Policy brief
2023 | International Edition | No. 1245

Advancing ecological organic agriculture in Africa

State of scientific evidence and recommendations

African food systems are facing a number of interconnected challenges, due to the negative impacts of climate change, among other factors. Nevertheless, Africa holds a primordial position to create more resilient and sustainable food production systems.

More than half of the African population base their livelihood on agriculture; and half of Africans live in urban regions due to a strong rural exodus over the last 50 years. There is substantial evidence illustrating that the dominant agricultural systems feeding the growing population are not a sustainable option for the future. Global environmental and social challenges are especially pronounced on the African continent, and the adverse effects of climate change, biodiversity loss, and food and nutrition insecurity make a transition to ecological organic food systems imperative.

Organic agriculture and agroecological approaches are gaining importance in Africa as they are supposed to enhance nutrition security and well-being of both smallholder farmers and urban consumers by contributing to healthy, diversified diets.

Currently, only ~1 % of the 204 Mio ha arable land in Africa is dedicated to certified organic farming[6]. A multitude of land is farmed in non-certified or agroecological ways. However, for African food systems to flourish and contribute to sustainable development, institutions, policies, programmes, markets and society must support a conducive environment for change.

Key messages

- The profitability and productivity of organic farming in the tropics can equal or exceed that of conventional farms.
- Ecological organic agriculture requires a shift of approach – to active, holistic farming. This is knowledge intensive and requires auxiliary institutions and policies.
- The policy landscape must strengthen to capitalise on the benefits of ecological organic agriculture and food safety.
- Markets must adapt to serve the distinct needs of organic farmers and consumers.
- Networks across levels and borders must improve.

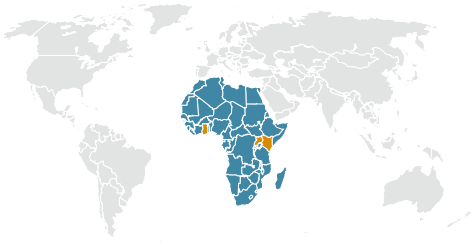
FiBL

Scope

Based on the lessons learnt from farming systems research, pursuant to the goals of sustainable development, the topics covered and policy recommendations provided in this brief are relevant to agricultural policies at the national and regional level, as well as to the actors in specific commodities and sectors, organic value chains, and standards.

This brief considers how the results of three projects, SysCom, ProEcoAfrica and OFSA can inform the debates on the future of organic agricultural development in Africa. The SysCom project consists of long-term farming systems comparison trials running since 2007 in three tropical countries: India, Kenya and Bolivia. The ProEcoAfrica and OFSA projects worked with over 1,500 smallholder farmers in Ghana, Kenya and Uganda gathering data on the farm level between 2014 and 2020.

The projects worked with and for farmers, using various methods from participatory on-farm research to on station and field research. The goal of these projects is/was to enhance the scientific evidence about the performance of organic agriculture in comparison to conventional agriculture in the tropics, investigating the topics of productivity, profitability, soil fertility and sustainability.



The research featured here is focused on the African continent. The three countries in orange, Ghana, Kenya and Uganda, are where the featured research projects focus(ed) their work.

Key results

Ecological organic agriculture can provide many benefits to people and nature. The profitability and productivity of organic farming in the tropics can equal or exceed that of conventional farms. Additionally, well-managed organic farming systems can increase soil fertility, improve water quality, reduce pesticide residues, and enhance biodiversity above and below ground.

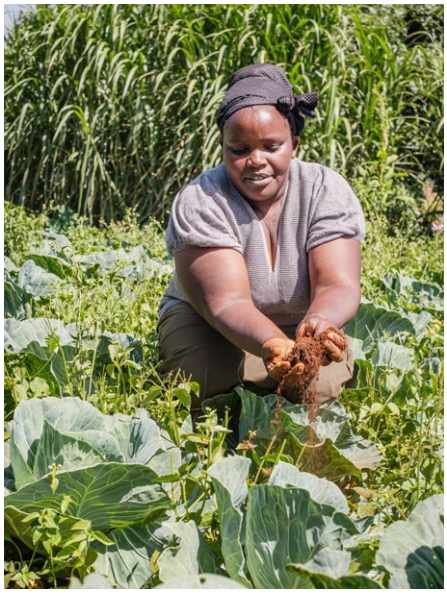
To realise these benefits, organic farmers must go beyond just eliminating synthetic agrochemical inputs and engage in active organic management practices on their farms, in line with agroecological principles. The ecological approach to organic farming is explained in detail, with examples, here > Link.

