

8 CONVERSION



IMPRINT

Publisher:

FiBL, Research Institute of Organic Agriculture,
Switzerland, www.fibl.org

Collaboration:

- > IFOAM, International Federation of Organic Agriculture Movements, Germany, www.ifoam.org
- > NOGAMU, National Organic Agricultural Movement of Uganda, www.nogamu.org.ug
- > FENAB, Senegal
- > OPPAZ, Organic Producers and Processors Association of Zambia, www.oppaz.org.zm

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Draft version 1.0, September 2011.

This is an interim version. Comments and recommendations for improvement are welcome.

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All materials resulting from the Africa Organic Agriculture Training Manual project are available free of charge in the internet under www.organic-africa.net

The production of this manual was funded by the Bill and Melinda Gates Foundation and the Syngenta Foundation for Sustainable Agriculture with the goal to promote organic farming in Africa.

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The African Organic Agriculture Training Manual is based on research funded by the Bill & Melinda Gates Foundation and the Syngenta Foundation for Sustainable Agriculture. The manual's findings, conclusions and recommendations are those of the authors, and do not necessarily reflect positions or policies of either Foundation.

Please cite this publication as follows:
FiBL (2011): African Organic Agriculture Training Manual. Version 1.0 June 2011. Edited by Gilles Weidmann and Lukas Kilcher. Research Institute of Organic Agriculture FiBL, Frick

ISBN 978-3-03736-197-9

CONTENTS

1	Introduction	1
2.	How can I start with organic farming?	10
3.	Scaling up organic production	21
4.	Access to support and information during conversion	24

8 CONVERSION

Learning targets for farmers:

- › Understand the key challenges related to conversion to organic agriculture and recognize possible approaches in the local context.
- › Know how to plan and implement a step-by-step approach to conversion of farms to organic farming.
- › Understand how to cooperate with other farmers to scale-up organic production.
- › Know where to get support during the conversion process.

1. How to address challenges of conversion?

Conversion to organic farming describes the process of learning and implementation of changes on the farm towards a more sustainable and natural way of farming. The form the process takes depends on the local circumstances and the predisposition of the farmer or the community, and it varies from farm to farm. The more knowledge a farmer has about the concepts and practices of organic farming, the more he or she relies on farm own or local resources to maintain soil fertility and on natural processes to manage pests and diseases, the closer the farm is to 'organic' and the easier conversion to organic farming will be. Even if organic farming does not depend on specific land conditions to start with, if soils are depleted for example, it may need greater efforts and require more patience to establish a sustainable production system and realize satisfying harvests.

Farm-related challenges to conversion

Depending on the farm situation, different challenges are to be expected during conversion.

a. Farms with high external input use

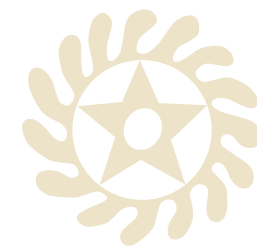
The majority of intensively managed farms in Africa that strongly rely on external inputs are larger farms. Such farms mostly grow a few annual or perennial cash crops relying heavily on the use of fertilizers for plant nutrition and pes-



Assessment of local farming practices

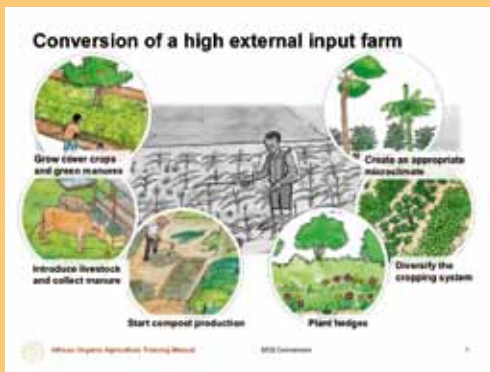
Inquire about the farmers' way of farming by asking them the following questions:

- › How do you fertilize your soils?
- › How do you manage pests and diseases?
- › Which crops do you grow?
- › Do you have any farm animals?
- › Do you grow food for subsistence only or also for the market?
- › If you grow for a market, to which market(s) do you sell?





RECOMMENDATIONS FOR HIGH EXTERNAL INPUT FARM



ticides and herbicides for pest, disease and weed control. On such farms crops are often grown without a planned rotation and farm animals are not integrated into the nutrient cycle. Diversification is usually low on these farms. Trees and bushes are mostly removed to facilitate extensive mechanization, and crops are mostly grown alone.

Potential challenges in conversion of such farms:

- › Establishing a diverse and balanced farming system with a natural ability to regulate itself usually takes several years.
- › Major efforts may be necessary to restore natural soil fertility by providing a considerable amount of organic matter to the soil.
- › Abandoning high input external fertilizers results in yield depression in the first years of conversion, before soil fertility is re-established and yields rise again.
- › New approaches and practices usually involve a lot of learning and intensive observation of crop development, and dynamics of pests, diseases and natural enemies.

How can conversion of such farms be attained?

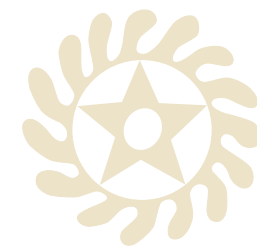
- › Diversify the farming system. Select appropriate annual crops for the area and rotate them in a planned sequence. Include legume crops such as beans or leguminous feed crops in the rotation to provide nitrogen to the subsequent crops. Plant hedges and flower strips to encourage natural enemies and to control pests.
- › Start recycling valuable farm by-products. Establish on-farm compost production based on harvest residues and manure, if available, and mix the compost with the topsoil. This will bring stable organic matter into the soil and improve its structure and its capacity to feed the plants and store water. Green manures can provide plenty of plant material to feed soil organisms and build up soil fertility.
- › Introduce farm animals into the system. Farm animals provide valuable manure and diversify farm income through additional animal products.
- › Grow cover crops. Cover crops or lay out mulches in perennial crops provide protection to the soil.



Farm visit or discussion on the challenges of converting an intensively managed farm

Visit a conventional farm that was converted to organic farming, if available. Let the farmer share her experiences with converting the farm. Which challenges did he face? Which benefits resulted from conversion? Which recommendations would he give to other conventional farmers interested in conversion?

Alternatively, compare the scenario of an intensively managed farm with that of an organic farm. Discuss with the farmers the differences between the two scenarios. Which challenges and potential do they recognize in conversion?



b. Farms with low external input use

Farmers working with little external inputs based on traditional practices may grow many different crops in a densely mixed system on the same piece of land changing crops randomly. A few livestock such as chickens and goats may be kept, which scatter the manure in their feeding places, hence providing very little manure for the gardens. The trees may be extensively cut for firewood and charcoal burning. Bush and trash burning may be a common practise especially during land preparation. Few or no externally-sourced fertilizers and pesticides may be used because they are expensive or difficult to purchase. Harvests are probably low and increasingly becoming difficult due to unreliable and insufficient rains. The harvests may just be sufficient for feeding the family and little may be left to sell for income.

How can conversion of such farms be attained?

