Organic Agriculture in Uganda

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Summary

This report contains an examination of the development potential of organic agriculture. Using Uganda as the area of study, the consequences of implementing a organic agricultural production system on small-scale subsistence farms are studied. The basic assumption is that abstinence from using chemical fertilizers and pest- and disease control, combined with other core organic techniques offers a stable and sustainable foundation for smallholder farmers to base livelihoods upon.

A historical and technical background of organic agriculture is offered to provide background understanding of the topic and introduce concepts and information used in the central analysis. The history and structure of the organic sector in Uganda is then sketched out to give context to the later analysis.

Following this, the central analysis examines the positive and negative consequences of converting from traditional to organic agriculture, and places them in relation to the living conditions of the Ugandan smallholder farmers. To serve as as the theoretical framework for the analysis, Ian Scoones' concepts of livelihood resources and livelihood strategies is utilized.

175 farmers were surveyed in two different locations in Uganda to examine what effects their conversion to organic production had on their standard of living. The conversion to organic cultivation techniques was found to have several positive effects on the livelihoods of the smallholder farmer households: increased yields of both food- and cash-crops, increased incomes and financial stability due to linkages to organic export markets, and increased skills and knowledge of the production system that maintains their livelihood. These benefits are all based on the improvements in the environment of the natural resource base that is the consequence of using organic production techniques.

The hindrances to expanding the organic production system in Uganda are chiefly centered around the high costs of conversion to organic agriculture that makes producers dependent on the organisations and companies that fund certification and conversion costs entirely. This dependency is accentuated by the governments lack of recognition and support towards an organic sector that has so far had a good track record. While the organic sector is in continuous growth, these two obstacles makes it uncertain whether the dissemination of organic agricultural techniques will reach critical mass.
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Abbreviations

EPOPA - Export Promotion of Organic Products from Africa
EU – The European Union
IFOAM – International Forum for Organic Agriculture Movement
NAADS - National Agricultural Advisory Services
NEMA - National Environment Management Authority
NOGAMU - National Organic Agriculture Movement of Uganda
UN – The United Nations
UNEP - United Nations Environment Programme
UNDP – United Nations Development Programme
WB – The World Bank
Introduction

Uganda is, generally speaking, a nation of farmers. While some of the multitudes of tribes populating the East African country have strong traditions of cattle-keeping as their primary livelihood, cultivating the land has been the traditional way of living for the majority of the population for more than 1,500 years. Today, more than 85% of the approximately 30 million Ugandans have agriculture as their main, and often only, livelihood. For them it is a source of both food and income, as the vast majority of households practise mainly substance small-scale farming, growing crops on an average of three hectares per household (Walaga & Hauser, 2005: 67). While the natural conditions are favourable enough to support a smaller population, the increasing population are beginning to put increasing pressure on the country's resources, with resulting adverse effects on the livelihoods that are largely based on these resources. While the land is fertile in most areas of the country, and growing conditions are ideal for a large variety of both food and cash crops, unsustainable farming practises have led to problems with erosion, deforestation and soil degradation (NEMA, 2007: 57f).

This, in combination with other factors, has led to a high level of poverty amongst Ugandan farmers. 8,4 million Ugandans lived in absolute poverty in 2006, 7,9 million of these in rural areas (UBS, 2009: 24f). While poverty is in fact decreasing markedly (ibid), Uganda is at the low end of the UNs Human Development Index at a 156th place out of 177. A life expectancy of 50 years and a per capita GDP of 888 USD (UNDP, 2008) are indicators of a country where the vast majority of the population struggles under the burden of poverty. These numbers are national averages, and in some of Uganda's rural areas, poverty is even more severe. While actual starvation is not common, food insecurity is prevalent, especially in rural areas. In 2001, a fifth of all Ugandans were undernourished (Walaga & Hauser, 2005: 68), a result of the inability of many households to maintain a food supply of sufficient quantity and quality. One of the consequences of mal- and undernourishment is stunted growth and poor child health, diminishing the potential of the country's future generations.

Even though the poverty problem is acknowledged by the government, and is sought amended through numerous development programs supported by foreign donors, the level and quality of support extended towards farmers leave room for improvement. Less than 5% of the nations budget goes towards the agricultural sector, and there is debate on how much of a tangible positive effect the support given is showing (Walaga, appendix G: 91). Uganda's official development strategy does include initiatives to development through the agricultural sector, but is in this area chiefly concerned with attempts to promote export production using high-input technology and high-value crops (UNEP, 2008: 37). Another area that the government has sought economic development through is mid-scale agriculture, mainly cash crop plantations. The country's main export is coffee, with tobacco, cotton, tea and fish as other significant unprocessed exports. Uganda exports virtually no industrially produced goods (UBS, 2009: 70f). Agricultural produce makes up the most part of foreign sales, with 83% of the country's exports being primary products (UNDP, 2007: 287), 68% of these being agricultural products (Tumushabe et al., 2007: xi). Common for many export productions are that they are often owned by foreign companies who tend not to reinvest their profits in Uganda, limiting the benefits for Uganda to the taxes and wages that the company pays in the country¹.

Considering the large section of the population that has no or little contact with either the industrial

¹ Note that this observation is based mostly on personal observations and conversations with people in the development industry working in Uganda. Exact data on ownership of production is difficult to obtain, and no detailed analysis of the sugar and tea estates that constitutes many of the foreignly-owned mid-scale agricultural productions could be found during the research for this report.
sector or mid-scale agriculture, the argument can be made for a higher level of support and focus on the small-scale agricultural sector. However, creating a agricultural sector that is successful on the international market is difficult – the world market for agricultural products have historically been extremely competitive, with producers of primary products (often developing countries) competing fiercely to sell similar products on a market distorted by trade barriers. As a rule, the price levels of agricultural products generally diminish over time (Thirlwall, 2003: 663f), making it difficult to maintain a steady income from exports of primary products without significant upgrading of the production and processing of products. Therefore, in configuring agriculture for development, options are needed that are uniquely tuned to the needs and conditions of the country in question, as well as ones that exploits the opportunities and niches that exist in the world market.

Organic agriculture

One such niche is organic products, for which there have been a steady increase in demand in the developed world during the last decade (Hallam, 2003: 180). Global sales of organic products were estimated at 38.6 billion USD in 2006, having grown from 18 billion USD in 2000 (Willer et al, 2008: 16). The majority of organic goods are produced in the developed world, but there are many products that cannot be efficiently cultivated in the Northern developed countries, either because a warm climate is needed or because the production is so labour-intensive that production costs in a industrialized country would be too high. The developed world therefore needs imports to satisfy the demand for organic products. This creates a potentially lucrative niche for developing countries in the world market for agricultural products, assuming that growth in demand for organic products remains relatively stable. This appears to be likely, as the trend of increased demand has been fairly constant in the last decade, and interestingly enough seems to continue for many organic products in the current context of the financial crisis (DST, 2009; Taylor, appendix B: 69).

Besides the financial gains of exports to a niche in the world market, organic production has several benefits for the producer country. Most importantly, it is a mode of production that puts less of a strain on the natural environment than conventional production (see for example Halberg et al, 2006 and Stinner, 2007). Organic production standards forbid the use of inputs like artificial fertilizers and pesticides in growing crops, which means that poisonous chemicals are not introduced into the ecosystem. In many areas of the world, soil depletion and imbalanced nutrient use have become serious hindrances to agricultural development, in turn affecting food security and environmental stability. The soil management techniques used in organic agriculture maintain a stable soil and nutrient balance in the environment, making it a more sustainable way of exploiting the natural resource base (Pender & Metz: 228f). The lack of chemical inputs also means less of a cost for the farmer, as expensive industrially manufactured fertilizer and pesticides (often imported) is not purchased. This is also less of a health risk for the farmer – it is estimated that globally more than 350,000 people die from pesticide poisoning each year (World Bank, 2007: 10).

As previously mentioned, several organic products are labour intensive to produce than conventional products (OECD, 2003: 24). For many countries this would be a disadvantage, since it heightens the production cost. However, developing countries usually have a large surplus of labour, making labour costs low. This means that these countries have a comparative advantage in the labour section of production costs.

There are a few disadvantages to organic production as well. It generally requires more land than conventional production, meaning that countries with population density problems could have difficulties implementing organic agriculture on a larger scale. And on the average, yields have a tendency to be lower than in conventional agriculture due to less inputs. Although this could be said to be weighted out by the fact that organic yields are more stable as well as more resistant to
extreme weather than conventionally grown crops (Ramesh et al., 2005: 563), it remains one of the major downsides of organic production.

Weighting the advantages and disadvantages, there is an argument for using organic agriculture as a tool for development – the earnings from imports and the environmental benefits could be a path to the much needed rural development in developing countries. Considering the additional fact that investments in rural developments yield significantly higher benefits than investments in other sectors (World Bank, 2007: 20), it is obvious that development of the agricultural sector is a beneficial strategy for many developing countries. New technologies and more efficient production modes need to be developed in order to pursue exploitation of niche markets and high-value products.

African countries have generally not been able to expand the agricultural sector and gain the benefits that developing countries in Asia and Latin America have managed over the last 50 years. Increasing crop yields, more efficient land use, improved irrigation and market access, and investments in research and infrastructure are all areas that most Sub-Saharan African countries have not managed to develop significantly (WB 2007: 51f). For the organic sector, this means that producers currently have trouble keeping up with demand, as they tend to be inflexible in adjusting production, and especially upgrading of the production seems to be a problem. This means that there is a supply/demand gap in the market for organic products.

The question is therefore how this trend of agricultural stagnation can be turned around to foster a positive and sustainable development. The aim of this report is to examine a possible path towards this, by using organic agriculture.

**Potential for development**

While Uganda struggles with a high rate of poverty and increasing food security issues, it has had success in developing a organic sector. 1.4% of the agricultural land is cultivated by certified organic farmers (Halberg et al, 2006: 28), and a lot of the institutional framework needed for certifying, processing and exporting agricultural goods is present in some form (largely developed with foreign donor support). One organization, the National Organic Agricultural Movement of Uganda (NOGAMU), does advocacy work on national level, trains farmers and connect them with certification bodies, and works in cooperation with export-promoting organizations to create links to foreign buyers. This way, a product chain is created that incorporates the growth, promotion and selling of organic products. A high share of the organic crops grown are exported, with coffee and cotton in the lead. In 2005, a total of 17 organic export projects exported USD 6.2 million worth of goods (Gibbon, 2006: 14). Some value addition to crops is taking place, such as cotton spinning, but few crops are significantly processed before export. The sector is still heavily dependent on donor support and intermediaries in trade (Gibbon, 2006: 4f), and there is still a lot of unfulfilled potential in the Ugandan organic sector.

