IMPACTS ASSOCIATED WITH THE UPTAKE OF ORGANIC AGRICULTURE IN EAST AFRICA

Drawing on over 150 in-depth qualitative interviews with selected organic farmers in Burundi, Kenya, Rwanda, Tanzania and Uganda, this series of articles presents highly convincing examples of the enormous development and progress Organic Agriculture can bring – especially to resource poor farmers and their families.

The articles are published with the involvement of local journalists and showcase the lived experiences and impacts associated with the conversion to Organic Agriculture. Results indicate Organic Agriculture offers East African smallholders and family farmers a wide range of economic, environmental and social benefits by:

• Increasing yields through the use of affordable inputs;
• Improving livelihoods and food security;
• Reducing the financial risk by replacing expensive chemical inputs with locally available renewable resources;
• Integrating traditional farming practices;
• Allowing farmers access to new market opportunities: both at home and abroad;
• Providing much greater resilience of the farming systems in times of climate extremes such as drought and heavy rains;
• Improving human health and maximizing environmental services.

Given its affordability and the valuable tool-kit provided by Organic Agriculture, government policies could significantly benefit from the integration of organic practices into their agriculture, climate change, food security, and rural development policies and action plans.
1 THE POTENTIAL OF ORGANIC AGRICULTURE IN THE RWANDAN CONTEXT

By Laetitia UMUHOZA KAMEYA, Rwanda Environment Management Authority

There is growing recognition among policy makers that Organic Agriculture has a significant role to play in addressing the pressing problems of food insecurity, poverty, land degradation and climate change in Africa. In January 2011, the Executive Council of the African Union passed a decision on organic farming at its Eighteenth Ordinary Session. In particular, the decision EX.CL/Dec.631 (XVIII) requests the African Union Commission (AUC) and its New Partnership for Africa’s Development (NEPAD), the Planning and Coordinating Agency (NPCA), to initiate and provide guidance for an AU-led coalition of international partners on the establishment of an African organic farming platform based on the best available practices; and to provide guidance in support of the development of sustainable organic farming systems and improved seed quality.

Organic farming refers to a form of agriculture that relies on techniques such as crop rotation, green manure, compost and biological pest control. Organic farmers work with natural manure and pesticides, but strictly exclude the use of manufactured (synthetic) fertilizers, pesticides (which include herbicides, insecticides and fungicides), plant growth regulators such as hormones, livestock antibiotics, food additives and genetically modified organisms.

IFOAM (International Federation of Organic Agriculture Movements) is the only international umbrella organization in the organic world. IFOAM’s goal is the worldwide adoption of ecologically, socially and economically sound systems that are based on the principles of Organic Agriculture. IFOAM unites some 870 Affiliates (Members, Associates, and Supporters) in more than 120 countries. This allows IFOAM to unite, lead and assist the organic movement – all IFOAM Affiliates – in its full diversity, while providing a common voice on relevant organic issues.

IFOAM defines Organic Agriculture as follows: “Organic Agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological
processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.”

In Africa, IFOAM is working with the African Union, the African organic sector and other agencies in the framework of its “Organic Alternative for Africa Initiative” to help coordinate activities, increase awareness of the multiple benefits of organic agriculture and facilitate the integration of organic agriculture solutions and opportunities into the core of African policies and development agendas.

In Rwanda, IFOAM mainly collaborates with the Rwanda Organic Agricultural Movement (ROAM). ROAM is a national umbrella organization which brings together producers, farmers' organizations, processors, export and import companies, NGOs and organizations that are involved in the promotion and development of the organic sector in Rwanda. Established in 2007 to realize the vision of increased incomes and improved livelihoods in Rwanda through the adoption of Organic Agriculture, ROAM has invested in education, training, extension and research in Organic Agriculture, promoting local and export marketing of organic products, advocating for Organic Agriculture, as well as attracting support for Organic Agriculture in Rwanda.

