Organic agriculture in Kenya and Uganda

STUDY VISIT REPORT

Charles Walaga

CTA number 8033

This report was produced following a study visit to Kenya and Uganda, 19–30 April 2004. The visit was sponsored by CTA and organised in collaboration with the Organisation for Rural Research and Development (ORREDE) and the Sustainable Agriculture Community Development Project (SACDEP–Kenya).

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Technical Centre for Agricultural and Rural Cooperation (CTA)
Postbus 380, 6700 AJ Wageningen, The Netherlands
Tel: +31 317 467100; fax +31 317 460067; e-mail cta@cta.int; Website http://www.cta.int

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Prepared by:

Charles Walaga, Organisation for Rural Research and Development (ORREDE), PO Box 27317, Kampala, Uganda

Edited by:

Words at Work, West Hill House, 6 Swains Lane, London N6 6QS, UK

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CTA hopes that this study visit report will contribute to a better understanding of the organic subsector in African, Caribbean and Pacific (ACP) countries and that the links forged will develop into fruitful partnerships.

Summary

The objective of the study visit to Kenya and Uganda in April 2004, sponsored by the Technical Centre for Agricultural and Rural Cooperation (CTA) and focusing on organic agriculture, was: 'Improved information and communication in African, Caribbean and Pacific (ACP) countries on best practices and added value production and certification of organic products (including medicinal plants)'. The 20 participants in the visit were stakeholders in the production and certification of organic products, including medicinal plants, in Uganda and Kenya.

The expected results were:

- Exchange of information among participants;
- Analysis of best practices observed in the field;
- Recommendations for follow-up actions.

The participants were drawn from eight ACP countries (Grenada, Kenya, Madagascar, Mozambique, Sudan, Tanzania, Uganda and Zimbabwe) and one European Union (EU) country (Austria) (*see* Annex 2). At the opening meeting in Kampala, Uganda on 19 April, the participants were briefed on the study visit programme, aims and objectives and given information on the agricultural sector in Uganda, particularly the organic subsector.

In Uganda, the participants visited projects involving rural farmers who had adopted organic agriculture, a university's organic agriculture neighbourhood schools outreach programme, and enterprises focusing on honey production, processing and marketing, medicinal grass processing, and sweet banana and pineapple processing. In Kenya, field visits were made to organic agriculture training institutes and non-governmental organisations (NGOs), organic farms, and small honey and medicinal plant processing enterprises. At the end of each day the participants discussed and synthesised their experiences and observations. The final group synthesis session was held in Nairobi, Kenya on 29 April. The study visit programme is reproduced in Annex 3.

The main issues affecting organic agriculture in developing countries, as identified by the study visit participants, are given here.

Organic agriculture as a strategy for production intensification

Throughout the ACP regions the size of landholdings is diminishing, posing a major challenge to farmers to produce adequate food and income for their families. During the field visits, the study team was able to observe and discuss with farmers and extension agents the successes in efforts to intensify production by applying organic agriculture principles and practices, resulting in an increasing number of NGO and formal training institutions offering training in organic agriculture. In Uganda and Zimbabwe, school outreach programmes in organic agriculture are being promoted.

It was noted, however, that these successes are not well documented and disseminated, and little information about them reaches researchers and policy-makers. Media coverage of this subsector is limited. This all serves to constrain the development of local markets for organic produce.

The study visit participants recommended that the quality and availability of information about organic agriculture should be improved, that a list of publications and institutions focusing on organic agriculture be compiled and that a technical journal on organic agriculture in tropical and sub-tropical regions be launched. They also recommended greater use of local media to raise awareness about organic agriculture and its potential.

Networking to promote information exchange and policy advocacy

The participants voiced the need for better networking among organic agriculture practitioners and other stakeholders to improve the exchange of information and strengthen policy advocacy. In Madagascar, for example, a network among traders in organic agriculture products does not include farmers; in Sudan, the University of Khartoum's work on organic agriculture appears to be isolated from other stakeholders; and in Grenada and Mozambique there are no formal organic agriculture networks at all.

Among the formal networks that do exist is Participatory Ecological Land Use Management (PELUM), a regional membership organisation launched in 1995 and covering Eastern and Southern Africa. There is also the National Organic Agriculture Movement of Uganda (NOGAMU) established in 2001, and a national network is being set up in Kenya. The International Federation of Organic Agriculture Movements (IFOAM) has also established an Africa desk in Kampala to promote increased networking and policy advocacy in organic agriculture in Africa.

The study team recommended strengthening national and regional organic networks in order to improve information exchange and dissemination and to foster the pooling of resources for better advocacy. The recently established IFOAM office in Uganda could play a crucial role here.

National organic agriculture policies and institutional frameworks

The study visit participants noted that most ACP countries lack national organic agriculture policies. They attributed this to poor awareness and understanding of organic agriculture among policy-makers and decision-makers. The successes achieved to date in developing the subsector stem mainly from the economic liberalisation polices enacted by many ACP governmentss, but the subsector will not realise its full potential unless there are explicit government organic agriculture policies and programmes in place that enable it to access the required financial, technical and institutional resources.

The participants recommended the formulation of national organic agriculture policies. These would not only make the necessary resources available, they would also enable national, regional and international development partners to identify priority areas for support.

Supporting ACP research on organic agriculture

It was noted that, in most ACP countries, research on organic agriculture is negligible. Where it is being conducted, it tends to be isolated and not part of a national effort to develop the subsector. Without greater support for research in proportion to that invested in conventional agriculture, the subsector will remain under-developed. Areas where research is urgently required include validating organic agriculture technologies and practices and developing pest and disease management strategies.

The study team recommended that greater efforts be made to raise awareness among policy-makers and decision-makers of the role of organic agriculture and the need for national policies that prioritise research needs. This would require enhancing the capacity of national networks to generate, document and disseminate information on organic agriculture to government bodies, research institutions and development partners. These networks should enlist support from the worldwide organic movement.

Organic agriculture certification systems and services

The standards currently used for the certification of organic produce for the international markets have been developed in Europe, Japan and North America where, unlike most ACP regions, climates tend to be temperate and farming is highly mechanised. In addition, because of the lack of regulatory frameworks for organic agriculture in most ACP countries, most ACP organic produce enters the EU via a derogation in EU regulations ('back door provision') on organic agriculture under conditions that are generally disadvantageous to ACP producers. Eastern Africa is among the few ACP regions where efforts are being made, albeit by the private sector and civil society bodies, to develop a set of regional standards for organic agriculture. Such standards need to be coded by governments or inter-governmental agencies if they are to be recognised by developed countries. Once coded, they would give ACP countries greater bargaining power in bilateral and multilateral negotiations with the countries and regions of the North as well as in such fora as World Trade Organisation (WTO) meetings.

Most ACP countries lack certification agencies. Certification services are usually provided by EU- and US-based agencies. The study team noted, however, that efforts are being made in several countries to establish such agencies, examples including Kenya (AfriCert), Tanzania (TanCert), Uganda (UgoCert) and the Organic Producers and Processors Association of Zambia (OPPAZ). EU accreditation to other national organic programmes, such as those in the USA and Japan, will present further challenges, such as covering accreditation fees, meeting quality standards and acquiring recognition in an area dominated by the private labels of well-established certification agencies in the North.

The study team recommended investment in building the capacity of regional inter-governmental agencies to provide the institutional frameworks for regional organic agriculture certification and standards. These agencies include the Common Market of Eastern and Southern Africa (COMESA), the Intergovernmental Authority on Development (IGAD) and the East African Community (EAC).

During the study visit, a particular area of certification examined by the participants was organic honey certification. In many ACP countries, honey production is now being promoted as a viable

income-generating activity for rural communities. Honey and other bee products have a high export potential, particularly in view of the bee disease problems in China, a major exporter of bee products. A constraint facing ACP countries, however, is the difficulty in ensuring that bees' forage areas are organic, and thus organic honey production is restricted to areas such as national parks and natural forest reserves. In Zambia and Tanzania, certified organic honey is being produced in forest reserves. In Uganda, although there is honey production in forest reserves it is not certified because the little that is produced is consumed locally. Other certification constraints relate to composition, as African honey lacks consistency because of the diversity of plants from which the bees collect nectar. The study team recommended that increased efforts be made to produce honey in conservation areas.

Consumer awareness of the benefits of organic agriculture

There is very little consumer awareness in ACP countries about the benefits of organic agriculture. This constrains the development of viable local organic markets and means that, although more farmers are adopting organic agriculture practices, their focus is on exporting to countries in the North. Efforts are being made to establish local outlets and raise awareness in some ACP countries, including Kenya, Senegal, Uganda, Zambia and Zimbabwe. South Africa leads the way in this field, with significant growth locally for organic produce in recent years.

The study visit participants recommended that vigorous efforts should be made to raise awareness of the benefits of organic agriculture among consumers and to develop local markets by establishing low-cost marketing outlets and secure marketing chains from farmer to consumer.

Conversion from conventional to organic agriculture

The participants noted that it appeared easier for farmers in countries with good soil fertility, such as Uganda, to convert from conventional to organic agriculture. Where soil fertility is poor, as in much of Kenya and Zimbabwe, for the conversion to be successful farmers need easy access to affordable soil amendments. The participants observed that many farmers in poorer regions do have livestock, an important element of viable organic production systems.

An additional challenge is that the certification costs involved in conversion are often prohibitive, primarily because of the required length of the conversion period. The EU regulations of 2 years for annual crops and 3 years for perennial crops are considered unrealistic for most low-input farming systems in ACP regions. This illustrates the inappropriateness of organic agriculture standards developed in temperate farming systems being applied to ACP countries.

Processing organic produce

Organic produce undergoes very little processing in ACP countries. What is exported is mostly in its raw form. During the study visit, the participants noted that fruit processing (solar drying) and packaging in Uganda is constrained by the lack of suitable technologies. Losses incurred as a result of

cloudiness are high, and the back-up systems for solar-drying operations when there is not enough sunlight are inadequate. Systems such as diesel burners that help maintain temperatures and thus prevent fruit from going to waste are needed. In Uganda, experiments are being conducted with systems based on using firewood and improving solar heat capture, but such initiatives are expensive.

The study team recommended lobbying governments to invest in the research needed to develop cost-effective and efficient processing equipment and facilities.

During the study visit, a particular area of processing examined by the participants was the processing of medicinal plants. The participants visited a project in Uganda where lemon grass produced by farmers is centrally distilled by a community-based women's group. The extracted essential oils are exported to the International Centre of Insect Physiology and Ecology (ICIPE), where they are processed into soap, shampoos and aroma therapy ointments and marketed. Constraints include distillation unit maintenance and repair difficulties, inappropriate distillation technology and low production capacity. The study team learned that in similar projects in Madagascar the farmers use less sophisticated distillation equipment that is made locally and is therefore easier to maintain.

With the numerous medicinal plants used in ACP countries, the participants considered that medicinal-based micro-enterprises could be viable so long as the processing equipment was appropriate and affordable and the owners were equipped with necessary technical knowledge. They recommended organising a technical study visit to explore these issues in more detail, with the focus on identifying and documenting the production, processing and marketing of medicinal plants.

Conclusion

The study visit enabled participants to share information about organic agriculture and visit projects in Kenya and Uganda that illustrated the opportunities and constraints faced by this subsector and its potential in ACP development. Access to lucrative markets is constrained by regulatory frameworks for certification and standards in developed countries and by the lack of them in most ACP countries. The development of internationally recognised organic standards and certification systems should be a government-led process within the framework of strong policies and programmes.

The production and processing of medicinal plants represents a particularly promising opportunity. ACP countries need to invest in medicinal plants research, production and processing and to ensure that the development of such enterprises benefits local owners and communities.

The participants considered the study visit to have been successful, enabling them to explore issues in organic agriculture in detail and to assess the subsector's role in the intensification of agricultural production against the backdrop of the diminishing size of landholdings. The study visit programme was tight, with little rest time, and the participants recommended that future visits should allow more time for rest and for interaction with farmers.

Acronyms

ABLH	Association for Better Land Husbandry
ACP	African, Caribbean and Pacific Group of States
ADP	Agricultural Development Programme
AGRINAT	Agriculteurs naturalistes
AZTREC	Association of Zimbabwe Traditional Ecologists
BAC	Baraka Agricultural College
BBC	Bunyangabo Beekeeping Community
CBO	community-based organisation
CDE	Centre for the Development of Enterprise
COLEACP	Liaison Committee for Europe, Africa, Caribbean and Pacific
COMESA	Common Market of Eastern and Southern Africa
CSARD	Community Sustainable Agriculture and Rural Development
CTA	Technical Centre for Agricultural and Rural Cooperation
DANIDA	Danish Agency for International Development Assistance
DED	Deutscher Entwicklungsdienst
EAC	East African Community
EC	European Commission
ECAJ	Earth Greenery Activities Japan
EPOPA	Export Promotion of Organic Products from Africa
EU	European Union
EUREP GAP	European Retailers' Programme on Good Practices
FAO	Food and Agriculture Organisation of the United Nations
FPC	Fambidzanai Permaculture Centre
GDP	Gross Domestic Product
GEF	Global Environment Facility
GGC	Grower Group Certification
GMO	genetically modified organism
GTZ	Gesellschaft für Technische Zusammenarbeit
HIMA	Hifadhi Mazingira
ICIPE	International Centre of Insect Physiology and Ecology
IFOAM	International Federation of Organic Agriculture Movements
ICRAF	World Agroforestry Centre
IGAD	Intergovernmental Authority on Development
I-GO	IFOAM-Growing Organic
IICA	Inter-American Institute for Cooperation on Agriculture
IMO	Institute for Market Ecology
INIBAP	International Network for the Improvement of Banana and Plantain
IPGRI	International Plant Genetic Resources Institute
IPM	integrated pest management
ITC	International Trade Centre
JESE	Joint Efforts to Save the Environment
KARI	Kenya Agricultural Research Institute
KIHATA	Kilimo Hai
KIOF	Kenya Institute of Organic Farming

KOAP	Kalehe Organic Agricultural Promotion
KOFA	Kenya Organic Farmers Association
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MHAC	Manor House Agricultural Centre
MRL	maximum residue levels
MSOFU	Mbalala Sustainable Organic Farmers' Association
NAADS	National Agricultural Advisory Services
NECOFA	Network Committee of Ecological Farming Systems
NFN	Natural Farming Network
NGO	non-governmental organisation
NOGAMU	National Organic Agriculture Movement of Uganda
NRM	National Resistance Movement
NULC	Nyahode Union Learning Centre
NWESE	Ntungamo Women's Effort to Save the Environment
OPPAZ	Organic Producers and Processors Association of Zambia
ORREDE	Organisation for Rural Research and Development
PAC	Programme Advisory Committee
PAPAT	Projet d'amélioration des plantes tubercules
PEAP	Poverty Eradication Action Plan
PELUM	Participatory Ecological Land Use Management
PMA	Plan for the Modernisation of Agriculture
PROMABIO	Syndicat professionnel des opérateurs en produits de l'agriculture biologique
RBKA	Rwenzori Bee Keeping Association
REDAD	Réseau de développement d'agriculture durable
SACDEP	Sustainable Agriculture Community Development Project
SARD	sustainable agriculture and rural development
SCOPE	Schools and Colleges Permaculture Programme
SECAP	Soil Erosion Control and Agroforestry Project
SGP	Small Grants Programme
SIDA	Swedish International Development Agency
TEFU	Tropical Ecological Foods of Uganda
UCDA	Uganda Coffee Development Authority
UEPB	Uganda Export Promotions Board
UIA	Uganda Investment Authority
UMU	Uganda Martyrs University
UNBS	Uganda National Bureau of Standards
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organisation
UOS	Uganda Organic Standards
URDT	Uganda Rural Development and Training Programme
USAID	United States Agency for International Development
WEDNR	Women's Effort to Develop Natural Resources
WTO	World Trade Organisation
ZIP	Zimbabwe Institute of Permaculture
ZOPPA	Zimbabwe Organic Producers' and Promoters' Association

Introduction

Since the early 1990s the market for organic produce has expanded rapidly in all the major consumer countries (Europe, USA, Canada and Japan), driven by an increased demand for food safety and environmental conservation. Consumer expenditure on organic food in the USA was estimated to be US$ 3 billion in 2001; this figure was projected to double by 2004. In the UK, the organic market grew by 55% on 1 year alone (1999–2000).

Nevertheless, organic foods represent a very small part of the total food sector, about 1% of total food sales in most countries. In Austria and Switzerland the figures are 1.8% and 2%, respectively, and in Denmark the figure reaches 3%. The share of sales in the fruit and vegetable sector is higher than in total food sales, ranging from 3 to 5% in most countries for fresh fruits and reaching 10% in Switzerland and the UK for vegetables. Clearly, the expanding market for organic produce offers considerable opportunities for African, Caribbean and Pacific (ACP) farmers and exporters.

Organic agriculture in the ACP regions

Many smallholder farmers in ACP regions are facing increasing difficulties operating in a free market economy. The challenges of meeting marketing requirements and the demands for sustainable production systems, coupled with falling world commodity prices for sugar, coffee and cocoa, has contributed to a shift to organic production as farmers and traders look for alternative market niches for better returns.

In the Caribbean most organic production and marketing is based on direct trading links between producers and commercial agencies, which benefit the producers and overcome the problems of quality and market penetration. Most of the producers are small- and medium-scale farmers. Although some governments in the region are building organic agriculture into their planning processes, with the aim of establishing supportive institutional and regulatory frameworks, funding the development of this subsector derives mainly from international funding agencies, international buyers and non-governmental organisations (NGOs). The region has the potential to supply a wide array of organic fruits, vegetables, cereals, coffee, cocoa, sugar, cashew nuts and meat to the major markets.

Organic agriculture in Africa has seen rapid growth since the mid-1990s. With its predominance of smallholder subsistence farmers, the continent has not benefited much from industrial agricultural approaches to agriculture, and farmers, traders and development workers have been looking for alternatives. Many African farmers mix long-tested traditional practices with adaptations of conventional technologies that suit their farming systems, and these types of systems lend themselves well to conversion to organic agriculture.

What does organic agriculture offer African smallholder farmers?

- *Ecological sustainability of their farming systems:* Retains the pattern of highly diversified farming systems that are productive, ecologically balanced, conserve resources and can withstand weather changes and pest and disease outbreaks.

- *Control of farming systems:* Reduces reliance on external providers of inputs.

- *Safety from poisonous chemicals:* Applies to both humans and livestock.

- *Social equity:* Provides employment for the whole family and thus suits the cultural norms of African society in which agriculture is more than just a business.

- *Economic viability:* Enables farmers to get a decent return on their investment when they are paid a premium price for their organic produce and are not subject to the price hikes that characterise input supplies, a problem farmers throughout the world have to face.

National and international NGOs working in partnership with donors and the private sector have been responsible for much of the development of the formal organic sector in Africa. They have achieved this through three main approaches:

- Promoting organic agriculture technologies and practices as a way of reviving the productivity of degraded farming systems and sustaining farm productivity. This approach has been pursued mainly by rural development NGOs and is widespread in Africa.

- Promoting national and international trade in organic produce as a way of improving smalholder farmer incomes through access to premium-price markets. This approach has been pursued mainly by bilateral donor agencies, private foundations and farmers' organisations. There are good example of this approach in Egypt, Tanzania and Uganda.

- Traders and trading companies operating in international markets requesting their suppliers in Africa to provide organic produce in order to benefit from premium prices. This approach involves traders organising smallholder farmers into large production projects. Some African-based suppliers may be large-scale farmers who convert their farms to organic production and supply traders (often supermarket chains) in Europe and elsewhere. This approach is predominant in Kenya, South Africa and Zimbabwe.

In order to exploit the full potential of organic agriculture in Africa, however, the concerted efforts of all stakeholders are needed to address the following challenges:

- Unfavorable national policy environments. Most politicians, policy-makers and government researchers and extensionists favour the industrial approach to agriculture, which means little or no funding for research, training and extension in organic agriculture;

- Lack of internationally recognised certification programmes;
- Little or no capacity to implement and operate certification services;
- High costs of certification charged by international certification agencies;
- Certification standards based on farming conditions in developed countries;
- Undeveloped local markets for organic produce;
- Unsustainability of some traditional farming systems under high population density, leading to degradation of the resource base and declining productivity;
- Lack of systematic documentation and dissemination of information on the benefits of organic agriculture. Most successes in organic agriculture are project based and are documented in project reports that have a limited circulation and often lack the scientific rigour required for formal publication.