Based on the issues outlined here, this report will examine how organic agriculture affects a farmer households' way of living, and in turn how the positive effects of this mode of production can be expanded wider. The starting point is the following research question:

*How does conversion to organic agriculture affect the livelihoods of Ugandan small-scale farmers, and what are the hindrances to expansion of small-scale organic agriculture in Uganda?*
Chapter 1 – Methodological chapter

The basic goal of this report is to examine how organic agriculture can be used as a tool for development. By studying the organic sector in Uganda in relation to the characteristics of organic agriculture and the market for organic products, the report will examine how the benefits and disadvantages that are specific to organic agriculture affects the livelihoods of smallholder farmers. More specifically, the effects on their living standards levels will be analysed, the primary assumption being that becoming a certified organic producer will improve the livelihood and income level of a farming household. The main focus in the report is the economic consequences of the change in production system, but to properly understand the background of these changes, the environmental dimension needs to be described and analysed as well. The environmental resource base is crucial in maintaining and improving an agricultural production system, and to understand the benefits and disadvantages of organic production, the production system itself must also be understood. In addition to this, the issue of food security is also included in the field of research. To the smallholder farmers that are the focus of this report, growing food crops is of at least equal importance to growing cash crops, and the effects of a change in production techniques on their ability to produce food is therefore relevant to include in a assessment of their livelihoods.

Chapter summary

To give an overview of how the argumentation will be presented, a short summary of what the individual chapters contain follows.

1. Introductory and methodological chapter
   Containing introduction, problem area and research question, this chapter serves as the introduction to the report.

2. Organic agriculture
   This chapter will serve as an introduction to the concept of organic agriculture. The first section will contain a brief history of the concept, from its development and increase in popularity in the North, to its introduction in the South. The basic concept behind organic production is described, along with the various characteristics of the organic mode of production. This is done in order to substantiate how organic agriculture functions as a distinct production system that differentiates itself from conventional agriculture. The benefits and disadvantages of organic production are outlined in detail, as they are necessary to understand in order to analyse the situation for Ugandan smallholder farmers and the consequences it has for them to enter the organic sector.

3. The organic sector in Uganda
   This chapter focuses on the organic sector in Uganda: its short history, the products grown and processed, the organizations working in the sector, and its ties to the export market. The characteristics of the Ugandan organic sector are described so as to, together with the background information on organic agriculture in chapter 2, provide background for the analysis in chapter 4. This chapter should also help to underline the fact that as political, agricultural, and social conditions vary greatly in different developing countries, it is likely that a more generalized analysis would be of limited benefit. The description of the sector will concentrate on the primary production side, the farmers who grow organic crops. This focus is chosen partly because the main focus throughout the report is on the farmers, and partly because of the fact that the processing and marketing areas of the sector are still underdeveloped.
4. The effects of organic agriculture on livelihood and poverty
Having described the characteristics of the organic production system and introduced the specific context in which this system has been implemented, the report will move on to a more thorough analysis of the effects of organic agriculture on smallholder farmers' livelihood. With the background of positive and negative effects of organic production described in chapter 2, the situation of Ugandan organic farmers who have been trained in organic practices and linked to local or export markets will be examined in relation to their incomes and livelihood status. By examining how the different characteristics of organic production affects the livelihood of a household, each negative or positive effect will be held up to its effect on the household's ability to maintain and improve its standard of living. This is done partly to map out the causalities of the organic production system's effect on living standards, and partly to clarify in which areas the efforts to establish farmers in the organic sector have been most successful, and in extension of this, to examine whether future efforts need to be focused differently in order to optimize the support given to the farmers.

This chapter will draw on the livelihood survey of organic and non-organic farmers conducted during the fieldwork done for the report, as well as on surveys done by other researchers in the same field. For the theoretical foundation of this analysis, see page 11.

5. Hindrances to the expansion of organic agriculture
Having established the development potentials in organic agriculture by showing benefits that organic production has already brought to Ugandan smallholder farmers, the proposal that expansion of organic agriculture will be beneficial for many poor smallholder farmers should be sufficiently supported at this point. In addition to this, the areas where farmer support and extension could be improved will have been examined. On this background, the chapter will analyse the barriers that exist to the expansion of the Ugandan organic sector. The focus of this chapter will be on the barriers that exist within the organic sector itself, as these are most likely to be addressed and dealt with. Barriers such as national policies and global trade issues will not examined in detail, as they are not practically possible to change in the short term. This distinction is made from the practical viewpoint that actors in the organic sector has an interest to improve efforts and results, while actors external to the sector does not necessarily have an interest in improving the conditions of organic production.

At the end of this section, it should be possible to formulate some key points that summarizes how organic agriculture can be used to further development in the rural population in Uganda. This will form the basis for the conclusion.

Project design
The chapter summary should indicate the way that the research question is answered. As chapters 2 and 3 is mostly a synthesis of the existing knowledge on the topic, the aim of the methodology used in those chapters is to gather and present data and information relevant to creating a basis for understanding the concepts and issues presented in chapter 4.

It is chapter 4 that provides the main bulk of the analysis that will answer the first part of the research question, and the majority of the analytical effort is therefore concentrated in this chapter. As the main goal is to examine how the conversion to organic production effects smallholder farmers in Uganda, the basic methodology used will be extraction of data and results from studies.
that relate to this issue. A significant portion of the data used in the analysis is taken from a field survey conducted for this purpose (see below). Aspects relating to livelihoods and standard of living are analysed on the background of the section in chapter 2 that outlines the benefits and disadvantages of organic agriculture. See below for the theoretical background and concepts that serve as the background of the analysis. The published literature tends to focus mostly on the positive consequences of conversion, but this analysis will attempt to create a mapping of the consequences that is as balanced as possible.

Chapter 5, on hindrances to expansion of the organic sector might appear to be somewhat removed from the previous progression of the report, as the discussion it fosters at times moves away from the basis of the analysis formed in chapter 2. The reason for furthering the scope towards this aspect is that by stopping at the end of chapter 4, having established the benefits of organic production to small-scale farmers, would be stopping short of the question that this result immediately poses: namely how these benefits are to be extended to a larger segments of Ugandan farmers to improve the general livelihood situation. The results of chapter 4 clearly shows that there are numerous benefits for the smallholder farmers of Uganda, and since this report attempts to put the organic sector into a wider developmental context, it would be insufficient to stop at this point. It was therefore felt that this question should be included to make the report as a whole more relevant to the developmental issue as a whole. This is also the reason for including the aspect of hindrances to the organic sector as the second part of the research question. Chapter 5 will also go into areas that have only been briefly touched upon in the sections previous to that, such as the wider context of the organic sector and its place in the political realities of Uganda and the world economy.

**Empirical basis**

The empirical material used is, apart from publications on the Ugandan organic sector and organic agriculture in general, interviews carried out with key personnel in the Ugandan organic sector (see appendixes A-G), as well as a survey done in local farming communities of two rural districts in Uganda. Most of the research forming the basis for the literature used as a foundation for the analysis is published by researchers who are independent of the organic sector, but there are examples of organisations within the sector publishing research and reports. These have been included in the empirical foundation, keeping in mind that they might at times not present facts or aspects that may be detrimental to the cause of the organisation that present it.

**Field work**

As part of the research process, five week period of field work was carried out in February and March 2009 in Uganda. The main purposes of the field work was to interview key persons in the organic sector, as well as conducting a livelihood survey of a selection of organic farmers in various parts of the country. The interviews conducted were mainly with people who worked in NGOs and companies within the sector. No government officials were interviewed, which is a fault in the research design. However, the attitudes of the government towards the organic sector were explained consistently by other interview subjects.

The other main activity of the field work was a survey of organic farmers, to examine the effects on their livelihoods that their conversion to certified organic production had brought. To do this, a
A house-to-house survey of groups of organic farmers was undertaken in two different areas of Uganda: in the northern district of Lira, and in the western district of Mbarare. The survey assessed the current living standard of farmers, compared to their living standard before they became organic producers. The main point of the analysis was to establish a picture of a household's wealth or standard of living over a period of time, more specifically: their current standard of living as opposed to the wealth level before their conversion to organic production. Standard of living was measured by several indicators such as income, number of children in school, acquired assets, and the respondent's own perceived standard of living. The examined group consisted of farmers who had previously been using conventional growing methods and have converted to certified organic production. In the Ugandan context, this means farmers who are producing (at least partially) for the export market, meaning that the household gets cash income from these sales.

Households selected for interview were all small farmers who are part of an outgrower scheme and who sell to intermediaries collecting and exporting their products. A control group of comparable households were interviewed as well. These were farmer households situated close to the organic farmers, who are using traditional farming methods, growing the same type of crops, and on the same scale as the households in the main research group. A standardized questionnaire was developed (see appendix A-G), and all farmers were interviewed according to this. For a more detailed description of the survey, see below and page 37. Apart from the information on living standards that the interviews produced, the conversations were also an opportunity to talk directly to farmers about their views on agriculture, both organic and conventional. These views brought forward nuances in the field that would otherwise have been left out, as the majority of the literature on organic agriculture deals with farming practices and market issues in the industrialized countries, since it is here that the sector is most developed. Conditions are quite different in the developing world, and not all characteristics of the sector can be transferred from North to South.

In this report, prices are given in US dollars for easy understanding and comparison of values. Much of the price and income information obtained during the field work and research phase was given in the currency of Uganda shillings, but have been converted at the exchange rate of 1 US dollar = 1.900 Ugandan shillings.

Land measurements are given in acres. One acre equals 0.004 square kilometre, or 0.4 hectare.
Theoretical background

To provide the background for the area of research, this section contains a summary of the areas of development theory used as background for the report, and an introduction of the theory and concepts used in the analysis in chapter 4. This report concerns the opportunities and limitations that organic agriculture offers small-scale farmers in a developing country. The aim is not to prove or disprove a certain development theory, but rather using already formulated theoretical positions to support the basic premises of the analysis.

Focus on agricultural development

It is relevant to ask the question as to why it is interesting to discuss in a developmental context something as apparently diminutive as the change in agricultural practices for poor smallholder farmers with low production capabilities and who each have little impact on the national economy as a whole. To develop this part of the economy can seem like a rather unambitious development strategy, when compared to some of the grander schemes that have been launched to develop Uganda's economy. One of the aims of the analysis carried out in this report is to show that long-lasting results can be obtained by making relatively small changes in the livelihoods of average families, and looking at the history of the developing world it becomes evident why the agricultural sector needs to be a key focus in development. In recent history, only very few countries have been able to make the transition from poor peasant economies to modern, industrialized capitalist economies. The four countries who have been most successful in this process (Hong Kong, Singapore, Taiwan and South Korea) are mostly small states with few of the characteristics of African developing countries (De Rivero, 2001: 128). Despite many attempts throughout the last fifty years, there is no immediate historical precedent of a country like Uganda making significant strides towards an export-based economy based on high value addition to products, and it is therefore necessary to examine different paths to development. Many countries, especially on the African continent, have had negligible success with various industrialization strategies that became popular in development economics from the 1960's on (Cypher & Dietz, 2004: 309ff). These strategies generally revolved around enabling developing countries to enter the world economy by creating industrial production within the country, thereby fostering economic development by increased foreign trade and higher employment rates in the formal economy. But there have often been wide gaps between the formulated industrialization strategies and the outcome of them. The poor track record of these strategies are not to be blamed entirely on unrealistic models and faulty theory, but have a multitude of explanations – the historical backgrounds of countries, armed conflicts and political instability of large regions, and so forth. But the fact remains that most Sub-Saharan countries in Africa have still only developed weak industrial sectors, and are still primarily agriculture-based (World Bank, 2007: 4). The argument can therefore be made for a different approach, one that is closer linked with already existing modes of production, and does not require fundamental changes in the basic structure of the economy.