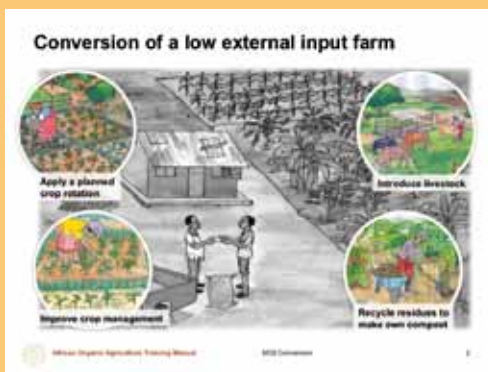
Traditional farmers fulfil some principles of organic farming already by relying on farm-own resources, growing different crops simultaneously and managing diverse enterprises including animals. Using few or no synthetic farm inputs and genetically modified plant varieties is another practice that increases the similarities between such traditional farms and organic farms. However, there are still practices, which clearly distinguish such farms from organic farms. The following challenges need to be addressed for conversion:

- › Avoid burning of crop residues after harvest as this is, in most cases, not a viable solution, since it destroys valuable organic material and damages soil organisms.
- › Establish a well organised diversification systems including a ‘planned’ crop rotation and intercropping systems.
- › Accumulate knowledge and practice regarding efficient use of farm own resources, especially for compost production to manage and improve soil fertility.
- › Indiscriminate tree cutting for firewood and charcoal burning.
- › Establish a system to collect the animal manure for composting.
- › Apply measures to prevent loss of soil through erosion and protect it from drying out.
- › Pay special attention to satisfy feed and health requirements of the farm animals.
- › Avoid infection of seeds with diseases, gain knowledge on disease cycles and preventive measures.
- › Avoid harvest and storage losses.





RECOMMENDATIONS FOR LOW EXTERNAL INPUT FARMS



Priority organic recommendations for conversion:

- › Implement planned crop rotation and intercropping systems. A combination of annual and perennial crops including leguminous green manure cover crops is needed. Combined with properly selected or improved crop varieties with good resistance to, plant pests and diseases will be managed better.
- › Proper integration of animals into the farming system. Planting rows of nitrogen fixing trees between annual crops will improve the growing conditions for the crops and encourage better growth, while providing additional feed for the ruminant animals. Better housing is also needed to facilitate collection of animal manure for field use.
- › Improving the fertility of the soils, for example, through the application of high quality compost. Compost is a highly valuable fertilizer in organic farming. Instead of burning the crop residues after harvest, collect them for compost production, or work them into the soil. The animal manures and plant materials should be regularly collected for compost making.
- › Growing nitrogen fixing legumes between annual crops is another possibility to feed the soil and the crops.
- › Additional measures to control soil erosion such as digging trenches and planting trees along the hillside, and covering the soil with living or dead plant material should be implemented.

c. Mixed farm

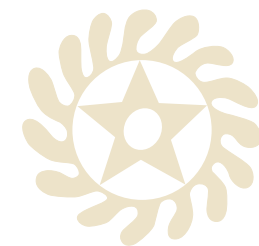
On mixed farms, crops and farm animals may be integrated, whereby the animal manure is collected and used in the gardens after having kept it for a few weeks to rot. Some soil conservation measures may be implemented, such as mulching in perennial crops and trenches to reduce erosion. Occasionally herbicides, pesticides and treated seeds may be used to control weeds in fruit and vegetable production.

Farmers of such mixed farms are obviously familiar with some of the organic farming practices. Such farmers will find it easy to learn new methods from other farmers or from a trainer and to implement organic practices only, throughout the farm.



Farm visit on the challenges of conversion of a traditionally managed farm

Alternatively, together with the farmers, characterise traditional farming as it is practiced in the local context and compare it with the one of the organic farm. Discuss with the farmers the differences between the pictures. Which challenges and potential do they recognize in conversion? Visit a conventional farm that was converted to organic farming, if available. Let the farmer share her experiences with conversion of the farm. Which challenges did she face? Which benefits resulted from conversion? Which recommendations would she give to other conventional farmers interested in conversion?





RECOMMENDATIONS FOR MIXED FARMS



Priority recommendations for organic conversion:

- › Implement organic practices to manage the soil and to control weeds instead of using herbicides. For example, in fruit orchards grow a leguminous cover crop to cover the soil. Or in vegetables and arable crops implement a planned crop rotation that includes weed suppressing green manure or feed crops.
- › Further improve recycling of farm own nutrients from animals and crop residues to make best uses of them, for example by mixing them with crop residues for making compost. Improve storage of animal manures to avoid nutrient losses.
- › Use seeds without pesticide-treatments, if available. Make sure to use healthy seeds only and get familiar with non-chemical ways of treating seeds.
- › Get familiar with approaches and methods of natural pest and disease control. Learn about beneficial insects and observe population dynamics of pests through regular monitoring during crop growth.
- › Further diversify the farming system to increase productivity of the land and provide habitats for beneficial insects and spiders.

d. Degraded land

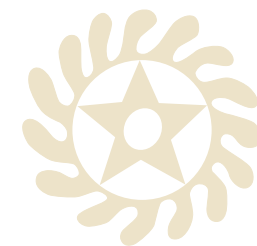
Land may be degraded due to shifting cultivation, overgrazing, over-cultivation or deforestation, salinity after years of intensive irrigation with ground water, or water logging and flooding. Such land may take more effort and patience to establish good growing conditions. At the same time, organic practices are an excellent approach to recover such soils. It may require specific practices to stop soil degradation and to re-establish soil fertility. Such practices include digging of terraces or sowing an intensive fallow with a leguminous green manure crop that grows well on poor soils.

Many experiences show that organic farming is a promising approach to improve degraded land and bring it back into production. In most cases, the increase of organic matter plays a key role to improve the quality of degraded soils. In case of a bare and eroded soil on sloping land, organic farming calls for digging of terraces (e.g. fanya juu terraces). Fanya juu ('throw it upwards' in Kiswahili) terraces are made by digging trenches along the contours and throwing the soil uphill to form embankments (bunds), which are stabilized with fodder grass like Napier (*Pennisetum purpureum*) and multipurpose agroforestry trees. The space between the embankments is cultivated with crops and over time, the fanya juu develop into bench terraces. They are useful in semi-arid areas to harvest and



Farm visit on regeneration of degraded land

Take the farmers to visit a farmer who has made efforts to stop erosion and that has improved her soil with compost, green manuring or leguminous cover crops. Let her share her experiences. How did she start? What measures proved effective to regenerate the land? What lessons did she learn? Discuss challenges and successes with the farmer.

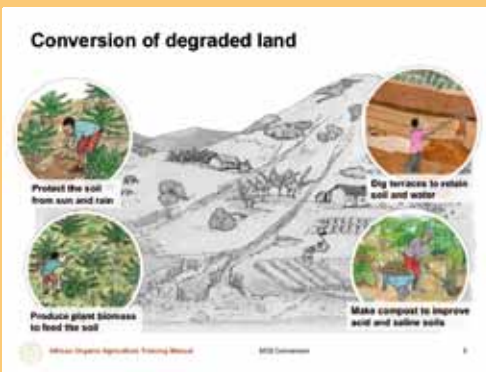




TIGRAY PROJECT



RECOMMENDATIONS FOR DEGRADED LAND



conserve water. Additionally, green manures and compost can be used to further build the soil to support good crop growth and yields.

Saline soils contain large amounts of water soluble salts that inhibit seed germination and plant growth. These salts may have been accumulated through excessive use of irrigation water, especially in arid and semi-arid climates. These salts can be reduced slowly by ensuring proper irrigation and building up the structure of the soil with compost to allow natural drainage of the excess salts. In a first period salt tolerant crops may be grown.

Acid soils can be reclaimed by adding lime and well-made compost.

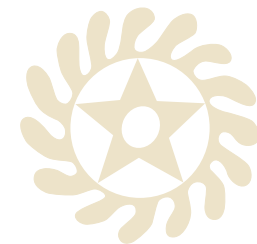
Flooded soils can be improved by creating drainage channels to drain off the excess water.

For further information on soil conservation and soil fertility management practices see module 2 of this manual.