There is little doubt that, given a favourable policy environment, appropriate institutional frameworks and adequate support, these challenges can be overcome. This relates particularly to building the capacity to meet certification requirements. The coming years will be critical in determining whether ACP countries can participate effectively in the global trend towards organic agriculture. For Africa, it is a globalisation trend in which the continent is well suited to play a leading role and from which it could derive great benefit if the right support systems are in place.

The study visit to Kenya and Uganda

The Technical Centre for Agricultural and Rural Cooperation (CTA) organised a study visit on organic agriculture to Kenya and Uganda. The visit took place from 19 to 30 April 2004 and involved stakeholders in ACP production and certification of organic products. The overall objective of the study visit was: 'Improved information and communication in ACP countries on best practices and value-added production and certification of organic products (including medicinal plants).'

The visit was coordinated by the Organisation for Rural Research and Development (ORREDE), a Ugandan NGO that promotes sustainable agriculture and natural resources management through research, training, extension, lobbying and advocacy. Additional support for the Kenyan part of the study visit was provided by the Sustainable Agriculture Community Development Programme (SACDEP), an NGO working with rural communities in Kenya.

The expected results of the study visit were:

- Exchange of information among participants;
- Analysis of best practices observed in the field;
- Recommendations for follow-up actions.

In addition, the documented information and experiences from the study visit would be disseminated to ACP countries to raise awareness about organic agriculture, particularly in relation to the following issues:

- Costs of certification, a service provided mainly by agencies from developed countries;
- Lack of certification services for smallholders;
- Poor national and regional capacity to set standards and implement certification schemes;
- Lack of harmony between regional/national standards and those of developed countries, which constrains export opportunities;
- Lack of support and coordination in the development of regional standards and certification systems;
- Limited opportunities for testing new approaches and technologies;
- Insufficient attention paid to the role of livestock in organic agriculture;
- Difficulties involved in converting from conventional to organic agriculture;
- Limited interaction and information exchange between researchers and producers/traders;
- Limited publication of producers' experiences and knowledge, other than as grey literature;
- Lack of manuals for smallholders.

To a limited extent, the study also looked at developments in the field of medicinal plants.

Invitations were sent to organisations and institutions, identified mainly from the International Federation of Organic Agriculture Movements (IFOAM)'s membership directory and its 2003 report on organic movements in Africa, to nominate participants based on the criteria given in Annex 1. The 20 participants were drawn from eight ACP countries (Grenada, Kenya, Madagascar, Mozambique, Sudan, Tanzania, Uganda and Zimbabwe) and one EU country (Austria) (*see* Annex 2. They included farmers' representatives, extension agents, researchers, information specialists, government policy-makers and policy advocates, as well as an expert in organic certification.

The study visit study opened with a meeting in Kampala at which the participants were briefed on the programme, aims and objectives of the visit and given information on the agricultural sector in Uganda, particularly the organic subsector. In Uganda, field visits were undertaken to projects involving farmers who had adopted organic agriculture, a university's organic agriculture neighbourhood schools outreach programme, and enterprises focusing on honey production, processing and marketing, medicinal plant processing, and sweet banana and pineapple processing. In Kenya, field visits were made to organic agriculture training institutes and NGOs, organic farms, and small-scale honey and medicinal plant processing enterprises. At the end of each day the participants discussed and synthesised their experiences and observations. The final group session to review the experiences and learning of the visit was held in Nairobi, Kenya on 29 April.

Overall, the programme enabled the participants to visit organic agriculture projects that illustrated a range of issues, including production, training, extension, certification, standards and trade. The study visit programme is reproduced in Annex 3.

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The study visit in Uganda

The opening session

At the opening session of the study visit, held in Kampala, Uganda, the organisers welcomed the participants and briefed them on the study visit objectives and programme and on the status of organic agriculture in Uganda. The coordinator of the International Federation of Organic Agriculture Movements (IFOAM) Africa Service Centre, established in Kampala in March 2004, provided an overview of organic agriculture in Africa.

Welcome address

Paul Mukasa Kasule, Vice-Chairman of ORREDE

It is with much pleasure that I welcome you to Uganda. I hope that your travel from your homes was comfortable and the welcome you have so far received hospitable. Uganda is renowned for the hospitality of both its people and its weather. I hope that you will enjoy this hospitability during your week's stay in Uganda.

The Organisation for Rural Research and Development (ORREDE), your coordinating host for this study visit, is an indigenous organisation dedicated to the generation of knowledge on development and the capacity building of the people for sustainable livelihood development outcomes. We believe that sustainable livelihood development outcomes can be achieved only through the knowledge and skills of individuals and a policy environment that enables the translation of such knowledge and skills into sustainable livelihood development outcomes for individuals, their familes and the local, national and global community. For such beliefs to become reality requires networking with all stakeholders in development. ORREDE therefore sees this study visit as an activity that promotes information and knowledge exchange at national, regional and global level, which is one of its major objectives.

The study visit has been made possible by the Technical Centre for Agricultural and Rural Cooperation (CTA). CTA was established in 1983 under the Lomé Convention between the African, Caribbean and Pacific (ACP) Group of States and the European Union Member States. Its tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area. In this regard, ORREDE shares a common interest with CTA. We are therefore grateful to CTA for selecting ORREDE to coordinate this study visit in Uganda. We are also grateful to the Sustainable Agriculture Community Development Programme of Kenya (SACDEP) for having agreed to work with ORREDE to coordinate this study visit in Kenya. We look forward to future collaboration with CTA, SACDEP and your respective organisations as we promote organic agriculture on this continent.

The study visit has been designed to achieve two major objectives.

- The first one is to achieve the objective of documenting experiences in organic agriculture and certification.

- The second major objective, which is not stated in the documents you have, is to enable you to learn more about Uganda. We believe that one needs to know more about the country before one can write about its agriculture! As this is the first time many of you are visiting Uganda, we have designed the study visit to take you through most of the country. Due to time limitations, you will visit projects in the southern, central and western parts of the country. This will enable you to see most of the country and be able to understand its people and how we do our agriculture.

You will also have the opportunity to drive through the eastern parts of the country on your way to Kenya. Do not miss the source of the great River Nile and Lake Victoria on your way to Kenya. The Kenyan leg will take you through the western part of the country up to the central region. You will get an appropriate brief on this leg at the right time. Due to time constraints, you will not be able to spend a lot of time with the communities you will be visiting but I trust that, with your expertise, you will be able to achieve the objectives of the study visit.

Uganda is an organic country, as you will find out. Our data show that about 33,000 farm households are certified and have access to international organic niche markets. The size of certified farms ranges between 0.5 and 4 ha. The number of certified farms represents about 1% of the total number of agriculture-based rural households in the country. Worldwide, in terms of number of organic farms, Uganda occupies fourth position, after Italy (56,440), Indonesia (45,000) and Mexico (34,862). We estimate that about 122,000 ha of land in Uganda are managed organically, which is about 1.32% of its total agricultural area. We estimate the number of non-certified but IFOAM-compliant organic farms to be three times higher than the figure for the certified segment. When combining the number of certified and non-certified farms, the share of organic acreage rises from 1% to 3.7%. This is similar to the acreage in leading organic countries, such as Italy 2.14 %, Sweden 3.94 % and Denmark 5.8 %.

Uganda has a strong organic movement, the National Organic Agriculture Movement of Uganda (NOGAMU). This morning, you will be briefed about its evolution and activities. We have developed national organic standards and formed a national organic certification company (UgoCert). Your study visit facilitator will in due course brief you about its status. We are in the process of developing a national policy on organic agriculture. The future prospects for organic agriculture in Uganda are therefore bright. But the sector also has its challenges. The most critical challenge is marketing. Marketing is complicated by our type of smallholder-based agriculture. Our farm holdings are, on average, 2.5 ha. That means that to sustain a marketing operation, you need to mobilise many farmers. That can be a nightmare considering our physical terrain and other infrastructural constraints. Undoubtedly, you will find many other serious challenges, such as those associated with certification. As experts with wider knowledge and experiences, we look forward to your recommendations.

An overview of organic agriculture in Africa and the activities of IFOAM

Fred Kalibwani, Coordinator, IFOAM Africa Organic Service Centre

There is a paradox at the heart of African agriculture. Despite the many attempts by many experts to prescribe strategies for rolling back hunger and poverty, and despite the highest level of technological advancement that humans have ever achieved, 75% of the population in Africa still wallows in abject poverty and is threatened by hunger. The most food-insecure people in Africa are the millions of smallholder farmers who wake up every morning to work the only resource available to them — the African soil. They work the soil with rudimentary and traditional tools and use very limited external inputs due to their limited resource base.

This paradox raises many questions: How can African agriculture become viable, responding to market forces as well as ensuring food security and environmental sustainability? How can African agriculture become a true engine of economic growth for the African continent? How can it become a source of vitality and livelihood for African communities? What has led to the failure of the many prescriptions that many experts have tried in an attempt to jump-start African agriculture? What is the niche in African agriculture that can trigger a real agricultural revolution in Africa?

A prescription is only as good as the diagnosis

Well known to any physician is the fact that a prescription is only as good as the diagnosis. In a study published by IFOAM in 2003, *Organic and Like-Minded Movements in Africa* (*see* References, p. 13), the niche in African agriculture has been identified as lying in the fact that African agriculture is *de facto* low or no chemical-input farming. While this does not necessarily render African agriculture organic by default, it does pinpoint the potential for organic agriculture in Africa.

Many farming technologies practised by the poor in Africa are sustainable, although some are clearly not and do require improvement. In view of the decreased subsidies for agrochemicals by most African governments and the general failure of the Green Revolution in Africa, viable alternatives for improving food security and sovereignty have gained momentum. Soil fertility management, desertification control, agricultural biodiversity conservation, agroforestry, integrated pest management, rural community development, urban agriculture, participatory ecological land-use management and many other agro-ecological approaches that have gained momentum in Africa tend mainly to use organic agriculture principles and farming techniques. These initiatives represent a large existing user-base as well as potential for organic agriculture in Africa.

Organic agriculture is a viable agricultural and development option for Africa. The global trading environment and demand for organic produce in the North is a clear impetus for stimulating organic production in Africa as a way of capturing the lucrative market niche in the North. Although most governments in the Africa, and even the Food and Agriculture Organisation of the United Nations (FAO), currently view the growing organic production primarily as a way of generating much-needed foreign exchange, careful and strategic growth of the subsector in Africa will certainly help the resource-poor farmers increase their cash incomes.

It is against this background that IFOAM, formed in 1972, has decided to establish a permanent presence in the African continent through the establishment of an IFOAM Africa Organic Service Centre. The focus on organic agriculture is seen as a focus on the niche potential of African agriculture, but the process of achieving this re-orientation is a protracted one.

The aim is to build a strong organic movement in Africa following a step-by-step trust-based process to establish a strong and intricate network of like-minded individuals, organisations, consultants, research and academic institutions and key persons in governments who will work to influence the agricultural policy focus of most African governments in order to bring about structural change that will facilitate a significant growth of the subsector.

The core of this network will be the 72 African organisations that are registered members of IFOAM. IFOAM has a total international membership of 750 organisations. The members of the IFOAM-Africa Advisory Committee are given in Annex 5.

The current status of organic agriculture in Africa

According to the IFOAM study on organic movements in Africa, cited earlier, there are five types of organic agriculture in the continent (see Box 1).

Box 1: Organic agriculture in Africa

According to the IFOAM study (2003), organic agriculture exists in Africa in five forms

1 *Commercialised, certified organic agriculture — without any significant development or donor funding*. This is practised on large-scale farms and is often oriented towards organic markets in developed countries. Examples include some large farms in Malawi, South Africa and Zambia, as well as north Africa. An outstanding example is Sekem in Egypt, which won the Right Livelihoods Award in 2003.

2 *Export-oriented certified organic agriculture — supported by development or donor funding.* This is aimed mainly at improving the incomes and livelihoods of smallholder farmers. For example, Uganda currently has 28,000 certified farms covering 122,000 ha of land, and Tanzania has 1,000 certified farms covering 5000 ha.

3 *Poverty and environmentally oriented agriculture (agro-ecology) based on organic principles — assisted by development agencies and NGOs.* This involves many initiatives that address soil degradation, water capacity, land-use management, biodiversity conservation, agroforestry, desert control, and food and seed security. These initiatives are often designed to enhance local initiatives.

4 *Local organic agriculture innovations — developed by farming communities and local organisations.* These constitute a means of addressing pressing social, economic and environmental problems. Such initiatives are most developed in Kenya, South Africa and Zimbabwe.

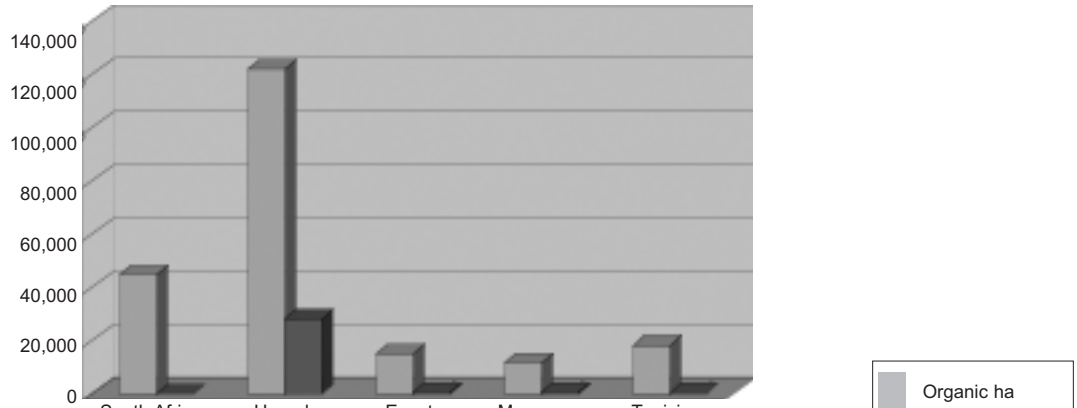
5 *Organic research — conducted by local, national and international institutions.* Egypt has a well-developed national research system for organic cotton. International research institutions include the World Agroforestry Centre (ICRAF) and the International Centre of Insect Physiology and Ecology (ICIPE).

Source: IFOAM. 2003. *Organic and Like-minded Movements in Africa.* IFOAM: Bonn, Germany.

About 40,000 farms in 22 African countries are certified organic. This translates into 235,000 ha of land, with 50% of this in Uganda, making it the only African country where certified organic land exceeds 1% of the total agricultural land. Most organic production, however, is believed to take place in the informal organic sector, but statistics are hard to come by. Certified organic products in Uganda include coffee, cocoa, vanilla, avocadoes, bananas, cotton, dried fruit, pineapples and sesame.

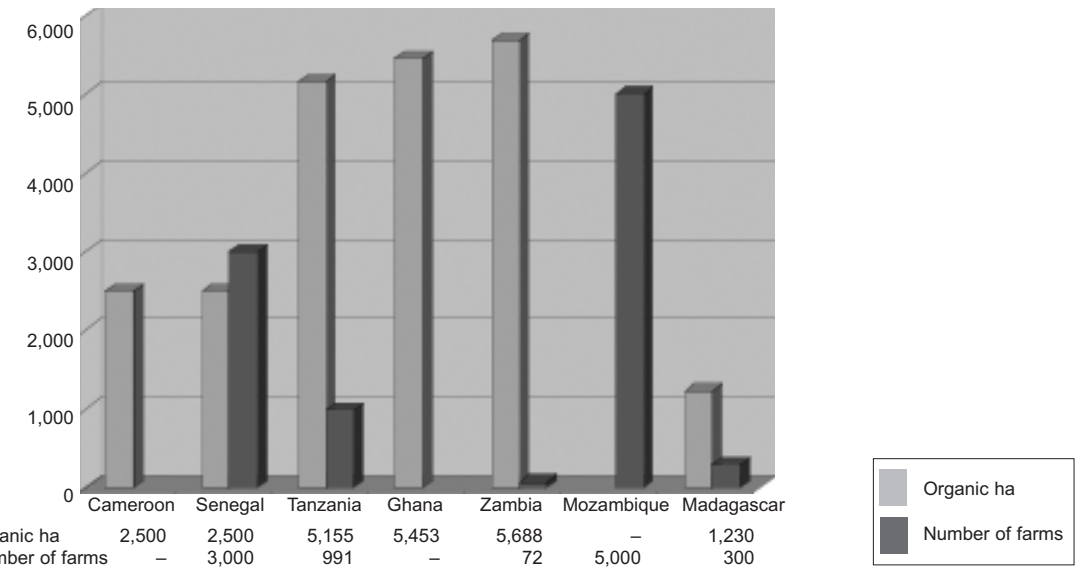
The success of organic agriculture in Uganda is attributed to a few large cooperatives such as the Lango Cooperative Union, a strong NGO sector promoting organic agriculture, and significant progress in developing domestic standards and certification bodies.

Box 2: Land under organic agriculture in Egypt, Morocco, South Africa, Tunisia and Uganda



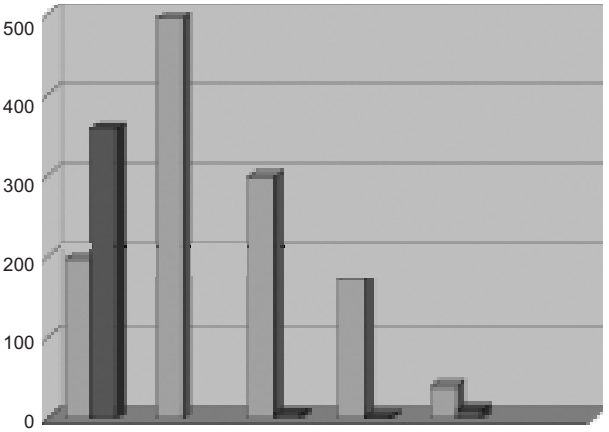
	South Africa	Uganda	Egypt	Morocco	Tunisia
Organic ha	45,000	122,000	15,000	11,956	18,255
Number of farms	250	28,200	460	555	409

Box 3: Land under organic agriculture in Cameroon, Ghana, Madagascar, Senegal, Tanzania and Zambia



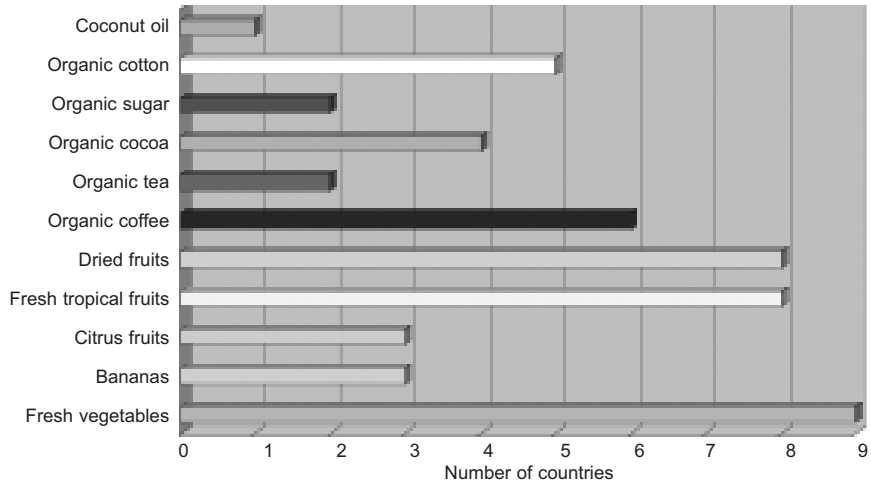
	Cameroon	Senegal	Tanzania	Ghana	Zambia	Mozambique	Madagascar
Organic ha	2,500	2,500	5,155	5,453	5,688	–	1,230
Number of farms	–	3,000	991	–	72	5,000	300

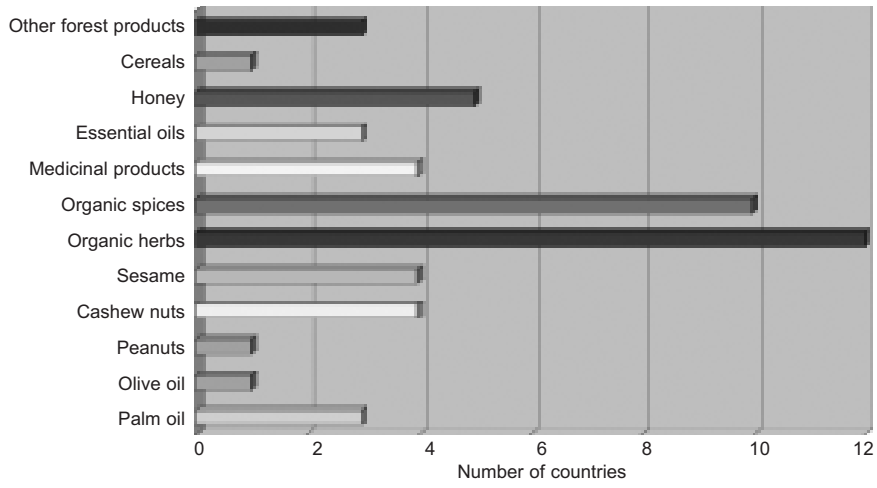
Box 4: Land under organic agriculture in Benin, Burkina Faso, Kenya, Malawi, Mauritius and Zimbabwe



	Benin	Kenya	Malawi	Mauritius	Zimbabwe	Burkina Faso
Organic ha	197	494	298	175	40	
Number of farms	359	–	6	3	10	

Box 5: Organic commodity production in Africa





Egypt is the other African organic stronghold, especially for organic cotton. In Egypt both the export and local markets are significantly developed. A range of organic products are also produced in West Africa, including coffee in Cameroon, palm oil and fruits in Ghana, and cotton in Mali, Senegal and Benin, but clearly the organic sector in West Africa lags behind the other regions. There is, however, significant potential in West Africa in the numerous agro-ecological, rural development and food security initiatives that operate in this region.