Since then, Organic Agriculture activities in Rwanda have attracted local farmers' attention and as a result the country is witnessing several emerging initiatives. One of these is the Gako Organic Farming Center based at KABUGA. This center contributes to building capacity of low scale farmers and works with the Rwandan government and private organizations in order to promote organic agriculture practices. About seventy farmers are trained on a quarterly basis in organic farming practices. Apart from this renowned center, many other local farmers have managed a large-scale shift to organic production. In the Northern Province, COOPPF, a fruit growers' cooperative, is a good example of this. In the western province many coffee growers' cooperatives provide the international market with clean and premium quality organic
coffee. Furthermore, organic farming for banana and pineapples is becoming more and more successful in the Eastern Province while the Southern Province has achieved a record on its most productive banana preference.

THE VARIOUS BENEFITS OF ORGANIC FARMING FOR RWANDAN FARMERS

According to many farmers’ experiences on the ground, Organic Agriculture is benefiting Rwandan small-scale farmers as it was found to be more affordable and profitable than chemical agriculture. This improved agriculture has, moreover, provided economic and agricultural benefits such as easy use of inexpensive organic fertilizers, top quality and quantity of the harvest, as well as improving the capacity of resilience against the effects of Climate Change.

"I choose to promote purely organic methods because they retain soil fertility. Previously, I applied synthetic fertilizers and noticed that production declined each year and during my many years of experience I have learned to appreciate the use of organic manure. I also noticed that they are good at fighting some plantation diseases," said one of the farmers of the Southern Province, Cyarwa sector.

"When I use chicken manure that I produce from my poultry farming I am able to get 5 tons of Irish potatoes on one hectare while I use to get no more than 2 tons per hectare using chemical fertilizers. And my products are the most favored on the market and consumed before others. The price doesn’t matter, people like high quality products," said Jean Marie Vianney Ngiruwonsanga, an organic farmer of Rulindo District, Muhondo Sector.

Many farmers look at organic farming as the best way to increase the ability of the farming system to continue functioning when faced with the adverse effects of climate change. Organic practices such as cover crops, crop residue retention, mulching, green manure and composting make farming more drought-resistant and more resilient to extreme events.
Organic fertilizers include organic residues of plants such as pyrethrum, fertilizers produced from earthworms, famous red California worms from barns combined with carpentry residues and manure from cattle stables and other livestock. For plant disease management, many products are made from available plants such as tobacco, chilli, Mary Rose, the famous Tetradenia riparia and the soap that farmers use to control pests.

"We chose the use of organic fertilizers in order to protect ourselves from potentially adverse effects coming from the use of synthetic inputs. As farmers, we know that synthetic pesticides have killed colonies of bees. To protect plants we prepare pesticides from tobacco leaves, Umuravumba “Tetradenia riparia”, Tephrosia, Mukuna and other organic herbs," states Emmanuel Majoro, COOPPF members’ representative.

COOPPF (Cooperative for the Promotion of Organic Fruit Plants) based in the Kinigi Sector of MUSANZE District is one of the cooperatives mentioned above that have decided to practice purely Organic Agriculture. COOPPF was created in 2006 and was given legal status by the Rwanda Cooperative Agency in 2009. Currently, COOPPF has 200 members among whom 117 are women. COOPPF has a property of 25-30 hectares of peaches known as tomato trees.

The harvested peaches are sold mainly at local markets for 800 to 1000 Rwandan Franc while ordinary peaches are sold at 600 Rwandan Franc. The most striking thing is to find the children of farmers sitting in the peach plantations and eating the fruit directly removed from their stems. This would have been a threat to their health if the cooperative had been using synthetic products.

**ORGANIC AGRICULTURE AND FOOD SECURITY IN AFRICA**

Similar to Rwanda, there are many other positive experiences of organic farmers found throughout the continent. For example, in a study published in 2008 titled “Organic Agriculture and Food Security in Africa”, the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Environment Program (UNEP) undertook a research program of some 120 different organic
agricultural farming systems across Africa. The results showed that the notion that organic farming does not lead to an increase of yields is a misconception. In fact, the results showed that increases in yields in the region of 60 to 100 percent were noted in many of organic agricultural farming systems.