As in many other developing countries, the Ugandan government's encouragement of market-based production of low-grade primary products for export have been less than optimal for the poorer segments of the population, as profits tend to concentrate in local elites or foreign owned companies (Hickey, 2005: 1004f). Furthermore, the nature of the production, such as large-scale sugar-cane plantations, does little to improve income and food security on a broader scale². This adds to the argument that alternative paths in agricultural development needs to be pursued to improve the living conditions for the rural populations that dominate the demographic of the developing world.

² See footnote 1, page 4.
In today's developing countries, agriculture not only provides foreign exchange income from exports, but often also constitutes the backbone of the country's food supply. Agriculture gives the billions who rely on subsistence farming a means of survival that is not as sensitive to fluctuations in the global economy as the income from exports may be, and gives farmers something to fall back on when other sectors in the economy are recessioning. But a stable food production depends on a sustainable use of the environment where the production takes place, something that rarely happens in poor and overpopulated areas. Unsustainable land use, soil depletion, incorrect use of fertilizer and pesticides all contribute to the undermining of the agricultural base which feeds both the subsistence farmers and those who depend on local food supply. Development strategies for the agricultural sector therefore needs to contain elements that ensure environmental sustainability, in order to maintain the resource base for future populations.

**Sustainable livelihoods**

This report focuses on the livelihoods of smallholder farmers. The majority of the Ugandan population is based in rural areas and base their livelihood on cultivation of an average of 3 acres of land (Walaga & Hauser, 2005: 67), making a strong argument for examining this segment of the population. For the analysis in chapter 4, to help define how organic agriculture affects the livelihoods of poor small-scale farmers, Ian Scoones' widely used concept of sustainable livelihoods is utilized. This concept will serve as a framework for analysing the various benefits and disadvantages that are the consequences of a shift to organic production. Scoones define a sustainable livelihood as:

> “A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base” (Scoones, 1998: 5)

This is a beneficial definition to use when discussing the agricultural methods used by small-scale farmers in a developing country because it includes the natural resource base prominently. The soil, water and other natural resources are the foundation of a peasant's livelihood, and is therefore essential to maintain. The concept is especially relevant in the context of organic agriculture – providing a farmer with tools to maintain and support the natural resource base is a cornerstone of organic agriculture.

According to Scoones, a household can pursue various *livelihood strategies*, based on their *livelihood resources*. These resources can be categorised in four sections (Scoones: 1998: 7):

- Natural capital (land, physical assets)
- Economic capital (income, savings)
- Human capital (skills, education, knowledge)
- Social capital (contacts, network, community status)

Other categories, such as cultural or political capital can be used as well, but in the context of the research field of this report, the four types listed are the ones found most relevant. Any household is in possession of these types of capital, in various configurations. How a household utilize their capital defines the degree of success they have in pursuing their livelihood strategy.

Livelihood strategies can be divided broadly in three clusters: intensification/extensification of agriculture, livelihood diversification, and migration. If we see the farmer households conversion to organic production as an intensification of the livelihood, the conversion must consequently be considered as a change (or at least modification) of the livelihood strategy. One of the objectives of the analysis is to examine how the different types of capital are affected by the change in livelihood.

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3 This approach to analysing the effects of organic agriculture is inspired by Moreno-Peñaranda & Egelyyng, 2008, as well as UNEP, 2008.
strategy. Survey results clearly show that the economic capital of a household is increased when converting to organic production, but how does this happen? Are other types of capital affected as well, and if so, how does the interplay between the different livelihood resources work? These questions will be examined in chapter 4, to get a better understanding of how the conversions to organic production affect a smallholder farmer household.

Another dimension in Scoones' theory is the impact of institutions on livelihoods. Based on their livelihood resources, households must form out their livelihood strategies on the background of context and conditions, as well as the organisational structures and institutional processes they are affected by (Scoones, 1998: 11). This dimension of organisations and institutions is only briefly touched upon in the analysis contained in this report, as the main focus here is the change happening in the farmer household's economic situation based on the change in production methods.

The analysis is empirically founded in the research, reports and statistics that form the bulk of the literature studied, as well as the field survey carried out in conjunction with the research. Mainly economic and environmental issues will be analysed in relation to the conversion to organic production. Social benefits will not been examined in the same depth, as it would widen the scope of the analysis too much, given the time and format constraints of this report. Furthermore, the existing literature on organic agriculture does not cover social issues at significant lengths. This is not to say that the social dimension is not important – there is an obvious need for further studies into the effects of organic cultivation on this – but for the purposes of this report it was considered too wide a scope to include it along with the other dimensions.

**Country selection**

The choice to specifically analyse the Ugandan organic sector was made for a number of reasons. First, examining the global organic market, or the general situation of organic farmers in developing countries is too wide of a focus, with consequent conclusions that would be of a too general nature. A focus on the organic sector in one particular country creates the opportunity to go into detail with the specific problems and challenges that are unique to this country. The organic sector in Uganda is, compared with other Sub-Saharan African countries, well established, with a well-functioning and funded network of organisations that train and support farmers and exporters. These conditions make for a good research location, as the development of the organic sector is already well under way, providing opportunities to examine the status of a already functioning system, and seeing what lessons have been learned so far. It is not the intention of this report to largely be speculative as to how future developments might play out, but rather to examine the characteristics and current trends in the sector and come up with suggestions to upgrading it to fully utilize the developmental potential of organic agriculture.

Another factor that helped the field work was that I worked in Uganda for six months in 2008. The familiarity with local conditions that this created cleared up a lot of obstacles in the field work conducted for this report, in addition to making it easier to establish contacts in the organic sector. The insights in the agricultural sector and the organic sector that the initial research done during this time provided also helped to lay the foundation for this report.

**Validity and scope**

Even though the organic sector in Uganda is relatively large, it is still small when compared to other
areas of the agricultural sector, and to other exporting industries. This means that it is a limited area of research, with a fairly small number of institutions, organisations and companies to analyse. With a share of total exports that is still below two percent, organic exports have a negligible effect on the country's economy as a whole. In spite of this, a study of the sector, can still be considered to have relevance for the current and future development of the country. An increasing number of smallholder farmers are basing their livelihood on this mode of production, and if it is to become more widespread, then studies are needed to assess the contributions to livelihoods it can offer, as well as the negative sides that needs to be avoided.

It is solely the scope of this report to say something about the organic sector in Uganda. Some of the results achieved and conclusions drawn may well be applicable to other developing countries, but except for the occasional comparison (parallel or juxtaposing) with other countries or regions, there will not be a attempt to generalize conclusions. This is not to say that some of the things happening in the Ugandan organic sector are not of a more general nature that can be found to say something about organic agriculture in developing countries on a general level. However, it would would be a study entirely in itself to examine which aspects are specific and which are general – and why.
Clarification of terms

As there are no internationally recognized formal definitions for some of the key terms used when talking about agriculture, the following will specify how some of these terms are used in the following chapters.

'North' and 'South'
The North is used to refer to the industrialized countries (generally situated in the Northern hemisphere), whereas 'the South' refers to developing countries, in this report mainly Sub-Saharan Africa.

'Farmers'
In Uganda, as in other developing countries, a household that has subsistence agriculture as its primary livelihood will engage all household members in some part of the production. The term 'farmers' is in this report used to refer to the members of the farming households collectively, and not solely to the head of the household.

'Conventional agriculture'
This term refers to what is generally understood as modern, industrialized agriculture, characterised by use of intensive growing methods, and utilizing chemical fertilizers and pesticides to maximize yields. It is sometimes referred to as 'Western agriculture' as many of the practices and methods were developed in Europe and North America in the post-World War II industrialization of agriculture. As such, the 'conventions' that the term refers to, are relatively recently established.

'Traditional agriculture'
Refers to the majority of farmers in Uganda who are not part of the organic sector. Traditional farming, especially the case amongst the smallholder farmers, is usually low-intensive, low-technology with only a few occasional aspects of conventional farming, such as use of chemical pesticides.

'Organic agriculture'
Agricultural production that is formally certified as organic by a recognized certification body. In the Ugandan context, the term can refer to a converted conventional farm, but usually describes a non-certified traditional farmer having become certified. See chapter 2 for a more detailed description of the concept and its differences from conventional agriculture.

'Non-certified organic agriculture'
A rather vague term often used to describe traditional farmers. As it is rather uncommon for poor smallholder farmers in Uganda to use chemical inputs, their farming practices are seen by some as being organic but simply lacking formal certification. This view is not entirely correct, as some practices used by the farmers may very well be unsustainable and degrade the resource base, even when conventional agricultural key elements, like chemical inputs, are not used. Some use the term 'organic by default' interchangeably with this term.

The words 'agriculture', 'cultivation' and 'farming' are used interchangeably throughout the report, all terms referring to a rurally based production system that uses a resource base of soil, water, and various inputs to produce food- and/or cash-crops. In the following chapters, the terms are used to refer to crop production – other types of production, such as animal husbandry or aquaculture, can also be done according to organic principles, but as they are not the topic of this analysis, they will not be discussed.
Chapter 2 – Organic agriculture

In order to establish a background for understanding the issues presented in the following chapters, this chapter will describe the characteristics of organic agriculture, including a highlight of the most significant benefits and disadvantages of this particular mode of production.

**Historical background**

With a background in the emergence of biologically oriented agricultural science that had been developing since the mid-19th century, the organic movement gained its initial momentum in the pre- and mid-war years where a crisis in agriculture was developing. The crisis stemmed from the negative results starting to show from the chemically intensive farming which was then in its early stages. Decline in soils ability to hold nutrients and water, along with a marked decrease in yields and plant quality, led to a concern amongst some agricultural scientists that intensive use of agrochemicals did more harm than good in the countries that had embraced intensive agriculture. (Vogt, 2007:10). Broadly speaking, two schools of thought developed from this crisis – those who argued that the increased use of next-generation agrochemicals would eventually solve the problems, and those who believed that these inputs were the cause of the problems.

As intensive industrialized agriculture continued to be implemented on a large scale in Northern countries, environmental problems such as soil degradation and high nitrogen levels in groundwater and rivers due to excessive spreading of fertilizer on fields continued to spread (Knudsen et al, 2006: 10f). This helped the organic movement gain further momentum, but it was not until the latter part of the century that the increased influence of environmental groups and consumer advocate groups helped to establish organic agriculture in the public consciousness as an alternative to intensive production methods. From the 1980's, the organic movement has gradually transformed from a social movement to something today that in many ways resembles more of an industry. Where the sector was initially characterized by activists whose agenda was as much about opposition to the established agricultural system as it was about making a living, the expansion of recent decades have attracted farmers and producers who are not necessarily as committed to the ideals of the movement, but are more focused on the business aspects of it (Lockeretz, 2007: 6).

The above history is included here to give a general idea of the background on which the organic sector in the North was formed. The pre-colonial and colonial agricultural history of the developing world is quite different, but agricultural trends and development in poor countries have, since the inception of foreign aid in the post-war era, often been initiated from the North to be adapted in the South. The most far-reaching example of this is the Green Revolution starting in the 1960's and culminating in the 1970's, where new crop varieties, chemical fertilizer and other intensive farming methods was introduced in developing countries in order to fight hunger and improve an inefficient agricultural sector that was believed to be the root of many of the poverty issues kept the South in underdevelopment (Cypher & Dietz, 2004: 329). Achieving positive results in many parts of the world, the Green Revolution largely failed to achieve its goals in Sub-Saharan Africa (Halberg et al, 2006: 288), perhaps most of all because the needs and conditions of the receiving countries were not properly assessed. Since then donor countries have generally been hesitant to invest in the agricultural sector of developing countries on a larger scale – less than 10% of the World Bank's loans and grants went to agricultural support in 1999, compared with 23% in 1980 (Cypher & Dietz, 2004: 320).