The key benefits of organic agriculture

- *Premium price:* This is a key indicator of the benefits of organic agriculture. Engagement with the lucrative and rapidly expanding organic foods market in the developed world is the main driving force behind the development of the organic sector. The economic significance of organic farming, however, spreads well beyond the premium market into numerous additional non-monetary returns accruing to the producers by virtue of their being organic.

- *Reduced financial risk, increased profit margins and access to new markets:* Organic farming often involves substituting purchased inputs with ones that are locally available, thereby increasing the profit margin of the farm. Organic farming also reduces the financial risk by avoiding the need take out high-interest loans to purchase agro-inputs. For many farmers, too, switching to organic farming often implies opening up access to new markets that are not often readily accessible. Organic farming is thus key to poverty reduction.

- *Gender empowerment:* Organic agriculture enables different social groups that may not have previously been involved in agricultural trade to become involved. This is particularly true for women who, in many developing countries, do not have access to the inputs or credit required for cash crop farming. Organic farming is a source of empowerment.

- *Knock-on effect on conventional prices:* It is the 'gross earnings' rather than just the 'margin of the premium' that represent the true benefit of organic farming. The premium offered on organic products, however, has a knock-on effect on the prices offered in local conventional markets by creating competition as the local non-organic traders seek to maintain their supply base. Thus, the benefits of organic farming become more diffuse and more widespread.

- *Stable prices and the organic fair trade regime:* The prices paid for organic products tend to be agreed upon in advance of the growing season, especially for the organic products currently covered under the fair trade regime. This protects the farmers from the volatility of global markets.

- *Food security:* Some benefits may not register in the cash economy but manifest themselves in other ways. One such benefit is increased food security. Most smallholder farmers, especially in Africa, grow only a small portion of their crops for sale, the rest being grown for domestic consumption or for local barter trade. In this context, organic farming techniques are widely recognised as increasing food security, especially in the rainfed agricultural systems that characterise much of Africa.

- *Agro-biodiversity:* Maintaining agricultural biodiversity is vital in ensuring long-term food security. Organic farms exhibit great biodiversity, with more trees, a wider variety of crops, use of local varieties of seed and many natural predators controlling pests and helping to prevent disease. Maintaining a wide range of crops provides food security throughout the year, an overwhelmingly important consideration for peasant farmers, who are well aware of the dangers of mono-cropping.

- *Soil improvement:* Organic farming helps conserve and improve farmer' most precious resource — the topsoil. Organic farmers throughout the developing world use trees, shrubs and leguminous plants to stabilise and feed the soil. They use dung and compost to provide nutrients, and terracing or check-dams to prevent erosion and conserve groundwater. There is no 'one-size-fits all' strategy in organic agriculture. The approaches vary with local expertise and ecological conditions.

- *Increased yields:* Case studies from many countries where there are radically different practices, local conditions and crops show dramatic increases in yields as well as benefits in soil quality, a reduction in pests and diseases and a general improvement in the taste and nutritional content of agricultural produce. The widespread assumption that converting to organic farming means a decline in yields has been proved false by overwhelming evidence.

- *Innovations by scientists and farmers:* Organic agriculture is not a return to some backward form of low technology agriculture. It pursues a blend of innovations that originate from scientists and farmers and uses only those traditional practices that are sustainable and useful. These practices have often, themselves, undergone a lot of innovation. Organic farming emphasises management over technology, and biological relations and natural processes over chemically intensive methods. Most importantly, it is a process of learning and adaptation, combined with an institutional and policy framework that drives this process.

- *Holistic — beyond trade:* Organic farming is an agricultural system that enhances and manages the complexity of the entire ecosystem, rather than reducing and simplifying the biophysical interactions on which agricultural production depends. It recognises people as an important part of this ecosystem, and deliberately integrates and takes advantage of all naturally occurring beneficial interactions.

Working in tandem with nature and encouraging biodiversity and local self-reliance, organic farming has become a major movement throughout Africa, Asia and Latin America. Although still largely overlooked by policy-makers, the organic movement presents a hopeful alternative to a world dominated by corporate agro-chemical giants and mono-cultural agriculture. Put into practice, organic agriculture will increase food security, reduce poverty and protect environmental resources.

The tasks ahead for the IFOAM Africa Organic Service Centre

- At the practical level, knit together the various aspects and key drivers of the organic and agro-ecological approach in Africa into a coherent continent-wide movement capable of providing an alternative to the conventional system.

- Galvanise the existing IFOAM membership, as well as like-minded organisations and networks, into a core group that will form the nucleus of the movement in Africa.

- Engage African governments in re-thinking the promotion of artificial pesticides and fertilizers among poor farmers and remove some of the barriers to NGO activity that currently hinder the growth of organic agriculture. The aim of this engagement process will be to ensure that governments adopt the promotion of organic agriculture as part of national agricultural and poverty reduction strategies.

- Develop a strategy to create deeper understanding among farmers and governments of the benefits of organic farming. This will enable farmers to develop self-confidence in their traditional knowledge and innovations so that they do not immediately switch to chemicals once they can afford them, having being told for years that industrial or chemical farming is more modern. It will also enable governments to devise more strategic interventions to develop the organic sector.

- Foster vibrant links among the disciplines and approaches within this 'alternative' agricultural movement and bring together foresters, researchers, livestock producers, horticulturalists and regional, national and international networks and institutions.

- Develop local certification capacity and facilitate the development of alternative certification and of domestic markets.

- Ensure that organic agriculture is seen beyond the trade frame to include a social agenda as well as a development agenda for Africa.

Looking to the future

The fact that most African agriculture is by default low-external-input agriculture, but not necessarily organic, provides a potential basis for organic agriculture as a development option for Africa. Organic farming practices deliberately integrate traditional farming practices and make use of locally available resources. As such, they are highly relevant to most African farmers, who have resisted Green Revolution technologies, seeing them as inappropriate, risky and inaccessible.

The link between organic agriculture and social accountability must be emphasised. The benefits of organic agriculture must be seen to spread beyond trade. Most organic agriculture in Africa today is referred to as non-certified and will probably remain uncertified for export trade for a while to come. There is a need to develop domestic markets as well as new or alternative forms of standardisation and verification that suit the African context and probably the rest of the developing world.

There is undoubtedly room for a substantial increase in certified organic production in Africa and smallholders engaged in it often derive significant benefits, improving their incomes as a result. Yet there are also significant constraints. In part, these are external, to do with the costs of certification, problems of infrastructure, maintaining links with distant markets and the vagaries of world markets.

But they are also internal. The over-riding priority for African agriculture is that of achieving sustainable food security. Organic agriculture has huge potential in helping to meet this aim, potential that is only just beginning to be recognised.

The formal and informal organic sectors in Africa share much common ground, but because of their different orientations and the different actors involved, the potential for sharing knowledge and pooling resources that undoubtedly does exist is rarely realised. The development of networks among NGOs, development agencies and research institutes will be a necessary step along this path.

The opening of the IFOAM centre offers a potential bridge between the formal and informal sectors and the possibility that achievements in organic farming will be more widely appreciated and further expanded. It offers a vehicle for a more intensified effort to unite the growing organic subsector in Africa into a marketable model to national governments and for more strategic lobbying and advocacy for the inclusion of organic agriculture as a coherent sustainable agriculture option in national agricultural sector plans. It is an opportunity for the organic movement in Africa, along with like-minded organisations, to speak with one voice.

The field visits

1. Mbalala Sustainable Organic Farmers' Association

The overall objective of the Mbalala Sustainable Organic Farmer's Association (MSOFA) is to improve the socio-economic status of its members, currently totalling 76 and drawn from the Mukono district of Mbalala. They are all smallholder farmers producing a variety of crops and rearing livestock on landholdings of about 2.5 ha each for their own consumption and for the local markets. The main crops include bananas, beans, cassava, coffee, maize, sugar cane, sweet potatoes, vanilla and yams. The livestock include cattle, chickens, goats and pigs.

MSOFA's specific objectives are to:

- Encourage unity and teamwork among members;
- Co-operate and assist one another for the benefit of families as well as the country;
- Foster the sustainable use of available resources;
- Co-operate with institutions and NGOs in areas that might benefit the members;
- Disseminate information among members and the general public about organic farming practices and its values;

- Assist marginalised groups such as women, young people, disabled people and people who are living with AIDS;
- Reduce unemployment, particularly in the rural areas.

The association has become an important development organisation in the area and is involved in networking with a range of groups, including the National Organic Agriculture Movement of Uganda (NOGAMU) and the National Agriculture Advisory Services. It has 'farmer trainers' who provide training in organic agriculture production technologies, practices, standards and certification; they also provide technical services to members and other interested individuals in the community, and help members improve the marketability of their produce. Some members have achieved organic certification and are now selling their produce as certified organic produce.

MSOFA faces two major challenges. It lacks the lobbying and advocacy skills needed to secure support from service providers, and the very low incomes of its members makes it difficult to finance the association's activities and the acquisition of additional land for demonstration purposes. Its future plans include:

- Developing a savings and credit scheme that meets the needs of members;
- Strengthening integrated crop and livestock farming;
- Acquiring land to establish a demonstration farm and for collective farming;
- Developing the skills of members through training;
- Establishing twining arrangements with similar organisations;
- Promoting organic agriculture locally and nationally.

Observations

The study visit participants visited nine farmers who are members of MSOFA, and after their visits they noted the practices they had seen:

- The use of cut-off drainage systems on gently sloping land allowed rainwater to be harvested for crop production;
- Contours dug across the farm holdings helped to prevent soil erosion;
- Contours and cut-off drainage systems were stabilised using fodder crops, maximising land use;
- Mulching the banana and vanilla crops was being practised to improve rainwater infiltration and manage soil fertility;
- Some farmers were grafting tree seedlings;
- Nitrogen-fixing crops, particularly jack beans, were being used to improve soil fertility;
- Intensive intercropping involving crops that occupy different strata of space, such as tall trees, medium-height bananas and ground-level creepers, was being practised, maximising land use.

The study team also observed, however, that the use of compost and liquid manure was low, the management of passion fruit crops needed improvement and the goats were local breeds and

characterised by low productivity. They noted that the farmers lacked support from research institutions, that few farms were certified and that farmers were constrained by certification costs.

The participants made the following recommendations:

- Improve the genetic potential of local goats;
- Increase the integration of animals into the farming system to provide manure;
- Improved livestock housing so as to facilitate the collection of dung and urine;
- Intensify the production and marketing of passion fruit, which has great potential;
- Help farmers to access certification services, an area where government needs to take action;
- Establish links with research institutions to develop solutions to production problems.

The farmers visited appeared knowledgeable about organic agriculture and had experienced its benefits in terms of maximising production from small land areas. The Kenyan and Zimbabwe participants noted that land in this area was inherently fertile and wondered whether organic practices could sustain production on less fertile land, as is the case in many areas of their countries where crop yields are poor if mineral fertilisers are not added. There is a need to explore this issue further to assess the potential of organic agriculture on less fertile soils.

2. Uganda Martyrs University / Schools' Organic Vegetable Gardening Programme

The Uganda Martyrs University (UMU) and the UK-based Seeds for Africa launched the Schools' Organic Vegetable Gardening Programme to improve the livelihoods and agricultural knowledge of children and teachers in primary schools and other lower level educational institutions in Uganda. Its main activity is to introduce vegetable growing in schools, using organic management techniques, both to improve nutrition and to disseminite such technologies in the community.

The main campus of UMU is at Nkozi, 82 km west of Kampala. There are more than 2000 students, of whom about 460 reside on the campus, while the rest are engaged in distance-learning and part-time programmes. The University is committed to serving the community through outreach programmes, especially in relation to marginalised, poor and vulnerable people. Fostering skills enhancement, knowledge sharing, sustainable development and environmentally sound management strategies are all high on its agenda.

Seeds for Africa is a registered charity based at the University of Kent and is run by staff and student volunteers from the University. It seeks to help needy African families by providing them with vegetable seeds, agricultural equipment and technical advice. Since it started in 1998, it has purchased more than 100 tonnes of vegetable seed for African farmers.

By the time of the study visit, the Schools' Organic Vegetable Gardening Programme had helped 57 Ugandan schools start organic vegetable gardens. Initially, the science or agriculture teacher in each

school is trained at UMU. They then lead the vegetable gardening activities at the school, with technical back-up and educational materials provided by the programme. Each class establishes and manages its own plots. The schools are encouraged to have 'vegetable eating days', such as a 'carrot day', when the children harvest, prepare and eat vegetables from their own plots. In addition. quizzes and debates are organised, with the winning school awarded a trophy or a study visit to demonstration farms. The children are encouraged to take some seeds or seedlings home to establish plots near their homes.

Observations

The study participants visited three schools (Nakirebe Primary School, Kampiringisa National Youth Rehabilitation Centre and Mbute Primary School) and UMU's demonstration plots. Apart from indigenous vegetables, there were also plots of bananas and *Moringa olifeira*. At Kampiringisa, the pupils each have their own plot and use organic pesticides such as tobacco and pepper to control pests. UMU's demonstration site is used for conducting trails and training the school teachers.

After their visit, the study participants made the following observations:

- The strength of the project lies in its contribution to developing a future generation that will be knowledgeable about organic farming. Follow-up activities are needed to assess whether this knowledge is reaching families and the local community.

- Rural, peri-urban and urban schools need different technologies. Many peri-urban schools put less emphasis on practical training because their teachers lack experience or interest. In addition, these schools often lack land suitable for gardens; in these cases they are encouraged to adopt basket gardening techniques or to inter-plant vegetables with flowers in existing flower gardens.

- The selection of type of vegetable is determined by the location of the school and likely pest incidence.

- Most parents are poor subsistence farmers who are unable to buy vegetables from the market. Encouraging pupils to grow vegetables at home transfers production knowledge to the home and results in improved nutrition at home.

- The availability of water is vital for year-round vegetable production. Students are taught how to harvest rainwater using such methods as gutters, tanks, water-collection ditches and trapping it from trees.

- The programme has produced a manual for primary schools that is used in teacher training, and conducts visits to schools to provide advice and assistance to teachers and pupils.

- Some schools drop out of the programme when the pupils leave or the teachers are transferred. It is very important to find ways of ensuring that the programme can become firmly established in schools.

- While the main purpose of the programme is educational, the potential of the plots as a source of school food should be maximised both for nutritional purposes and to engage school management in the activity.

- The schools could also be encouraged to provide their local communities with seed/seedlings from the plots and to offer technical advice.

- The promotional activities such as 'carrot day', quizzes, a trophy and study tours are important ways of developing and retaining pupils' interest in the venture.

- Tilling could be minimised to conserve water, and pupils can be kept occupied with mulching and other labour-intensive tasks that enhance soil fertility

- Sunken beds might be more effective than the current raised beds when it comes to rainwater harvesting and conservation.

- There are continuity problems with regard to funding, retaining the lead teachers and maintaining plots during school holidays.

- The programme needs to be more integrated with UMU's work and research institutions. The UMU demonstration plot, where vegetables are grown under nine pest and soil fertility management regimes, could be duplicated at the schools.

- The programme should develop a more comprehensive model of organic farming and initiate follow-up activities with pupils, their families and the community.

3. Ntungamo Women's Effort to Save the Environment

The major farming activities in Uganda's Ntugamo district are cattle rearing and banana production, both of which have resulted in over grazing, land degradation and high rates of soil erosion. The aim of the Ntungamo Women's Effort to Save the Environment (NWESE), based in Rwenewera village, is to foster income-generating farming activities that conserve the soil. With support from the Small Grants Programme (SGP) of the United Nations Development Programme (UNDP)/Global Environment Facility (GEF) and from the Cananda Fund, NWESE has acquired the land, buildings, equipment and technical expertise needed to grow and distill lemon grass (*Cymbogon flexuosus*) and promote it as a means of controlling soil erosion and earning income from extraction of essential oils.

Lemon grass is fairly resistant to drought and fungal infections and there is no need for irrigation. It was introduced in Rwenewera in 2000 not only for essential oil production but also for its excellent mulching properties and as a source of manure. Members of NWESE are now achieving yields of 120–140 ml oil from 13 kg of dry lemon grass.

ICIPE ran a course on lemon grass distillation in 2002 and remains available to NWESE members for technical advice. Lemon grass distillation equipment was purchased and installed in the distillation building. A 20,000 litre underground tank was constructed because of a poor water supply connection from Ntungamo Town Council and to ensure continuity of distillation work. The distillation building is surrounded by a lemon grass demonstration garden that is intercropped and contour banded.

By the time of the study visit, NWESE had produced 30 litres of the lemon grass essential oil. From this oil ICIPE makes soap, shampoos and aroma therapy ointments. The lemon grass variety grown is also suitable for flavouring soft drinks and confectionery.

NWESE is developing a business plan intended to move the project from its donor-supported basis to an independent business enterprise. Currently, it faces a number of challenges:

- The distillation capacity is too small to cope with the amount of lemon grass available for distillation;
- Funding is needed to improve the electrical wiring of the building;
- The manual grass-chopper needs to be replaced by an electrical or motorised type;
- Markets for essential oil need to be found;
- A soil extension agent is needed to train farmers in land husbandry;
- Glassware and simple reagents are required so that NWESE can conduct its own quality control;
- Information is needed on such issues as the effects of crop age on the yield and quality of essential oils, the shelf life of essential oils and market prices.

Observations

The study participants visited the NWESE site and followed this up with a visit later to ICIPE in Kenya. Their observations after these visits included the following:

- The NWESE group consists of men and women working well work together. However, the men appeared to have a dominating role, as evidenced by the prominent role they played in hosting the study team. There is a need to strengthen the women's participation in the project.

- The project is experiencing marketing problems as some of its oil is lying in storage without a market.

- There are problems with the buyer, who is not paying on time for the oil delivered by NWESE and has retained the distillation unit maintenance manual, which is affecting repair and maintenance. The Kenya visit showed that the buyer appeared to be doing good business and that there was no reason why payment could not be made on time.

- The distillation unit is inappropriate. It is a sophisticated piece of technology and has a low production capacity. Experiences from Madagascar indicate that farmers can use less sophisticated distillation equipment that is made locally and is cheaper to maintain.