ORGANIC AGRICULTURE SHOULD BE INTEGRATED IN RWANDAN AGRICULTURE AND RURAL DEVELOPMENT POLICIES AND ACTION PLANS
As the world population increases, sustainable food security should be every single nation's priority. This is particularly important for Rwanda which figures high on the list of countries with intense population pressure and where most families live from subsistence farming practiced on very inadequate arable land.

The experiences of farmers engaged in organic farming both in Rwanda and beyond demonstrate that Organic Agriculture has a significant role to play in addressing the problems of food insecurity, poverty, land degradation and climate change in Rwanda. Given the affordability and multi-benefits of Organic Agriculture, it is therefore important that national policies in Rwanda do not overlook the valuable tool-kit provided by Organic Agriculture. There is undoubtedly room for substantial increases in organic production in the country so that millions of smallholder farmers and their families can move out of poverty and hunger and enjoy a better life.
2 FOR FARMERS OF THE ASSOCIATION, FOR THE PROMOTION OF AGRICULTURE AND LIVESTOCK IN BURUNDI, ORGANIC MEANS A BETTER LIFE

By Nicolas KAMETERE, Burundi National Radio and Television

The information presented in this article draws on qualitative interviews with members of the Association for the Promotion of Agriculture and Livestock (APAEL: Association pour la Promotion de l'Agriculture et de l'Elevage). APAEL is a community-based organization of organic farmers located in Kirekura in the commune of Mutimbuzi in the province of Bujumbura.

APAEL was founded in 2010 with 20 members (twelve women and eight men) and was legally recognized by the Burundi Ministry of Agriculture and Livestock in April 2012 as one of the farmers association committed to training and raising awareness of Organic Agriculture.

The farmers grow different vegetables such as eggplants, cabbages, onions, peppers and tomatoes in a market garden which extends over one and half hectare of land. Farmers initially worked individually on small portions of lands using chemical fertilizers. Farmers have received training in organic farming methods, have learnt how to produce chemical-free vegetables in a sustainable manner and have adopted a range of new farming techniques such as the application of composts made from household waste and livestock manure.

IMPACTS ASSOCIATED WITH THE UPTAKE OF ORGANIC AGRICULTURE

While APAEL farmers are not certified organic farmers, the adoption of new organic techniques enables them to grow high quality organic produce and to boost their vegetable production. A farmer states: “Continuous use of chemical costly fertilizers resulted in the degradation of farming lands and food security. Good yields are obtained during the first harvest, but production reversed in the following harvest seasons,
causing a reduction of food availability in the region.”

For many farmers, farm yield has increased as an outcome of conversion to organic farming techniques. For example, the eggplant yield has increased from about 170 kg to 400 kg per one hundred square meters. This provides a richer and more varied diet and local food security.

The adoption of organic agriculture techniques has reduced the cost of farming. While the cost of 7 kg of chemical fertilizer used on one hundred square meters is 11,200 BIF, the cost of 22 kg of organic livestock used on the same surface is 4500 BIF.

“Our biggest ambition is to raise awareness among other farmers on the importance of using organic fertilizers for the sake of environmental protection and human health as well as improving the quality in production of our vegetables. Farmers can use organic inputs like compost which can be found easily in their surrounding area or produced on the farm,” says a farmer.

**CHALLENGES**

Despite the above-mentioned advantages, APEAL members are facing several challenges. The main challenges include insufficient capital to buy more cows and enough farm animals (e.g. goats and chickens) to ensure on-farm supplies of manure for compost. Moreover, similar to many other regions of Burundi, farmlands in the Mutimbuzi Commune are small. This sometimes causes competing claims to land and family conflicts.

**OUTLOOK**

Despite these challenges, all members of APAEL are motivated and committed to supporting the Burundian government in their battle to reduce poverty and hunger. They expressed readiness to collaborate with any association or organization involved in the development of Organic Agriculture in order to reap the benefits which organic agriculture can provide.
Sally Niaisiae, an elderly mother of six children, cannot remember the last time she made a trip to the local market to buy vegetables as she did in the past. Instead, vegetable vendors seeking organically grown supplies for the fresh food market at Kiserian Town come to her.