The introduction of organic agriculture in developing countries has happened gradually via aid agencies and NGOs, making it another example of an 'imported' idea. What differentiates the
organic concept from many other imported ideas is that principles of organic farming are very compatible with the traditional farming systems where it is introduced and therefore only requires gradual changes in lifestyles and routines of the people it targets. The concept was initially introduced most thoroughly in Latin- and South America, and some Asian countries (Kristiansen, et al., 2006: 7f), but have since been introduced to some extent in African countries. It is difficult to obtain exact sales figures of individual countries, which makes it hard to gauge exactly how different countries and continents are performing. This makes a country’s share of total global organic land one of the only indicators usable for comparison. Today, more than 70% of organically cultivated land is in Northern countries, with Africa counting for a 1% share of organically cultivated land (Willer et al, 2008: 28). The developing countries’ share is increasing, but with Africa still in the rear of the field. A contributing factor to the expansion of organic farming in the South is undoubtedly that the opportunities for exporting organic goods to Northern countries have been constantly improving for the last twenty years (Hallam, 2003: 180), something that increases the chances for the financial sustainability of the production. The increase in global sales of organic products from 18 billion USD in 2000 to 38.6 billion USD in 2006 (Willer et al., 2008: 16) show how fast the market the market is growing, with demand in developed countries driving the expansion. Developing countries still only accounts for small share supply, as Northern producers dominate the market, but their export revenue is increasing concurrently with the market expansion.

As the expansion of markets has happened, the organic sectors of developing countries have become open to private companies who have seen opportunities in it. That private companies have entered the sector means that organic production can be established by others than the the non-profit donor organizations and agencies that usually initiate development initiatives. This means that donors are not the only deciding factor in the expansion of the sector, something that ensures that there are a wider range of interests involved. These interest may have different reasons and motivations for being involved in organic agriculture, but the diversity does result in a larger amount of participants involved in the continuous development of the sector. This is necessary, as organic farming is not a static concept, but continues to develop over time. Many facets have changed and developed since its inception, but fundamentally it still exists in opposition to intensive agrochemical agriculture, as an “alternative agricultural paradigm” (Kristiansen & Merfield, 2006: 3).

The concept

Exact definitions on what organic agriculture is varies from country to country, as do the legal standards for what producers can label as organic. However, the basic organic values are generally agreed upon amongst the key institutions in the sector (Sligh & Cierpka, 2007: 36). In the Codex Alimentarius standard document for organic agriculture, what is most likely the closest thing to a standard definition of organic agriculture can be found:

“Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, cultural, biological and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system.” (FAO/WHO, 1999 :2)

On the most basic level, organic agriculture can be described as an approach to agriculture that

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4 This number is slightly misleading as an indicator of production. Australia possesses more than 40% of global organic agricultural land, but the majority of this is vast areas of grazing land for cattle (Willer et al, 2008:36).
5 The Codex Alimentarius is a collection of international food standards developed and maintained by the Food and Agriculture Organization of the United Nations (FAO), and the World Health Organization (WHO).
establishes a system where on-farm or locally available resources are used to sustain and improve the resource base of the system, rather than use chemical external inputs. A main principle is that soil, water and other fundamental resource bases on the farm is seen as capital that must be properly maintained in order for the dividends (the crops produced on the soil) to be of continuously high quality and quantity. This view could be argued to be somewhat similar to the foundation of conventional industrialized agriculture, but with the point of contention being what “proper maintenance of the fundamental resources” means. In conventional high-intensive farming, crop yield is seen as the predominant criteria to measure the success rate of the production system, while other values such as soil fertility or biodiversity are seen as secondary qualities who must contribute directly to increased yields in order to be considered significant. Using inputs and practices that can potentially degrade the production base is therefore seen as acceptable as long as it ensures high yields. Proponents of intensive agriculture who state this point of view explicitly can be difficult to find, but the statistics are clear: global use of nitrogen fertilizer increased from 75 million tonnes in 1996 to 100 million tonnes in 2006 (Paull, 2009: 19), and intensive agricultural methods are becoming increasingly dominant across the globe (World Bank, 2007: 51f).

In the concept of organic farming, sustainability in maintaining the production basis is essential. This means that the long-term life of the farm and its resources are of equal importance to the yield of the current season, and that this principle must therefore translate to the practical techniques that are used on a daily basis to maintain the system. The manifestation of this ideal is incorporated in the various standards and guidelines (see below) that a farmer has to adhere to in order to become a certified organic producer. This is partly done in order to provide the consumer with a production guarantee, and partly to keep producers in check. For example, a poor farmer in a developing country will have most interest in the immediate benefits of this seasons yield, especially during seasons with low income or food. This can lead a otherwise organically certified farmer to abandon organic principles and cut corners, for example by applying chemical pesticides, to gain immediate benefits. Incidents like this can be reduced by maintaining a system where producers are routinely checked for compliance with agreed standards. The above might seem like an abstract ideal, but with the implementation of organic growing techniques it is quite possible to achieve a sustainable agro-ecosystem.

**Application**

Ideally, the practical application of the organic concept manifests itself in all aspects of the farming system, but the following characteristics that impact directly on crop production are common for organic farms. It should be noted that, as in the rest of this report, the methods mentioned are ones used in small-scale farming. Organic farming systems in developed countries are mostly mid- or large-scale, and while the basic principles remain the same, some methods vary, and discussing these variations would not bear much relevance for the examination of the conditions of smallholder Ugandan farmers.

Any plant can sustain itself in its natural environment, but to grow crops with significant yields, inputs are needed in the cultivation process. The use of non-chemical materials as input is fundamental to the maintenance of an organic crop production. These inputs are often made from on-farm materials in accordance with the idea of a system that is as self-sustaining as possible. Fertilizer is one of the most important inputs, as it provides nutrients for plants and helps to maintain the fertility of the soil. Biological fertilizer can be purchased factory-made, but in most cases inputs are made from materials readily available on the farm. This is ideal for a small-scale farm where compost made from plant waste material, together with waste from household animals such as cattle can provide nutrients for crop production on a small-scale farm system (Knudsen et al,
Animal fertilizer is a key supplier of nutrients, so to be as self-reliant as possible, an organic small-scale farm must engage in animal husbandry. While this is not always practised by the specialized crop producers in the North, almost every farmer in developing countries such as Uganda keep animals as part of the household. As nutrient addition by input is lower than in conventional agriculture, to maintain a high nutrient level, various techniques are used to retain nutrients in the soil. A common way to do this is to use intercropping and crop rotation on the fields so as to prevent the soil-depletion that is often the consequence of monocropping (Pender & Mertz, 2006: 225). To actively add nitrogen to the soil, catch-crops can be planted, as a main crop or between other crops. Catch-crops are plants such as legumes and pea plants that fix nitrogen in the soil. This is an significant part of maintaining soil fertility and quality by biological means, and must be done as part of the seasonal crop rotation (Badgley, 2006: 91). A problem that remains to be solved is the issue of phosphorous deficiency in the soil. In Northern countries this is not a widespread problem, as soil conditions and nutrient cycles differ, but for smallholder farmers in African countries, there are limited solutions available for improving phosphorous-poor soils (Pender & Mertz, 2006: 230; Niggli, 2007: 77).

While soil fertility is fairly uncomplicated to maintain, the treatment of unwanted elements in the farming system can be more problematic when growing crops organically. Pests, diseases and weeds can be fought and controlled, but the efforts needed are considerably greater than in conventional agriculture where a variety of agrochemicals can be applied. Pest and diseases can be controlled by biological means through a variety of different methods, such as applying biological pesticides made from on-farm materials and planting insect-repelling plants. Furthermore, a number of pest-combating insects are found naturally in organic systems (Stinner, 2007: 58). Most of the methods for biological pest and disease control have as a common characteristic that they are more labour-intensive than the use of chemical inputs, and can therefore add to the production costs. This disadvantage may be reduced over time, as there is evidence that organic cultivation techniques will in the longer term help in making plants more naturally resistant to pests and diseases (Niggli, 2007: 81).
Maintaining biodiversity in the farming system is another key element in organic cultivation. A wider variety of crops grown means that the soil may be better utilized, as different plants have needs for different nutrients found in the soil. As chemically based fertilizers and pesticides are not used, organisms have better living conditions, making for a diversity of insects and animals in the farm system that can be a help in combating pests (Pender & Mertz, 2006: 225). The high biomass of microbes and bacteria also contribute to making the farming system more resilient towards crop failures, since crop diversity is greater and growing seasons longer (Parrott et al, 2006: 169).

As previously mentioned, organic agriculture is not a static concept. New methods are constantly being developed and tested, combining traditional practices and scientific research. And as methods are always dependant on the context in which they are used, a considerable variety exist within the methods described. These practises are not newly developed but are often more or less modified reapplications of pre-industrial agricultural techniques (Parrott et al., 2006:163f). Numerous variations of these techniques can be employed to adapt the production to local circumstances. For example, the types of pest control can vary greatly according to crops grown, the nature of the local climate and the local eco-system the farm is a part of. Even though organic practices from the beginning were based on traditional practices, there were several issues that needed scientific research to address. For example, the problem of nitrogen depletion, only began to be solved systematically when techniques such as crop rotation and planting nitrogen-catching crops began to achieve scientific documentation from the 1950's (Niggli, 2007: 76f).

The above things considered, careful planning and management of farm resources are essential to maintaining an efficient and sustainable system. This requires a certain level of knowledge and education, making organic farming a knowledge-intensive mode of production when compared with conventional agriculture where use of agrochemicals serve as broad and simple solutions to most of the problems arising, and therefore requires less expertise and knowledge.

Standards and certification

To ensure that all organic products are made according to the same basic principles, producers are required to become certified before they can sell produce as organic. The establishment of standards for organic products can be traced back to the 1920's, where the biodynamic movement in Germany formulated the first formal requirements for farmers who wanted to brand their products as biodynamic (Schmid, 2007: 153). From the mid-1900's, a number of different organizations, mainly in Europe, developed separate organic standards, and while the leading international organic organisation IFOAM (International Forum for Organic Agriculture Movement) published the first version of a standard intended for widespread use in 1982, a complete harmonization of standards have not yet been reached. There are still a bewildering array of different organic standards that an organic producer can be certified to, with sometimes rather different requirements. Recent years have shown a trend of standards becoming increasingly differentiated, as the various standards organizations develop specialized standards. This development towards standards disharmonization is sought countered by actors in the private sector (such as IFOAM), and public policy makers (such as the EU) by formulating standards that attempt to bring previous efforts together. The European Union regulation 2092/91 has gone a long way in harmonizing standards in the European market, and when the FAO and WHO Standards Programme (the Codec Alimentarius) established a set of organic standards in 1999, they did so on the basis of the standards already formulated by IFOAM

Many of these techniques were not new inventions – planting nitrogen-fixating plants to improve soil quality is documented as far back as ancient Greece – but for perhaps the first time they were systematically documented and integrated into a formalized production mode.
That standards become increasingly harmonized will most likely lead to a more stable organic market, as labelling confusion amongst consumers will be reduced. Moreover, the fact that products originating in developing countries such as Uganda are marked with internationally recognized certification labels is likely to increase consumer confidence in these products. Harmonization is also beneficial for producers in developing countries in that increases the number of potential buyers per type of certification. Producers obtain the type of certification that the buyer needs to export to the market they are linked to, which in a sense binds the producer to a specific buyer. Complete harmonization of standards would mean that the producer would have a higher degree of freedom in selling to different buyers, as a possible new and costly certifications would not be needed when switching to a new buyer.