- With the numerous medicinal plants used in ACP countries, medicinal-based micro-enterprises could be viable so long as the processing equipment was appropriate and affordable and the owners were equipped with necessary technical knowledge. A technical study visit to explore these issues in more detail should be organised, with the focus on identifying and documenting the production, processing and marketing of medicinal plants.

- The group's plans for organic certification of the oil need to be expanded to cover the certification of whole farms, opening up organic marketing opportunities for other organic crops grown locally.

4. Karughe Farmers' Partnership

Based in Uganda's Kasese district, the Karughe Farmers' Partnership is an association of 40 farmer groups, representing more than 1000 farmers. It was set up as a self-help community organisation in 1989 and gained NGO status in 1998. Its overall objective is to 'to promote and spearhead sustainable human development and ensure natural environment conservation for development in activities affordable to the target beneficiaries'. It seeks to promote gender awareness, to help farmers and farmer groups overcome constraints to development, and to develop farmers' skills and knowledge through such methods as self-reliant participatory development.

The association owns a small complex consisting of a training centre, a hall and offices and employs eight people, including five extension agents. The building has solar power for computers. The association also owns a nursery which produces seedlings of *Caliandra* sp.*, Sesbania sesban,, Leucaena* sp.*, Akazia* (for firewood), Jack fruit, avocado, *Eucalyptus* sp., citrus and *Moringa* sp.

With funding from a Dutch development agency, the association had enabled 350 farmers to receive training in organic agriculture by the time of the study visit, and is providing assistance on organic certification. The focus is on organic Arabica coffee, vanilla and fruit, including apples, avocadoes, bananas, mangoes, papaya and passion fruit. It has formed Organic Farmers Cooperatives and is also involved in setting up a national organic marketing company.

The Karughe Farmers' Partnership faces a number of constraints:

- The long distance from the airport, the only outlet for fresh fruits and vegetables to international markets. The association plans to overcome this by facilitating organic fruit and vegetable processing, which also has the benefit of adding value to the products.

- The scattered location of its member farmers constrains group marketing. The association is encouraging more farmers to convert to organic production, which would make collection, storage, transport and group marketing easier.

The association sees great potential for organic agriculture in the district, not least because the organic market continues to expand, Uganda's climate is conducive to organic agriculture and Ugandan

farmers already use fewer agrochemicals than is the case in any other African country. The association is working closely with NOGAMU to find marketing opportunities.

Observations

The study team visited two farmer groups that are members of the Karughe Farmers' Partnership.

Kyambogho Sustainable Agriculture Group

This group was formed 1997. Based in the Kisinga area and consisting of nine farming families, its main activity is to promote organic agriculture for own consumption and for sale. The crops grown are pineapple, tomatoes, bananas, passion fruit and *Amaranthus* sp. Livestock production (dairy cattle, pigs and goats) is integrated into the farming systems.

The study team visited two farms to observe the technologies and practices in use. These included the production and use of liquid animal manure from plant remains and livestock dung, the production and use basket compost, and growing nitrogen-fixing legumes. On-farm trials with pineapples as the test crop were being conducted, focusing on round/sunken/raised beds, manure, mulching, spacing and shade requirements. They showed, *inter alia*, that shade results in bitter-tasting pineapples and that sunken beds are better because they collect more water, although they are more labour intensive to establish. Pest control measures included putting ash and planting marigolds around the tomato fields. Liquid manure, ash and compost were used to fertilise tomatoes and bananas. *Sesbania sesban* was grown as the support for passion fruits vines and was also used to produce plant manure. Livestock tick and insect control was based on the use of local herbs such as marigold and washing the livestock with soap weekly. One of the farmers visited processes her own pineapples and buys some from neighbouring farmers. She hopes to acquire organic certification but is still constrained by the costs.

The farmers said the main benefits of adopting an organic approach was that it enabled them to intensify production from their smallholdings (averaging about 0.6 ha) and saved them the costs of mineral fertilisers. Being part of the group gave them access to information, participation in decision-making, improved family cohesion and provided equal opportunities for male and female farmers. The group also works as a training resource for the community and is developing a co-operative marketing system to gain access to the organic market and get better prices for their produce.

Women's Effort to Develop Natural Resources (WEDNR)

Formed in 1998, this group promotes organic farming, including the use of organic husbandry technologies and the integration of livestock production (pigs, goats and dairy cattle) with crop production. It also promotes food processing (apples, bananas, papaya and pineapples) using solar drying technology. The solar drying method involves spreading polythene on a raised wooden platform to trap solar rays, but this is not effective in the rainy season; in addition, the fruits darken on drying as they are directly exposed to the sun's rays. The new approach is to pass a stream of hot air,

generated by heaters, over the fruits. The group also has problems in ensuring hygienic packing conditions of the fruits because it does not have a vacuum packer.

5. Kiima Foods and the Uganda Institute of Organic Farming

Kiima Foods is a local NGO based in Kasese district. It was set up in 1995 to promote improved and appropriate organic agriculture technologies, to conduct research on organic agriculture and to develop demonstration centres. It has established the Uganda Institute of Organic Farming and runs a community organic agriculture outreach programme involving about eight farmer groups. The outreach programme involves:

- Training farmers in the basics of organic farming through extension services;
- Training selected farmers in organic certification and standards, and the formation of cooperative groups for production and marketing;
- Supporting farmers with agricultural inputs such as dairy goats, improved seeds, appropriate farm tools and vanilla vines;
- Collecting and providing market information to farmers.

The Kiima Foods approach is based on the notion that organic farming does not feed the crop directly, as is the case in conventional agriculture, it feeds the soil. This, in turn, feeds the crop through the action of microbes and other soil processes. The key to feeding the soil is compost. Organic farming is not seen as a cheap system meant only for poor farmers but rather as a system that works with nature and benefits the environment and the whole community, rich or poor.

At the time of the study visit Kiima Foods was working with 340 households, including men, women and children, and many farmers were growing organic crops such as vanilla, beans and pineapples commercially. The programme faces a number of challenges, including the following:

- Low literacy levels make documentation of the farm production process difficult, but this a major requirement for organic certification;
- Kiima Foods lacks expertise in organic certification and related marketing issues and is therefore limited in the training and advice it can offer farmers;
- It relies entirely on volunteer staff, making it difficult to reach all farmers in the outreach programme;
- Organic agriculture experiences are not well documented and disseminated;
- The government needs to formulate an organic agriculture policy and raise consumer awareness about the benefits of organic agriculture.

The farmer groups are being facilitated to work with the Karughe Farmers' Partnership to jointly market their organic produce.

Observations

The study visit team visited one farmer and had a meeting with one group of farmers who are participating in the outreach programme. At the farm visited, among the activities observed were the production of poultry feeds, poultry breed improvement through the crossing of exotic breeds with local breeds, dairy production, the use of local herbs (aloe vera, neem, hot pepper and tobacco) to control ticks and flies, the use of castor roots to treat problems of retained placenta in livestock, earthworm production for fish farming, and viniculture.

The study participants made the following observations:

- The farmers' initiative to conduct trials to identify the most appropriate production systems was commendable, but the trials could be improved through replication of the treatments, giving good comparative information.

- The farmer groups needed to link up with researchers for technical assistance in developing technologies, but this is constrained by the distances involved and the lack of resources to finance such partnerships.

- The individual farmers cannot access organic certification as the costs are prohibitive, but as a group collective certification could be cheaper. An internal control system, a prerequisite for group certification, needs to be developed.

- There is a lack of the knowledge and skills needed to develop internal control systems and related farm documentation, and the groups and their supporting NGOs will need technical assistance in this area and in meeting the initial costs of certification.

6. Bunyangabu Beekeeping Community

The Bunyangabo Beekeeping Community (BBC) is an NGO that was established in 1993 in the Kabarole District and has about 200 members from 27 registered vllage beekeeping groups. It provides technical services in production and bulk marketing and from its premises in Rubona Trading Centre it processes, stores, packs and markets honey and other bee products collected from members.

Its existence has created great demand for honey locally, but its honey production is low and cannot meet this demand. The reasons for the low honey production, which is preventing the BBC from creating the funds to re-invest in training, include the lack of intensive extension services, the lack of protective equipment, the small operational size of the area and the rebel insurgency that has disrupted production in some areas. The NGO has undergone a restructuring process and more groups have been registered and trained on basic beekeeping techniques. The members of these groups now constitute the general assembly of BBC.

The NGO is involved in promoting the formation of Rwenzori Bee Keeping Association (RBKA) which will handle the export marketing of bee products produced by the BBC and other beekeeping associations in the Rwenzori region. Organic certification will enable producers to have access to good markets, but it is constrained by the free-ranging habits of bees. A solution being investigated is for producers to place their bee hives in protected areas such as national parks.

Observations

The study team visited and exchanged experiences with leaders of the BBC and one of the member farmer groups, the Chivota Women's Group. The team made the following observations:

- The BBC is an example of a successful and sustainable producers association that provides technical and marketing services to its members. It is able to pay cash for the bee products delivered by its member farmers and has maintained the quality of the bee products it markets.

- It has been at the forefront of promoting improved technologies aimed at improving the quality and quantity of bee products produced by members.

- Having first targeted the local market, it is now in position to move to marketing bee products internationally in partnership with other bee associations in the region.

- The potential for producing organic honey is high if the vast protected areas in the region could be exploited for bee product production.

- The current low yield of honey per bee hive is attributed mainly to erratic weather changes and low forage quality; the NGO needs to encourage producers to grow appropriate forage plants. Other factors include poor extension services and the lack of protective equipment.

7. Joint Efforts to Save the Environment

A registered NGO and based in the Kihura area, Joint Efforts to Save the Environment (JESE) was formed to promote an organic approach to achieving sustainability in agricultural production. Its specific aims are to:

- Help farmers to mobilise, plan, develop and manage their resources sustainably;
- Promote appropriate technology that protects and conserves nature by reducing pollution and increasing plant and animal diversity;
- Promote low-cost farm input and sustainable agriculture practices that increase production potential and reduce yield loss;
- Promote interaction between agencies involved in sustainable development;
- Facilitate communities' access to safe water and improve standards hygiene and sanitation.

JESE runs a sustainable agriculture community development programmme providing training and extension services for farmers, as well inputs under revolving credit arrangements.

Observations

The study team met the staff of JESE and two farmers in Kihura sub-county, and made the following observations:

- Among the organic agriculture technologies being applied by the farmers were the production and use of manure and compost, soil erosion control and the use of herb-based pest control measures. Livestock urine was collected from livestock shelters and used to fertilise crops. Trenches had been constructed to prevent soil erosion and capture rainwater. The banana fields were intercropped with nitrogen-fixing plants such as *Mucuna* and *Grevellia*, which are also used to feed livestock. Both live and dead mulch were used in the banana fields.

- Plans were underway to facilitate the marketing of the farmers' organic products in the next phase of the programme, starting in 2005.

8. Tropical Ecological Foods of Uganda

TEFU was formed by farmers in the Mubende district in 1999 to process and export organic fruits. The idea to form TEFU was in response to visitors from Denmark informing some farmers in the district of the growing market for dried organic foods. TEFU has a staff of four, including an extension agent, and occasionally engages part-time workers. At its solar processing factory it has installed both hydro-electric power and solar electricity. It has 38 contracted farmers who supply the factory with organic apples, bananas, mangoes and pineapples.

All production is documented and inspected by TEFU staff and farmers as part of the internal control system. At harvest time, TEFU collects the produce from farmers once or twice a week. At the factory it is graded and sorted according to state of ripening and then stored. Ripe fruits are washed, peeled, sliced and laid on trays that are then placed in the solar drying chambers. There are three types of driers:

- *Solar tunnel drier:* A concrete, direct sun-based drier that collects heat from the sun's rays in the heat accumulation section of the tunnel (9 m long) and the hot air is gently blown (using a fan) over the fruits in the other section of the tunnel (11 m long).

- *Chamber solar drier:* Supplemented by hot water at night, an improved solar tunnel drier that depends both on air heated by the sun and a network of hot water pipes that draw heat from the sun. The drying process takes 24 hours to complete, whereas the solar tunnel system takes 3 days. The longer it takes fruit to dry the greater the loss in quantity and quality.

- *Hybrid solar drier:* A drier that depends on both solar heat and a diesel heater to heat air blown over the fruit. With the hot air maintained at a temperature of 60°C, the drying process takes only 12 hours to complete the fruit drying process. Although this is the fastest drier, it is also more energy consuming than the other types.

The dried fruits are packed in 4 kg packets for export and then deep frozen for 48 hours.

TEFU owns the organic certificate. The cheapest certification system is called Grower Group Certification (GGC), which is cheaper than individual farm certification. It requires establishing a documented internal control system. The costs of certification are:

- External costs, paid to the certification company. The total paid for the year preceding the study visit was 6.6 million Ugandan shillings, half of which is by TEFU, the other half by the importer;

- Costs of running the internal control system (salaries, transport, allowances and documentation, etc.). The total for the year preceding the study visit was 9.8m Uganda shillings.

Among the constraints currently faced by TEFU are limited drying capacity, poor transport facilities and the certification cost when TEFU becomes eligible to pay the full amount.

Observations

The study team visited the factory and was taken through the whole process of solar fruit processing, from the point when fruit is received at the factory to when it is ready for export. After the visit the team made the following observations:

- Organic certification costs are high even when the GGC system is used. The establishment of local certification agencies could reduce certification costs significantly. Governments should address this issue and help farmers and operators gain access certification services.

- Mobilising farmers, providing them with extension services and running internal control systems constitute a major drain on company resources. These services are not the core business of private processors and exporters and should be taken over and/or facilitated by government, leaving companies free to concentrate on quality control and marketing.

- There is a need to help develop strong farmer organisations whose members have the skills to establish and manage internal control systems and acquire certification via the GGC system.

- TEFU received assistance from the United Nations Industrial Development Organisation (UNIDO) to install the hybrid solar drier under a pilot scheme. Such support is critical to overcoming technological constraints to small-scale food processing by low-resource farmers. Governments need to implement similar schemes.

The study visit in Kenya

The opening session

The study visit participants were welcomed to Kenya by the Director of the Manor House Agricultural Centre (MHAC) and were then briefed on the aims and programme of this part of the study visit. Two speeches followed, one by a Ministry of Agriculture official who provided statistical data and outlined the government administrative structure in Kenya, and the other on the history of the MHAC.

The MHAC focus is on improved soil fertility. To achieve this, it promotes crop diversity, integrated pest management (IPM), natural resources conservation and the use of raw materials for industry, including timber for construction. It consists of five departments dealing with crop production, agroforestry, livestock, beekeeping and engineering.

The speeches highlighted several problems facing organic agriculture in Kenya, including:

- Inadequate water resources;
- Lack of ineraction between NGOs focusing on organic agriculture;
- Inadequate knowledge and experience regarding organic certification;
- High costs of certification, preventing farmers from converting to organic farming.

The field visits

1. Association for Better Land Husbandry

The Association for Better Land Husbandry (ABLH) was formed by a scientist with long experience in research and training in tropical agriculture in Africa. His main interest was soil fertility in tropical regions, where soils are prone to leeching and the depletion of organic matter due to high temperatures. Organic agriculture is promoted by ABHL as a holistic livelihood system benefiting producers and consumers. The main activities of the association are:

- Mobilising farmers and providing them with training and extension services in organic agriculture practices (such as composting, the use of farmyard manure, agroforestry, crop rotation and kitchen organic farming);

- Helping farmers to form farmer associations and gain better access to extension services;

- Promoting contract farming to enhance access to markets;
- Liaising with stakeholders in the agricultural sector to provide an appropriate and sustainable service;
- Training self-help groups.

Observations

The study team made the following observations:

- Most people in Kenya, including consumers, know little or nothing about organic farming;
- There is a misconception that organic farming is tedious compared with conventional farming;
- Raising awareness about organically produced food and the benefits of organic agriculture requires a nationwide campaign;
- Farmers need to be linked to external markets.

2. Baraka Agricultural College

The Baraka Farmers Training Centre was established in 1974 and in its early years the curriculum reflected that of conventional agricultural training centres, with an emphasis on high-input agriculture. It soon became clear that this approach was not responding to the needs of the small-scale farmers. After an international workshop at the centre in 1986 on sustainable agriculture, the curriculum promoted the concept of sustainable agriculture. In the early 1990s the centre changed its name to the Baraka Agricultural College (BAC) and the concept was extended to include rural development, termed 'sustainable agriculture and rural development' (SARD). The focus is on the small-scale farming sector and all five BAC programmes aim at empowering rural communities.

The SARD concept is now accepted by government agencies as a strategy to eradicate rural poverty. The BAC's extension programme has had a strong influence on government extension policy. The college is also involved in providing processing and marketing facilities. Its Community Sustainable Agriculture and Rural Development (CSARD) training course is organised for about 80 participants annually.

More than 1,600 women and men from Eastern Africa have graduated from this 16-month course and many of them now work in their rural communities. In the southern Sudan there are more than 70 CSARD graduates promoting sustainable development in a region that has no development infrastructure.

Observations

After its visit to the college, the study team made the following observations:

- The college has a good reputation as a training institute, with skilled and experienced staff and good links with development partners;
- Its SARD approach puts people at the centre of development;
- The facilities and equipment need improvement;
- More advanced programmes are needed and existing programmes need to be better co-ordinated;
- There is no Board to develop policies and provide direction for the management of the college (the policy on resource mobilisation, for example, is unclear, and there is no policy for staff development).
- There is too much reliance on external donor support for programmes and inadequate publicity aimed at attracting more students from the region;
- The college lacks an effective follow-up system for CSARD graduates.

3. International Centre of Insect Physiology and Ecology

Established in Kenya in 1970, the International Centre of Insect Physiology and Ecology (ICIPE)'s mission is to help alleviate poverty, ensure food security and improve the health status of people in the tropics by developing tools and strategies for managing harmful and useful arthropods, while preserving natural resources through research and capacity building. Its main activities involve:

- Serving as the regional focus for bioscience and technology information and knowledge, and developing and adapting improved arthropod management technologies;
- Building the capacity of individual researchers and institutions in the tropics to initiate research as new problems arise, as well empowering women and young people and building the capacity to use, transfer and teach ICIPE technologies;
- Contributing to policy development by working closely with governments and policy-making organisations at the local, national, regional and international levels;
- Reducing the impact of arthropod pests on food production and well-being, promoting the use of beneficial insects and contributing to the creation of sustainable livelihoods through the development of rural agro-based food, fibre and health product enterprises.

The agenda for carrying out these activities is based on ensuring the four Hs: human health, animal health, plant health and environmental health.

Carrying the health paradigm a step further, ICIPE stresses 'prevention over cure' when it comes to arthropod-related problems. It tackles these problems using multidisciplinary teams that include entomologists and acarologists, behavioural biologists, molecular biologists and biochemists, population and ecosystem ecologists, biomathematics and bioinformatics specialists, entomopathologists, biosystematics experts, social scientists and trainers. Capacity and institution building activities are integrated into every project.

Much of the basic strategic research is carried out at ICIPE's international headquarters on the Duduville campus in Nairobi, with fieldwork being conducted at the major field station on the shores of Lake Victoria. Other field sites in Kenya, Sudan and Ethiopia ensure that ICIPE's research and development work spans a wide range of tropical ecosystems and habitats. By working closely with farmers, national agricultural systems and research institutes, and more than 50 universities around the world, ICIPE is able to draw on the global fund of knowledge and experience.

ICIPE is extending its outreach activities by working closely with growers, NGOs, exporters and governments to help small-scale farmers and local communities to:

- Meet the stringent standards for horticultural products by developing IPM strategies that enable farmers to abide by hygiene and quarantine regulations and pesticide maximum residual limits set by the European Union and the European Retailers' Programme on Good Practices (EUREP GAP); some of these technologies are applicable in organic agriculture;

- Have access to affordable certification services by facilitating the establishment of a local certification body;

- Process and market insect products; ICIPE runs a high quality processing and marketing operation for bee and silkworm products, enabling farmers to reach high quality markets through the sale of their products to ICIPE;

- Bio-prospecting for useful natural products such as medicinal plants. Under this programme, ICIPE helps local communities find new sources and uses of indigenous plants, as in the lemon grass essential oils project in Uganda.

The oils are bought by Biop Co. Ltd, wholly owned by ICIPE, then processed and sold through ICIPE's Bio Research Shop.

