SOWING THE SEEDS

for Sustainable Food Systems in Africa

Success Stories from the Ecological Organic Agriculture Initiative, Phase I & II

March 2023

RWANDA

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ECOLOGICAL ORGANIC AGRICULTURE
Growing Sustainably

Biovision Africa Trust

The Ecological Organic Agriculture Initiative (EOA-I) is funded by the Swiss Agency for Development and Cooperation (SDC)

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Publisher:
Biovision Africa Trust, The Executing Agency of EOA-I,
Nairobi, Kenya

This booklet was compiled and produced by iDev Consulting: Justice Rutenge and David Ngome

Introduction

In 2011, the Executive Council of the African Union (AU) took a decision to build an Africa-wide organic agriculture platform. The African Union Commission (AUC) accepted the mandate, launched the Ecological Organic Agriculture Initiative (EOA-I) and established the Continental Steering Committee (CS) as the apex in the governance structure of EOA in Africa whose members serve to provide EOA in Africa and its membership with guidance, oversight and decision-making regarding the operations and activities of EOA Initiative in Africa. , EOA-I has received alot of support from the Swiss Agency for Development and Corporation (SDC) in the framework of the Global Program on Food Security (GPFS), Swedish Society for Nature Conservation (SIDA) and from Africa Union Commission - DARBE through funds from EU.

The Ecological Organic Agriculture Initiative (EOA-I) was established to transform and create sustainable food systems in Africa by promoting ecologically sound strategies and practices among diverse stakeholders in production, processing, marketing, and policymaking, to safeguard the environment, improve livelihoods, alleviate poverty, and guarantee food security.

The initiative entails a holistic system that aims to sustain the health of ecosystems by relying on functional natural cycles adapted to local conditions, rather than the use of synthetic inputs, which have adverse effects on human, animal, plant, and environmental health. With agroecology as its cornerstone for achieving sustainable agriculture, the initiative placed emphasis on all facets of the food systems from production to processing, marketing and consumption with ecological, economic, and social aspects benefits. EOA-I promots agricultural techniques tailored to local conditions and encouraged practices, technologies and innovations that enhance beneficial biological interactions between various plants and species to build long-term fertility and soil health.

Recognizing the value of conventional, traditional and indigenous knowledge in creating sustainable agricultural systems, the initiative lays a heavy emphasis on community involvement and information sharing. The EOA-I aims to transform and create sustainable food systems by promoting ecologically sound strategies and practices among diverse stakeholders in production, processing, marketing and policy-making, to safeguard the environment, improve livelihoods, alleviate poverty and guarantee food security.

From its inception, the initiative harbors an ambitious goal to mainstream EOA into national agricultural production systems by promoting agricultural practices that maintain the health and fertility of the soil, conserve water resources, and safeguard natural habitats and ecosystems with respect to the interconnectedness between plants, animals and the environment.

To achieve this goal EOA-I is organized around four objectives:

1. To increase documentation of information and knowledge on organic agricultural products along the complete value chain and support relevant actors to translate it into practices and wide application.
2. To systematically inform producers about the EOA approaches and good practices and motivate their uptake through strengthening access to advisory and support services.
3. To increase the share of quality organic products at the local, national, and regional markets; and
4. Strengthen inclusive stakeholder engagement in organic commodities value chain development by developing national, regional, and continental multi-stakeholder platforms to advocate for changes in public policy, plans, and practices.

This booklet highlights some of the outstanding success stories from direct beneficiaries of the project in the nine countries at farmer, processor, and policy-actor levels and as a reflection of the effective implementation of the project action plan through strong partnerships and beneficiaries' needs-oriented interventions.