Organic producers in developing countries are usually certified to European or North American standards, as the produce is intended for consumption in these territories. Uganda is a good example of this, with producers adhering to the standards developed in the countries where the products are exported. Several certifications organizations, some of them local, operate in the country, but most certification is done according to EU regulation (Gibbon, 2006: 10). Certification is costly, and remains one of the most expensive entry barriers to organic production for the producer. Even in countries with highly developed agricultural sectors, certification is financially supported and subsidized by government funding. If this was not the case, only a fraction of farmers would be able to convert by own means (Gibbon & Bolwig, 2007 :4).

With the increased expansion of the organic sector and the proliferation of organic products in Northern markets, the debate continues on whether the increasing levels of details and specialization dilutes the founding organic principles, or if they are improving producer guidelines and help increase consumer confidence (Schmid, 2007: 165f). Both positions have some validity, but the fact remains that the harmonization of standards have helped 'organic' to become a consumer-recognized brand, recognized by the majority of consumers in the Northern markets (Aschenmann et al, 2007: 138).

Finally, it is important to note that organic certification is not a product guarantee. It does not guarantee high quality or other properties of the product, such as health benefits,. The certification is a process guarantee, stating that the production process adheres to the requirements formulated in the standards.

Benefits and disadvantages of organic agriculture

When it is maintained thoroughly, the characteristics of organic agriculture described above lead to a farming system with unique properties. Mentioned here are the benefits and disadvantages of this system that have the most direct consequences for the producer.

Benefits

The advantages of organic agricultural production can be classified in two sections: the environmental benefits that come from changing to a mode of production that fosters sustainable resource use, and the economic benefits that are obtained by producing for a market where more favourable prices and conditions can often be obtained. In addition to this, there are a number of social benefits that a producer gains from producing organic. These will not be discussed in depth, as it falls outside the economic and environmental focus of this report. Another reason for the
exclusion of this aspect is that it appears to be an area where only limited research effort have been made so far, meaning that the conclusions would have limited validity.

**Environmental benefits**

The concept of organic production was initially developed as an alternative to the dominating system of industrialized agriculture, and the environmental sustainability remains a key value in organic production (Sligh & Cierpka, 2007: 37). For the farmer, the perhaps most tangible benefit is the heightened quality of the soil, something that is a constant focus in organic farming. The growing and fertilizing methods that includes intercropping and crop rotation techniques ensures that the levels of nutrients and biological activity is higher than in conventional systems (Stinner, 2007: 55). Sustaining of a high soil quality will also ensure that the water retention in the soil is high, making crops more drought resistant, and the land less vulnerable to erosion (UNEP, 2008: 12). When a high topsoil quality is sustained, more crops with more stable yields can be grown, even in marginal conditions (Halber et al, 2006: 294). These are especially beneficial properties in areas and countries that are affected dry climates and soil degradation, as many African countries are (World Bank, 2007: 38, 65). Erosion of fertile topsoil is responsible for the undermining of important parts of the resource base, and the prevention of this contributes to the sustainability of the entire local environment.

Biodiversity, an important factor in environments on all scales, is higher in an organic production system. This is a general environmental benefit, but it also helps to make the production system itself better. For the farmer, this results in a production better able to withstand external shocks – a wider variety of crops and other plants means increased resilience towards stresses on the micro-environment that is the farm. The high crop diversity and longer growing season that is the result of biodiversity in the farming system will also increase food security and nutritional quality of the household's food intake. Furthermore, since organic farms will not experience the soil degradation that is the result of the loss of vegetation and organic soil matter that can occur in more unsustainable systems (Knudsen et al, 2006: 10), crop quality and yield can be maintained at a level where food security is more easily maintained. The increased stability of the livelihood that these things bring can consequently add to the economic benefits that the farmer experiences.

**Economic benefits**

Anyone who has bought organic products in a supermarket will know that organic products are sold at (sometimes drastically) higher prices than their conventionally produced counterparts. Price differences on some products have decreased over time, but on most organic products the price remain markedly higher (Aschermann et al., 2007: 144). This relatively higher price reflects a number of differences in the value chains of conventional and organic products, most notably that the value chains for organic products are longer, that more labour is required for production, and that most organic production is small-scale when compared to the conventional food industry.

For the producer, the higher prices can mean an increase in income, but this very much depends on where in the world the production takes place. Producers in Northern countries are in competition with each other, forcing them to reduce profits to be competitive. Demand for organic products from tropical climates exceed supply (Namuwaza, appendix D: 76), and therefore prices tend to favour producers more than would be the case if suppliers competed for demand. In addition to this, many of the producers in developing countries are farmers who do not have access to the world market by other means, but can acquire increased profits from access to the organic market. Increased profits for producers is especially favourable, as organic yields can increase dramatically when comparing with traditional agriculture, and average yields also tend to be more stable in organic systems when converting from low-input systems (UNEP, 2008: 33). It should be pointed out
that this can vary greatly, and that the question of whether organic yields are indeed higher than conventional agriculture is a highly contested issue, with some researchers arguing that this is only the case for select crops, that organic yields are too unstable, and that chemical inputs are a basic necessity to maintain the world's current level of food production (Pindstrup-Andersen et al., 1999: 24f). While the debate is not entirely settled, the majority of research in small-scale farming systems indicate that in systems where inorganic fertilizers have not been in use prior to conversion, yields do indeed increase after conversion to organic methods, both for food- and cash crops. (see for example Pretty et al. 2002; Halberg, 2006; Walaga & Hauser, 2005: 76; Gibbon & Bolwig, 2007; Badgley et al, 2007). Yield increases in the triple-digits has been seen for some crops, making organic cultivation a strong bid for securing both food security and financial stability. The increased yield means more produce to sell on local (and possibly export) markets, which is a source of income. But another economic benefit is that the household growing organic will have to buy less food crops on local markets, as its degree of self-sufficiency has increased. This can mean quite a lot in areas where incomes are low and food insecurity is prevalent.

If producers are able to connect with exporters, the economic benefits can be even further increased. Linkages of smallholders to high-value supply chains helps to increase not only incomes but also market security, something that affects many smallholder farmers with a weak market position. Furthermore, the participation in modern supply chains can help the producer to gain access to assets such as training and contacts that would otherwise be unavailable to them (World Bank, 2007: 127), and can provide the opportunity for further development.

**Other benefits**

Converting to organic farming systems can lead to many other benefits besides the ones listed above. One of these are the health benefits that come from not handling agrochemical in the daily maintenance of the farm. Pesticides are estimated to cause more than 350,000 deaths every year globally (World Bank, 2007:10), with as many as ten times as many farmers becoming poisoned (Knudsen et al, 2006: 15). A contributing factor to this most likely misapplication of pesticides and lack of skills at farmer level (DeGregori, 2002: 149), but the number still stands as an indicator of the destructive properties of agrochemicals.

Apart from having their food security increased, the household producing organic will also experience an improved nutrition situation. With a wider diversity of food crops grown, the household members have the opportunity to diversify their diet which will improve the nutritional value of their calorie intake. In developing countries where the majority of households grow a large part of their food themselves, unvaried diets are a partial cause of child maldevelopment and deficiency diseases. Increasing the variety of the basic food intake can help to improve general health tremendously.

The employment opportunities that are created by the increase in labour requirements can be seen as a benefit in the right circumstances. It can help to reverse the local migration trends that tend to go from rural areas to cities and create concentrated poverty in urban areas. However, this will mainly tend to be the case in countries where the agricultural sector is dominant, and where unemployment in rural areas is high.

From a more anthropological viewpoint, the rediscovery and preservation of traditional agricultural techniques that occur when alternatives to chemical inputs are sought can be seen as a cultural benefit. The organic method encourages farmers to preserve and build on traditional knowledge, as this knowledge will often have been developed over long time-spans to suit the exact needs of the particular area they are developed in (Walaga & Hauser, 2005: 59). The use of more effective
techniques have the potential to spread in the community around the farmer. A spill-over effect can occur when farmers who have been trained in organic production can teach their newly acquired skills to other farmers in their area (see for example UNEP, 2008: 28). This spill-over is not guaranteed to occur, as knowledge dissemination in a community depends on a variety of local sociological factors.

**Disadvantages**

While having many benefits, organic agriculture is not a production method without disadvantages. Conventional high-intensive agricultural techniques have become widespread in many parts of the world for a reason, and the areas where organic agriculture is less competitive must be considered if its benefits are to be fully utilized. The disadvantages with the most consequences for the producer are listed below.

**Extra costs**

As described above, there are several reasons for the high price of organic products. The higher price can be beneficial for the producer, but it is also a consequence of the higher production costs in organic production. Part of the reason for this is the value chain for organic products being longer than that of conventional products – the extension staff, certifiers, and other additional links in the chain must necessarily add to the final price of the product. Another factor is that some of the characteristics of organic production result in increases of production costs. Even though the farmer saves the cost of purchasing chemical inputs, there are other things that add costs to the organic product. One is the extra labour requirements, described below. Another is the additional labelling and separate handling of organic products that is required. Documentation and tracing is important at all part of the product chain to document to importers and consumers that products sold as organic are correctly labelled. For the farmer and the buyer who both handle the product before it is packaged, this requires careful handling, and this in turn adds to production costs (Gibbon, 2007: 30).

This, however, depends on the setup of the production – in cases where only organic produce is handled, separation costs are negligible. However, the field organisation of organic producers also add to costs. Organic markets operate separately of conventional markets in developing countries, since there is no demand for certified organic products on the local village markets where the organic farmers live. Organic products can only be sold in small quantities on national markets, so the main share of the produce has to be exported. While this has the advantage of connection producers to world markets where they can sell produce at premium prices, it also results in a dependency on export markets that can become problematic in a situation where demand for organic products drop.

There is no exact formula for calculating these costs when comparing to conventional or traditional farming methods, as it very much depend on the specific circumstances. Not all of the costs mentioned are likely to occur for a small-scale Ugandan farmer, as their level of operation is much smaller than the average Northern organic producer, with similar lower overhead costs. The costs are mentioned here to give an overview of the reasons for the higher product price. The ones most relevant for Ugandan smallholders will be taken up in the analysis in chapter 4.

**Higher labour requirements**

The lack of chemical inputs in the production means that many crops have a higher requirement for manual maintenance when grown organically. Labour requirements vary according to what type of organic production is pursued, but for organic horticulture (which is practised by most smallholder farmers in developing countries) a considerable extra labour effort is needed (Wynen, 2003: 208). However, the labour is more evenly spread out over the season than it is in conventional production
Where biodiversity is increased by planting a higher variety of crops, extra effort to plant and maintain crops is required, compared to conventional systems that generally have lower variety in crops (Knudsen et al., 2006: 8). Weeds have to be either manually removed or tolerated on the fields, adding to the labour requirements at harvest time (Niggli, 2007: 78), and the production and application of compost and biological fertilizer adds to the time the farmer has to work in the fields. Extra time spent on doing paperwork and other administrative tasks to maintain organic certification can also be seen as an extra cost in labour, since organic certification requires a larger amount of control visits and documentation, relative to conventional production (Walaga, appendix G: 88f). However, most of these cost are incurred by those higher up in the product chain than the farmer, and especially in the outgrower systems that are common in developing counties, the administrative costs remain minimal for the producer.