The profitability and productivity of organic agriculture can match or even exceed that of conventional agriculture. This is dependent on the type of crop, management practices and size of the field and farm. On average, farm income on some organic farms more than doubled compared to conventional, despite the fact that the farmers realised no organic price premium. However, research also showed that organic is more labour-intensive than conventional.

Soil fertility improved over the long term with good organic management. Research showed that after about 10 years, organic systems build up important nutrients and soil organic carbon, have a higher biological activity and improve soil's physical properties. Nonetheless, certain nutrients are less available in organic systems because they are applied in less plant-available forms. Such missing nutrients at key stages can lead to lower yields in nutrient demanding crops in organic systems.

Additional benefits that organic systems offer to society and the environment compared to conventional systems are, e.g., reduction of pesticide residues in soils, crop products and run-off water, enhanced flora and fauna diversity and abundance, reduction of non-renewable energy resources used, and increased farm resilience. The approach is more sustainable regarding environmental attributes, as well as some social, economic and farm governance attributes when compared to conventional farming.

Engage in active organic management to be successful instead of just eliminating or simply substituting synthetic agrochemicals for organic-approved products. The projects concluded this is a key to success in organic farming in the tropics. However, this approach is knowledge-intensive – farmers and advisors have to continuously learn, experiment, adapt and share knowledge and skills with others.



Resurrected soils – Kenyan organic farmer, Joyce Angari in her cabbage field showing her healthy, productive soil.

Beatrice Mkawuganga Maganga, a certified organic farmer in Kenya, since 2009. She raises animals and crops for the local market, but also exports her avocados as a member of a farmers' cooperative.

Box 1. Key agreements supporting the advancement of ecological organic agriculture in Africa

The high-level decision by the African Union Heads of States and Governments on Organic Agriculture (OA) in 2011 resolved to mainstream organic agriculture into national plans, programmes and policies by 2020 (now 2025).

This high-level decision led to the subsequent implementation of a multi-year continental initiative on Ecological Organic Agriculture (EOA-I > Link) outlining the politically recognised importance of organic and sustainable agriculture beyond certified organic in Africa.

Policy recommendations

In order to capitalise on the benefits organic agriculture can offer the environment and society, institutions and programmes dealing with sustainable/ecological organic food systems must be strengthened. Governance systems need to work on four main axes:

1. Enact policies and strategies for organic agriculture and food safety

Most Sub-Saharan African nations lack basic national or subnational organic strategies or policies which would enable organic agricultural uptake. To create enabling environments for organic, governments can:

- Create specific organic agricultural policies or strategies – especially if they lead to a national organic standard. Both Uganda and Tunisia are examples of countries in Africa that have national organic policies. Tunisia has had a national organic policy since 1999 and has created a national action plan that, amongst other things, provides financial incentives (tax breaks and subsidies) for producers that are converting to organic agriculture[1]. Within this context, Tunisia is to date the African country with the largest organic area[6].
- Consider the support of organic agriculture within the framework of enhancing the share of agroecological agriculture, achieving the Sustainable Development Goals (including zero hunger, decent work and economic growth, fight against land degradation and desertification), and generating employment.
- Enact and implement food safety policies that limit, for example, synthetic pesticide residues and protect rivers and groundwater from harmful fertiliser runoff.
- FAO estimated that, "if women had the same access to productive resources as men, they could increase yields on their farms by 20–30 percent." Policies to strengthen organic agriculture thus need to also strengthen the access of women and other disadvantaged groups to resources and markets.[5]