COUNTRY IMPLEMENTING PARTNERS BY COUNTRY AND PILLAR	
ETHIOPIA	
Pillar 4	Institute for Sustainable Development (ISD) — County Lead Organization (CLO)
Pillar 1	Wollo University
Pillar 2	PAN Ethiopia
Pillar 3	Institute for Sustainable Development (ISD)
KENYA	
Pillar 4	The Kenya Organic Agriculture Network (KOAN) — County Lead Organization (CLO)
Pillar 1	Egerton University
Pillar 2	FarmKenya
Pillar 3	Kenya Organic Agriculture Network (KOAN)
UGANDA	
Pillar 4	Pelum Uganda— County Lead Organization (CLO)
Pillar 1	Uganda Martyrs University (UMU)
Pillar 2	Eastern and Southern Africa Small Scale Farmers' Forum (ESAFF) Uganda
Pillar 3	Kulika Trust
RWANDA	
Pillar 4	Rwanda Organic Agriculture Movement (ROAM) — County Lead Organization (CLO)
Pillar 1	Regional Research Centre for Integrated Development (RCID)
Pillar 2	Radio HUGUKA
Pillar 3	Rwanda Organic Agriculture Movement (ROAM)
TANZANIA	
Pillar 4	Tanzania Organic Agriculture Movement (TOAM) — County Lead Organization (CLO)
Pillar 1	Sustainable Agriculture Tanzania
Pillar 2	Pelum Tanzania
Pillar 3	Tanzania Organic Agriculture Movement (TOAM)
MALI	
Pillar 4	Féderation Nationale des Producteurs de l' Agriculture Biologique et Equitable du Mali (FENABE Mali) — County Lead Organization (CLO)
Pillar 1	Institute of Rural Economy (IER) Mali
Pillar 2	Association Malienne pour la Solidarité et le Développement (AMSD)
Pillar 3	Union des Producteurs de Sésame de Banamba (UPSB)

SENEGAL	
Pillar 4	National Council for Concertation and Cooperation of Rural People (CNCR) — County Lead Organization (CLO)
Pillar 1	Environnement Développement Action pour la Protection Naturelle des Terroirs (EndaPronat)
Pillar 2	Environnement et Développement en Afrique (IED)
Pillar 3	Agrecole Afrique
BENIN	
Pillar 4	Beninese Organization for the Promotion of Organic Agriculture (OBEPAB) — County Lead Organization (CLO)
Pillar 1	Research Laboratory on Innovation for Agricultural Development of the Faculty of Agronomy of the University of Parakou (LRIDA/FA/UP)
Pillar 2	Platform of Civil Society Actors of Benin (PASCiB)
Pillar 3	Research and Technical Assistance Center for the Environment and Agricultural Development (CRASTEDA ONG)
NIGERIA	
Pillar 4	Association of Organic Agriculture Practitioners of Nigeria (NOAN) — County Lead Organization (CLO)
Pillar 1	Kwara State University
Pillar 2	Farmers Development Union
Pillar 3	Ibadan Go Organic Multipurpose Cooperative Society

EOA Initiative Coverage

Rwanda

SCALING UP OF ORGANIC TECHNOLOGIES FOR PINEAPPLE AND STRAWBERRY

The University of Technology and Arts of Byumba (UTAB) in Rwanda has been implementing the Ecological Organic Agriculture Initiative (EOA-I) since September 2021. In this project, the university implements activities that are geared towards generating research-based knowledge and promoting its practical application in the field of organic agriculture. In the initial phase of the project, a baseline value chain analysis was conducted to identify knowledge gaps, needs, and priorities of various actors, with a special focus on women, youth, and marginalized groups in the pineapple and strawberry value chains in Gakenke, Rulindo, Muhanga, and Kamonyi districts. A one-day workshop was held in January 2022 to validate the baseline findings for dissemination.

The study revealed a number of gaps in the pineapple and strawberry value chains, such as a shortage of materials for mulching, insufficient organic fertilizers, and a scarcity of organic pesticides. To address these gaps, four technologies were developed: intercropping pineapple with *Desmodium intortum* and sweet potatoes for sustainable mulching in organic highland pineapple production; exploring the effectiveness of pest-repellent crops on pest management in strawberry farming; homemade organic fertilizers on pineapple production; and homemade organic fertilizers on strawberry production.

Prior to the establishment of the practice of intercropping sweet potatoes with pineapple, pineapple farmers used *Eragrostis variabilis* to mulch pineapple crops. However, they complained about the disadvantages of this practice, including its labour-intensive nature, low decomposition, and increase in temperature. Currently, experiments on the use of sweet potatoes as a green cover crop and food are showing promising results.