The relatively larger inputs of labour is required in production will add to the cost of the final product, but only in cases where labour costs are significant for the producer. Farmers who have a high degree of subsistence production and operate in areas with low labour costs and high unemployment rates will not be as affected by the increase in demands for labour.

**Conversion and other entry barriers**

The costs of conversion from conventional to organic agriculture is one of the biggest hurdles for all parts of the sector. In industrialized countries conversion costs are considered a significant entry barrier for producers to the organic market, which is why many governments choose to support the process (Padel & Lampkin, 2007: 94ff), and even in developing countries where traditional agricultural practices are not far from the practices required in organic production, conversion can be an expensive process. This is mainly because of the relatively high costs of the certification required to sell products as organic on the world market. Both in Southern countries as well as many Northern countries certification costs are subsidized to some degree (Gibbon & Bolwig, 2007: 4; Kristiansen & Merfield, 2006: 11f), but unlike a country like Denmark where the state subsidizes farmers on a regular basis, certification subsidizing in developing countries is often done by private organizations promoting organic agriculture. As it is unlikely that certification costs will decrease markedly, new low-income farmers entering into the organic sector create a continuous need for subsidizing. Even if these subsidies increase, this issue remains a significant entry barrier to the sector. In practice, this closes the option of becoming an organic producer to anyone who does not have access to subsidies. Few farmers will have the financial capital to pay all entry costs by themselves, and the institutions responsible for subsidizing certification cost thus becomes a linchpin for the expansion of the sector.

**Markets**

The largest markets for organic products are in Europe, North America, Japan and Australia, with North America and Europe accounting for 97% of global revenues (Willer et al., 2008: 53). Countries in the developing world generally have next to no local market for organic products, due to low purchasing power in the population and limited marketing efforts. The fact that a significant share of organic production is done outside the the main markets for these products hints at a discrepancy in the world organic market. Even though the organic industry has been in continuous growth for several decades, organic products still holds a relatively small market share when local at global food markets. The organic market is thinner than the market for conventional products, meaning that demand is more spread out and the number of potential customers for a particular product is limited (Gibbon, 2006: 28). This makes the market potentially more vulnerable to shocks in the world economy, and makes producers dependent on few buyers. The position of all parts in the value chain is therefore more vulnerable, as a sudden drop in demand from one buyer can seriously affect
the producers ability to sell the product at all, and thereby posing a threat to their livelihood. This is mostly a threat to the developing countries that have little or no opportunity to sell their organic production on local markets (Willer et al. 2008: 57).

**Summary**

Organic agriculture is a integrated system approach that is not concerned solely with one facet of the system such as output, but incorporates a wider range of factors in its concerns as it aims to improve both the production base and the output of the production. The basic argument for this focus is that output cannot be optimal in the long term if the production base is not properly maintained. Weighing the benefits of organic agriculture with the disadvantages, it is clear that the organic mode of production offers opportunities for the farmer to improve both income and the quality of the production base. With a sustainable production system as the base of its livelihood, the farmer household's prospects of improving and maintaining its living standard increases. The high costs that go into establishing an organic production system remains a significant barrier, keeping many potential producers out. This contributes to hindering the expansion of organic agriculture and, as we shall see later, creates a bottleneck around the organisations supporting conversion and certification. But as in indicated above, some of the disadvantages in organic production may be negligible for a small-scale Ugandan farmer, or they might even be turned to an advantage, as outlined in the next chapter.
Chapter 3 – The organic sector in Uganda

Background info on the agricultural sector

Agriculture is the backbone of the Ugandan economy, with nearly 90% of the population of 31 million being engaged in the sector, and 68% total exports being agricultural products (Tumushabe, 2007: xi). The majority of the land found in Uganda is arable, with favourable conditions for cultivation. The soil is fertile, and the equatorial climate makes for two harvest seasons in a year. As in most other African countries, the percentage of irrigated land is very low (World Bank, 2007: 65), making agriculture dependant on rainfall. There is no immediate shortage of land, although there are some areas that are in exception to this trend, where soil degradation have caused scarcity of good arable land. The National Environmental Management Authority of Uganda projects that arable land may run out at early as 2020 (NEMA, 2007: 59).

Since Uganda, along with most other African countries, never really went through a 'Green Revolution' phase as did Asia and Latin America, farming methods have largely remained static. The agricultural sector is not very developed compared to Northern intensive farming systems, with most Ugandan farmers being family based and engaged in subsistence farming (Tumushabe, 2007: 6). The use of agrochemical farming practises are not widespread. This is partly due to the poverty levels of the average farmer – nearly 35% of the rural population lives in absolute poverty (UBS, 2009: 24). Farm size average around 1 hectare or less most of the rural population, and many do not own the land they cultivate (Tumushabe, 2007: 56). It is difficult for most farmers to afford even small amounts of chemical fertilizers and pesticides, and in the extent they are used by smallholder farmers, it is for production of cash crops such as coffee and cotton (Walaga & Hauser, 2005: 67). In 2005, a total of 4.298 tons of pesticides and 15.500 tons of fertilizer was used in Uganda (NEMA, 2007: 264). Considering that the urban population engaged in farming is around 28 million, this makes for a very low national average chemical consumption per household.

While the limited use of agrochemicals has meant that Uganda has so far steered clear of the environmental problems that these inputs can cause, this does not mean that agriculture has had no negative effects on the environment. Environmental problems are being caused by unsustainable practises by the rural population, many of them related to farming. Soil depletion is a problem on the rise, but opposed to developing countries where soil depletion is often caused by excess use of agrochemicals (Knudsen et al., 2006: 10), the soil depletion in Sub-Saharan countries are mainly due to declining lengths of fallow periods and burning of crop residues (Pender & Mertz, 2006: 218). Erosion is also becoming a problem in Uganda, with deforestation and overgrazing leaving large areas of topsoil vulnerable to water erosion (NEMA, 2007 :60). This in turn affects agricultural land, as erosion decreases the total amount of land suitable for utilization. The increasing pressure that population growth is putting on the natural resources is a strong factor in these unfortunate developments. In spite of increases in life expectancy and reduction in child mortality, Uganda still has one of the worlds highest population growth rates at 3.2% (UBS, 2009: iv). Overpopulation and resource depletion contributes to traditional practises such as long fallow periods or shifting cultivation becoming more difficult to pursue, and in some cases abandoned entirely (Walaga & Hauser, 2005: 69). Contributing factors to this dynamic may also be the straining of social structures

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7 For example, use of mineral fertilizer is 1 kilo per hectare on average (Walaga & Hauser, 2005: 67). In comparison, the average fertilizer use in Sub-Saharan Africa is 13 kilos per hectare, and in South Asia the average is 98 kilos per hectare (World Bank, 2007: 52).
caused by the decades of internal conflicts in some districts, as well as the increasing migration to the urban areas.

Organic production

Organic agriculture was brought to Uganda in the late 1980's by Ugandans having studied organic techniques in the UK. A few farmers were trained during the early 1990's, and in 1993 the first organic export company began to export organic products to Europe (Dissing, 2007: 1). It took the creation of two central institutions to initiate the growth that today characterises the organic sector. The first was the EPOPA (Export Promotion of Organic Products from Africa) program, a development initiative created and funded by Swedish development aid, launched in 1997 to assist farmers and exporters in becoming organically certified, and to promote organic exports. The program ran in the three East African countries Uganda, Kenya and Tanzania for 11 years, phasing out during 2008, after where the structures it had helped create continued, managed by a private company (Taylor, appendix B: 67). The program identified farmers for organic production, offering training, extension services, organisation and export linkages to them. EPOPA has played played a central role in the development of the entire sector and has has been involved with most other operators – in 2005, 12 of 16 certified exporters with certification had received support from EPOPA at some point (Gibbon, 2006: 2).

The other significant (and more permanent) institution created was NOGAMU (National Organic Agricultural Movement of Uganda), an umbrella organisation formed in 2001 to connect and support organic farmers, processors and exporters, and to advocate for increased government support and an improved legal framework for organic agriculture. Like many others in the sector, the NGO was created with support from foreign development aid, and continues to depend on financial support for its existence (Dissing, 2007: 5). Since its inception, NOGAMU has developed to a position where it is the prime organisational hub that connects organic farmer organisations and companies. The organisation is involved in nearly all stages of organic production, export and marketing. It identifies farmers to train for organic production, facilitates contact between farmers and export companies, and promotes Ugandan organic products in export markets. In addition to this, it coordinates advocacy efforts, having as one of its main results so far the lobbying against the formation of a government-owned organic regulation, something that would have lessened Uganda's ability to compete considerably (Gibbon, 2006: 3). NOGAMU also owns UgoCert, Uganda's largest certification body that has been operational since 2004. International certification bodies still handle the vast majority of organic certification in Uganda (Namuwoza, appendix D: 77), some in cooperation, others in competition with UgoCert.

Out of the approximately 28 million Ugandans with agriculture as their primary livelihood, the share of organic farmers is minuscule. Around 45,000 farms grow crops under organic certification, cultivating approximately 185,000 hectares of land (Tumushabe et al, 2007: xii). These are still low numbers, but Uganda remains the African country with the largest amount of certified small-scale farmers, though it does not have the largest organic exports in Africa (Willer et al., 2007: 92). Practically all organic production is done at smallholder level, which fits well with the fact that most farmers in Uganda are in this category. A factor that perhaps has contributed to the focus on smallholders is that the organic sector has been heavily funded by foreign aid, and consequently organic projects tend to have a strong developmental focus. Small-scale farming households are effective to target when trying to alleviate poverty, and this is most likely part of the reason why no mid- or large-scale organic production, such as plantations, has yet been attempted.

The main crops grown organically for export are cotton, coffee, sesame and tropical fruits, with cotton alone accounting for almost 50% of organic exports by weight (Willer et al, 2008: 92).
The value of organic exports increased from 3.7 million USD in 2004/2005 to 6.2 million USD in 2004/2005. This growth has resulted in that organic products now holds a 1% share of total exports (Gibbon, 2006: 15), indicating that there still is a long way to go before organic agriculture constitutes a significant part of the agricultural sector.

Most crops are exported with only a moderate level of treatment, resulting in a low level of value addition for products. This is, however, a common problem with agricultural exports from Uganda. One of the main reasons for this is that the local capacity to develop and manage processing and value addition processes remains low. The product processing taking place is mostly run by the foreign owned companies who have a wider array of experience and resources to draw on, as well as the financial capital to invest in equipment, but the smaller companies and farmer groups have neither the expertise or the capital to invest in value addition equipment (Muwanga, appendix C: 70). An example of the potential profit that is lost because of low processing capacity is found in the production of pineapples. 60% of organically produced pineapples are ineligible for export to the European market because of variations in size. This share of production could be processed into pulp or dried fruit, but due to the low capacity this only happens on few occasions (ibid). Considering that the profits are larger from processed product, this makes the loss of potential profit even bigger.