The company also processes and sells neem tree products (produced from raw materials supplied by Kenyan farmers) and insect repellents (produced from *Ocimum kilimandcharicum* supplied by Ugandan and Kenyan farmers).

Observations

The study team visited ICIPE's headquarters in Nairobi, after which they made the following observations:

- ICIPE is playing a leading role in applying the concept 'from basic research to product development and adoption' in tropical countries, making research outputs relevant to the needs of local communities; the approach needs to be studied by ACP institutions;

- It is making its technical resources available to local communities, helping them to produce high-value products and reach good local and international markets; this overcomes the problems of quality assurance, processing, packaging and market access which constrain most small-scale farmers;

- It has deployed its enormous technical resources to help local communities validate the medicinal properties of their indigenous vegetation, its commercial production, processing and marketing, thus bringing medicinal products to the formal market and improving rural incomes;

- It has responded to the need for farmers to adopt technologies and practices that protect the environment and meet the requirements of international markets for horticultural exports;

- It is working on the establishment of a certification agency that will make certification services available to local communities at affordable costs;

- ICIPE's processing and marketing roles enable it to generate income to finance its work and thus sustain its facilitation role. However, instances such as that highlighted by the NWESE lemon grass project, where ICIPE had not bought in all the essential oil produced and had not paid promptly for what was delivered, could undermine the confidence in ICIPE in this area of its activities.

4. Kenya Institute of Organic Farming

The Kenya Institute of Organic Farming (KIOF) was established in 1986 to train and promote organic farming methods among smallholder Kenyan farmers, using participatory approaches. The initial KIOF programmes in central and eastern Kenya proved successful because they encouraged low-cost farming methods appropriate to small-scale farming. Organic farming became very popular, leading to a demand for information and training in organic agriculture from throughout the region.

KIOF has established a residential training centre with demonstration gardens in Thika, about 40 km from Nairobi, where it provides training in organic farming. The trainees include small-scale farmers, rural youth and extension agents. The institute also provides research and consultancy services and disseminates information on organic agriculture.

Its many achievements include the following:

- More than 15,000 farmers have been trained in organic farming and followed up; most of them are practising the skills learned through this training;
- More than 300 young people have taken up careers in organic farming after completing KIOF's 18-month certificate course;
- Through regional workshops on organic farming, KIOF has trained about 250 agricultural extension staff, trainers and farm and programme managers working with NGOs, churches and governments;
- KIOF gathers information on organic farming from sources around the world and disseminates it within Eastern Africa and beyond;
- The institute has encouraged the formation of CBOs, NGOs and networks to promote organic farming locally and regionally;
- It has established 10 organic farming demonstration farms in Kenya, serving as working examples of organic farming and offering local opportunities for practical learning;
- It has mobilised organic farmers in Kenya to form the Kenya Organic Farmers Association (KOFA) to deal with inspection, certification and marketing issues; KOFA has already developed national standards for organic production in Kenya;.
- KIOF has been at the forefront of conducting on-farm trials and data analysis in organic farming and is active in collaborative research with other institutions, including ICIPE and the Kenya Agricultural Research Institute (KARI).

Organic farming in Kenya faces a number of constraints. One of these is that many farmers in Kenya have not been exposed to organic farming and lack technical knowledge about it. Another constraint is that labour requirements for such tasks as composting, manure collection, tree pruning and green manure incorporation can be overwhelming for poor-resource farmers. Third, soils in many areas are poor, partly because of the high mineralisation rate of organic matter. A fourth constraint is that agricultural research by government institutions, universities and international organisations is oriented towards promoting conventional agriculture; little of this research is relevant to organic agriculture.

Other constraints include the current lack of local markets for organic produce, the high cost of certification, the widespread promotion of agrochemicals by government and private institutions which often has the effect of making farmers view organic farming as a backward form of agriculture, and the emergence of GMO technologies.

Nevertheless, there are many opportunities for the development of organic agriculture in Kenya. These include:

- The maximum residue levels (MRLs) requirement for fruits and vegetables by EU markets opens a niche for organic produce from Kenya;
- Increasing environmental concerns and negative experiences with agrochemicals are leading farmers to search for alternative methods such as organic farming;
- Farmers in remote areas have limited access to conventional inputs, and where available the cost is out of reach for most smalholders, making organic farming an attractive option using local resources;
- Access to agro-industrial and urban waste by farmers near urban centers offers great potential for organic soil fertility management;
- In arid and semi-arid areas the use of organic matter increases the water-holding capacity of the soils, resulting in higher yields;
- The intensification of animal production through controlled grazing due to limited space facilitates the production and management of manure, resulting in improved soil fertility;
- Organic farming has the potential to generate employment in rural communities.

KIOF considers that the future development of organic agriculture in Kenya depends on a desire by farmers to adopt this approach, a supportive government policy environment, government incentives, an accessible and affordable national inspection system, the development of local organic markets and a better pricing system. It also requires collaboration with NGOs to ensure that organic techniques are appropriate to local agro-ecological and cultural conditions, and improved training provision for all stakeholders, including farmers, traders and extension agents.

5. Sustainable Community Agriculture Community Development Programme

The Sustainable Community Agriculture Community Development Programme in Kenya (SACDEP–Kenya) was registered in 1993 and works in the central districts of Kenya. Its activities are based on five main principles:

- Harnessing social capital, with farmers operating as organised groups;
- Agricultural production through low-cost external inputs;
- Focusing beyond increased production to farmer-driven value-adding and marketing systems;
- Use of renewable energy and low-cost alternative technologies;
- Local finance mobilisation through the development of a savings and credit culture at group level.

SACDEP collaborates with many national, regional and international organisations. Among these is Participatory Ecological Land Use Management (PELUM), an association of technical NGOs in Eastern and Southern Africa. SACDEP is a member of IFOAM's global project entitled IFOAM-Growing Organic (I-GO) and sits on IFOAM's Organic Service Advisory Committee. It is also on the Board of AfriCert, an organic certification agency, and has taken a leading role in the creation of a Kenyan national organic co-ordination body.

SACDEP obtains financial support from three key sources. Donors account for 60% of the budget and include Action Aid, the German development agency Gesellschaft für Technische Zusammenarbeit (GTZ), the UK's Tudor Trust and the UNDP. Internal fundraising, mainly from hiring out the conference facilities at its offices, contributes 30% of the budget, and consultancies contribute the remainder.

SACDEP is mainstreaming HIV/AIDS in agriculture, promoting sustainable agriculture among school children, researching and documenting the impact of sustainable agriculture and providing opportunities for practical training for local and international students. Since 1993, more than 30,000 families have benefited from the SACDEP development programmes and currently about 3,500 households are involved in SACDEP programmes.

Recommendations

Discussion sessions were held each evening covering each project visited, and a final discussion session was held on 29 April. These discussions gave the study visit participants an opportunity to synthesis the main issues in organic agriculture in ACP countries. Each participant also completed a questionnaire giving his/her evaluation of individual visits.

The participants identified eight main issues. These issues are outlined in the Summary (*see* pp. 1–5). For each issue, the participants formulated recommendations. These are presented here.

1. Organic agriculture as a strategy for production intensification

- Scientific research needs to be conducted to improve the quality of information and knowledge about organic agriculture.
- A list of publications and institutions covering and promoting organic agriculture needs to be compiled and widely disseminated.
- A technical journal specialising in organic agriculture in tropical and sub-tropical regions should be launched.
- More use needs to be made of local media (television, radio and newspapers) to raise awareness about organic agriculture and its potential.

2. Networking to promote information exchange and policy advocacy

- National and regional networks on organic agriculture need to be strengthened or, where none exist, established.
- The main aims of these networks should be to enhance the documentation and dissemination of information, exchange experiences and pool resources for lobbying and advocacy for organic agriculture.
- The new IFOAM Africa Organic Service Centre should play a crucial role in facilitating national and regional networking on organic agriculture.

3. National organic agriculture policies and institutional frameworks

- National organic agriculture policies need to be formulated.
- Such policies should be comprehensive enough to ensure that the necessary political, technical and financial resources required to develop the subsector become available and to make clear the priority areas requiring support from development partners.
- Technical assistance is needed in the areas of policy formulation, analysis and advocacy.

4. Supporting ACP research on organic agriculture

- Awareness of the need for research on organic agriculture technologies and practices applicable to ACP conditions needs to be raised both within the research community and the donor community and among government policy-makers and decision-makers.
- Raising awareness should be done through lobbying, advocacy and the generation, documentation and dissemination of organic agriculture information and experiences.
- This campaign needs to be spearheaded by organic agriculture networks, which should also enlist support from the worldwide organic movement.

5. Organic agriculture certification systems and services

- Efforts need to be made to develop national/regional standards for organic agriculture; these standards should be coded by governments and inter-governmental agencies to attain recognition by developed countries and to enhance the negotiating position of ACP countries in international fora.
- National certification agencies need to be established to make certification more affordable for smallholders than the current position whereby this service is provided almost entirely by external certification agencies.
- In the particular area of organic honey certification, efforts need to be made to facilitate honey production in conservation areas.

6. Consumer awareness of the benefits of organic agriculture

- Vigorous efforts are needed to raise consumer awareness of the benefits of organic agriculture.
- Local markets for organic produce need to be developed by establishing low-cost marketing outlets and organising efficient and viable marketing chains from the farmer to the consumer.

7. Conversion from conventional to organic agriculture

- To reduce the costs of conversion incurred from the certification costs involved and time span required, national/regional standards for organic agriculture that suit ACP conditions need to be established.

- Organic soil amendments need to be available in large quantities and at affordable costs for farmers who wish to convert to organic farming but farm in areas where soil fertility is low.

8. Processing organic produce

- Governments should invest more resources in research on developing cost-effective and efficient processing equipment and facilities suited to local conditions.

- In the particular area of processing medicinal plants, equipment that is appropriate and affordable is needed and the owners of such enterprises need to be equipped with necessary technical knowledge.

- A technical study visit should be organised to explore medicinal plant processing in more detail, focusing on identifying and documenting the production, processing and marketing of medicinal plants.

Conclusion

The study visit enabled participants to share information about organic agriculture and visit projects in Kenya and Uganda that illustrated the opportunities and constraints faced by this subsector and its potential in ACP development. Access to lucrative markets in the EU, Japan and the USA is constrained by regulatory frameworks in developed countries and by the lack of them in most ACP countries, alongside a lack of national organic agriculture policies. Consequently, the certification of organic produce is based on standards developed in the North, where temperate conditions prevail. Similarly, certification services are provided by agencies based in developed countries, making them too costly for most ACP farmers and exporters.

The development of internationally recognised national and regional organic standards and certification systems should be a government-led process within the framework of strong policies and programmes. Without such policies, the subsector will continue to lack the access it needs to technical and financial resources, and ACP governments will not be in a position to negotiate for realistic access to the markets of the North.

A particularly promising opportunity concerns medicinal plants. Currently, many multinational pharmaceutical companies are exploiting the potential here, with little or no benefit to the local communities who are the custodians of these resources. ACP countries need to invest in medicinal plants research, production and processing and to ensure that the development of such enterprises benefit the owners and the local communities. In its pioneering work in Kenya and Uganda, ICIPE has demonstrated the potential of such investment, but there are many issues that need to tackled if such investments are to pay off, including appropriate technology, improved skills and enhanced marketing capacity. The study visit participants recommended organising a technical study visit to explore these issues in more detail.

The participants considered the study visit to have been successful, enabling them to explore issues in organic agriculture in detail and to assess the subsector's role in the intensification of agricultural production against the backdrop of the diminishing size of landholdings. The study visit programme was tight, with little rest time, and the participants recommended that future visits should allow more time for rest and for interaction with the farmers.

Annexes

ANNEX 1: Criteria for participation in the study visit

CTA selected 20 people from the Caribbean, Kenya, Madagascar, Malawi, Mozambique, South Africa, Tanzania, Uganda, Zambia and Zimbabwe and one person from the EU to take part in the study visit. The selection of participants was based on the following criteria:

- Active involvement in the development of the organic sector (e.g., extension, research, training, inspection, certification, information dissemination, policy), regionally or nationally;
- Potential for a multiplier effect in disseminating study visit information and lessons learned (e.g., member of a networking organisation, employed in an institution active in networks, employed in government policy-making agricultural departments/units);
- Technical staff from large farmers' organisations involved in information dissemination and promoting organic agriculture;
- Demonstrated analytical and documentation skills;
- Nomination made by the institution/organisation in which the participant involved/employed;
- Gender composition of the study team to reflect the gender realities in agriculture in ACP countries, thus nominations of women encouraged;
- Study team to be multidisciplinary, with participants reflecting the spectrum of activities involved in organic agriculture (e.g., production, extension, training, research, inspection and certification, trade and policy).

The nominations were made by the institutions/organisations, which sent the following information:

- Nominee's CV;
- Nomination letter giving reasons why the nominee was suitable for inclusion in the study team.

ANNEX 2: List of participants in the study visit

Mr Anthony Acheampong
1 Rochfort House
Grove Street
London SE8 3LX, UK
E-mail: tonykutu@aol.com or
aseku@hotmail.com
Tel: +44 20 86911456
Cell: +44 7740 871133

Mr Felix Atkinson
Grenville Stondrew
St Andrew, Grenada
E-mail: Colla@CARIBSUF.com
Tel: +1 473 442 7379; cell: 406 0624

Mr Joel Atuti
Sustainable Agriculture Community
Development Programme (SACDEP-Kenya)
PO Box 1134
Thika, Kenya
E-mail: sacdepkenya@iconnect.co.ke
Tel: +254 67 30541

Dr Malachy P. Dottin
Ministerial Complex
Botanical Gardens
St George's, Grenada
E-mail: malachyd@calibsurf.com /
malachyd@hotmail.com
Tel: +473 440 2708/3083/3112
Cell: +473 409 1219
Fax: +473 440 6613

Dr Carvalho Carlos Ecole
FPLM
2698 Avenue
PO Box 3658
Mavalane
Maputo, Mozambique
E-mail: ccecole@hotmail.com
Tel: +258 1 460203
Cell: +258 82 804958
Fax: +258 1 460074

Ms Kalomo Leonard Felistas
District Agriculture and Food Security
PO Box 747
Morogoro, Tanzania
E-mail: felistakalomo@yahoo.com
Cell: +255 023 0744 581302

Mr Rene Fischer
PELUM Regional Desk
PO Box CY 301, Causeway
Harare, Zimbabwe
E-mail: rfischer@zol.co.zw
Tel: +263 4 495443; cell: 263 91 301 393
Fax: 263 4 495443

Mr Jordan Augustine Gama
ADP Mbozi Trust Fund
Box 204, Mbozi
Mbeya, Tanzania
E-mail: gamajam2002@yahoo.com
Cell: +255 748 492439
Fax: +255 25 2580312

Mr Rajaonarison Andrianjaka Hanitriniala
Lot H85 bis, Alasora,
Antananarivo, Madagascar
E-mail: njk17@netcourrier.com
Tel: +261 20 22 241 84
Cell: +261 33 11 360 49

Mrs Dinah Kasangaki
Ministry of Agriculture Animal Industry
PO Box 102
Entebbe, Uganda
E-mail: dkkasangaki@hotmail.com
Tel: +256 41 320822; cell 077 483099

Mrs Mary Salima Kuria
Kenya National Federation of Agricultural
Producers
PO Box 43148
00100 Nairobi, Kenya
Tel: +254 20 581066
Fax: +254 20 583344

Dr Abdalla Mubarak
Department of Soil and Environment Science
Faculty of Agriculture,
University of Khartoum
Khartoum, Sudan
E-mail: mubarakaba@yahoo.com
Tel: +249 9 12947250

Mr Isaac J.W. Mulagoli
Research Extension Liaison Division
PO Box 30028
Nairobi, Kenya
E-mail: imulagoli@yahoo.co.uk
Tel: +254 20 2710911; cell: +254 733 859200
Fax: +254 20 2718044

Mr Ismahel Nsovella
Natural Resources Department
PO Box 188
Njombe, Tanzania
E-mail: msovella76@hotmail.com /
msovella@yahoo.com
Tel: +255 26 278 2535; cell: +255 748 379 494
Fax: +255 26 278 2464

Mr Jean Marie Randriavahimanana
VF 99 Ankurahutra
Madagsacar
E-mail: jmravahy@hotmail.com
Tel: +261 20 22 309 48; cell: 033 11 791 61
Fax: +261 20 22 566 33

Mr Charles Rusoke
Ministry of Agriculture, Animal Industry and
Fisheries
PO Box 102
Entebbe, Uganda
E-mail: entebbe@ulampico.co.ug
Tel: +256 41 321773; cell: +256 77 480062
Fax: +256 41 321773

Mr E. Sajjabi
PO Box 27193
Kampala, Uganda
E-mail: afrd@africaonline.co.ug
Tel: +256 77 750387; cell: +256 77 550387
Fax: +256 77 251387

Ms Judith Schachinger
Wickenburggasse 14/9
Vienna, Austria
E-mail: judith.schachinger@bioinfo.at /
jschachinger@yahoo.de
Tel: +43 1 4081048 12
Fax: +43 1 4027800

Ms Polly Wachira
Sustainable Agriculture Community
Development Programme
PO Box 1134
Thika, Kenya
E-mail: sacdepkenya@iconnect.co.ke
Tel: +254 67 30541

Mr Charles Walaga
Organisation for Rural Research and
Development
PO Box 27317
Kampala, Uganda
E-mail: ccwalaga@hotmail.com
Tel: +256 77 407259
Fax: +256 41 530487

ANNEX 3. Study visit programme, 19–30 April 2004

Uganda

18 April	Arrivals
19 April	Opening session with presentations from the Ministry of Agriculture, National Organic Agricultural Movement of Uganda (NOGAMU), International Federation of Organic Agricultural Movement (IFOAM) Africa Desk, and UgoCert, giving an overview of organic agriculture in Uganda, networking activities and subsector constraints, challenges and opportunities.
	Visit organic farmers in Mbalala, Mukono District
20 April	Visit Nkozi University, staying overnight in Masaka
21 April	Visit lemon grass project in Bushenyi District, staying overnight in Kasese
22 April	Visit farmers group in Kasese, staying overnight in Fort Portal
23 April	Visit farmers in Kabarole and Kyenjonjo Districts, staying overnight in Fort Portal
24 April	Visit Tropical Ecological Foods Uganda (TEFU) in Mityana, staying overnight in Mukono
	Reception

Kenya

25 April	Travel to Kitale, Kenya, and briefed on the organic sector in Kenya
26 April	Visit Manor House, organic agriculture training and extension centre
27 April	Travel to Kakamega to visit Association for Better Land Husbandry (ABLH)
28 April	Travel to Nakuru to visit Baraka College
	Travel to Nairobi to visit International Centre for Insect Physiology and Ecology (ICIPE)
29 April	Meet officials of the Kenyan organic agriculture network
	Visit Kenya Institute of Organic Farming (KIOF)
	Final discussions and conclusions
29–30 April	Departures

ANNEX 4: Groups, organisations and institutions visited

(in chronological order)

Mbalala Sustainable Organic Farmers' Association
PO Box 68
Mukono, Uganda
Tel: +256 75 648493; 071 650906; 077 690530

Uganda Martyrs University
PO Box 5498
Kampala, Uganda
E-mail: cssekyewa@umu.ac.ug

Ntugamo Women's Effort to Save the Environment

International Centre for Insect Physiology and Ecology (ICIPE)
PO Box 30772-00100
Nairobi, Kenya
Tel: +254 20 861686
Fax: + 254 20 860110/803360
E-mail: dg@icipe.org
Website: http://www.icipe.org

Kalehe Organic Agriculture Promotion (KOAP)
PO Box 507
Bwera
Kasese, Uganda

Karughe Farmers' Partnership
PO Box 507
Bwera
Kasese, Uganda
Tel: +256 039 300738

Kiima Foods
PO Box 263
Kasese, Uganda

Bunyangabu Beekeeping Community (BBC)
PO Box 841
Fort Portal, Uganda

Joint Efforts to Save the Environment (JESE)
PO Box 728
Fort Portal, Uganda

Tropical Ecological Foods Uganda Ltd (TEFU)
PO Box 1234
Mityana, Uganda
Tel: +246 075 623439
E-mail: muwongemulindwa@yahoo.co.uk, / dissing@africaonline.co.ug