Case study: Tigray Project in Ethiopia - Improving degenerated land through organic practices

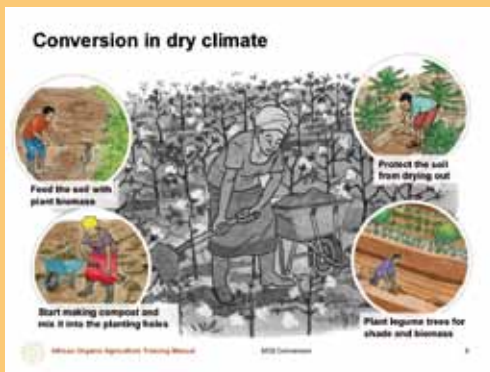
In 1996, four villages of the Tigray region in Ethiopia started replacing synthetic fertilizers with compost to improve soil fertility and yields. Within 12 years the project had been extended by the government to 165 districts throughout the regional state following the same approach. Since the positive effects of the compost were seen very quickly, the farmers relied exclusively on compost within 2 to 3 years. Application of compost generally doubled the grain yields compared to the yields from plots with no inputs. The use of compost resulted in even higher yields than those achieved with synthetic fertilizers. Improved soil fertility and water retention enabled farmers to grow a greater diversity of crops, improving the resilience of their farms, providing better nutrition to the farm families and offering new income opportunities.

For more information see: www.ifoam.org > About_ifoam > IFOAM around the world > Organic Agriculture related success stories in Africa > The Tigray project in Ethiopia





FARMS IN DRY CLIMATE



1.2 Climate-related challenges to conversion

Converting a farm to organic farming in an area with very little rainfall and high temperatures or strong winds will be more challenging than converting a farm located in an area with well distributed rainfall and favourable temperatures. At the same time, the improvements that follow implementation of organic practices will be more obvious under arid conditions than under ideal humid conditions. For example, compost application into topsoil or into planting holes will increase the soils water retention capacity and the crop's tolerance to water scarcity.

In very warm and dry climate, losses of water through transpiration from plants and evaporation from soils are high. These losses may be further encouraged by strong winds, enhancing soil erosion. The soils' organic matter content is generally low, as biomass production is low, implying that the availability of nutrients to the plants is highly reduced.

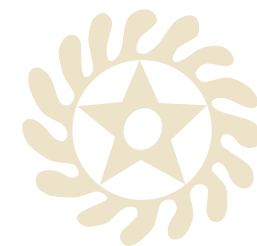
Under such conditions, the key to increasing crop productivity lies in protecting the soil from strong sun and wind and increasing the supply of organic matter and water to the soil. Soil organic matter can either be increased through compost or through cultivation of green manure crops. In the case of compost production the challenge is to increase production of plant biomass, which is needed for compost production.

In warm and humid climate, high aboveground biomass production and rapid decomposition of soil organic matter imply that the nutrients are easily made available to the plants. But it also involves a high risk that the nutrients are easily washed out and lost. Under such conditions a balance between production and decomposition of organic matter is important to avoid depletion of soil. Combining different practices to protect the soil and feed it with organic matter proves to be the most effective approach to choose. These practices include creating a diverse and multi-layer cropping system ideally including trees, growing nitrogen-fixing cover crops in orchards and applying compost to enrich the soil with organic matter and in this way increase its capacity to retain water and nutrients.



Discussion on climate related challenges

Ask the participants, how they would describe the local climate. What are the main challenges for farming related to climate? Have you seen any changes in the rain and dry seasons or temperatures in the last years? Do you see any solutions to overcome limitations resulting from climate?





SOCIAL CHALLENGES

What does it take to farm organically?



1.3 Social and cultural challenges to conversion

In addition to agricultural and ecological aspects, also social and cultural aspects are relevant in conversion to organic farming. In most African cultures, farming is communal and highly regarded as a social activity, whereby decisions regarding what, how and where to grow is taken by either the whole family or the community. So changes in farming, such as the introduction of organic farming practices, needs to be discussed with the family and the community. Key aspects to consider include the ideas of family members about conversion to organic farming, their aims and expectations. A farming family or community needs to sit together to agree on what they wish to achieve through conversion to organic farming. Points to take into consideration include income, availability of food for own consumption, the amount of firewood produced on the farm and the work load of each family member.

1.4 Economic challenges to conversion

The decision to farm organically is in most cases a commitment for the future of farming: When a farmer and his family decide to convert to organic farming, they aim to improve their income and livelihood.

In a first period of the conversion process, however, some investments may be required. Such investments may include, for example, purchasing of appropriate equipment for soil cultivation, for weed control or for compost production. It may also be recommended to buy animals or specific seeds in order to diversify production. Improvements may be necessary for housing animals, storing manures or storing farm products.

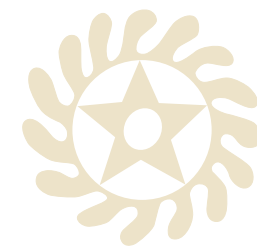
Furthermore, additional labour may be needed for constructing erosion control structures, for composting. Further, the decision to become an organic farmer also includes the decision to improve efforts in marketing. Conversion to organic agriculture also requires time and investment in building knowledge and in setting up a marketing infrastructure, for example building an on-farm store or finding new buyers. However, all the above requirements will vary with the size of the farm, the intensity of production and the market channels being targeted.



Awareness building on personal motivation to conversion

Ask the farmers to share their personal vision and goals related to organic farming, using the following questions:

- > Why are you not satisfied with the present way of farming? Do you have a vision for your future farm or garden? Do you share the same vision with the rest of the family?
- > What expectations do you have towards organic farming?
- > What do you need to know to successfully practice organic farming?





ECONOMIC CHALLENGES



Does organic farming imply lower yields?

Experiences made so far in Africa show that organic farming can give comparable and even increased yields. Over the longer term, improvements become most evident in previously degraded soils. Given the fact that most farmers in Africa are small-scale farmers with limited access to synthetic inputs, they normally realize increased yields within a short time after implementation of organic practices.

A review published by the Food and Agriculture Organisation (FAO, 2007) concludes that organically managed annual crops in humid tropical climates attain similar yields as conventionally grown crops. In contrast, perennial crop yield losses can be considerable under organic management compared to management based on a high level of inputs. In arid tropical climates, implementation of organic practices including proper integration of livestock into the farming system can result in higher yields compared to conventional management, as some examples show (for further information on the yield performance of organic crops in the tropics, see module 1 of this manual).

However, crop yields depend on many factors, including the type of seeds used, the quality of the soil and the way land is managed, use of manure, pest and disease control and of course the water availability and favourable weather conditions. It is, therefore, difficult to make an accurate, general statement on how conversion to organic farming will affect short, medium and long-term yield performance as compared to conventional production methods.

In farming systems using high amounts of synthetic inputs, farmers usually experience a decline in yields during the first years of transition to organic farming. This decline mostly occurs as the soil restores its natural properties and farmers learn new organic management techniques. However, the yields increase significantly after the farm agro-ecosystem is restored and the organic management practices are fully implemented, reaching production levels close to equal or even better than conventional farms.

Small-holder farmers usually depend on farm own resources and cannot afford to buy expensive farm inputs. Adoption of organic farming practices does in most cases result in higher and safer yields and more diverse income without major investments into farm inputs.

Does organic agriculture generate better incomes?

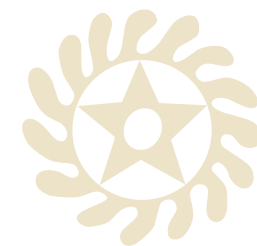
In the end, what counts are not mainly yields, but the income resulting after selling farm products and paying the production costs. Farmers can generate more



Discussion on the economy of farming

Discuss with the farmers the following questions:

- > What costs do you expect to increase or reduce with converting to organic farming?
- > How do you expect to improve the farm income?
- > Is it by reducing production costs, increasing harvests, improving produce quality, by finding new customers, by higher product prices or by doing any other changes?



income from organic agriculture by reducing costs while achieving secure yields. Also, more income can be secured when products are sold in premium organic markets to obtain better prices and by developing value added products demanded by the market. However, as already mentioned, there may be a time lag when transitioning to organic farming before farmers achieve the full organic yield potential. Therefore, farmers are advised to take a stepwise approach by gradually implementing organic practices and by diversifying production to a diverse range of crop and animal products. This reduces the risk of failure and buffers possible reductions in market prices.