2. Make markets work for farmers and consumers

To ensure markets serve farmers and consumers and that the economic benefits of organic farming (in terms of premium prices) are realised, externalities (i.e., the costs of agriculture to society and the environment) must be internalised. Concretely, these actions can be taken:

- Get rid of governmental subsidies for synthetic agrochemicals, instead invest in research and development of organic practices and inputs. Ensure at least a symmetry of subsidies to give a fair choice to the producers.
- Establish public procurement programmes, such as school feeding programmes – these should offer incentives for family farmers and those who practice more environmentally friendly farming, as is the case, for example, in Brazil[2]. In general, any policies that reimburse farmers for ecosystem services (e.g., on-farm practices that support biodiversity, like agroforestry systems, flower strips, etc.) should be advanced.
- Support and constitute measures and policies that improve necessary infrastructure, to ensure farmers' products can reach markets – this includes, but is not limited to transportation and storage infrastructure, access to electricity, schooling and natural resources, such as water and irrigation infrastructure.
- Create markets for more diverse produce – invest in education and communication around the benefits of organic, health and environmental risks associated with synthetic pesticide use, nutrition and healthy foods – focusing on a diverse diet.

Together it works! Ghanaian farmers involved in the ProEcoAfrica project in conversation about organic cotton productivity.

Box 2. Ecological organic agriculture and agroecology

Active ecological organic farming works with nature and helps sustain living ecological systems and cycles, this includes: soil, plants, animals, household, society and the environment. This approach requires a focus on productivity of the whole farm system over the long term using organic best practices instead of focusing on short-term income from single crops.

Agroecology considers the interactions among key environmental, social and economic characteristics that are typical of diversified agricultural systems. It recognises the great potential of knowledge sharing, and deepened understanding, that favour the behavioural changes in food systems that are required for sustainable agriculture to become a reality.[4]

Ecological organic agriculture comprises agroecology, certified and non-certified organic farming. The boundaries between them are fluid, and differences are often on ideological bases as opposed to technological or practical bases.

3. Address the distinct needs of organic agriculture

The holistic, ecological approach taken in organic agriculture presents different needs, compared to conventional – the approach is more knowledge and labour intensive, this requires:

- An increase in government investment into agricultural research and development (as per the 10 % of the government spending goal agreed upon by African Heads of State in the Maputo and Malabo Declarations)[3]. Economic and institutional support for organic agricultural research should be advanced, especially in the following areas:
  - Optimising nutrient management, carbon storage and tillage practices,
  - Enhancing synergies between crops and livestock,
  - Increasing the availability of high quality planting materials/starter materials, and
  - Further developing and testing system approaches for pest and disease management (preventative and direct control measures).
- Strengthening of public and private extension systems – allocating more funding, utilising innovative digital technologies and testing novel financing mechanisms for these services. More support is required for agricultural advisors and extensionists training programmes in agroecology and organic agriculture.
- Improving the attractiveness of rural spaces – regarding economics and infrastructure. If more knowledge and labour-intensive approaches are to prosper, rural spaces as a whole need to become more attractive, especially for the youth. This means strengthening rural infrastructure such as mobile internet and incentivising companies to invest in rural areas via policies.
- Adapting technical innovations and medium-scale mechanisation to local conditions, thus reducing the need for manual labour. This action is key to empowering small-scale organic farmers. Such innovations can help sustain and increase farmers' activities, lower their production costs and improve their livelihoods and food security.
- Harmonising policies and minimising conflicting programmes that may hinder the successful uptake of organic agriculture and other agroecological technologies and practices.

4. Better networking and cooperation at local, national and regional level

The diverse actors, both individual and collective, from private, community and state sectors, must improve cooperation and align various projects and programmes in order to increase the sustainability and resilience of the sector. Concretely, actors can:

- Promote and facilitate social learning among farmers.
- Improve networking – share information, knowledge and project insights. Proactively look for and build alliances and mutualisation, e.g., organise tours and exchanges to model ecological organic farms and research stations.
- Consult broadly and ensure public participation in policy and regulatory formulation/reviews and decision making processes. Use evidence to build support for reform and resist pressure from vested interests that may not be sustainable in the long term.
- Focus on sustainable farming practices that work with nature instead of ideologies. Agroecology is an umbrella term that covers lots of sustainable agricultural practices, like ecological organic, certified or not, agroforestry, biodynamic, etc.
- Exploit synergies, across geographic levels (local, national, sub-regional or regional).