Until four years ago, Niaisiae went to the local market regularly, buying vegetables and other fresh food. Living in a peri-urban area, the land she had left after putting up her house could not produce enough food to feed the family, or so she thought. Then in 2008, officials of the Kenya Institute of Organic Farming (KIOF) happened to visit Kiserian to sell the concept of organic farming to farmers there.

“What struck me about the whole idea of organic farming is that with my little farm plot, I could grow enough food to feed my family and supply the market. And that, without the use of synthetic fertilizers, pesticides and herbicides which are expensive these days,” she said.

“Only a few of us started the training because others wanted to see if it really works. Most of the people around here have small plots that produce just enough to feed the family and were therefore skeptical of how this new farming methodology would enable them to produce enough food to generate income. But with evidence of successful harvests, more farmers here showed interest.”

“Today, we are about 100 organic farmers in a radius of about seven kilometers. We are able to supply the local food market with enough produce and sell to other markets unlike before when market vendors had to travel to the wholesale fresh food market in the city,” she said.
Niaisiae is a member of Ngong Organic Farmers Association, an umbrella community based organization (CBO) for small scale organic food farmers located in Kiserian, a sprawling peri-urban area about 30 km southwest of the capital Nairobi. She is also the Chairperson of the Olonana Group, one of the six small welfare organic farming groups that combined form the association.

IMPACTS ASSOCIATED WITH CONVERSION TO ORGANIC AGRICULTURE
The impact of organic farmers in this area may not be felt until one visits the local market food market.

Fresh food vendors we interviewed at the Kiserian market spoke about how popular their organically grown vegetables, tubers and corn are as well as their organically raised chicken and rabbits.

Because of the fact that organic farming does not follow rainfall cycles but rather farmers use simple irrigation methods, farmers have been able to ensure a constant fresh food supply not only to the local market but also to other markets like the Karen Shopping Center which farmers supply every Saturday throughout the year and the growing pool of large scale buyers especially those operating restaurants specializing in organic food in the capital Nairobi.

The case of Jennifer Kigunda, an organic farmer representing the Puan Group is more illustrative of the transformation that organic farming has had.

Her one-acre of land is divided into several portions, growing maize, various vegetables, and different potato varieties. Farmers divide their plots growing different crops allowing crop rotation and ensuring a constant supply of fresh produce as they mature at different times. Previously she would only have grown maize and beans – the two most popular food crops with subsistence farmers in Kenya mainly grown using conventional farming methods.

“I would harvest on average six 90-kg bags of maize from the farm and on average three bags of beans,” she said. With her small family, she prefers to sell most of the
harvest, fetching around 400 U.S. dollars per season, meaning she would make on average double that amount per year from the sale of surplus harvest.

But since the change to organic farming, Kigunda’s family income has increased tremendously as the sale of organic food from her farm brings in on average, 1,200 U.S. dollars per a three month season meaning that in a year, she now makes at least 3,600 dollars a year from her one acre farm.

“We have a ready market for organic foods and we get a premium price for it at the market. What else would a farmer look for?” she asked.

Kenya is among countries in the world where awareness of lifestyle diseases has increased tremendously in the last ten years partly because of improved diagnostics and availability of data indicating the number of deaths resulting from lifestyle diseases. As one of the preventive measures, more Kenyans are choosing to eat a healthy diet, preferring foods with fewer chemicals and more natural, thus increasing demand for organic foods.

Among the key beneficiaries of this awareness is Jamlek Wagondu, also a member of the Ngong Organic Farmers Association. He is a specialty farmer for tomatoes. Two years ago, he decided to start growing organic tomatoes exclusively.

“First of all, I do not have to spend on the expensive pesticides which were contributing to 70 percent of my costs. Then, these tomatoes have a ready market. Some of my customers even come to supervise if I follow the organic model. I no longer have to sell to the main market in Nairobi through brokers and this means I fetch a much higher price, sometimes even three times the cost of a comparable quantity of conventionally grown tomatoes,” said Wagondu.