The study found that pathogens and pests cause yield losses and negatively affect the quality of produce, leading to complaints from farmers. To address these issues and support the integration of homemade technologies, the university has developed two technologies for organic fertilizers and organic pesticides capable of fighting against potential pests such as cyclamen mites, aphids, whiteflies, spittlebugs, flower thrips, chilli thrips, armyworms, and related Noctuid caterpillars. Strawberry diseases, such as leaf spots, grey mould, red stele, powdery mildew, Alternaria spot, black root rot, and black spot, were also identified.

Most of the raw materials used, such as *Tithonia diversifolia, Tephrosia vogelii*, Endod, and African marigolds, are locally available around the farmers' gardens. Farmers can also produce other ingredients, such as chilli, Carica papaya leaves, wooden ash, cow dung, and urine, to develop both technologies. The university obtained promising results from laboratory experiments, and they are now ready for application by pineapple and strawberry farmers from Gakenke, Rulindo, Muhanga, and Kamonyi Districts.

Rwanda

HEAP COMPOSTING FOR INCREASED PINEAPPLE PRODUCTION AND DECREASED COSTS IN RWANDA

In December 2021, 57 representatives of different groups of pineapple farmers from the Northern and Southern Provinces of Rwanda attended a training of trainers on EOA benefits and practices. The TOT was organized by HUGUKA in partnership with the Rwanda Organic Agriculture Movement (ROAM) in the framework of EOA initiative.

One of the EOA practices presented to farmers participating in the training was heap composting. The trainees were impressed by this practice and recognized it as a solution to the problem of soil fertility management.

"For many years, we have been growing organic pineapples and we have never used chemical fertilizers in our pineapple plots. In the beginning, the harvest was so good that we could get 100 kgs on 10 acres of land and this was every week," said Nturanyenabo Felicien, one of the trainees and a pineapple farmer since 1997.

Nturanyenabo Felicien continued by saying that in the last 3 years, he could not get the same production as he used to do at the beginning: "The harvest is decreasing every year, and today, I cannot even have 30 kgs on a weekly basis on the same plot I used to harvest 100 kgs."

Nturanyenabo and his colleagues from both the Southern and Northern Provinces of Rwanda agreed that the use of organic fertilizers is a solution to increase their production.

However, it was very complicated for them to find organic fertilizers. "Before this training, the fertilizer we used to have for our pineapple was farmyard manure and animal waste. However, this one is very expensive and not affordable for every pineapple farmer because we all do not have domestic animals. Those who have them are selling the fertilizer at an estimated price of between 120 and 150 Rwandan francs per kilogram, and the fertilizer for only one pineapple plot requires between 700 kgs and 1 ton of fertilizer every three months", explained Nyiransabimana Pricilla, chairperson of ABIZERWA Cooperative from Nyarusange Sector Muhanga District, Southern Province.

After the TOT, training participants have gone back home and transferred the skills and knowledge to their respective group members, who are now 1,137 farmers. They all started heap composting as fertilizer for their pineapple plots. By today, they have not yet started harvesting but their pineapple plantations are promising to increase productivity. They also said that heap composting is very cheap because they do not even need to buy ingredients, they only consider the cost of the workforce.

Rwanda

RWANDAN FARMERS ENHANCE THEIR SKILLS SKILLS IN VALUE ADDITION TO ACCESS BETTER MARKETS

The Ecological Organic Agriculture Initiative in Rwanda is a collaboration between the Rwanda Organic Agriculture Movement (ROAM) and pillar implementing partners, namely the University of Technology and Arts of Byumba and the Huguka Organization. The initiative is supporting approximately 1,145 farmers in strawberry and pineapple value chains located in four districts of Rwanda namely Rulindo, Gakenke, Kamonyi, and Muhanga.

After conducting an assessment of the challenges faced by farmers in the strawberry and pineapple value chains, including limited knowledge and skills on organic agriculture practices, value addition, and lack of appropriate packaging materials, ROAM coordinated activities related to the value chain and market development under pillar three. Through this effort, a group of 27 out of 120 farmers in the strawberry value chain were supported with capacity building on growing strawberries and training on value addition. The training included processing juice, jam, and wine, and providing packaging materials for these products as a sample for linking farmers to suppliers of the materials.