For small-holder farmers, conversion to organic farming mostly leads to a higher and more stable farm income.

Larger and intensively managed farms need to prepare well for conversion, as harvests usually decrease during the early seasons of conversion. This implies that such farms may need to find alternative sources of income to make up for the losses, while the total costs in terms of labour and some inputs may initially increase. After the conversion period, these losses may be turned into benefits, when organic products can be sold at higher prices, while externally sourced inputs are greatly reduced.

Organically certified products can profit from higher market prices. The access to organic markets may not be obvious, especially in areas where organic farming is newly introduced. Collectively farmers may have to directly promote their products as organic in order to attract the attention of consumers or by directly contacting any organic buyers in the main towns. For more information on organic markets and marketing and certification, see module 7.

2. How can I start with organic farming?

Depending on the present way of farming, the farmer's motivation and expectations on conversion to organic farming can proceed as a step-by-step process.





STEPWISE APPROACH



2.1 The step-by-step approach

The procedure of conversion of a farm commonly consists of three steps. In a first step, it is recommended to collect information on appropriate organic farming practices. In a second step, the most promising organic practices should be tried out on selected plots or fields to get familiar with. In a third step, only organic procedures should be implemented in the entire farm. Support from an experienced extension officer or a farmer is usually very helpful to give guidance in the process.

1st Step: Good information first

Successful organic farming requires considerable knowledge on the functioning and the possibilities of management of natural processes. Interest in learning about the possibilities to support natural processes to sustain and improve harvests is essential for successful organic farming.

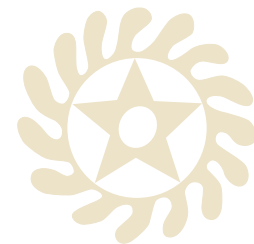
Farmers who are interested in adopting organic farming practices are recommended to get in contact with farmers in the area, who already practice organic farming to learn from them. Some farmers may be good at making compost, some at growing green manures, and some at making plant or manure tea. Learning from experienced farmers allows to get first-hand experience under local conditions, and thus to learn about the advantages and potential challenges related to implementing organic methods.

Basically, farmers who are interested in converting their farm to organic agriculture, need to know:

- > How to improve soil fertility.
- > How to keep crops healthy.
- > How to best increase diversity in the farm.
- > How to keep livestock healthy.
- > How to give value to organic products and how to successfully sell them.

The information can be obtained from different sources depending on the circumstances. Potential sources are experienced organic farmers, training courses offered by institutions such as non-governmental organisations or the national organic agriculture movement (NOAM) or from radio programs.

For further details on information sources, see paragraph 4 of this module.



2nd step: Trying out organic practices

After having collected information about the requirements, the potential and the main practices related to conversion, farmers should start to learn from their own experience on their farms. To minimize risks of crop failure and losses of animals, and avoid frustrating overload, farmers are recommended to implement organic practices step-by-step to a limited extent, selecting specific practices at a time and testing them on selected plots or selected animals only.

But which practices should one choose to start with? As would seem natural, farmers should start by applying practices that are of low risk and investment, require little specific knowledge, limited additional labour, and with high short-term impact. Examples of recommended interventions include:

- › **Mulching** - Covering the soil with dead plant material is an easy way to control weeds and protect the soil in annual crops. This practice can be implemented into most existing cropping systems. The main question may be, however, where to get appropriate plant material from.
- › **Intercropping** - Growing two annual crops together, commonly a leguminous crop like beans or a green manure crop in alternating rows with maize or another cereal crop or vegetable is a common practice in organic farming to diversify production and maximize benefits from given land. In intercropping, special attention must be paid to avoid competition between the crops for light, nutrients and water. This requires knowledge on arrangements, which promote growth of at least one of the crops.
- › **Composting** - Application of compost to the fields can have a major impact on crop growth and yields. To start compost production, farmers will need enough plant materials and animal manures, if such are available. In case such materials are scarce, farmers would first have to start producing plant materials on the farm by sowing fast growing leguminous plants that build a lot of biomass, and by introducing some livestock on the farm for manure production, if this proves appropriate. To get familiar with the process of making compost, farmers should be instructed by an experienced person. Proper compost production requires some knowledge and experience and additional labour, but is low in investments.
- › **Green manuring** - The practice of growing a leguminous plant species for biomass production and incorporation into the soil may be new to most farmers. Nevertheless, this practice can greatly contribute to improvement of soil





IMPLEMENTATION OF ORGANIC PRACTICES

How to start implementing organic practices

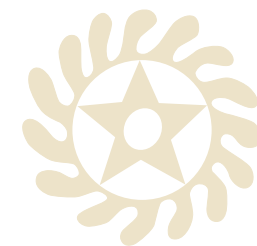


- fertility. Green manures can be grown as improved fallows, as seasonal green manures in rotation with other crops, or in strips between crops. Proper green manuring first requires information on appropriate species.
- › **Sustainable pest management** - Introduction of sustainable pest management requires good knowledge on the pathogen cycle and its interaction with the crop, on influencing factors and potential natural enemies. Farmers, who use synthetic pesticides, may start by introducing weekly monitoring of pest development in their crops applying recommended procedures. Pesticides should then only be used, when the threshold level of the crop is reached. Instead of using synthetic pesticides, farmers should try out recommended bio-control agents or natural remedies, perhaps only on a limited surface first.
 - › **Appropriate seeds and planting material** - Use of healthy seeds and planting materials, and robust and/or improved cultivars can make a big change in crop production. This practice may require some information on selection of seeds and planting materials including availability of improved varieties and seed treatments.
 - › **Planting of leguminous trees** - In perennial crop plantations such as banana, coffee or cocoa, planting of leguminous trees such as gliricidia, calliandra, and sesbania may improve the growing conditions of the fruit crop by providing shade, mulching material and nitrogen through nitrogen fixation. In addition, some leguminous trees provide good fodder for livestock. This practice requires some knowledge on shade and space requirements of the tree crops and thus on ideal planting patterns for the leguminous trees.
 - › **Growing farm-own animal feeds** - To improve available feeds for the livestock, farmers may grow grasses and leguminous fodder crops around, between other crops or in rotation.
 - › **Terraces and soil bunds** - Construction of terraces and soil bunds along the curves of hills is a key measure for soil conservation. This practice builds the foundation of further improvement to soil fertility on slopes. It is of high relevance, but requires much labour and some specific knowledge for appropriate implementation.



Discussion on how to start implementation of organic practices

Ask the farmers, which organic practices they already know and apply on their farms. Give an overview of the practices and discuss together with the farmers, which practices are the most appropriate and promising to start with. Do the selected practices concern soil fertility management, pest and disease management, weed management, animal husbandry, or another range of production?



3rd Step: Full conversion to organic farming

In a third step, implementation of organic practices throughout the entire farm should be considered, once sufficient experience with different practices has been gained. As soon as organic practices are implemented throughout the entire farm, a farmer can claim to be an organic farmer.

Commonly, consistent application of organic practices marks the beginning of a long process of improving the production system:

- (i) improving soil fertility based on the recycling of farm own organic materials and enhancement of farm own biomass production,
- (ii) encouraging positive interactions between all parts of the production system (the farm ecosystem) to enhance self-regulation of pests and diseases,
- (iii) optimizing the balance between feed production and livestock.