Manor House
Private Bag
Kitale
Kenya

Kenya Institute of Organic Farming (KIOF)
PO Box 34972
00100 Nairobi
Kenya

International Centre for Insect Physiology and Ecology (ICIPE)
PO Box 30772-00100
Nairobi, Kenya
Tel: +254 20 861686
Fax: +254 20 860110/803360
E-mail: dg@icipe.org

Association for Better Land Husbandry (ABLH–Kakamega)
PO Box 1499
Kakamega, Kenya
Tel./Fax: +254 56 30534

Sustainable Agriculture Community Development Programme (SACDEP–Kenya)
PO Box 1134
Thika, Kenya
E-mail: Sacdepkenya@iconnect.co.ke

Baraka Agricultural College (BAC), Kenya
PO Box 52
Molo 20106, Kenya
E-mail: barak@africaonline.co.ke
Tel: 254 51 721091
Fax: 256 51 721310

ANNEX 5: Members of the IFOAM-Africa Advisory Committee

Africa Coordinator
Fred Kalibwani
E-mail: f.kalibwani@ifoam.org;,
fkalibwani@yahoo.com

IFOAM Head Office
Thomas Ciepka
Managing Director
Bundeshaus, Gorresstrausse 15
53113 Bonn, Germany
E-mail: t.ciepka@ifoam.org
Tel: +49 228 926 50 10
Fax: +49 228 926 50 99

Africa Representative, IFOAM World Board
Al Haji Hamath Hane
AGRINAT
BP 234 Mbour, Senegal
E-mail: agrinat@enda.sn

IFOAM I-GO programme and member of PAC
J. Ngugi Mutura
Executive Director
SACDEP-Kenya
PO Box 1134
Thika, Kenya
E-mail: sacdepkenya@iconnect.co.ke

IFOAM I-GO programme and member of PAC
Diana Callear
AFRISCO – Certified Organic
PO Box 74192
Lynwood Ridge, South Africa
E-mail: afrisco@global.co.za

Member of IFOAM Development Forum
Charles Walaga
UgoCert
PO Box 27317
Kampala, Uganda
E-mail: ccwalaga@hotmail.com;
Ugocert@utlonline.com

Member of IFOAM Development Forum
Rene Takannou
REDAD
04 BP 0670
Cotonou, Benin
E-mail: redad@leland.bj

Member of IFOAM Criteria Committee
Dr Mwatuma Juma
Commissioner for Agriculture,
Research and Extension
Ministry of Agriculture, Natural
Resources, Environment and
Cooperatives
PO Box 1255 Zanzibar, Tanzania
E-mail: mwatima@hotmail.com;
zarc@zitec.org

African Biodiversity Network
Sue Edwards
E-mail: sustainet@yahoo.co.uk

ANNEX 6: Background papers: Uganda

1. Organic agriculture in Uganda

Uganda covers an area of 240,000 km^2, of which 194,400 km^2 is land, 33,926 km^2 open water and the remainder permanent swamp. Much of the country lies on the African plateau at an altitude of 900–1,500 m a.s.l., where the rainfall is at least 750 mm and temperatures range from 10º to 25ºC. The country's population is estimated at 22 million, of which more than 90% is rural, with a Gross Domestic Product (GDP) per capita of US$ 300.

The agriculture sector employs more than 80% of the population and accounts for about 45% of the GDP. Production is based on smallholder production, with 2.5–3.0 million households cultivating less than 2 ha each. Over half of the total agricultural GDP (56%) is subsistence production for household consumption. The structure of Uganda's agriculture sector has been changing with increasing investment by commercial farmers in ranching, floriculture, tea and sugar cane.

The agriculture export sector as a major source of income has suffered greatly due to declining world coffee and cotton prices. This translates into declining incomes for the smallholder farmers who earn their income from the production of these export crops. The government broke the monopoly of the State and the co-operative movement that used to dominate agricultural production input and output marketing services and liberalised the marketing of agriculture products. This has had both negative and positive effects. It is in this context that organic agriculture has developed in Uganda.

Since the late 1980s, organic agriculture has expanded rapidly in the country. More than 30,000 farm households are now certified and controlled. It is estimated that three times as many farm households manage their farms under non-certified arrangements, but comply with internationally accepted organic standards and guidelines. Ugandan organic agriculture has moved beyond the pioneering stage and is now being consolidated.

This paper outlines the development and status of organic agriculture in Uganda. It identifies the main thrusts of the subsector and how it has developed in the absence of an explicit organic agriculture policy.

The genesis

The start of what we call 'formal organic agriculture' in Uganda can be traced to the period immediately after the National Resistance Movement (NRM) government came to power in 1987. We use the term 'formal organic agriculture' to refer to the type of organic agriculture that is actively promoted by development agents. This may be either with the main objective of improving the productivity and ecological sustainability of the farming system and/or increasing incomes through accessing niche markets. It is noted that many traditional farming systems in the country already meet some of the requirements of

organic agriculture[1], although there are no development agents providing a support service. It is also noted that organic certification is just one of the marketing tools needed in a market that requires such third party verification.

The initial efforts to promote organic agriculture in Uganda were made by rural development NGOs following a period during which the country had experienced serious agricultural production problems and high levels of high poverty and food insecurity. NGOs such as the Uganda Rural Development and Training Programme (RDT), the Mirembe Self Help Project, and development programmes such as the United Nations Development Programme (UNDP)/Africa's 2000 Network Programme sought to help farmers halt the degradation of their natural resources and farming systems through the adoption and adaptation of technologies appropriate to local ecologies and farming conditions. Such technologies and practices were to be developed with farmers in a participatory way, starting with what they were practising and based on locally available resources. At that time, the term 'sustainable agriculture' began to be used in Uganda and NGO technical staff started looking for training opportunities in 'sustainable agriculture' and participatory methodologies that would enable them to work with farmers.

The Kenya Institute of Organic Farming (KIOF), with the support of the Dutch Government and others, provided the first formal technical training for NGO staff in this region. This training continues to be offered.

In 1989 the government launched a major campaign to control banana weevils and nematodes that were destroying the country's banana crop. The pesticide promoted was Furadan (a mixture of an insecticide and a nematicide) and many farmers took up the technology. By 1991, it was clear that the campaign had failed, not because farmers had been immune to the new technology, but because of serious problems with the use of the pesticide. The farmers were complaining of poultry losses due to poisoning and of attacks by banana weevils and nematodes that were worse than before as a result of the pesticide resistance that built up. Government research institutions (Makerere University and Kawanda Agriculture Research Institute) reverted to researching and promoting traditional organic approaches to the management of the banana weevil and nematodes. Since then, the problem has been contained. Many NGOs had their first lessons in organic agriculture during the 'Furadan debacle'. Unfortunately, little of this has been documented, but there are important lessons to learn from it.

Since the early 1990s, hundreds of NGOs and community-based organisations (CBOs) specialising in organic agriculture have been formed and are active as farmers' organisations or technical service agencies. It is difficult to estimate the number of practising organic farmers in Uganda. The number would include those farmers who are being supported by NGOs and other development programmes, but who are not certified, as well as those farmers who are working on their own and whose farming practices follow organic principles. The NGO/CBO initiatives represent a productivity-based organic approach, aimed at the sustainable intensification of farming in Uganda.

1. This is due mainly to the limited accessibility of external inputs, such as mineral fertilisers and synthetic pesticides. This does not mean, however, that the entire agricultural sector is 'organic by default'. Some geographical areas and regions have higher comparative advantages in terms of the prerequisites for organic production than others. In addition, many so-called traditional farming systems are no longer sustainable. Organic agriculture is therefore seen as a strategy for the sustainable intensification and diversification of the production of food and fibre.

Box 6: Status of certified organic agriculture in Uganda (October 2003)

Company name	Project started	Region/district	Products	Exports (t) 2000–01	Exports (t) 2001–02	Exports (t) 2002–03	Expected exports (t) 2003–04	Number reg. certified 2001	Number reg. certified 2003	Project support
Suntrade/African Organic/ Amfrifarms	1993	Luwero, Mukono, Rakai, Masaka, Mpigi, Mubende, Mbarara	Fresh fruits and vegetables Dried fruits	180	200	250	350	62	70	Private
Lango CU/LOFP/Boweevil	1994	Lira, Apac	Cotton lint Sesame	240 140	280 160	681 240	700 400	8,000	10,000	Boweevil BV/ Hivos
Outspan Enterprises Ltd	1998	Soroti, Apac	Cotton lint	22	200	–	–			
Kawacom (U) Ltd	1998	Bushenyi	Robusta	60	60	60	120	5,000	5,200	SIDA
Kawacom (U) Ltd	1998	Nebbi	Arabica – Fair Av Quai	80	80	80	120	5,000	3,000	Private
Tropical Ecological Foods Uganda Ltd (TEFU)	2000	Mubende	Dried fruits	–	5.5	14	20	10	31	DANIDA
Masaka Organic Producers (MOP)	2000	Masaka, Rakai	Dried fruits	–	0	0.16	3	35	40	DANIDA
Uganda Marketing Services Ltd	2000	Mukono	Vanilla	–	–	0.15	0.3	0	23	Private
Kawacom (U) Ltd	2000	Kapchorwa	Arabica – Fair Av Quai	180	180	180	250	3,000	4,500	Private
Twin Trading – Gumutindo Project	2001	Mbale	Fair Trade Arabica	–	–	18	36	0	733	Cafédirect/ Twin Trading
Ibero (U) Ltd	2001	Luwero	Robusta	–	50	50	80	0	395	GTZ
EXCO (U) Ltd	2001	Bundibugyo	Cocoa Vanilla	–	–	84 3	160 8	1,500 –	3,000 –	SIDA
Kahangi Estate	2001	Kabarole	Passion fruit Tea Coffee	–	–	0	18	–	1	Private
Gumutindo Project	2001	Mbale	Fair Trade Arabica	–	0	100	150	0	1,000	Cafédirect/CBI
Spicelands-Davula Estates	2002		Vanilla						1	Private
BioUganda	2002	Mukono	Vanilla				0.2		100	Private

Source: Adapted from *Consultancy Report to NOGAMU: Trends in Formal (Certified) Organic Production in Uganda (2001—03)* (N. Shirra, 2003)

The second type of organic farming initiative started in 1994 in northern Uganda with the Lango organic cotton scheme, planned and implemented under the Export Promotion of Organic Products from Africa (EPOPA) project. The main aim of this initiative was to help farmers access world organic product markets under the slogan of 'Trade not Aid'. These initiatives are based on the fact that traditional smallholder farmers are organic in their farming practices and/or their farming practices easily render themselves to organic conversion. What is needed is documentation and certification so that the farmers' products can reach the market. Since 1994, several commercially based initiatives have been started, resulting in what we now call 'certified organic agriculture'. The EPOPA project has been extended and many more projects are being initiated (*see* Box 6).

In the meantime, Uganda's organic farming subsector has diversified tremendously. New private sector initiatives for organic coffee, vanilla, cocoa, tea and tropical fruits have emerged. Non-certified and certified organic schemes co-exist, forming the main pillars of the country's organic agriculture movement. The non-certified initiatives are starting to look at marketing and have been the main force behind the development of a national organic certification programme.

The policy environment

Organic agriculture in Uganda has developed to the present level without any official government policy support. Indirectly, however, it has benefited from two main government policies:

- *The NGO Act that formally recognised NGOs as important development agents in a liberalised economy.* This policy opened the door for alternative schools of thought to develop. Where there had been a single approach to agricultural development as advocated by government and implemented through its extension services, alternative approaches could now be developed with farmers by other development agents. Where there had been a single source of funding for agriculture extension services, NGOs could now mobilise resources from alternative sources. The availability of resources for agricultural development, with fewer strings and the emphasis on the relevancy of support for farmers, made it possible for farmers to express themselves and to be heard. They also made it possible for NGOs to invest in developing new practices with farmers.

- *The economic liberalisation policies of the late 1980s and early 1990s which allowed unfettered free enterprise.* These policies meant that any individual or company could set up a business, produce and export what it wanted and in any form it wanted. They created a favorable environment for the development of such initiatives as the Lango organic cotton project, the first commercially oriented organic agriculture project in Uganda.

Currently, government policy for agricultural development is based on the Plan for the Modernisation of Agriculture (PMA). The PMA does not mention organic agriculture, but it carries forward important elements from the earlier two polices. One of these addresses the need for more pluralistic approaches to agricultural extension through the National Agricultural Advisory Services (NAADS) whereby, rather than the government alone delivering agricultural advice to farmers, extension services can now be provided by other organisations, including farmers themselves.

The PMA and NAADS also seek to empower farmers to determine their agricultural service providers and the type and quality of the service to be provided, as well as to hire and fire service providers. This means

that farmers can use government resources to develop organic agriculture farming systems, including acquiring organic certification. The PMA lays specific emphasis on the commercialisation of smallholder farmers, rather than self-sufficiency in food production, for achieving food security. The other relevant PMA specification is on adding value to agricultural products in order to increase returns from the market. Certified organic agriculture contributes to the realisation of these PMA policy objectives.

Thus, although there is no explicit government policy on organic agriculture in Uganda, the subsector has been able to exploit the existing policy opportunity windows. However, it will not reach its full potential without direct government support. The governments has law enforcement powers and possesses enormous financial and technical resources.

To harness these resources for organic agriculture requires an explicit government policy. The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) has established a policy committee to start developing a policy to guide the development of organic agriculture in the country. The organic movement has a member on this committee. The organic agriculture stakeholders will, however, have to get more involved in this process if the policies developed are to reflect the opportunities and needs of the subsector.

Certification

Certification by a third party is required to access the world organic products market. Organic certification services for projects targeted at accessing the international market are currently provided by three international certification companies: KRAV (Sweden), Ecocert (Germany) and the Institute for Market Ecology (IMO) (Switzerland). The certification is based on their organic standards and/or on the organic standards of the countries or region to which the organic produce is to be exported. Necessary modifications of the applied standards are made where necessary in order to meet the specific conditions of Ugandan farming systems.

However, because these standards were developed in northern countries with different social, economic and ecological conditions, there are often problems associated with their application, such as the required length of the conversion period and the level of farm documentation. Another major problem has to do with the cost involved in accessing the services of a northern-based certification company.

In spite of these constraints, the certification activities of the international agencies have created a considerable technical capacity in certification in Uganda. The country now has six fully trained inspectors who can conduct inspections to international standards. In addition, since 1994 the country has developed considerable local capacity in developing and managing internal control systems for farmers' groups. This remains the most efficient method of organising organic certification for groups of farmers.

Since 1999, Uganda has been exploring opportunities to develop its own certification programme. In 2001, with the formation of the National Organic Agricultural Movement of Uganda (NOGAMU), bringing together key stakeholders, work began on developing a programme. This effort was boosted by the new phase of the EPOPA programme in which there is a component for supporting the development of organic certification. NOGAMU is working closely with GroLink AB, a consultancy firm, to develop an organic product certification programme for Uganda. So far, this work has:

- Facilitated a nationwide stakeholder consultative process, leading to the production of draft Uganda Organic Standards (UOS);

- Led the process of developing a national certifying company, UgoCert. The company is now being registered. Local certification services could be available from the company early in 2006. In the short term, plans are being made for UgoCert to facilitate the access to international certification by Uganda-based operators. In the long term, UgoCert will be working towards international accreditation;

- Led to an increase in the number of inspectors being trained, with support from GroLink AB under the EPOPA II project;

- Led to equipping organic project management staff with technical expertise in developing and managing organic projects, including establishing and managing internal control systems for grower groups.

The challenges

Despite recent achievements, NOGAMU faces many challenges, some of which are not restricted to Uganda but apply in many other developing countries. The main challenges include:

- *Lack of an explicit government policy support for organic agriculture.* This is responsible for the high dependency on external funds to finance organic agriculture development in Uganda. It also means that the full force of the country's resources cannot be mobilised to support this development. While the process to develop relevant policies has started, there will be a need to ensure that it is stakeholder driven and managed, and not hijacked by people seeking only self-aggrandisement.

- *Negative impact of other government policies.* Some other government policies pose a threat to the development of the organic sector. For example, the intentions of the government to permit genetically modified organisms (GMOs) in Uganda could increase the certification costs for the commercial segment of the organic sector, making it less profitable.

- *The lack of a distinct local organic market*. This makes commercialised organic agriculture risky as it relies solely on the export market.

- *The lack of an agreed way for harmonising organic standards*. This may make certification based on Ugandan, Tanzanian or regional standards irrelevant on the international market.

- *The continuing degradation of the vast areas of agriculture land*. This presents a challenge to the subsector to develop economically viable organic soil fertility replenishment technologies.

- *Lack of information on the extent of traditional agriculture and its compliance with organic certification requirements.* Collecting and analysing such information is costly. NOGAMU has commissioned a study to establish the extent and potential of organic agriculture. The Austrian University of Natural Resources and Life Sciences is preparing an extensive study to determine the potential of organic agriculture in Uganda.

Conclusion

After nearly two decades of 'formal organic agriculture' in Uganda, the subsector has moved into a consolidation phase. The fact that policy circles, including the highest office in the land and the wider public, have started to recognise organic agriculture as one of several rural development pathways is an important milestone. Uganda has thus moved beyond the pioneering phase. However, more challenges lie ahead, some of them critical. Meeting these challenges requires continued efforts to join forces within the national organic agriculture movement. At the same time, national attempts need to be complemented by regional mechanisms for exchanging information and working together for mutual benefit. It is unlikely that national efforts alone will meet these challenges. This study visit provides an excellent opportunity to go beyond individual country experiences and enter a phase of regional collective action.

2. Organic agriculture networking: the National Organic Agricultural Movement of Uganda

Derrick K. Tenywa, Local Marketing Officer, NOGAMU

The National Organic Agricultural Movement of Uganda (NOGAMU) is a network of organisations and individuals involved in the development of the organic subsector. The idea to establish the network was originally mooted by stakeholders, primarily farmers and exporters. Farmers were becoming increasingly concerned about the high input costs in agricultural production, and exporters had noted a change in demand from conventional products to organically grown products on the export markets. They collaborated on examining how to convert from conventional production to an alternative and more sustainable way for the majority of Ugandan farmers. The first step was to hold a stakeholders workshop in January 2001, during which a task force was formed.

By the end of 2001 NOGAMU had registered over 80 members, including farmers' groups and large companies. It currently has over 170 individual members, divided into three categories: individual membership, corporate membership I (small groups) and corporate membership II (large companies, managing thousands of farmers).

Vision, mission and objectives

NOGAMU's vision is 'to coordinate and promote sustainable organic agriculture development, networking and marketing in Uganda'. Its mission is 'to promote, advocate and lobby for sustainable organic agricultural development in Uganda.' The objectives are to:

- Promote organic agriculture systems such as organic farming, agroforestry, permaculture and biodynamic farming;
- Promote certified organic production and marketing from Uganda;
- Standardise the principles and practices of organic farming following recommendations from acknowledged bodies such as the International Federation of Organic Agricultural Movement (IFOAM);
- Promote networking among members;
- Promote research, education, training and extension in organic production systems;
- Create a database and resource centre in organic production and marketing;
- Lobby and advocate for organic agriculture and marketing nationwide.

Structure and funding

At the core of NOGAMU is the General Assembly. Initially, it performed the organisation's activities through volunteer activity committees. Later, it gave powers to a central committee for policy formulation and decision-making. The committee sits once a month. It has one representative from all four regions of the country who are elected by the general assembly and serve for 2 years. There are four sub-committees working under the central committee:

- *Training committee.* This organises training in the various aspects of organic agriculture for member organisations.

- *Lobby and advocacy committee.* This lobbies for support for the organic farming subsector at all levels from government and various organisations. Its efforts are bearing fruit as the government is developing a policy and a regulatory framework for the subsector. The committee is responsible for the publication of NOGAMU's newsletter, produced every 2 months.

- *Marketing committee.* This is responsible for discussing strategies in developing organic products markets and reviewing the progress of the marketing department. It initiated the idea of developing local markets for organic products, resulting in the opening of a retail outlet for organic products.