Ngong Organic Farmers Association traces its roots to the year 2004 when the current chairman of the association Peter Melonye and friends decided to visit Nairobi International Trade Fair to learn some of the new farming technologies.
The Kenya Institute of Organic Farming (KIOF) that pioneered expanded training and education in Organic Agriculture had an exhibition stand that Melonye and his friends were interested in visiting. Little did they know that they had just triggered an organic farming revolution that has now become one of the main economic activities for small-scale farmers in Ngong.

Melonye is perhaps the clearest manifestation of the strides small-scale farmers, with a thirst for knowledge combined with the drive to put this knowledge into practice, can actually achieve.

His farm is a case study on integrated sustainable farming where every drop of livestock waste, felled branch and leaves, and other farm waste find productive use.

Although he has not achieved it yet, he is working towards ensuring his farm is fully organic; from the crops to the livestock. Currently, he does half an acre of largely organic horticulture. All of his chickens are also organic. He is working to ensure that cows and goats are organically certified.

At his farm, he has overcome the challenge of water shortage with a system of harvesting rainwater using the gutters that feed to his underground water reservoir that can provide water for household use for one year.

He runs a drip irrigation system and when he uses the same water for the irrigation, it can take him four months; a big achievement considering the practice of rainwater harvesting is not very popular among Kenyan small scale farmers despite water shortages experienced in most parts of the country.

His home kitchen runs on biogas that is generated using livestock waste. He does not use firewood whatsoever.

The grass that naturally grows in his farms, plus farm waste like maize stalks are
pressed to make hay barns that can be stored for up to two years. In his granary, there are three metal silos that can hold 450 kg of maize each. The maize can be stored there for two years without adding any chemicals. The silos use the vacuum concept to keep the maize dry.

By this measure, Melonye has been able to cut his post-harvest maize losses to zero. He sells the maize when the prices are high or just keeps it to feed the livestock.

In his backyard, he has started making briquettes; made from waster paper and charcoal dust mixture that is put in water and then pressed into various shapes and then dried in the sun.

Thereafter, the pieces are sold to the local community. The briquettes burn slowly but produce more heat that charcoal. They help households avoid the use of charcoal and firewood. They are also more affordable.

**WOMEN ARE EMPOWERED TROUGH ORGANIC AGRICULTURE**

Out of the 100 members of Ngong Organic Farmers Association, 70 are women. "The reason is that women are more interested in organic farming because its benefits are a sort of empowerment for us," said a farmer.

For instance, women are happy that with the fact that with just a small plot of land, organic farming is able to generate attractive revenue. The money generated is actually enough to employ a temporary farmhand, therefore creating another income opportunity.

“When a woman is engaged in organic farming, she is liberated from borrowing money from the spouse or relatives. The family is also well fed," said Carol Njema, the representative of Acacia Group, also an affiliate of the Ngong Organic Farmers Association.
WAYS TO ENSURE THAT ORGANIC STANDARDS ARE MET

Ngong organic farmers are certified through a process known as Participatory Guarantee Systems (PGS), based on East African Organic Products Standard requirements and the group internal procedures modeled as a peer review system.

International Federation of Organic Agriculture Movements (IFOAM) which is the only international umbrella organization for organic farming initiatives defines PGS as locally focused quality assurance systems that certify producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange.

Key customers of the organic produce are involved through inspection of the farming processes practiced by supplier farmers, said Jack Juma of the Kenya Organic Agriculture Network (KOAN), one of the non-profit organizations that coordinates organic farming in Kenya.

When a farmer has a particular market that specifically demands third party certification, they apply for certification from authorized certifying companies like Encert, Nesvax Control, Soil Association, and Ceres among others.

CHALLENGES FACED IN UP SCALING ORGANIC AGRICULTURE

The Ngong area where farmers operate does not receive much rainfall and has been classified as a semi-arid area.

Climate change effects have further reduced the amount of rainfall the area receives, to below the annual average of 500 mm, according to data from the Kenya Meteorological Department.