Farming organically also means continuously learning from personal observation, from outside experiences, sharing experiences with other organic farmers and implementing new information on the your farm, making it increasingly more sustainable.

2.2 How to proceed with marketing of the farm products

Organic farmers who produce for the market are interested to know the market potential and how to get access to organic markets. Giving best value to high quality organic products is a major concern of organic farmers and needs specific techniques. Marketing products as organic also requires certification of the farm. No organic certification is required, if the farm products are not sold as organic. The decision to certify the farm as organic should be linked to the possibility of marketing a relevant share of the farm products as organic with a premium price. The premium price should cover the certification costs.

Application for certification can be made, when the entire farm is managed organically. Depending on the organic standards there is a defined transition or conversion period of one to three years. During this time, depending on the standards, the farm products must either be marketed as non-organic, or they can be marketed as organic products originating from a farm in conversion. Most customers in export markets, however, request organic products that originate from farms that have already achieved the conversion period.



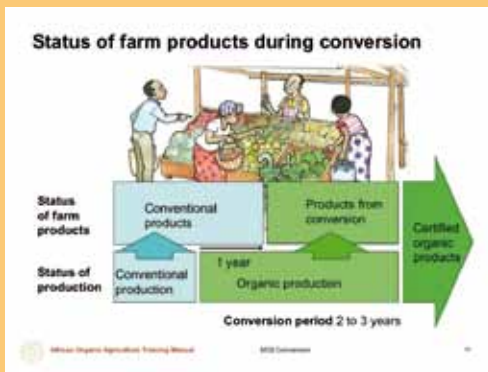
Sharing experiences on conversion

If possible, invite some farmers to share their experiences on the steps towards converting to organic farming. The following questions may provide you guidance for the discussion: How did they first get in contact with organic farming? What motivated them to apply organic practices? What recommendations would they give to farmers concerning the procedure? At which stage did organic certification become relevant?

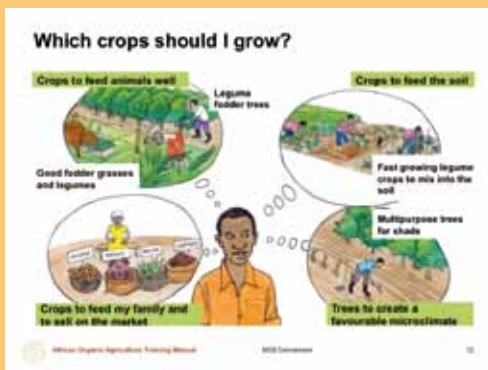




STATUS OF FARM PRODUCTS



CROP SELECTION



Marketing organic products involves considerable personal initiative. To access domestic and local markets, farmers need to communicate the value of their products to local traders and customers. This may involve inviting them to the farm and explaining the principles of organic production and showing them advantages of the organic approach for nature and the positive impact on product quality. Traders and customers buy organic products based on a certificate from an organic certification body. Local supermarkets may require registration as a member of the National Organic Agriculture Movement (NOAM) as an additional guarantee of the farmer's commitment to organic agriculture. In that case, it is the responsibility of the NOAM to ensure that their registered farmers are producing according to organic requirements.

In case the farmers want to sell to export markets through a trader, there may be specific regulations to comply with. Selling to export markets requires proper guidance by the NOAM or the exporting company.

For further information on the procedure to gain organic certification and approaches to market organic products, see module 7.

2.3 Which crops to grow during conversion?

Looking at the organic farm as being 'one organism', the focus does not lie on cultivating specific crops only. Rather, the focus is on choosing crops that can easily be integrated into the existing farming system and will contribute to its improvement. But the choice also depends on the farmer's knowledge on the right management of the crops, their contribution to a diverse family diet or their demand in the market. Besides growing crops for food, farmers may need to grow leguminous cover crops to provide high-protein feed for livestock and to be used as green manures to feed the soil. Planting trees for shade, as windbreak, for firewood, feed, mulching material or for other uses, can be recommended in most situations.

Criteria for crop selection during conversion:

- In a first place organic farmers should grow enough food for the family. But they may also want to grow crops for the market to get money for other family needs. The farmers should also grow crops that contribute to improvement of soil fertility. Farmers who keep livestock need to grow pasture grass and legumes.



Discussion on marketing of farm products

Discuss with the farmers the potential of marketing their farm products as organic. Discuss the advantages and difficulties selling products to the different markets.



- b. Basically, farmers should select crops with low risk of failure. Cereals and legumes such as maize, sorghum, millet, beans and peas are especially suitable for conversion, since they cost little to produce, generally have moderate nutrient demands and are robust against pests and diseases. In addition, many of the traditional crops can be stored and sold in domestic markets. High-value short term crops, such as most vegetables, are more delicate to grow and highly susceptible to pest and disease attack. Therefore, they should not be grown on a larger scale, unless the farmer can endure some losses in harvest.
- c. The crops to grow for sale should include crops that can be sold at the farm gate, at the roadside market or can be transported directly to nearby markets in urban centres. Choosing the right crop to sell on the market may require some market information. Decision making for crops for local or export markets requires detailed information from traders or exporters on the crops, requested varieties, quantities, qualities and season.
- d. High-value perennial crops such as fruit trees take at least 3 years until the first harvest from the date of planting. This makes them appropriate crops for the conversion period. For new plantations, species and varieties must be carefully selected to suit the organic market and production requirements. For conversion of an existing orchard, it might be necessary to replace old existing varieties, if they are very susceptible to diseases and the product quality does not match with the market requirements.
- e. The success of a crop will also depend on provision of favourable growing conditions. The better a crop variety matches local soil and climate conditions, and is tolerant or resistant to common pests and diseases, the better it will grow.
- f. Planting of hedges and agroforestry trees can be valuable to help establish a diverse farming system.
- g. Growing leguminous green manures provides nutrients to the soil. Green manures do not provide immediate income, but in the long-term, they make the soil fertile and productive for the future.

Many farmers want to see quick results and often ask how long it takes for organic crops to grow. Organic farming does not aim to make crops grow faster. Crops will grow faster and larger when they have better growing conditions than before. Although conventionally grown crops can be made to grow faster by intensive use of synthetic fertilizers and sprays, organic crops are nurtured



Discussion on appropriate crops

Ask the farmers, which crops they presently grow and discuss with them, which crops would be most suitable under organic management:

- > Which crops contribute to a diverse family diet?
- > Which crops respond to market demands?
- > What price can you obtain on the market? Are there many competitors?
- > Do the crops serve to feed livestock?
- > Do the crops fertilize the soil, or do they offer shade for other crops or firewood?
- > Which crops grow well together? Which crops contribute to a diverse and stable production system?



to grow at their normal, natural rate in order to be less susceptible to pests and diseases and build up good physical and nutritional structure. However, organic farmers do a lot to make their crops grow healthy and to produce good yields.

For further information on soil fertility management, see module 2 of this manual.

2.4 Avoiding contamination

It is in the responsibility of organic farmers to protect the organic fields from being sprayed with synthetic pesticides. Even if the neighbour is not farming organically, an organic farmer can grow organic foods and fibres. To avoid pesticide drift from neighbouring fields onto the crops, organic farmers should safeguard the organic fields by using any of the following measures:

- › Planting of natural hedges on the boundary to neighbouring fields can avoid the risk of pesticide spray drift through wind or run-off water. The wider the border area around the fields, the better.
- › To avoid runoff from upstream fields, organic farmers should divert the water away or talk to the farmers upstream about how to work together to minimize the risk of contamination through water. Organic farmers who are interested in saving nature, should share their knowledge and experiences with neighbours with the aim of helping them to either adopt organic farming practices or to minimize the risk of contaminating nature.