- *Standards committee.* This was very instrumental in coming up with the idea of developing local organic standards and establishing a local certification body. The committee thought it important to have the local organic standards to enable the streamlining of production and marketing of organic products in Uganda and to help raise the credibility of Uganda's organic products in the international market.

These committees sit every 2 months to plan activities and provide feedback to the central committee.

The NOGAMU staff consist of: national coordinator; administrator and four support staff; local marketing officer; international marketing officer; training officer; accountant; and sales assistant. These staff visit members regularly. Some visits are of an advisory nature, while others are to discuss issues, identify problems and assess farmers' needs. Some visits are made to collect organic products that could be sold in NOGAMU's shop.

Funding for NOGAMU comes mainly from membership subscriptions, EPOPA, a Dutch organisation called Hivos and a German development agency, Deutscher Entwicklungsdienst (DED).

Main activities

- *Training farmers in sustainable organic farming practices and making them aware of the importance of converting from subsistence production to commercial farming*. Training is done in various ways and focuses mainly on market-oriented techniques. Seminars and workshops involving experts in particular aspects of organic farming are regularly organised.

- *Linking farmers to local and export markets*. NOGAMU markets the products locally in its shop and participates in local and international trade exhibitions. It is working on developing more outlets where members' products can be sold locally. This will bring the products closer to the consumers and will enable farmers sell products that have no export value (e.g., milk products and some legumes). Local marketing has also enabled farmers to introduce their new products to the consumers.

- *Organising exhibitions to link exporters with companies interested in Uganda's organic products.*

- *Raising awareness among consumers through various campaigns.* This is a continuous process involving placing articles on organic agriculture in newspapers and running programmes on radio and television; there were four such programmes in 2004.

- *Producing and distributing promotional materials.* Some materials, such as posters, flyers and brochures, are given out free. Others, such as T-shirts, key holders, caps and pens, are sold at reasonable prices.

NOGAMU networks with other organisations involved in sustainable agriculture. These include the Kulika Charitable Trust, CARITAS, SATNET and international agencies such as IFOAM.

It has good relations with companies exporting organic products and with local authorities such as the Uganda Investment Authority (UIA), the Uganda Coffee Development Authority (UCDA), the Uganda Export Promotions Board (UEPB) and the Uganda National Bureau of Standards (UNBS). The UNBS has greatly contributed to the development of national organic standards.

Conclusion

Much has been achieved so far in training and marketing promotion. NOGAMU continues to gain recognition as the leading agency in the promotion of the organic subsector in Uganda. It was nominated for inclusion on the committee set up by the government for developing a policy and regulatory framework for organic agriculture.

The great challenge remains how to convert all farmers from conventional to organic practices and to raise consumer awareness of organic products. Unless consumers are aware of the benefits to health and the environment of organic agriculture, it will be difficult to develop markets or to prevent attempts to introduce GM crops into Uganda.

3. Organic agriculture policy development in Uganda

Dinah K.Kansangaki, Principle Agricultural Office, Ministry of Agriculture and Animal Industry

Agriculture is the backbone of Uganda's economy. It contributes 42% of the GDP and 85% of export earnings, and it provides employment for more than 85% of the population which is mainly rural based. It also provides most of the raw materials for agro-based industries. Uganda has suitable climate, land, water and forestry resources for agriculture. Farming is carried out by 3 million households cultivating less 2.5 ha each. Over half the total agricultural GDP is subsistence production for household consumption.

Uganda's agriculture is classified as traditional because most of the farming techniques and practices are indigenous and have not changed since independence. Inorganic fertilisers for soil fertility improvement and agro-chemicals for pest and disease control are rarely employed by the smallholder farmers because they are generally unavailable and/or unaffordable. The level of fertiliser application in Uganda in 2000 was estimated to be 1 kg/ha, compared with an average of 9 kg/ha for sub-Saharan Africa. Thus, crop yields at farm level are 30% of the potential obtained at research stations.

Definitions of organic agriculture

Despite the low use of chemicals, Uganda's subsistence agriculture is not recognised as organic agriculture because of the lack of certification. However, organic production is concerned not only with a product, but also with the processes used to produce and deliver agriculture products to the consumer.

As defined in the Codex Alimentarius, organic agriculture is a holistic production management system that promotes and enhances ecosystem health, including biological cycles and soil biological activity. It is based on minimising the use of external inputs and avoiding the use of synthetic fertilisers and pesticides. Its primary goal is to optimise the health and productivity of interdependent communities of soil life, plants, animals and people. According to the International Federation of Organic Agriculture Movement (IFOAM), organic agriculture is a whole-system approach based on a set of processes resulting in a sustainable ecosystem, safe food, good nutrition, animal welfare and social justice.

Organic agriculture is therefore more than a system of production that excludes or includes some inputs. Organic producers, food handlers, processors and retailers must adhere to standards that maintain the integrity of the products. The use of synthetic pesticides, preservatives, fertilisers, GMOs, sewage sludge and irradiation are prohibited in all existing organic agriculture standards. Organic agriculture ensures the protection of consumers from fraudulent practices through inspection and certification systems.

Principles of organic farming

According to IFOAM, organic farming seeks to:

- Give everyone involved in the production and processing of organic products a good quality of life, meet their basic needs and bring adequate returns and satisfaction from their work, including a safe working environment;

- Move towards achieving a strong production, processing and distribution chain that is socially just and ecologically responsible;
- Produce food of high quality in sufficient quantity;
- Encourage and enhance biological cycles within the farming systems;
- Develop a valuable and sustainable aquatic ecosystem;
- Maintain the genetic diversity of the production system and its surroundings, including the protection of plants and wildlife habitats;
- Promote the healthy use and proper care of water, water resources and all life therein;
- Use, as far as possible, renewable resources in locally organised production systems;
- Create a harmonious balance between crop and animal production systems;
- Minimise all forms of pollution;
- Produce fully biodegradable organic products;
- Produce textiles which are long lasting and of good quality.

The use of pesticides and monocultural practices reduce biodiversity. Organic farming systems provide feed for insects and birds and allow weed species to exist.

Some major benefits of organic agriculture

- Organic agriculture does not use chemical fertilisers. Instead, there is optimum use of the nutrients available in animal manure and green manure to supply nitrogen while balancing nutrient availability with plant needs;
- Soil-building measures are fundamental in organic agriculture. Soil improvement methods such as mulching, the use of green manure, crop rotation and agroforestry play an important role in improving soil water availability and quality;
- Organic agriculture encourages minimal use of non-renewable resources. This reduces the costs of production and energy in agriculture;
- Many people in farming are affected by the use of agro-chemicals. Toxic inputs are associated with lung cancer problems and with malformation in new-born babies. Organic agriculture provides safer working conditions for farmers;
- Studies show that there is increased fertility in animals and people who eat organic products. Currently, contamination of underground drinking water is occurring throughout the world, even in countries with low pesticide use. The long-term preservation of our planet will depend to some extent on the increased adoption of organic farming practices.

The development of organic agriculture in Uganda

The initial efforts to promote organic agriculture in Uganda were made by rural development NGOs after the liberation war when farmers were experiencing serious agricultural production problems, high poverty levels and food insecurity. NGOs such as the Uganda Rural Development and Training Programme (URDT), the Mirembe Self Help Project and the Africa 2000 Network sought to help farmers in areas where natural resources had been severely degraded to adopt technologies suited to local conditions. At that time the term 'sustainable agriculture' was used to describe these practices, and NGO staff were being trained in sustainable agriculture and participatory methodologies, mainly at the Kenya Institute of Organic Farming (KIOF), with support from the Dutch government. Farmers found most organic agriculture technologies affordable.

Currently, about 35,000 smallholders in Uganda are engaged in certified organic production. Most of the certified producers are part of the Export Promotion of Organic Products from Africa (EPOPA) programme funded by the Swedish International Development Agency (SIDA). The Lango project involving 12,000 farmers producing organic cotton and sesame is certified by EcoCert, while KRAV has certified 23,000 farmers producing commodities such as coffee, cotton, sesame and cocoa.

Over $US 4.6 million was earned in the 2002–03 financial year from organic exports. In the 2003–04 financial year, $US 7.7 million was expected to be realised from 3,159 tonnes of exported organic products.

The National Organic Agriculture Movement of Uganda (NOGAMU) was set up to facilitate the exchange of ideas and information and act as a pressure group for the development of organic agriculture. Its membership has grown considerably and it has gained national and international recognition. It has led efforts to develop a local organic standards and certification programme, resulting in the launching of a national certification company, UgoCert.

Challenges facing organic farmers

Organic agriculture in Uganda faces a number of challenges, including:

- *Pest and disease problems:* Uganda's climatic conditions favour many pests and diseases, so the selection of organic enterprises should consider varieties that are resistant to pests and diseases for organic farming to be profitable.
- *Scale of operation:* Organic agricultural production is labour-intensive, which may limit the scale of operation. The lack of raw materials for organic fertilisers may also limit the size of enterprises.
- *Lack of capacity:* It is necessary to build both institutional and human capacity. Currently, farmers may be getting conflicting messages from various service providers. Information needs to be harmonised to help farmers make informed decisions.
- *Cost of certification and inspection:* For exports, producers have to meet the high costs of international inspection and certification, making Uganda's organic products less competitive and unprofitable.
- *Lack of domestic organic market:* This makes commercial organic agriculture more dependent on export markets.

The policy framework

Despite the lack of an explicit policy, the development of organic agriculture has been remarkable under the existing enabling environment and legislative framework. Uganda's constitution provides important principles for the development of organic agriculture. Several acts and statutes focus on the sustainable management of natural resources and protection of the environment. Government policies such as those on poverty eradication, modernisation of the economy, decentralisation, economic liberalisation and democratisation have created a conducive environment for developing organic agriculture as a strategy for poverty eradication and the sustainable management of agricultural resources. Uganda's Food and Nutrition Policy has a bearing on the development of organic agriculture, its overall goal being to ensure food security and adequate nutrition for the population.

With the rapid expansion of organic agriculture in Uganda in recent years, the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) has started work on developing an explicit policy to guide the development of organic agriculture in the country in order to exploit its full potential. A policy committee has been set up and consultations with stakeholders are in progress. NOGAMU is represented on the committee.

Policies are broad guiding statements that define the mandate and objectives of sectoral agencies. They aim at providing comprehensive integrated and coordinated frameworks for the management of human and physical resources towards a sector's objectives. They provide a framework for government decision-making and specify clear privileges and responsibilities for individuals, as well as government procedural requirements. The steps for developing a national organic agriculture policy would be:

Step 1	Mobilise resources
Step 2	Establish an organic agriculture policy working group to steer the development process
Step 3	Recruit a short-term consultant to prepare an issue paper
Step 4	Hold a stakeholders' workshop on the issues identified and reach a consensus on priorities
Step 5	Prepare a draft national organic agriculture policy
Step 6	Circulate the draft to all national stakeholders and district and urban authorities for review and reaction
Step 7	Hold regional consultative workshops ensuring that each district or urban authority is adequately represented
Step 8	Revise the draft policy document
Step 9	Hold a national workshop to review the revised draft
Step 10	Finalise the National Organic Agricultural Policy Document
Step 11	Forward the final draft to the relevant Minister for transmission to Cabinet
Step 12	Obtain Cabinet approval

Box 7: The policy cycle

AGENDA SETTING	This imparts enough importance and urgency to an issue to compel a government to list it as a priority action.
CONSULTATIVE PROCESS	This involves soliciting people's views on proposed actions.
FORMULATION	This is the setting of policy goals and the formulation of specific plans to achieve them.
LEGITIMATION	This is where authority is invested in the policy to encourage public acceptance. It may require constitutional, statutory or administrative measures such as the promulgation of a supporting law or a set of regulations.
IMPLEMENTATION	This involves translating the policy proposals into actions.
ASSESSMENT AND REFORMULATION	The policy is assessed (sometimes partly through pilot implementation) and changes made as necessary.
POLICY TERMINATION	One of the outputs of assessment is the decision not to implement a policy.

Box 7 depicts a typical policy cycle, beginning with agenda setting. The organic agriculture policy should echo the commitments expressed in the Poverty Eradication Action Plan (PEAP), the Plan for the Modernisation of Agriculture (PMA), the National Environment Management Policy 1994 and the National Environment Statute 1995 that poverty should be eradicated by modernising agriculture through the optimal utilisation of natural resources (soil and water), using environmentally friendly techniques.

ANNEX 7: Background paper: Kenya

Organic production was practised in Kenya long before the term 'organic' term came into common usage when talking about agriculture. Traditional farming practices were, to a large extent, based on organic farming principles. Even with the introduction of conventional agricultural systems, there are still thousands of producers using production methods that are organic, although most of them would be classified as uncertified organic producers.

The organic agriculture movement has grown for the following reasons:

- Lack of capital to invest in external inputs that often expensive, hence the need for low-cost, sustainable production systems;
- Ability of smallholder farmers (the bulk of agricultural producers in Kenya) to produce without external inputs;
- Fast-emerging local markets for organic produce;
- Ever-increasing export market outlets for organic products;
- Poor infrastructure, making the transport of inputs to remote rural areas difficult;
- Inadequate skills in the use of external inputs;
- Awareness of the possible dangers of chemical residues.

While those involved in the organic agriculture movement showed much enthusiasm in the early years for networking in order to popularise organic agriculture, the same cannot be said now, mainly because the organisations involved have not acted on a national scale. They have tended to think in terms of their own organisations. This is in contrast to Tanzania and Uganda, which are ahead of Kenya. The International Federation of Organic Agriculture Movement (IFOAM) has only eight member organisations in Kenya, and in the wider African region the declining membership of IFOAM is noted with concern.

The potential for organic agriculture in Kenya

There is no coordinated plan for the development of organic agriculture in Kenya. The reasons for this include:

- The 'lone ranger' approach to fostering organic agriculture, especially among non-governmental organisations (NGOs);
- Lost opportunities to capitalise on synergies within networks such as IFOAM and Participatory Ecological Land Use Management (PELUM);
- Too much emphasis on production and not enough on marketing;
- Poor skills in agro-marketing among all involved, with what skills there are tending to be borrowed from conventional agricultural approaches.

The policy environment

The policies in support of organic agriculture are implemented by a variety of institutions, such as NGOs, private companies and government departments. Although the government has not explicitly supported organic agriculture, it has not been against it. The reasons for its continued caution may be:

- Lack of adequate empirical data to prove that organic farming is a sustainable production system;
- Skepticism about the potential of organic farming as a result of the original rather confrontational approaches adopted by NGOs;
- Undeveloped markets for products;
- Undocumented success stories in organic agriculture.

Standards, inspection and certification

Efforts to develop standards have been made by various NGOs and private companies. It is not yet clear how these standards are being implemented. Discussions continue on:

- National standards;
- Local standards;
- Local export markets;
- Advocacy and lobbying;
- Research and documentation.

An effort made to establish a local organic certification service collapsed and there is now a new initiative being led by ICIPE to establish a certification service called Africert.

ANNEX 8: Background paper: Tanzania

Tanzania occupies an area of 945,090 km^2 and has a population of about 35 million people. Of the land area, 5% is arable and permanent crops occupy 1%, meadows and pastures 40%, forest and woodlands 47% and the rest (7%) is mixed.

The rainfall pattern is both bimodal and unimodal — bimodal along the east coast and in the north-east, and unimodal in the rest of the country. The rainfall ranges from 450 mm in the semi-arid arid areas to more than 1,600 mm in most of the coffee and tea growing areas. The temperature range is 11 to 28°C.

History of agricultural production in Tanzania

Before and shortly after independence, most farmers in Tanzania were practising low-input agriculture, otherwise known as traditional farming, with a strong bias towards organic principles. Immediately after independence the government introduced a number of interventions aimed at speeding up rural and socio-economic development, enhancing food security and raising household income. The interventions included the introduction and intensification of the use of industrial fertilisers, pesticides and hybrid seeds. In order to accelerate the adoption of these inputs the government introduced subsidies.

In the following years, production increased tremendously. However, over time, productivity began to decline, partly because of the mismanagement of agricultural inputs and their increased cost as a result of trade liberalisation and the privatisation of the procurement and distribution of inputs. This decline led to an increase in crop pests and diseases.

In an effort to help farmers address such problems, NGOs were formed and project initiatives were launched, some of which focused on sustainable, organic farming or ecological farming. Most of the initiatives were based on the practices and principles that are now embedded in organic agriculture. Among the NGOs involved in this were Earth Greenery Activities Japan (ECAJ), Institut africain pour le développement économique et social (INADES–Tanzania), PELUM-Tanzania, Sunhemp and Agricultural Development Programme Mbozi, Tanzania (ADP–Mbozi). The projects included the Soil Erosion Control and Agroforestry Project (SECAP–GTZ), the Meatu Cotton Project and the DANIDA-funded Hifadhi Mazingira (HIMA) project. Several institutions were also involved, including Sokoine University and various agricultural and livestock training institutes. These developments went a long way towards achieving certified organic production for:

- Honey from Tabora, Iringa and Rufiji;
- Pineapples from Njombe in Iringa;
- Coffee from Bukoba and Kilimanjaro;
- Cashew nuts from Mkuranga;
- Tumeric from Mbeya;
- Cocoa from Kyela;
- Ginger from Kigoma, Tanga and Iringa;
- Tea from Njombe in Iringa;
- Cotton from Geita;
- Various herbs and spices from Zanzibar.

These products have been certified by external certifiers using their own standards. The certification agencies include the Institute of Market Ecology (IMO), EcoCert, KRAV and the Soil Association of England. Products certified by these agencies are exported.

However, many products grown using organic principles are not certified and are therefore sometimes consumed locally, often without any price differentiation from conventionally grown products. Some producers are seeking certification so that they can penetrate the local supermarkets initially, and then produce for export.

Marketing initiatives

The cost of certification is paid by the exporters of the produce, and most of the produce is exported to European countries. The exporters participate in local and international trade fairs to find more customers and raise awareness of the value of organic produce in terms of health and prosperity.

Since 1996, Export Promotion of Organic Produce from Africa (EPOPA), a Swedish organisation, has helped about five projects gain access to the export market through assistance with certification and market identification. These projects include cocoa from Kyela, instant coffee from Kagera and pineapples from Njombe. There are also efforts to maximise the local market for products produced organically, such as eggs, chicken, honey, fruits and vegetables. Some supermarket chains, such as Shoprite and Imalaseco, have started stocking some of these products in response to customer demand.

Research and information

Some research institutions in Tanzania have been conducting studies on organic practices, especially in relation to medicinal plants and their efficacy and safety with regard to human and animal health. However, this is limited due to resource limitations. NGOs are conducting elementary research at grassroots level in the course of project implementation, sometimes using participatory research or farmer-managed research.

A national organic movement

In 2001, PELUM–Tanzania and Kilimo Hai (KIHATA) in Tanzania organised a stakeholder meeting with the aim of forming a local certification organisation. Two committees were established, with the support of EPOPA. The Standards Committee was to develop draft standards for both the local and export markets, while the Certification Committee was to develop the certification procedures and propose agencies that would be responsible for certification.

These assignments were completed in 2003 and the Tanzania Organic Certification Association (TanCert) was established. TanCert is undergoing registration. The members of its Board were appointed during a stakeholders meeting in Arusha in December 2003.

Despite these commendable efforts and results, there is no single national movement unifying stakeholders in organic agriculture in Tanzania. Efforts are now being made to rectify this. The movement will be responsible for policy formulation, advocacy, marketing, documentation and information dissemination.

Policy, certification and standards

The existing National Agricultural Policy has clauses on organic agriculture. There is no separate policy on organic agriculture in the country. The recognition of organic agriculture in the national policy has created an enabling environment for stakeholders to continue with organic production in the country.

As noted earlier, stakeholders have participated in the formulation of the national organic standards and certification body. The short standards for the local market have been adopted already. The export standards are at the hearing stage, awaiting stakeholder feedback. The registration of the national certification body, TanCert, is in its final stages, with the manager already in place, and the TanCert Board of seven members has been set up. These efforts have been supported by the DECUT project under the EPOPA programme.

Negotiations with external certification agencies about using TanCert for organic produce marketed in the country have started and local inspectors have been trained.