Farmers said lack of adequate water is the main challenge to expanding the size of the farm they used in practicing organic farming.

“If farmers were closer to each other, we could make a communal borehole by contributing to the costs, but this is not the case. What we are not happy about is that
the demand for organic food is so high, yet we are not able to meet it just because of water shortage. The money that we could have made from higher sales from more production is then lost,” said Njema.

Melonye sees a long-term solution for the group in buying a communal farm and developing water access systems within that land. The groups also plan to adapt a drip irrigation system that uses minimal water.

Farmers said they also face a problem of accessing certified organic seeds that are only available through a few outlets. While farmers said they have been trained to develop homemade pesticides, they are sometimes not effective on some pests. Yet very few agro-dealers sell recommended pesticides and when available, they are very expensive.

The pest problem is becoming bigger because of the movement of pests from conventional farmers to organic farmers. Because organic farming is not yet a mass practice in Ngong, most farmers are very likely to border conventional farms thus facilitating the transfer of pests and crop diseases.

CONCLUSION
Organic Agriculture could be a powerful tool for Kenya, in particular, as well as for Africa at large in achieving Millennium Development Goals (MDGs) particularly those on poverty reduction, hunger and environmental conservation. However, it requires focus and commitment from leaders and policy makers to develop and implement policies that support sustainable food production.
4 ORGANIC AGRICULTURE CONTRIBUTES TO IMPROVED LIVING CONDITIONS OF FARMERS OF THE MAENDELEO GROUP IN TANZANIA

By James RANGE, Journalist in Dar es Salaam, Tanzania

MAENDELEO\(^1\) Group of organic farmers was established in October 2010, having 23 members (17 women and 6 men), and located in Ruvuma village Towelo ward of Morogoro urban district in Tanzania.

According to Mrs. Khadija Kibwana president of the group, women play a vital role in food security for their families and are therefore highly committed and hardworking, which greatly contributes to the success of the group.

Together with Sustainable Agriculture Tanzania (SAT), an NGO based in Morogoro, the group has received trainings in organic farming through developed best approaches and practical techniques in demonstration gardens for organic crop production. Each farmer group trained gains experience on field plots where all the practical experiences are demonstrated later in organic home gardens.

As a result, many members practice organic agriculture by integrating the principles and methods in their nursery preparation, soil fertility management, soil and water conservation, pest and disease and weed management.

IMPACTS ASSOCIATED WITH THE UPTAKE OF ORGANIC AGRICULTURE

Maendeleo farmers engage in organic farming in order to live in a healthy environment and to produce, high-quality healthy food for their families and local communities. After realizing the health hazards of continuous exposure to synthetic fertilizers and pesticides such as frequent illnesses and cancer, the farmers thought of a better way to practice agriculture while at the same time conserving the environment.

\(^1\) The meaning of MAENDELEO is “development”.

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**Reduced costs of farming**

The group members improve soil fertility and maintain moisture retention via the application of composts made from household waste, farmyard manure and plant material, the growth of cover crops and green manure such as *phaseolus vulgaris* and *mucuna pruriens*. Moreover, cropping systems such as crop rotation, mixed cropping, intercropping (e.g. maize and beans, carrots and leeks, tomatoes and onions) are highly practiced for soil fertility as well as pest and disease management. Farmers use botanical pesticides such as extracts from various parts of the neem tree (*Azadirachta indica*) for crop protection. But if they had to buy synthetic fertilizers, they would buy three bags of fertilizers for planting and growing every quarter hectare (e.g. of maize) for sixty thousands Tanzanian shilling (28.3 U.S. dollars). As a result, dependence on costly external inputs has been greatly reduced since most of the farm inputs are sourced locally on the farmers’ plots and in the surrounding area. Lower production costs reduce financial risk and avoid the need for credit.

**Increased access to food**

Group members plant more than 30 varieties of crops, which are for family consumption and sale at local markets. For example: maize, watermelon, tomatoes, onions, carrots, spinach, amaranth, beetroot, garlic, papaya, beans, bananas, cucumber, cassava, avocados and passion fruits. This crop diversity provides the benefits of having more than one crop at a time on a plot of field. This increases the access to food and income sources and therefore reduces the risks associated with the failure of a particular crop.