Of the value addition is taking place in Uganda, a large part of the fruit production is dried or pulped, and sesame is dried and packaged for consumption or resale. Coffee receives only the most minimal processing required to sell it on the world market. The highest level of value addition is done in the processing of cotton, which is spun into yarn before export, a process that adds 3.200 USD of value per ton. In comparison, the value of addition to organic sesame is 50 to 100 USD per ton (Gibbon, 2006: 13).

Some of the companies operating in Uganda are small and mid-size, while others are off-shots or subsidiaries of larger multinational companies. Approximately half of the 14 companies exporting organic products in 2005 were locally owned, the rest being either joint ventures or branches of international companies (Gibbons 2006 :7), with most of the locally owned companies being very small operations (Walaga, appendix G: 87). There are examples of farmer-owned companies that process their own products and have contracts with foreign buyers (Kidd et al, 2001: 29), but only a few of these companies exist, and they still depend on partners for certification support. On
occasion, farmer groups will contact NOGAMU on their own initiative, with requests to receive training and become linked to the export market. This is mostly done by groups who have become aware of nearby farmer groups who have gained benefits from organic production (Muwanga, appendix C: 73). The training received by farmers in conversion can differ according to who is assisting their entrance into organic production. The training received by farmers in conversion can differ according to who is assisting their entrance into organic production. The farmers receiving training through NOGAMU are taught various cultivation techniques, as well as skills necessary for operation in groups and other aspects related to their functioning as a farmers group (Nalunga, appendix F: 84f). Operators may also choose to train producers themselves (Gibbon & Bolwig, 2007: 7), but will generally make use of the training consultants available through donors (Gibbon, 2006: 25).

**Product chain**

The process that forms an organic product chain in developing countries is different to the process as it happens in the developed world. In Northern countries, farmers generally have the skills, knowledge and financial resources to decide for themselves which type of production they want to engage in, and act accordingly with this decision on the market. Given the low resources and limited market access of the average smallholder Ugandan farmer, they are not able to take the same route. An organic production in Uganda starts by someone higher up in the product chain taking the initiative. Usually, an operator who plans to export organic goods initiates contact with farmer groups who organize farmers in a relevant area, either on its own, or through NOGAMU (Taylor, appendix B: 64). The farmer group is then group certified, since output per farm is so small that individual certification would prove to be too cost-ineffective. Where companies need to buy large amounts of produce, entire villages may become group certified, in which case the farmers may not have been organized previously. This is not to say that farmers cannot take the initiative to convert – farmer groups do occasionally contact NOGAMU independently (Muwaga, appendix C: 73) – but they still have to wait until they can be connected to an exporter before their conversion can commence.

The export companies decide what production to engage in, but the crops selected will usually be similar to the ones already grown in the area, and often the farmers will already have experience in cultivation the crop. However, there are examples of crops such as, chili and vanilla, that are not cultivated prior to conversion. Transport of produce to the buyer countries can either be done by plane, from Entebbe airport near Kampala, or by sea, through Mombasa on the Kenyan coast. Even though the extra land transport distance is a comparative disadvantage compared to other East African countries, Uganda has low air freight rates when compared to other African countries, so air transport routes are firmly established (Malins & Blowfield, 2001: 2). The EU market buys by far the largest share of Ugandan organic exports, with Germany, Denmark, The Netherlands, France and Switzerland as the primary markets (Namuwoza, appendix D: 76). Demand is generally higher than supply (ibid), and reports of organic exporters in Uganda who have been unable to sell their products are few. Logically, this should lead to the supply rising to meet the increasing demand, but this is happening very slowly in Uganda. The main reasons why production is not increasing at the same rate as demand are discussed in the later chapters of this report.
The route of organic apple bananas

To illustrate the Ugandan part of the product chain of organic export products from Uganda to Europe, we here follow the route of apple bananas grown in Ntinda in the Western district of Mbarare. The apple banana is a good example of an export crop, because even though it can be consumed locally, the short shelf life of the product and the small role it plays in the diet of the local population means that the local market opportunities are very limited. The non-organic farmers in the area do not cultivate apple banana on any significant scale, and it can therefore be said to be a product that is only grown to meet the demand of the European market, making it as much of an export crop as coffee or vanilla.

Apple bananas are grown next to or intercropped with the green bananas that are a staple food across Uganda. Most farmers are able to sell an average of 30 kilos every two months to the company called Bio Fresh Ltd. This company has, in cooperation with NOGAMU, trained the farmers in organic practises and made sure they received certification. The product chain is started when Bio Fresh receive an order from their buyer, an organic import company in Germany. Bio Fresh field staff then contact the farmer association in Ntinda and places an order. The order is divided between the 18 organically certified members of the association, with members taking turns to deliver if the order is too small to accommodate all producers. The farmer receives a fixed price of 500 Uganda shillings (~0.25 USD) per kilo. The bananas are not harvested by the farmer, but by Bio Fresh field staff. This is done to ensure maximum freshness of the product. The bananas are then transported by road to the Bio Fresh packing facility in Kampala (approximately 250 kilometres), where they are packed in labelled cardboard boxes. The boxed produce is then taken to a cooling facility near Entebbe airport (40 kilometres from Kampala), from where it is shipped on a cargo plane to Germany. The timespan of the bananas being harvested to their shipment out of Uganda varies between one and three days.

(Source: conversations with organic and non-organic farmers in Ntinda, interview with Bio Fresh staff)

Farmers

The three million Ugandan rural households each cultivate an average of 3 acres of land (Walaga & Hauser, 2005: 67). This land may be rented or owned through a variety of ownership systems, and not all land owned by a household is necessarily cultivated. All stages of cultivation – preparing the soil, sowing, weeding and harvesting – is done primarily by hand, with minimal use of machinery. The basic technology level largely remains as it has been for hundreds of years, and the acquirement of modern farming implements is financially unrealistic for the majority of farmers.

While there are some regional differences in diets, the basic food crops grown by smallholder farmers are generally similar. Vegetables high in carbohydrate form the base of most families' diet, with maize, millet, green bananas, sorghum and cassava accounting for the main portion of the average rural Ugandans food intake. This is supplemented with vegetables such as beans and peas as protein sources. In the poorer households, meat is rarely eaten as it is expensive to buy and because these households keep few animals. Mostly chickens, goats or cattle are kept, and while the animals are primarily kept for the meat, eggs and milk they produce, most families have nowhere near enough animals to maintain a steady supply of meat.

The vast majority of farmers are engaged in subsistence farming, with the majority of the grown food crops being consumed within the household. Organic farmers grow export crops as an integrated part of the farming system in the smallholder farms, and farmers therefore do not become entirely dependant on their export crops. Crops are stored either within the households or
collectively in village stores. In the case of fresh produce, such as fruit, it is common practice that the staff from the exporting company harvest crops on-farm, to quicken the supply time and reduce post-harvest losses (Bio Fresh, appendix A: 60). Non-export produce is sold on local village markets, or to traders who transport the products to regional markets or to other districts. Prices on the local markets fluctuate greatly from season to season, with prices especially low in harvest seasons. Producers have very little control over these price fluctuations, and are often forced to sell crops at unprofitable times to make cash when managing a crisis in the household.

Organisation of farmers have had a bumpy history in Uganda. Farmers unions, associations or cooperatives have historically had important roles in the development of the economies and democracies of many Northern countries, partly by being a mouthpiece for farmers to articulate their interests, and by being a catalysts in the modernisation of agriculture. There have been attempts to organize Ugandan farmers, most recently in the early 1990's where large cooperatives were formed to coordinate producers in the agricultural sector (Dissing, 2007: 1). Unfortunately the cooperatives were dismantled after only a few years in existence, a main cause being the corruption that is so widespread in practically all layers of Ugandan society. The leadership, which was politically appointed, did not represent the interests of the farmers properly, and payments to farmers were managed poorly (Dissing, 2007: 1; Taylor, appendix B: 69). This history has led to a widespread scepticism to large cooperatives, and the issue remains a sensitive one. As a consequence of this, farmers are now poorly organized on a large scale, and development of the agricultural sector is done through smaller structures such as village-based farmer groups.

When expanding organic production to new areas, two general approaches to introducing organic agriculture to smallholder farmers has been used: the community oriented approach where food security and production for local markets is central, and the market oriented approach that focuses on connecting producers to the export market (Walaga & Hauser, 2005: 74). There is a debate over which of these approaches yields the most sustainable results, the argument for the former approach being that it is not sustainable in the long term to depend on contact with exporting companies for income. A main question in this discussion is whether it is necessary to have linkages to buyers who export the organic crops, and if is not sufficient to teach farmers the methods of growing organic, without having them go through the expensive and time-consuming process of certification and constant control visits. In response to this, it is argued that farmers are reluctant to engage in a change of their farming system when there is no immediate economic benefits to be gained, and that financial issues are of so high an importance that improvements in food security is not a sufficient incentive to change (Muwanga, appendix C: 70f). A as preliminary conclusion to this debate, a paradigm of using the market oriented seems to have been established, and it appears that all of the major institutions and programs working in the sector have the idea of export promotion integrated in their operations. There is some farmer organisation happening that aims at producing for the local market, and where farmers are not certified to international standards, (Tenywa, appendix E: 78f) but seeing as the aim of this is still geared towards sale of crops, the approach could be described as market-oriented. In the research for this report, barely any examples of projects that used the community-based approach were found.

**Certification**

For the first decade of certified organic production in Uganda, certification was done solely by foreign organisations, with the Swedish KRAV dominating certification and inspection until the late 1990's (Gibbon, 2006: 11). In the 2000's, other certifiers such as IMO, Ceres and Soil Association have entered the sector, and some local organisations have become accredited certifiers who can can
certify producers according to international standards. From a local perspective, the main result of this development is the company UgoCert that is currently establishing itself as a local certifier, albeit one with a minor share of certifications. Having local organisations that are able to certify and inspect farmers is an important development step for the sector, as a contributing factor to the high cost of certification are the visits from foreign certifiers.

Farmers are certified in groups, as production per household is so low that individual certification would be economically infeasible. Exporting companies tend to avoid working with farmers who have a history of agrochemical use, since the conversion period is longer and farmers can be more difficult to train once they have become used to a practise of using agrochemicals (Bio Fresh, appendix A: 62). The costs of certification vary according to the type of organic standard, the type of production, as well as the number of farmers in the project. A 2002 examination of costs note an expense of 4.000-8.000USD for a project of 500 smallholder farmers, and a cost of 20.000USD for a project involving around 10.000 farmers (Walaga & Hauser, 2005: 79). These figures show the economies of scale that are in play, making it more profitable to operate with larger amounts of farmers than in small numbers. This is one of the many reasons that smaller operators have difficulties in maintaining their production (Walaga, appendix G: 87f). Start-up costs per farmer is high, and the partnership is therefore an investment for the company who funds training and certification. A 2005 survey of Ugandan organic operators found that certification costs amounted to 2,3% of the operators yearly sales. While this is a cost for the operator, it is still below the average of 3% in operators in the EU (Walaga & Hauser, 2005: 79).

It would be extremely costly if staff from the certifier organisations were to oversee all control of the individual farmers. To avoid this, an internal control system (ICS) has been put in use by the major operators in the sector. The system works by letting the operator and farmers themselves manage the regular inspections, and the task of the certifier is thus reduced to a significantly less costly evaluation of the internal inspection (Tumushabe, 2007: 56). All export products are certified to the standards applicable in the territories they are exported to. As the European market is by far the most important one for Ugandan producers, the EU standard regulation 2092/91 is what nearly all products are certified to, with only a handful of exporters certifying to other standards (Gibbon, 2006: 10).