The potential for organic agriculture in Tanzania

Nothing stands in the way of developing organic production in Tanzania. The doors are open for farmers, processors, exporters and investors to participate in a rapidly expanding sector. However, the formation of a national organic agriculture body must be finalised in order to guide the process and help develop the local market, so that farmers become aware of the benefits of organic farming, before overcoming the more difficult hurdle of gaining access to foreign markets.

ANNEX 9: Background paper: Zimbabwe

The organic sector in Zimbabwe reflects the characteristic division in agriculture in this country between the large-scale commercial farming and small-scale or communal farming sectors that evolved during colonial times and persisted in the post-colonial period. Whereas relatively few commercial operators got involved in certified organic production, a network of support and representative organisations developed around the various aspects of sustainable land use.

Formal certified organic production

The Zimbabwe Organic Producers' and Promoters' Association (ZOPPA) was formed 1990 as a membership association to promote and support organic farmers. It focuses on information exchange, organic certification and marketing. Initially low key, it was revived in the mid-1990s, with membership reaching about 50. One of its most notable achievements was establishing local certification services.

The Zimbabwe Organic Cotton Project, started in 1995, was the first attempt by small-scale farmers to produce a commodity for an export market. It gave useful insights into the production technology, community development, group certification and the logistics of building up a commodity supply chain from scratch, with support from the Export Promotion of Organic Produce from Africa (EPOPA) programme. Recently, ZOPPA's membership has shrunk, partly due to the land acquisition programme, the general economic downturn and erratic fuel supplies.

Agro-ecological and related initiatives

In post-independence Zimbabwe many NGOs were formed and many of them focused on sustainable agriculture. Much credit for the initial development in the agro-ecological sector goes to the Fambidzanai Permaculture Centre (FPC), formed in 1988 to provide training and practice in a sustainable approach to land use using the permaculture design technique and incorporating other sustainable agriculture approaches such as organic, holistic resource management. Its vision was to link smaller independent agencies/units such as the Zimbabwe Institute of Permaculture (ZIP) in a loose coalition. The ZIP was formed in 1990 and consisted of five units: FPC, Natural Farming Network (NFN), ZIP Research (now AfFOResT), Schools and Colleges Permaculture Programme (SCOPE) and PELUM–Zimbabwe. The ZIP manages the 40 ha property at Mount Hampden from which FPC and AfFOResT operate.

The NFN was formed in 1992 as a network for institutions promoting sustainable agriculture. Initially it took over the publication of *Groundcover* and FPC's outreach training. NFN members include the FPC, the National Training Centre for Rural Women, the Association of Zimbabwe Traditional Ecologists (AZTREC)–Masvingo, the Zimbabwe Women's Bureau, Jekesa Pfungwa, KAJIWA–Mutoko, the Centre for Holistic Management–Victoria Falls, the Nyahode Union Learning Centre (NULC)–Chimanimani, the Chikukwa Permaculture Club and Silveira House.

SCOPE was set up in 1994 as a ZIP/Ministry of Education, Sports and Culture project. It aims to provide educational institutions with design tools and processes to develop integrated land-use management systems on their grounds and to promote the integration of ecological principles in the curricula.

PELUM was established in 1994 as a joint project between FPC and the Permaculture Trust of Botswana to promote curriculum development in sustainable agriculture. This eventually became a regional association covering Eastern and Southern Africa. Its training programmes are organised in various countries on sustainable agriculture and community development. The PELUM Regional Desk is in Harare. PELUM–Zimbabwe has 24 members, including FPC, SCOPE, the Department of Environmental Science at the University of Zimbabwe, the Zvishavane Water Project, Silveira House, NULC, Chikukwa Permaculture, Africa University, Mupfure College and Mwenezi College. PELUM College Zimbabwe opened in 2001 as a 'university without walls'. PELUM–Zimbabwe is currently developing a farmer-owned organic marketing scheme, Greenet, in collaboration with IFOAM.

The potential for organic agriculture in Zimbabwe

The agricultural potential of the land changes gradually from the humid Eastern Highlands over the Central Plateau to the lower regions with very poor soils and marginal rainfall. In most of these areas recurrent drought threatens food security, limiting the potential for organic production where there are no irrigation facilities.

Attempts to introduce organic agriculture should concentrate on the areas with high agro-ecological potential, which have till recently been occupied mainly by commercial farmers. In less secure environments, ecological farming should continue to be promoted for the preservation of the environment and improved food security, but farmers should not be saddled with certification costs that stop them applying small quantities of chemical fertiliser in a good rainy season, as is the norm. In poor agro-ecological areas, the costs of collecting surplus organic products from scattered holdings are higher than is the case where production units are small and surplus production consistent.

From an organisational point of view, the networks of producers and supporting NGOs are currently hindered in their activities by the polarised political situation. Once the political situation has normalised, these civic society groups will be able to resume their work.

Policy, partnerships and standards

There is no explicit organic agriculture policy in Zimbabwe. Because of the strong position of commercial agriculture and the heavy use of chemical fertilisers, organic farming is not easily understood and is not really promoted by government. There are some laws that directly affect the development of organic agriculture, such as one prohibiting the marketing of open-pollinated seed, as well as sanitary regulations that make it compulsory to dress seed.

With regard to partnerships, the current land resettlement programme is having a divisive effect and there has been limited cooperation between the private/NGO sector and government research institutions.

With regard to standards, between 2000 and 2002 there was an EcoCert inspector in the country. In 2002, the Standards Association of Zimbabwe brought together a group of stakeholders to start developing a set of local organic standards modelled on EC regulations. This initiative was discontinued before any tangible result was achieved. Greenet is working on its own label and certification scheme, in collaboration with IFOAM.

ANNEX 10: Background paper: Madagascar

Madagascar's organic sector started small and remains small. Lack of knowledge in production, certification, processing and exporting continues to inhibit growth. This is in spite of assistance from several outside agencies, including major donors. Fresh organic fruit and vegetable exports have proved unsuccessful, and the only current exports are in the processed category. Efforts to organise a viable organic sector continue among the private enterprise and donor group, but it is likely to be some time before an effective organic export sector can develop.

History of the organic sector

In the late 1980s a French and a German company each initiated export-oriented organic production of spices and other products in Madagascar. They developed consultancy services and inspection in line with EC regulations. As the importers were in possession of the organic certificates, some exporters of organic products from Madagascar became dependent on these two companies. The producers/exporters were therefore unable to sell their products as organic to other potential purchasers, resulting in discontent.

In 1993 the Syndicat professionnel des opérateurs en produits de l'agriculture biologique (PROBIOMAD, later changed to PROMABIO) was formed. Its main objectives were to:

- Promote organic agriculture;
- Support producers, processors and exporters of organic products;
- Develop the brand name.

The first organic certified products in Madagascar were spices, essential oils, cashew nuts, coconut oil and palm oil. Initially, most of the products were collected from the wild. Proper organic agricultural cultivation started at a later stage. Most products were and still are produced by small-scale farmers, while processing, grading and exporting is done by commercial companies.

Support to organic agriculture

There is no government support for organic agriculture in Madagascar. However, in the 1990s some international agencies provided technical support to enhance the organic production capacity and promote export.

Between 1994 and 1996 private companies received support from the Gesellschaft für Technische Zusammenarbeit (GTZ)/Protrade through a product and marketing advisory service programme. The objectives of the programme were to:

- Strengthen the position of organic growers and companies producing organic products (through information and training) and negotiate better terms with importers and trade partners;
- Develop economically viable organic production of marketable products;
- Facilitate a successful entrance for Madagscar's producers, processors and exporters into the European organic market.

Protrade supported participation in BioFach, the annual international organic trade fair in Germany. It also works closely with the US Agency for International Development (USAID), which has provided support through co-financing seminars on organic agriculture, financing and organising training courses at the university, financing an exporters' visit to South Africa and advising on organic plant protection.

Between 1994 and 1997, the Liaison Committee for Europe, Africa, Caribbean and Pacific (COLEACP) had a small support programme for the organic sector in Madagascar. It did not support individual companies, but rather associations and groups of producers and exporters. The support measures included training, expert reports, inspections and participation in trade fairs.

In 1997 the Centre for the Development of Enterprise (CDE; ACP-EU) became interested in promoting organic agricultural systems. Following a seminar on the quality of plant products that it organised in Mauritius with COLEACP and GTZ, CDE set up a meeting between Malagasy producers and European importers of fruits and spices. It also began to support PROMABIO, which now represents nearly all Malagasy producers. CDE co-financed the participation of Malagasy producers in BioFach between 1997 and 2000.

Growth of organic farming

A major factor influencing the decision to proceed with large-scale organic farming was that extensive farming systems are common in Madagascar. In the late 1980s and early 1990s, large, remote areas were certified because no agro-chemicals had entered these regions. They were organic by default, not because organic methods had been deliberately practised there. Recently, the requirements for certification of organic production methods have become stricter.

A second factor is that commercial companies in Madagascar noted the market potential for organic products and the possibility of fetching premium prices. Environmental concerns hardly played any role.

The most important constraints currently facing organic agriculture in Madagascar include:

- Lack of information and knowledge about the principles and methods of organic agriculture;
- Lack of knowledge about EC regulations and requirements for the export of organic products to EU countries;
- Lack of information on certification procedures and the required documentation;
- Poorly organised systems of production, collection, transport and processing, making control difficult and calling certification into question;
- Lack of market information, such as products demanded, quality required, prices, potential importers and market size;
- Lack of national standards and regulations on organic agriculture.

Institutions involved in the organic sector

Local and national bodies involved in the organic sector include PROMABIO, which is a member of IFOAM and the only association of entrepreneurs commercially active in the organic sector in Madagascar.

In 1997, a second organic producers association, Association Bio Côte Est, was founded, but it was dismantled in 1998. One of the main reasons for failure was that the member companies underestimated the time needed to convert from conventional to organic production. When it became clear that conversion could not be completed in a year, the members lost interest.

Five international agencies are currently supporting organic agriculture in the country through projects and technical assistance. These include a CARE International project, Projet d'amélioration des plantes tubercules (PAPAT), which is focusing mainly on the improvement of cassava, sweet potato and potato and promotes the use of organic fertilisers such as compost and manure to improve soil fertility.

There is also a USAID project, the Madagascar Landscape Development Interventions Activity (LDI), which provides technical assistance aimed at converting a large coffee plantation in the south-east into the largest organic farm in Madagascar.

Standards and regulations

There are no national standards for organic agriculture in Madagascar. Most organic farming in the country is geared towards export markets, where international standards such as the EC regulations are relevant.

Two international certifiers are currently operating in Madagascar: EcoCert International and Lacon GmbH. EcoCert has been active in Madagascar since 1990 and has certified 28 companies. Lacon GmbH started in 1998 and has certified one company. Both certifiers are EC accredited.

Two certified companies in Madagascar are producing organic fruits and fruit products, but only one of them is exporting the products. The other company is facing quality problems in its organic apples and has been unable meet the required export standards for several years.

Production of organic fruit and vegetables

After 1995, a number of companies made attempts to produce and export organic fresh fruits and vegetables from Madagascar. Most of them failed (*see* Box 8). By 2001 there was no export of organic fresh fruit and vegetables; one company was producing and exporting juice and pulp from various fruits.

The reasons for the failure to establish an export sector include:

- Malagasy exporters were not willing to start exporting small quantities as a test export to interested importers, but insisted on 500 kg as minimum quantity;
- Poor communication between foreign importers and Malagasy exporters;
- Competition from South Africa, which was exporting litchis at lower prices;
- Lack of information given to the potential importers on, for example, timing of production, estimated quantities to be supplied, and prices.

Box 8: Exports of organic apples from Madagascar: lessons learned

In 1997 and 1998, a Malagasy company exported organic apples to Germany. The venture looked promising, as it was based on supplying of fresh organic apples to northern markets during a season when there was no domestic production of apples. The Malagasy company produced two organic apple varieties (Double Red and Melrose) and the quantities exported from the end of March to mid-May were estimated at 100 tonnes in 1997 and 25 tonnes in 1998.

Upon their arrival in the German market, however, quality problems became evident. Both apple varieties were infected by 'bitter bit', resulting in brown spots inside the fruit. This affected further exports and the company had to stop exporting these apples to Germany.

The reasons for the failure of this venture included:

- the lack of experience in the relatively young organic sector in Madagascar;
- the absence of research on organic production under local conditions;
- the lack of extension services to organic farmers.

This example illustrates the difficulties of producing and exporting high quality fresh organic fruits.

An example of a company that started to export 'extra fine' organic green beans from Madagascar to Europe in late 1998 gives an idea of why the export sector has so far failed. A Dutch importer requested this product for January, February and March. The Malagasy exporter had experienced producing these beans in a trial during the dry season and felt able to deliver in other months as well; from January to March it usually rains in Madagascar and bean production is difficult because of diseases, especially during harvest. The first shipment of beans arrived at the destination market in poor quality; the Dutch importer rejected the shipment and cancelled further dealings. In the other months, the importer continued to receive supplies of these beans from countries closer to Europe, meaning cheaper freight costs. This example illustrates a situation where the domestic season of supply and foreign demand did not coincide and the price of production was not competitive with other suppliers during other seasons.

Production and marketing of processed fruits

PROMABIO is the only company active in the production of certified organic fruits and vegetables in Madagascar. It organises and finances inspection and certification for its members, mostly small-scale farmers.

Papayas, mangoes, guavas and passion fruit are processed into pulp and canned. Pineapples are processed into pulp and juice. All products apart from passion fruit are grown by out-growers who are organised into producer groups, simplifying the certification and collection of fresh produce. For passion fruit, the company has a small farm in Tamatave but also buys from farmers. The average farm size is 0.5 ha. The farms are managed by family members. The limited financial resources of farmers constitute a major production constraint.

All certified organic products are intended for the export market as there is no domestic market for organic products in Madagascar. The major destination is Europe, especially Germany and France. Box 11 shows the export quantities per product in 1999 and 2000.

As noted earlier, no fresh organic fruit and vegetables are currently exported from Madagascar. In 1999, exports of organic processed fruits amounted to 47 tonnes. In 2000, 62 tonnes were exported by one company to the EC. This exporting and processing company buys all products directly from the growers. All the products are exported to France where the company has a marketing office that also operates as the importer. The export prices are, on average, 20% higher than those for conventionally produced products.

Box 9: Organic products exported from Madagascar

Products	Varieties	Area (ha)*	Quantity (t)*	Seasons
Pineapple	Cayenne Lisse	15.0	150	December–February July–September
Papaya	Local	8.0	56	July–October
Mango	Local	2.5	40	October–December
Guava	Local	100.0	100	March–April
Passion fruit	Violette	3.0	50	October–December January–March

* The figures give the total area (ha) certified and the potential quantity of output.

Box 10: Processed organic products exported from Madagascar, 2000

Products	Quantity (in kg)
Litchi syrup	90
Pineapple pieces	2,720
Pineapple juice	16,230
Crushed pineapple	350
Pineapple pulp	9,025
Litchi pulp	2,900
Mango pulp	20,580
Passion fruit pulp	2,275
Guava pulp	1,040
Green papaya pulp	7,180
Total	62,390

Conclusions

- The organic sector in Madagascar is small and exports are limited. Production is predominantly by small-scale farmers. Certification costs are paid by the commercial companies. PROMABIO is the only association of entrepreneurs commercially active in the organic sector. There are no farmers' organisations or government agencies active in this sector. Five international agencies are currently supporting organic agriculture. There are no local standards or regulations. Certification is geared towards exporting. The only certifiers operating in Madagascar are EcoCert International (accounting for more than 90%) and Lacon.

Box 11: Export of organic products from Madagascar, 1999–2000

Products	Quantity (in kg), 1999	Quantity (in kg), 2000
Black pepper	12,500	17,200
Chillies	1,435	875
Cinnamon	7,690	5,520
Cinnamon extract	–	10
Cloves	1,645	8,290
Clove stems	–	700
Cocoa	967,000	1,142,740
Coffea robusta	210,045	350,410
Coffea arabica	7,550	18,950
Essential oil of clove stems	645	–
Essential oil of niaiuli	1,600	825
Essential oil of ravinstara	980	725
Essential oil of yiang yiang	2,319	3,500
Essential oils (all others)	1,205	2,006
Ginger	–	1,280
Green pepper preserved in brine	4,420	10,800
Macis	28	135
Nutmeg	564	525
Palm oil	323,460	216,350
Processed fruits	46,900	62,400
Red pepper/red berries (*Schinus molle*)	590	400
Sugar	908,790	726,000
Turmeric	2,025	1,050
Vanilla	8,640	14,890
Vanilla extract	350	30
Total	2,510,381	2,585,611

- Despite efforts to establish an organic export sector in Madagascar in the 1990s, there are few success stories. Major constraints include: lack of knowledge and information about the principles and methods of organic agriculture; lack of knowledge about the regulations and requirements for export of organic products; and lack of market information.

- There are no exports of organic fresh fruits and vegetables from Madagascar. One company is processing organic fruits and exporting them as pulp or juice. All produce, apart from passion fruit, is bought from certified smallholders. Certification costs are paid by the processor who is also the exporter. In 2000, 62 tonnes of pulp and juice were exported by one company to France. Export prices were about 20% higher than those for conventionally produced products.

- According to an exporter of processed fruits, the production of tropical pulps and juice could expand in response to market demand of the market. Development of exports of organic fresh produce, however, does not seem to have good prospects in the near future.

- In the past, the rapid organic certification obtained due to chemical-free agricultural production misled companies into believing that quick profits could be made. That situation has changed and elaborate internal control systems and associated documentation are required before organic certification can be granted. Member companies of Bio Côte Est attempted to export organic litchis but they

underestimated the need for careful logistical planning when handling fresh produce. Other constraints to exporting organic fresh fruits and vegetables include: lack of experience of intensive organic production, especially of fruits and vegetables; lack of experience in handling and exporting of fresh produce; lack of professional management; and long distances to the markets, reducing competitiveness.

Contact details of certifiers, consultants and producers

EcoCert International
Foerster Strasse 87
D- 37520 Osterode
Germany
Tel.: +49 5522 951 161
Fax: +49 5522 951 164
E-mail: info@ecocert.de

Lacon GmbH
Weingartenstr, 15
d-77654 Offenburg
Germany
Tel.: +49-781-55802
Fax: +49-781-55812
E-mail: lacon@lacon-institut.com

Gabriel Guet
Organic Agriculture Consultant
La Bergerie
Les Îles
84840 Lapalud
France
Tel.: +33-4-90 40 30 82
Fax: +33-4-90 40 24 29

Mme Lecacheur
PROBIOMAD International
Rés. Le Donjon
Pl. des Douves,
78960 Voisins-le-B
France
Tel: +33-1-30 96 69 88
Fax: +33-1-30 48 97 44

Alexis Rabemananjara
Pabiom
PO Box 110
Antalaha 206
Madagascar
Tel: Phone: +261-32 07 161 58
Fax: 0049-7741 60 92 20
E-mail: pabiom@les-raisting.de

ANNEX 11: Background paper: Sudan

The evolution of organic agriculture in Sudan began in the late 1990s. However, if the term is used loosely to mean farming without chemicals, farming systems in much of the country do not use chemicals. There are many products that can be classified as fully organic (field crops, livestock, derivatives and poultry from the western part of the country) but are exported under conventional marketing systems (not certified). This is because organic agriculture did not appear to deal seriously with the problems of production but emphasised the documentation and certification aspects. The Ministry of Agriculture and Forestry has been conducting an awareness campaign on the environmental effects of the use of chemicals in agriculture with a view to improving safety, and the Network Committee of Ecological Farming Systems in Africa (NECOFA–S) has just established a branch in Sudan.

Almost all the traditional farming systems could be classified as partially organic without formal certification. The crops grown in these systems include: millet, sorghum, groundnut, sesame, watermelon and okra, as well as mango, citrus and gum Arabic. Livestock (beef, camels and sheep) are fed with straw from field corps and by open grazing on rangelands. A formal body os needed to organise and certify these organic plant and livestock products. Some research is being done by university staff on the effect of organic amendments on the quality of fodder crops and their digestibility, and on changes in soil quality.

There is no formal policy for organic agriculture. However, some efforts are being made to use NECOFA–S for information dissemination. There is a great need for the International Federation of Organic Agriculture Movement (IFOAM) or an equivalent body to help realise the potential of organic agriculture in Sudan.