Further information

SysCom project

- Project website > Link
- Project Synthesis Report > Link
- Project publications > Link
- Site description videos:
  - Bolivia > Link
  - India > Link
  - Kenya > Link

ProEcoAfrica/OFSA project

- Project website > Link
- Project publications > Link
- Can organic agriculture improve yields and incomes for smallholder farmers in Africa? Video: > Link

Further knowledge products in the series

Factsheets, Powerpoint presentations, posters and videos cover topics such as: the ecological approach to organic farming, pest and disease, productivity, soil, profitability and biodiversity > Link

References

This policy brief is based on more than 60 publications written by experts involved in the previously mentioned research projects.

1 Carey, C. Governmental Use of Voluntary Standards Case Study 9: Tunisia's Organic Standard. ISEAL Alliance, (2008). https://platform.isealalliance.org/sites/default/files/E054_Tunisia_Organic.pdf

2 da Silva, E.A.; Pedrozo, E.A.; da Silva, T.N. PNAE (National School Feeding Program) and Its Events of Expansive Learnings at Municipal Level. World 2022, 3, 86-111. https://doi.org/10.3390/world3010005

3 Goyal, A., Nash, J. Reaping Richer Returns: Public Spending Priorities for African Agriculture Productivity Growth. African Development Forum – World Bank Group. 2016. https://openknowledge.worldbank.org/handle/10986/25996

4 HLPE. Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition. (2019). A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.

5 Raney, Terri (Eds.). Women in Agriculture – Closing the gender gap for development. The state of food and agriculture 2010-11. (2011). Office of Knowledge Exchange, Research and Extension, Food and Agriculture Organization of the United Nations, Rome, Italy. ISSN 0081-4539.

6 Willer, Helga, Jan Trávníček, Claudia Meier and Bernhard Schlatter (Eds.) (2022): The World of Organic Agriculture. Statistics and Emerging Trends 2022. Research Institute of Organic Agriculture FiBL, Frick, and IFOAM – Organics International, Bonn. ISBN 978-3-03736-434-5.

Imprint

This policy brief is a part of a series of knowledge products produced as an outcome of the SysCom and ProEcoAfrica projects. For further information on these projects refer to the corresponding project description factsheet > Link.

The purpose of this knowledge series is to educate African farmers, advisors, students and policy makers on research results related to organic farming.

Publisher
Research Institute of Organic Agriculture FiBL, Switzerland, Ackerstrasse 113, Postfach 219, CH-5070 Frick
Tel. +41 (0)62 865 72 72
info.suisse@fibl.org, www.fibl.org

Authors: Benjamin Graeub, Lauren Dietemann, Gian Nicolay, David Bautze, Beate Huber (all FiBL CH)

Contact: beate.huber@fibl.org

Contributors: Noah Adamtey, Irene Kadzere (all FiBL CH)

Editor: Lauren Dietemann (FiBL CH)

Layout: Brigitta Maurer (FiBL CH)

Photos: Alexander Valeton (Yielder) page 1, 3, Joost Bastmeijer (Biovision) p. 2, Gian Nicolay (FiBL) p. 4.

FiBL ordering no.: 1245

Permalink: orgprints.org

Knowledge product funders

Projects involved

Project funders

FiBL is one of the world's leading research institutions on organic farming. It has offices in Switzerland, Germany, Austria, France and a representative office in Brussels (FiBL Europe). The strengths of FiBL are interdisciplinary research, joint innovations with farmers and the food industry, solution-oriented development projects and rapid knowledge transfer. The views expressed in this policy brief belong to the author(s) and do not necessarily reflect those of FiBL, or any associated institutions or individuals.