200 per cent.<sup>6</sup>

Organic production is also particularly well-suited for smallholder farmers, who comprise the majority of Africa's poor. Resource-poor organic farmers are less dependent on external resources and experience higher and more stable yields and incomes, enhancing food security. Studies from Africa, Asia and Latin America indicate that organic farmers earn more than their conventional counterparts. UNCTAD research shows that in Uganda, for example, an in-depth study of 331 farmers found that those engaged in certified organic export production had significantly higher incomes than their conventional counterparts. Conversion to organic was fairly easy, involved little risk and required few, if any, fixed investments. The organic households became more food-secure due to higher incomes.<sup>7</sup>

## Environmentally friendly

Organic production offers a range of environmental benefits. It does not pollute the environment with agrochemicals, and also reduces illness and death in farm families due to agrochemical exposure – a leading cause of occupational mortality and morbidity worldwide. Organic agriculture actually conserves biodiversity and natural resources on the farm and in the surrounding areas. It improves soil fertility and structure, thus improving water retention and resilience to climatic stress, contributing to climate change adaptation. Finally, it mitigates climate change by utilizing less energy than conventional agriculture and also by sequestering carbon.

For all these reasons, organic agriculture can be a powerful tool for achieving the Millennium Development Goals, particularly those related to poverty reduction and the environment.

## Challenges

But there are also challenges for African countries in seizing these opportunities, particularly in terms of building productive capacities and market access and entry difficulties.

Organic and other forms of sustainable agriculture receive little support from African Governments. Some policies, such as agrochemical subsidies, tilt the playing field away from organic producers. Organic agriculture is virtually absent in agricultural education, extension services, and R&D. Misinformation is a big barrier in Africa – e.g. equating organic agriculture with simply not applying agrochemicals or with traditional agriculture, or the myth that organic yields are lower than conventional yields.

This lack of awareness of organic agriculture, combined with dispersed supply, means that domestic markets for organic products are small, albeit growing. For accessing international markets, certification can be difficult and costly, especially as each market has its own standards and conformity assessment systems. There is a need for greater coherence at the international level. UNCTAD and partners have been working on solutions to help reduce the technical barriers to organic trade.<sup>8</sup>

## Recommendations

There is a need for a global partnership for an African Sustainable Green Revolution. Key steps identified in the UNCTAD–UNEP *Best Practices for Organic Policy: What Developing Country Governments Can Do to Promote the Organic Agriculture Sector* include:

- Setting sustainable agriculture as a priority;
- Assessing current policies and programmes, and remove disincentives to sustainable/ecological/organic agriculture – for example, subsidies on agrochemicals;
- Training extension workers in sustainable agricultural practices;
- Encouraging farmer-to-farmer exchanges;
- Compiling and disseminating indigenous agricultural knowledge and varieties;
- Funding research on sustainable agriculture, building on indigenous knowledge in response and in partnership with farmers; and
- Promoting development of local and regional markets for organic products.

In addition, 92 per cent of sub-Saharan African households have no access to electricity or other modern cooking energy, with significant costs in terms of forest degradation, time spent in firewood collection and health problems due to indoor pollution. Potential synergies between organic agriculture and biogas based on manure and agricultural waste should be explored. There is a need for South–South cooperation on this issue – for example, sharing the experiences of China, India and Bangladesh.

The international community should;

- Reverse the decline in ODA to African agriculture
- Increase support to African sustainable agriculture;
- Reduce organic market entry barriers, including by recognizing African standards such as the East African Organic Products Standard<sup>9</sup>.
- Explore schemes to make payments to smallholder organic farmers in Africa for carbon sequestration and ecosystem services.

<sup>5</sup> Sahota A (2009). The Global Market for Organic Food and Drink. In: Willer H and Kilcher L (eds.) (2009). The World of Organic Agriculture. Statistics and Emerging Trends 2009. IFOAM, Bonn; FiBL, Frick; ITC, Geneva.

<sup>6</sup> For example, in Uganda the farm gate price for organic pineapples is 80 per cent higher than for conventional pineapples; for ginger, it is 185 per cent higher; for cotton it is 33 per cent higher. National Organic Agriculture Association of Uganda 2008.

<sup>7</sup> UNCTAD (2008). Certified organic export production: Implications for economic welfare and gender equality among smallholder farmers in tropical Africa. (UNCTAD/DITC/TED/2007/7); IFAD (2003). The adoption of organic agriculture among small farmers in Latin America and the Caribbean; IFAD (2005). Organic agriculture and poverty reduction in Asia: China and India focus.

<sup>8</sup> UNCTAD-FAO-IFOAM International Task Force on Harmonization and Equivalence in Organic Agriculture. www.itf-organic.org.

<sup>9</sup> Developed with the support of UNEP-UNCTAD CBTF and the International Federation of Organic Agriculture Movements (IFOAM).