Contamination risk from Genetically Modified Organisms (GMO)

Genetically modified seeds and planting materials are produced by transferring isolated genes from plants, animals or microorganisms into the crop genome, circumventing pollination and crossing natural barriers. This is seen as a violation of the integrity of the cell as the smallest living entity and is not accepted in organic farming. Genetically modified products should, therefore, not be used in organic farming, and organic farmers should protect their production against any GMO contamination. However, with the increased use of GM crops in the conventional farming systems, the risk of GMO contamination is expected to increase. Species which cross-pollinate, such as rapeseed or maize, or insect pollinated crops, such as soybean or cotton, are at a higher risk of being con-



taminated by a nearby genetically modified crop. Species that are mainly vegetative pollinated such as potatoes, cassava or banana are at lower risk of GMO contamination. Besides the genetic contamination, there is also a risk of physical contamination caused by GMO residues along the production and market chain, if GMO and organic products are not properly separated.

Recommendations to farmers for reducing the GMO contamination risk:

- › Use either personally selected seeds or get organic or untreated seeds that were not genetically modified from neighbouring farmers you and are certain do not use GMO seeds and are not surrounded by GM crops of conventional farmers (distance of at least 1 km). If you use seeds from a trader, make sure that he is registered and can confirm where the seed is derived from. Check that he is not involved in GM production and multiplication. Ask your trader for a certificate confirming GM free seeds and inquire about the trader's involvement in the GM-seed market.
- › Check for the breeding habits of the specific crops you are interested in. Most cross breeding species such as maize can disperse by wind or bees to distances of up to 1 to 3 km.
- › Seeds of some crops can survive for 5 to 20 years in the soil. Therefore, precautions must be taken that no GM crops have been planted on land that shall be used for organic production.
- › Create protective safety (buffer) zones around your fields to reduce the risk of GMO pollen dispersal, if GM crops are cultivated in this region. Isolation distances between GM crops and organic fields should be established, about 2-3 times larger than those required for seed production for a given species. For dispersal of critical GM crops such as maize, the isolation distance should probably not be less than 2 to 3 km. This will reduce GMO dispersal by pollen to a great extent. For wind pollinated crops, like maize, borders or hedges with tall plant species, such as sugarcane or trees, can additionally prevent cross-pollination with GM crops.
- › Avoid any physical GM contamination by using sowing and harvesting machines, transporters, processing and storage facilities not used for GM crops. In case you have to use the same machines, thorough cleaning is necessary. Do not store organic products next to GM products.
- › GMO free regions should be encouraged wherever possible, especially for own seed production.



Discussion on GMO contamination risk

Assess the farmers' understanding of GMOs by asking the following questions:

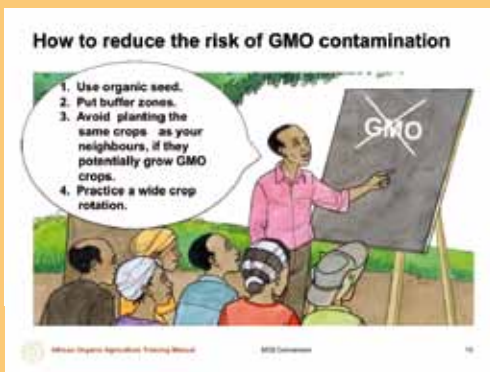
- › Have you ever heard of genetically modified organisms?
- › Which GMO crops are grown locally, if any?
- › Do you know which cultivars are GMO?
- › Do you know which traders sell GM crops and which traders propagate, process and store only GM free crops?
- › What do farmers say about GMO crops?
- › Do you know if your neighbours cultivate GM crops?
- › Do you know where you can check your seed or your crop if it is GMO contaminated?

Discuss with the farmers measures of prevention of contamination of organic crops.

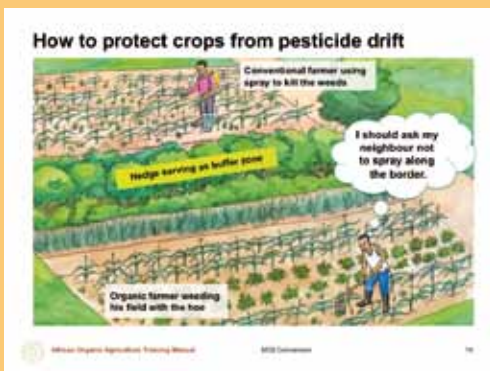




MEASURES TO AVOID GMO CONTAMINATION



PREVENTION OF PESTICIDE DRIFT



- › If you are uncertain about the quality of your seed, have it checked for GM contamination.

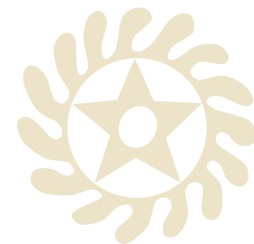
2.5 The conversion process for organic certification

From the point of view of certification, the period of conversion starts when a farmer manages his farm in accordance with the organic regulations. This starts when a farmer renounces use of synthetic pesticides, fertilizers and GMO or treated seeds. Stepwise reduction of agrochemicals cannot be considered part of the conversion period. An important step of the conversion period is the recognition of the farm as organic by a certification body. The conversion period is accomplished after the third year or third harvest is certified as organic. Nevertheless, even if the formal conversion period is accomplished, the adaptation of the farm is not finished. It usually takes several years to establish a well-balanced farm ecosystem and restore natural soil fertility.

According to the basic regulations of IFOAM, the International Federation of Organic Agriculture Movements, the entire farm must be managed organically. This is true for all private organic labels as well. Whereas most governmental regulations allow farmers to certify a part of the farm as organic and still manage the rest of the farm conventionally. Such separation, however, involves risks and, therefore, also some restrictions and constraints. Generally, for small farms, only conversion of the entire farm can be recommended, as the farm unit would become too small to enable establishment of a diverse production system, allow proper crop rotation and introduction of livestock.

The procedure of inspection and certification

1. Once a farmer or a farmer group has taken the decision to convert his or their farm(s), the farmer or the farmer group can take the first step towards certification by contacting the certification body and asking for information on the certification procedure, the costs and the subscription forms for certification. This can happen at any time of the year. The contact between the farmer and the certification body may also be established through an agricultural adviser. Following the farmer's contact, the certification company will give the farmer the application forms for starting the official conversion process, and the organic regulation manual to make sure that the farmer has all infor-





THE PROCEDURE TO CERTIFICATION OF THE FARM



MARKETING OF ANNUAL AND PERENNIAL CROPS DURING CONVERSION



mation available on the requirements of organic agriculture. The farmer is then asked to get familiar with the regulations and sign the application. Together with the application, the farmer provides detailed information about the farm to be certified.

- Based on the forms, the certification body sets up a contract and forwards it to the farmer. The farmer signs the contract, declaring commitment to comply with organic regulations and the conditions of the certification procedure including the annual visit, the duty of record keeping and payment of certification fees.
- The conversion can start at 1st of January or during the year when the crop season starts (for example flowering of fruit trees or soil preparation for vegetable crops). When converting, the farmer must start keeping records, such as purchase and application of inputs (fertilizers, pest and disease management agents, seeds) as well as marketing of products (see module 7). The records will serve as one of the references on crop and animal husbandry for certification.
- Every year the farm is inspected by an inspection officer or by a member of the participatory control system (see module 7). During inspection, the farmer informs the officer about the management of the crops and of livestock and his or her successes and failures. The officer consults the records and takes a look at the fields and the stables. Inspection also includes an estimation of the risk of contamination of the farm through synthetic pesticides and GMO from neighbouring fields. In case products are transformed on the farm, the procedures will also be discussed. The more open and honest the communication by the farmer is, the better any possible misunderstandings can be avoided.
- Based on the farm-visit the inspection officer writes the inspection report and forwards it to the certifiers for analysis and final certification decision. If the farm complies with the organic regulations, the farmer receives the certificate, if necessary with additional recommendations for the management. In case of non-compliance with requirements, for example, following the use of synthetic pesticides, the certifier is not authorized to issue a certificate (details see module 7).
- With the certificate, the farmer may now sell his products as organic in conversion during the first 2-3 years. After the third year only, the farmer can sell his products as full organic. The EU regulation provides that the farmer has to sell the first harvest as conventional (not even as organic in conversion).