**Increased incomes**

Organic products are certified through the Participatory Guarantee System (PGS) developed in line with the East African Organic Products Standards (EAOPS). PGS are locally focused quality assurance systems. They verify producers based on active participation of stakeholders (e.g. producers and consumers) and are built on a foundation of trust, social networks and knowledge exchange. The PGS helps smallholders to have their products recognized as organic in local markets.
Products are on sale at the organic shop of the association in Morogoro where farmers supply fresh vegetables and fruits on a weekly basis, leading to increased income. Due to the high demand for organic products at the shop, the group members have planned to increase the sizes of their farms under organic production so that they can be increase their supply and outputs. With additional income, farmers are able to meet the needs of their families such as sending children to school and paying for medical expenses. For example, Mrs. Khadija Kibwana President of the group said that she has successfully managed to educate her two children in school as a result of benefits from organic farming.

Members have also developed a system to provide financial resources using savings and credits amongst themselves. The group has savings close to 500 US Dollars. It is also currently working on opening a group bank account in one of the local banks in Morogoro.

*Increased resilience to erosion and climate change*
Each group member has made contours and terraces on their farms and along the fields. This prevents soil erosion and protects the environment. Moreover, trees and shrubs were also planted to act as buffer zones, windbreakers and a source of biomass while providing additional benefits in climate change adaptation.

**CHALLENGES**
Some of the challenges MAENDELEO group members are facing include inadequate experience in organic agriculture production methods, organic fertilizers to be used for planting crops and lack of good roads to transport produce to the market. Their approach is to provide farmers with more training and education on the importance of organic farming and further the development of local and regional markets in order to enable small-scale organic farmers to supply to these markets.

**ORGANIC AGRICULTURE: THE WAY TO GO**
The satisfaction derived from being an organic farmer is huge; the farmers are happy and proud to contribute to the wellbeing of the Morogoro community by producing healthy vegetables and fruits.
5 IMPROVED LIVELIHOODS THROUGH ADOPTION OF ORGANIC AGRICULTURE IN UGANDA

By John KASOZI, Journalist in Kampala, Uganda

This article draws on qualitative interviews with farmers of the Namulonge Horticulture Farmers Association (NHFA).

The NHFA is located in Busukuma sub county; 25 km away from Kampala in the central district of Wakiso (Uganda). Mr. Christopher Nsamba started it in 2000 after a brief Integrated Pest Management (IPM) tour to Nairobi, Kenya in 1998.

“My visit to Kenya, where vegetable and fruit farmers worked in Associations, excited me. The obvious collective benefits I saw were hard to resist. When I came back to Uganda, my first task was to reorganize my family’s horticulture business, giving everyone a role to play, similar to Nairobi Associations, then I sold the idea to other horticulture growers in Busukuma sub-county and then an association was born,” he explains.

The Association started with five members. And as more Associations were formed in Busukuma sub-county, Wakiso district, they came up with Namulonge Horticulture Farmers Association.

The Association was registered at national level in 2007. It is comprised of about 460 members in 23 homesteads whereby 80 percent of the members are female. About 75 of the members in the association grow organic vegetables.

Annually each member pays a subscription fee of sh20,000 which is mostly meant for the day-to-day running of the association’s activities, mainly capacity building of the members through trainings and conducting market research on trends in the horticulture sector.
PARTICIPATORY GUARANTEE SYSTEM - SHARED VISION

The Association markets over 25 different types of traditional Ugandan, Asian and exotic vegetables grown under conventional and organic farming systems. The organic farmers market collectively under a Participatory Guarantee system (PGS), with their own marketing officer, and supply niche markets such as supermarkets, organic shops and restaurants within Wakiso and Kampala. The association also has a stall in Nakasero market where members sell directly to clients.