Irene Nyirabarigira, a member of the CODFM cooperative, shared her experience:

"We grow organic strawberries, and we produce 150 kg of strawberries on a weekly basis, making a total of 53 USD in a week. We were fortunate to receive training from the EOA-I project through ROAM to enhance our skills in value addition, specifically processing strawberry juice, jam, and wine. We have customers in Kigali and in one of the supermarkets in the Muhanga district called Lumina Supermarkets. After the training, we sold the processed jam and have received many positive comments from our customers on the improved quality of the jam. We started as a small factory, but we hope that with the improved skills we gained in the training, we will be able to grow into a big factory, hence improving our income, and livelihood, and accessing more markets and customers. We are grateful to ROAM for connecting us to other partners, and we are looking forward to their continuous guidance."

Through this initiative, ROAM has been able to improve the skills and capacity of smallholder farmers in the strawberry value chain, leading to an increase in income and access to markets. This highlights the potential impact of ecological organic agriculture in improving the livelihoods of smallholder farmers in Rwanda.

THE VOICE OF ORGANIC STAKEHOLDERS IN RWANDA

Rwanda Organic Agriculture Movement (ROAM), the Country Lead Organization implementing activities related to management, coordination, and governance, in collaboration with other stakeholders and National Steering Committee members, has facilitated different stakeholder consultation meetings.

In line with the promotion of ecological organic agriculture in Rwanda, ROAM signed a memorandum of understanding with the Rwanda Standards Board (RSB) to promote the implementation of East Africa Organic Product Standards (EAOPS) and certification and to strengthen the development of Participatory Guarantee Systems(PGS) in Rwanda to promote local and regional organic market products.

Due to the instability resulting from the Ukraine conflict, Rwanda's agricultural sector faced challenges, including the high cost of mineral fertilizers. In response, the Rwanda Organic Agriculture Movement (ROAM) advocated adopting organic fertilizers, particularly those produced locally, to reduce dependency on expensive imported fertilizers.

"Our organic fertilizers are now allowed to be distributed and used by farmers after the whole period of testing them, as proved by the list provided by the Ministry of Agriculture and Animal Resources (MINAGRI). Thanks to ROAM for advocating for using ROKOSAN organic fertilizers on different levels. The fertilizers have been tested on two value chains: rice and coffee," said Ndore Rurinda, the Managing Director of ROKOSAN Rwanda.

ROAM, in collaboration with civil society organizations, namely the Nile Basin Discourse Forum (NBDF), and with the support of the UNDP-GEF Small Grants Programme (SGP), facilitated a study conducted by the University of Rwanda, led by Prof. Elias Bizuru, to document the current status of agroecology and ecological organic agriculture in Rwanda.

The study's primary objective was to document the current practices and existing policies on agroecology/ecological organic agriculture in Rwanda, evaluate the potential impact of chemical fertilizers and pesticides, and provide an overview of sustainable wetland use in the context of Rwanda. The study findings have identified several areas requiring further attention from policy and research actions to ensure that ecological organic agriculture is effectively and progressively mainstreamed in sector planning. ROAM and NBDF organized a high-level stakeholder meeting to develop a policy brief, emphasizing science's importance in informing policies.

The study findings confirm the significance of ecological organic agriculture in contributing to the green growth and climate resilience strategy in the agriculture sector and in realizing the vision of Rwanda 2050 and relevant sector strategies. The research also identified the most commonly used pesticides for pest control in the study area, including *cypermethrin, dithane,* and *Roket*. In particular, the US Environmental Protection Agency (US EPA) has classified cypermethrin as a possible human carcinogen (Group C) and highly toxic to fish and water insects, highlighting the need for alternative pest control methods in agriculture.

ROAM, as the Country Lead Organization, is preparing a consultative meeting aimed at convening policymakers, ministries, civil society organizations, development partners, and research institutions to develop an action plan based on the policy brief's action points.

Get in Touch

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