COLLABORATION FOR SCALING UP

Success through collaboration



3. Scaling up organic production

Although organic farming originated as a small-scale enterprise in family gardens and operations from under 1 acre to 10 acres, today large scale organic farms exist also in Africa, requiring machinery and equipment similar to other large scale farms. Large scale production is more attractive to big buyers and easily attracts support from governments and other funding institutions. In fact, the market offers increasing opportunities for scaling up organic production.

Of course scaling up does not only mean increasing the farm area. This is—in many cases—not possible. There are different scenarios how farmers can increase production:

- Small-scale farmers willing to expand their production without land constraints should expand production proportionately to the available resources and the market opportunities. Such farmers should remember that increasing the area of production implies more resources to manage (seeds, labour, mechanization, capital, etc.) and to market the excess production.
- Small-scale farmers with limited land for expansion, as they are common in hilly areas, can work together with other farmers in a group to either consolidate the smaller units of land into large units or pool the harvests from the individual farmers to make larger volumes. Then the large volumes are marketed collectively.
- Large-scale farmers might need to start by applying organic practices on selected plots only to minimize risks and to gain experience. They then can progressively convert the entire farm to organic farming.
- Scaling up is also possible with diversification and intensification of a farm. For example, intercrop fruit production with vegetables produce several crops on the same surface.



Discussion on options for increasing the farm size

Discuss and compare the different options for increasing the size of organic farms. What are the potential and risks of the different options from the farmers' perspective?





KAHANGI CASE STUDY

Kahangi Estates in Western Uganda: Example of a successful, large scale organic farm



- > Use of few external farm inputs only
- > Own fuel and firewood
- > Cultivation systems were adapted to local conditions
- > Low labour requirements
- > Good harvests
- > Own processing of farm products for value added

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10

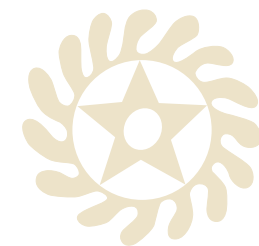
Case study: Kahangi Estate in Fort Portal, Uganda - An example of large-scale organic farming

Kahangi estate is a private and commercial farm, located in Western Uganda 14 km northeast of Fort Portal Town at an altitude of between 1,450 to 1,550 meters. The estate comprises 93 acres of tea, 24 acres of Arabica coffee, intercropped with bananas, 36 acres of woodlots and 6 acres of essential oil crops, while the rest of the land is left for grazing and natural wetlands.

The estate has developed its own system of organic management based on permaculture principles where all the necessary inputs for crop production are developed on-farm. The zone 1 crops comprise coffee, bananas, and oil crops, zone 2 is comprised of tea, and zone 3 and 4 comprise woodlots and grazing areas. The estate has focused on developing a fertile soil, maintaining an environment conducive for microorganisms (with proper soil moisture and temperature), and a system of minimum tillage was adopted. In 2005, a program for establishing windbreaks around the farm and intercropping all the crops with trees began. This supported a steady decline in average wind speeds, which led to a decline in evapo-transpiration rates. This also reduced the need to water crops, thus reducing energy use and labour time.

In 2004, the estate developed on-farm processing facilities for the production of body care products and edible oils. It processes own oil seeds together with purchased seeds that cannot be produced on the farm. The bulk of the firewood comes from the management of shade for the tea and coffee and also from own wood lots. The processing waste, which includes seed cake waste, ash from the distillation of essential oils and crop trashes, is used to enhance soil fertility as is the extensive use of cover crops such as *Mucuna* and *Dolichous* for the coffee and *Canavalia* spp for the tea. Subsequently soil fertility is now maintained by careful management of the soil to enhance microbial activity. Trials are being conducted with the introduction of microorganisms, specifically nitrogen fixing bacteria extensively used on the tea and mycorrhizal fungi used for the coffee.

The estate uses solar power, supported by a generator, in its processing activities. The generator is powered with biodiesel produced from the seeds of some of the shade trees such as *Alurites mulucanna* and Croton. Also, the waste from biofuel production is used as a fertilizer.





KAATULO CASE STUDY

Katuulo Farmers Cooperative, Uganda: Up-scaling through collective marketing

Achievements:

- > Collection center for farm products
- > Collective sorting, grading, cleaning, weighing and packaging of farm products
- > Community health center
- > Better harvests
- > Continuous expansion of farm production
- > Fair trade certification to access additional markets



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MOA Cameroon

The system of organic farming developed by the estate is not labour intensive, has given a substantial cost savings. For example, organic tea production is 10% lower than conventional production, but profitability of the tea has increased by over 20 fold because of the savings. The estate is increasingly being used by private commercial companies to train staff involved in the export of certified organic produce.

Case study: Katuulo Farmers Cooperative in South-Western Uganda - An example of a farmer marketing initiative

Katuulo Farmers Cooperative is a group of about 25 farmer households, including men and women, located in Rakai district of Western Uganda. The farmers have been working together for more than 10 years, growing organic pineapples and apple bananas for export. The farmers are collectively certified under an ICS arrangement by an export company, Amfri Farms/African Organic, based in Kampala, since 1998. Together they harvest and collect the fresh pineapples and apple bananas from their individual farms, to a collection centre. Here they sort, grade, clean, weigh and pack the harvested produce according to Amfri requirements, either for fresh export or for dried fruit processing.

According to the chairperson of the group, Mr. Karenzi Atanazio, working together as a group has given them many benefits:

- > Using their own resources they were able to buy land and construct a collection centre together with an office, where their group documents are kept and trainings are held.
- > The group opened a bank account and is able to make savings from the deductions whenever members sell and also from annual membership contributions. Using part of these savings plus contributions from Amfri and its partners, the group has constructed a community health centre to serve the whole community.
- > Over the years of farming organically the productivity of their farms has greatly improved and all members now own their land and are continuously expanding.
- > Recently the group has also been certified fair trade under the Amfri 'fair for life' programme and they consequently expect to get a premium that will enable further development to take place.





INFORMATION SOURCES



4. Access to support and information during conversion

Farmers who want to produce organically need to learn a lot. Naturally curious farmers will feel well with this production method, as they will need to constantly look for information and learning opportunities. Information and support to organic farming is available in Africa, though still limited. Many initiatives, mostly on national level, are preparing information about organic farming and support farmers to convert.

At country-level, the immediate source of information and support is the national organic agricultural movement (NOAM) or any other local organizations that are promoting organic farming. The NOAMS such as NOGAMU, FENAB, KOAN, TOAM and OPPAZ are a contact point for local organic farmers, traders and other organic stakeholders, and can be very helpful in providing information needed for conversion to organic farming.

An overview of addresses and recommended literature for Africa is provided on the internet at www.organic-africa.net.

In addition to documentation and internet resources, there are also other sources of information available applicable for the African situation. One the most important sources are the other organic farmers or farmers who want to convert to organic. Farmer to farmer learning is a tremendous opportunity, but also necessary. Farmers also need to learn step by step, they do not need all information on organic farming at once. Farmers need specific information at a particular time to address a specific need.