The Association joined the National Organic Movement of Uganda (NOGAMU) in 2005, started supplying the organic shop in 2006, and was introduced to PGS by NOGAMU in 2007. Today, the association is approved to use the East African Organic mark in promoting and selling their organic produce.

Sylvia Nayigga Zizinga the association coordinator and the current PGS contact person says market demand for organic produce is increasing. “So there was need for organic horticulture farmers to step up and together meet demand by selling vegetables and fruits with a single marketing voice,” she explains.

Under the PGS organic certification scheme, the organic farmers look at a shared vision and ideals in vegetable seasons planning, planting and marketing. Moreover, farmers have to prove compliance to organic principles and East African Organic Products Standard. It is ensured that members are continuously sensitized on organic regulations, environmental conservation and that all decisions in the association are taken in a participatory manner. There is an unparalleled transparency and openness. The association PGS leadership structure comprises of different committees, each comprising of secretaries and chairpersons from each of the eight parishes. Each committee is tasked with a vital role within the PGS, for example, seed sourcing, internal inspection and the production advisory committee.
BENEFITS OF ORGANIC FARMING IN THE ASSOCIATION

Organic agriculture empowers farmers.

The association has opened an office in Namulonge trading center where its day-to-day activities are coordinated and members can access online price-monitoring and agronomic research.

“Our office is equipped with a computer connected to the internet. Members can now monitor horticulture prices in Uganda and worldwide as well as accessing agronomic research,” says Nayigga.

Through the association pool funding, seven members have secured small-scale and simple irrigation equipment such as treadle pumps and irrigation water dams dug to combat the effects of changing climate such as irregularities of rainfalls.

“Our office is equipped with a computer connected to the internet. Members can now monitor horticulture prices in Uganda and worldwide as well as accessing agronomic research,” says Nayigga.

“Since climate change measures were undertaken, vegetable and fruit production has increased annually, supplying the market throughout the whole year,” explains Nayigga.

Organic agriculture provides farmers with new market opportunities.

Members now sell organic produce twice a week to local restaurants, supermarkets and hotels.

On average, about one out of 10 of the homesteads in the Association has been able to raise a minimum earning of sh20 million per annum, thus meeting the minimum farm income for small scale commercial farmers set by the President of Uganda.

Other members have bought cattle, goats, pigs and chickens to supplement their horticulture income, get manure and they are also embracing biogas. Some of the association members have a vegetable stall at Nakasero Market in Kampala City center. They also supply the NOGAMU Organic shop at Kabalagala as well as supermarkets and hotels.
Organic agriculture improves living conditions.

Several members have also built themselves permanent houses with the help of the members' pool fund contribution. The majority of members now meet school fees for their children unlike the period when they worked individually. Nsamba has been able to pay school fees for all his 10 children.

Some members have acquired single-axle tractors like Nsamba and are slowly embarking on mechanized farming as opposed to the small scale farming which is mostly dependent on the hand hoe. Single-axle walk tractors are mainly used to open land, pump water, ferry compost manure to the garden and vegetables from the garden. Members of the association who do not have machines can hire them from other members at a reasonable fee.

CHALLENGES ENCOUNTERED BY THE ASSOCIATION

Despite the above-mentioned advantages, organic farmers in the Association are facing several challenges. For example:

- Although the association is trying to combat the changing and unpredictable climate, not all members have been able to succeed.
- Farmers can hardly access certified organic or improved horticulture seeds on the market.
- Lack of post-harvest cold storage facilities and the unreliable transport system to the market. This has often resulted in the farmers’ loss of markets.
- The eviction from the Kibanja land (land without title deed) by the owners. This is perceived as the worst problem faced by members.
- Limited access to credit.

LOOKING INTO THE FUTURE

Plans are underway for the Association to set up a training center to share experiences with the unemployed youth on the benefits of horticulture.

“We need more funding to set up structures such as sheds and green houses also to combat the changing climate. Irrigation of vegetables during the dry season fetches good money. We have missed many orders from the hotels during the dry season. Also, the association plans to acquire a two-axle tractor to open up more land and also hire it out to other farmers ” notes Nayigga.