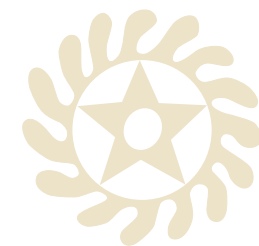
The information sources for organic farming include:

- › Farmer to farmer learning (discussions, farm visits, etc.)
- › Organic trainings, seminars and meetings
- › Inviting specialized advisors to the farm
- › Books and other printed materials addressing organic farming issues
- › Internet and radio
- › Informal networks through fellow farmers, group members, buyers and consumers, business partners, local and village leaders
- › The institutional networks like development (extension workers), research institutions and NGOs



Discussion on sources of information and support to organic farming

Give to the farmers an overview about regional, national and international information sources on organic agriculture and the kind of information they provide. Inquire if any of the participants have used any of the information sources and what their experiences are. If possible, visit the main information sites in the internet and discuss the quality of the information provided. Inform the participants about training opportunities in organic farming. Hand out a list to the farmers with all contacts from where they can get organic farming information.





TIGWIRIZANE WOMEN DEVELOPMENT CLUB

Tigwirizane Women Development Club, Zambia: Achievements through cooperation



Efforts:

- > Intensive training to meet the quality requirements
- > Guidance to ensure good harvests

Achievements:

- > Education of own extension staff
- > Diversification of production
- > Own oil extraction unit
- > Provision of extraction services



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20

4.1 Cooperation among organic farmers

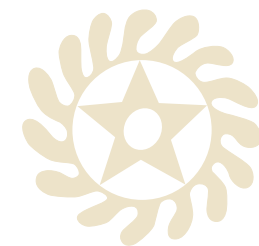
As an organized group of people interested in organic farming, there are many activities farmers can do together and many benefits that they can get, for example:

- > Build an experience-sharing group for farmer to farmer learning during the conversion process (if possible with the support of an organic advisor). The goal is sharing of knowledge and experiences from practicing organic farming through regular meetings.
- > Requesting training seminars together from training institutions at a cheaper cost or sometimes even for free.
- > Collective marketing of organic products, where organic products are sold together in a common project (farmers, processors, traders). This may also include common postharvest facilities and the creation of a brand for organic products, so that the products are specifically marketed and sold to customers in urban areas or in export.
- > Production and marketing of organic inputs such as organic seeds or compost within the group and to other groups.

Case study: Tigwirizane Women Development Club in Zambia - Networking and cooperation among farmers

Tigwirizane Women Development Club (TWDC) is a group of 20 women in Zambia. The club was founded by a development support organization to grow maize and groundnuts. These crops were grown traditionally just like all other farmers do, but TWDC experienced challenges in ensuring the quality and access good paying markets.

In 2005 following sensitization by the Organic Producers and Processors Association of Zambia (OPPAZ) the group joined OPPAZ and requested for services to convert them to organic farming. In response, OPPAZ embarked on a fast track programme that exposed the group to the various organic farming technologies clearly distinguishing it from traditional farming. OPPAZ also explained the benefits of organic farming in terms of competitive costs of production, good quality of products, assured access to lucrative markets, independence from external support, assurance for food security and potential for diversification into other value chains.



In 2007, the group membership grew to 150 persons as more and more farmers became interested in converting to a sustainable production system. Then OPPAZ came in with more lessons on ensuring good quality organic products and sensitivity to the demands of the markets. The message of ‘there is more to the product than the product itself’ was the focus of these lessons. TWDC members responded by developing and implementing local regulations to guide their activities individually as a way to ensure production according to required market standards. They also diversified into production of organic cotton and sunflower based on their internal regulations. Consequently, they appointed a community extension agent to help with routine extension support, advice, and liaison with OPPAZ technical staff. Under guidance from OPPAZ, the group set up and implemented an Internal Control System (ICS) for third party organic certification.

In 2008, the group for the first time produced 18 metric tons of good quality groundnuts without aflatoxins. In 2009 the group applied to Control Union for organic certification, which has since been granted. TWDC produced 30 metric tons of organic groundnuts in 2010 with a local farmgate value of USD 20,700. During the same year, the group constructed a 26 m² oil extraction plant for sunflower and groundnut oil. Today TWDC has diversified their income sources to oil extraction services and selling of oil cake.



Discussion on opportunities for government support

Invite a government representative to inform about government support to organic farming. Discuss the advantages of sustainable agriculture methods, for instance, for soil conservation and food supply and the need to promote these approaches.

4.2 Government support to organic farming

Currently, there is little government support for organic farming in most African countries. However, over the past few years, organic farming has attracted growing attention from governments as an interesting option to access export markets and as a low cost, environmentally-friendly farming system. Organic farming is also being recognised as a sustainable approach to increase food security. For these reasons, government support is expected to increase in the coming years.

In some countries, governments have gone ahead to develop organic agriculture policies as avenues for eliciting more support for the sector. On the other hand, some governments are still subsidising chemical fertilizers and pesticides which make organic farmers uncompetitive. However, with proper information, farmers are taking on organic farming based on their knowledge and motivation





GOVERNMENT SUPPORT



and not only on the option to get cheap chemical sprays. International organizations and donors contribute to this debate and invest more and more support into organic farming projects.

Relevance of government support

Individual farmers do not depend on government support to start with organic farming. But government can provide highly valuable services and facilitate conversion and access to markets. The organic sector needs support from governments to grow, especially as the concern over the way food is produced, safety of food, the effect of farming methods on the environment and animal welfare is widely increasing.

Some of the areas where intervention by governments is needed include:

- › The introduction of a national program to support and promote organic farming and the establishment of organic production standards and the regulation of organic products in the domestic markets. The information needs of the farmers on organic farming and markets should be addressed using the government network of extension service.
- › There is a considerable need for research and capacity building on technical, economic and social aspects in the field of organic agriculture. The contribution of organic farming to the development of sustainable and environmentally friendly agricultural systems as well as the impacts of a widespread conversion to organic farming on public costs and benefits should be evaluated and supported.

4.3 Access to organic seeds

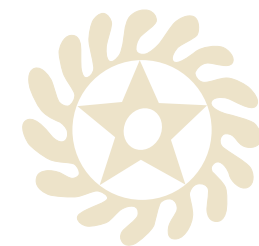
There are also still limited sources of certified organic seeds available in most African countries and, therefore, farmers should work together to collect, select and save enough seeds according to the requirements on their farms.

Organic seeds include any seeds or planting materials that are not treated with toxic chemicals and are used in the production of organic products. Therefore, most of the seeds available with farmers from their previous harvests can be used to grow organic crops. This includes seedlings, cutting or plant shoots, tubers and bulbs. The focus regarding organic seeds for the individual farmer is



Sharing knowledge on seed initiatives

Get information on or visit farmer initiatives that work on improving the quality of local cultivars and seeds. Let them share their experiences with the farmers.



to be able to select and multiply own seeds on the farm and not to rely on purchased seeds.

Seeds from crops grown from hybrid seed varieties, as they are commonly sold by seed companies, should not be saved. Seeds saved from these varieties normally have poor performance when re-used because of the way they were originally produced.

Organic seed requirements for certification

For organic certification according to most standards, farmers are required to use only organic seed and planting materials, if available. If organic seed and planting materials are not commercially available, the following options (in order of preference) may be permitted with documentation that organic seed is not available:

- › Seed grown only with substances in accordance with organic standards (can be from fields under conversion).
- › Untreated seed and planting stock from neighbours or group members.
- › Non-organic seed for perennial plants may be used. Perennial plants or crops must be managed organically for at least 12 months before harvest or sale as organic, but the original plants need not be organic.

Recommended further reading

- › Scialabba N (2007). Organic agriculture and food availability. International Conference on Organic Agriculture and Food Security. OFS/2007/1. FAO, Rome, 2007.
- › Sustainable Agriculture Information Initiative, Kenya (SUSTAINET EA). 2010. Technical Manual for farmers and Field Extension Service Providers: Certification of Organic Products.