External support
Practically all the organisations in the Ugandan organic sector has in some way or other been developed with substantial foreign donor support, as is the case for many other sectors in the Ugandan economy. A study of the 23 major organic operators in 2006 found that 21 of these had received donor support for implementing or upgrading organic production (Gibbon, 2006: 26). Initially, Swedish development aid played a crucial part in development of the organic sector through the EPOPA program, but in the last decade several other governments have extended support to the organic sector. In addition to the Swedish-funded EPOPA, other donor countries having established significant programmes in Uganda have been the Netherlands, the United States, Denmark, as well as the EU (ibid). To this day, foreign development aid continues to play a central role in the maintenance and development of the sector. The focus on export promotion and cooperation with companies in the private sector has decreased the dependency on external support somewhat, when compared to the early days of the organic sector, but central institutions such as NOGAMU and UgoCert still need regular external funding to exist. This has meant that the foreign donors have had a decisive say in formulating agendas and strategies for practically the entire organic sector in Uganda. This is of course unfortunate, as it makes the chances of the sector
becoming self-reliant smaller, but donors are generally aware of this problem, and try to amend it. This is perhaps a motive behind the dominant market-based approach, where farmers can support themselves through their market linkages without, only needing external support for the start-up phase. A significant reason that donor support is still paramount is that the Ugandan government has so far taken little interest in supporting the organic sector.

The governments position

There is no official policy for organic agriculture from the government, despite several years of advocacy efforts by NGOs in the sector (Muwanga, appendix C: 75). As an indicator of the official position on organic farming, the concept is barely mentioned in the nearly 300 pages of the government's most recent Poverty Eradication Action Plan. Support to the agricultural sector in general is channelled through the National Agricultural Advisory Services (NAADS), a semi-autonomous body under the government that offers extension services such as training, seeds and inputs to farmers. Its relevance to organic farmers is rather limited, as the lack of policy means that organic agriculture is not formally recognized as a viable mode of production, and that training for it is consequently not included in the range of extension services. In the annual achievement report of NAADS for 2006/07, a total of two projects relating to organic agriculture is mentioned, out of several dozen projects (NAADS, 2007).

Ugandan official agricultural policies have a history of inconsistency (Tumushabe et al, 2007: xvi), and the government's position on organic agriculture is therefore not surprising, especially when seen in the light of the general development strategy that tends to focus on “modernisation and commercialisation of agriculture” (MoA, 2005: xvi). Another, and less clearly formulated, part of the government's development strategy is supporting mid- and large-scale agricultural operations such as sugar plantations, in an attempt to bring much needed foreign exchange into the economy⁸. This strategy is problematic because the companies operating many of these productions are foreign owned, and profits therefore have a tendency to siphon out of the country. The same critique can be made of operators in the organic sector, but with some noticeable differences. As we shall see in the next chapter, switching to organic production has several beneficial consequences for the producer, benefits that a worker in the foreignly owned textile industries or sugar plantations will not achieve.

Summary

While organic production is low compared to the total agricultural production, Uganda has one of Africa's most developed organic sectors with a functioning and relatively well-funded apparatus for identifying, training and export-linking farmers. The key players in the organic sector have all been created with support from donor aid, and donor support is a continued requirement for large parts of the sector to function as is does. A common trend in the establishing of organic production is market-orientation, where farmers are linked to an exporting company that buys, processes and resells their products. This makes the organic farmers (both current and prospective) heavily dependent on two groups: the organisations and companies who provide training and certification support for the farmers, and the buyers who provide producers with a strong financial incentive to continue organic production.

See footnote 1, page 4. Because this strategy is rather controversial, it is rarely discussed openly. However, since it has been consistently referred to during conversations and discussions with several different people working with development and/or agriculture, it is felt that there is sufficient basis for it including here.
Chapter 4 – The effects of organic agriculture on livelihoods

In this chapter, it is examined what happens when the effects of conversion to organic agriculture, when applied to Ugandan smallholder farmers, are seen in the analytical framework of Ian Scoones' theory of sustainable livelihoods (see chapter 1). This framework is used to understand how the livelihood changes manifest themselves, and what the consequences of these changes are for the farmer. Many of the results and observations referenced here are taken from the field study carried out for this report (see page 37).

Using Ian Scoones' concept of livelihood strategies, the conversion to organic agriculture can be seen as a change of strategy. Of the types of livelihood strategy changes Scoones describe, converting to organic cultivation is a *intensification* of production, as more crops are produced with the same amount of natural capital (land). Practically, this decision to change livelihood strategy is not taken by the household by assessing all possible opportunities and options before choosing a strategy, as would be argument by classical economic theory. Instead, what happens is that the household is offered an opportunity for changing their livelihood strategy, and since there are obvious benefits, most accept. In Uganda, the product chain for organic products is not initiated by the farmer, and it can therefore be said that the farmer does not even have the opportunity to make the change in livelihood strategy. This would require that the farmer household was capable of obtaining training and certification by their own means, something that is financially unrealistic even for well-to-do farmers. The farmer is therefore, in a sense, powerless to initiate the change towards this particular livelihood strategy, and is dependent on others. However, this does not differ much from other potential livelihood improvements – if the household was able to pursue this or any other livelihood strategy (such as livelihood diversification or migration) that would improve their situation, it can be assumed that they would do so.

To summarize Scoones' concept of livelihood resources, they can be categorized into four categories: natural, financial, human, and social capital, all of which are present in a household in various configurations, making up the livelihood of that particular household. What the change in livelihood strategy means for the farmer household's livelihood resources is discussed below.

**Environmental benefits**

In view of how fundamental the concept of environmental sustainability is in organic farming, it might not seem like the environmental benefits offered by conversion to organic cultivation has much impact on the daily living conditions of a small-scale Ugandan farmer – especially when the practices of the farmer have not changed drastically from their previously used methods. However, as the environmental improvements are closely tied to the effects of increased crop yield and stability, they become apparent to the farmer through the consequent increased income and food security. Another tangible aspect is the higher resilience to pest and diseases that the increased biodiversity of organic farming system offers. The knowledge of which specific plants, insects or biological pesticides to use in case of attacks on the crops is relatively specialized, and the farmer needs training in order to be able to utilize the techniques properly. It should be mentioned that biological pest and disease control does not solve all problems, and that producers can still find themselves in situations where a significant share of their crops are lost. A portion of the farmers surveyed for this report grew apple banana for sale through the exporting company Bio Fresh. This crop had secured significant earnings for the participating farmers, but following the recent outbreak of two plant diseases that both affected the banana plants, production was reduced to a
level where farmers considered switching to another crop. There was apparently no known cure for the diseases. This shows that organic systems can also be seriously affected by diseases\(^9\), but perhaps equally important, it is a strong argument for the diversification of production, showing that the strategy of focusing on one crop is a vulnerable one in any system.

Some of the environmental benefits are not directly visible, but can be described as avoidances of unfortunate future developments, in which case they may not be manifested clearly, as they are longer-term consequences of the nature of the production. That soil erosion is prevented is perhaps not something that the average farmer will notice in his or her daily routine, but it contributes to countering the overall trend of environmental degradation in which erosion plays a large part. Environmental benefits like these could be argued to be one of the most important aspects of the organic production system for Uganda, while at the same time being the most intangible. If we imagine a scenario where agrochemicals are widely introduced in the Ugandan agricultural sector to intensify production, this would lead to the same environmental problems that other countries pursing intensive conventional agriculture experience such as increased soil degradation and erosion. The exact benefits of avoiding of such a possible future scenario is difficult to calculate, but the examples set by countries who have widely incorporated intensive agricultural methods in their traditional practises are good arguments for using a precautionary approach.

Despite these positive aspects of organic production, the environmental benefits are not a strong selling point when attempting to get farmers interested in organic agriculture. Most are mainly preoccupied with their financial situation (Muwanga, appendix C: 71), which is understandable considering the poverty level amongst Ugandan farmers. In a 2006 survey of Ugandan organic farmers, only 17% gave environmentally related reasons as their main motivation for producing organic (Tumushabe, 2007: 22). This shows the wide difference in views between producers and consumers on what makes the organic production method significant. For the most part, consumers in Northern countries cite issues such as food safety and consumer health as their main motivation for paying premium prices for organic products, but environmental concerns are also a factor in the motivation for buying organic (Hallam, 2003: 183). Interestingly, these aspects are not of immediate significance for the producers who, as opposed to the consumers, are the ones benefiting directly from the environmental advantages. This is taken into consideration when identifying and training new farmers. For example, in the training that NOGAMU facilitates, environmental improvements are seen as a automatic consequence of the nature of the production system (Nalunga, appendix F: 85), and they are as such not a central focus in the motivation of converting farmers.

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\(^9\) As a side note, the application of chemical herbicides would most likely not have solved the problem in this case. Non-organic farmers in the same area had experimented with agrochemicals in attempts to cure the diseases, but with negative results.
To generalize from the above described environmental consequences of the switch to organic agriculture, the increased degree of sustainability in the natural resource base results in an increased degree of livelihood sustainability. The environmental benefits of the organic production system all contribute to increase the quality of the natural capital of the household engaging in organic production, which in turn improves their general livelihood. It is notable that the quality of the households natural capital is increased without increasing the quantity of land cultivated, indicating an improved utilization of an unchanged quantity of land resources. In a country that has one of the world's highest population growth rates, this is a strong argument for pursuing organic production techniques further.

Livelihood survey
A survey of organic and non-organic farmers was conducted in two locations in Uganda during February 2009. 175 certified organic farmers were interviewed, along with 111 non-certified farmers who acted as a control group. All organic farmers were under contract with companies who process and export organic products, and has as part of that process been group certified. These farmers sell two or three crops to the exporter, while also growing crops for own consumption and sale on local markets. The farmers in the control group mainly grow the same types of crops, which are consumed or sold on local markets.

Location and respondents
The survey was conducted in two areas of Uganda: The first location was the northern district of Lira, where the crops grown for organic exports are cotton and sesame, 154 organic farmers were interviewed, with a control group of 91 non-organic farmers from nearby villages. The second location selected was Ninda near the town Mbarare in the western district of the same name, where fruits (mainly apple-banana) is grown for organic export. Here, the organic farmers interviewed were members of a small farmer organisation with 21 members. 20 non-certified farmers living intermittent with the organic farmers were used as control group.

The farmers included in the survey appeared to be fairly representative of Ugandan smallholders. With an average cultivated land area of 4.97 acres, the organic farmers were above the national average of 3 acres,
indicating a tendency of relatively better-off farmers to be the ones engaging in organic production. However, with an average family size of 7.5, the households growing organic had an average of 0.66 acres of land to cultivate per family member, making the term 'better-off' rather relative. Farmers in the control group of non-organic farmers cultivated an average of 3.23 acres, closer to the national average and indicating that these farmers were generally less well-off than the organic farmers. The average size of households was close to that of the main group, with 7.3 household members.

The two overall survey locations were selected in cooperation with NOGAMU, who then facilitated contact with the farmer organisations that assisted in the planning of the survey. Selection of survey area was only an issue in Lira, where several villages had been group certified and there were several thousand households to choose from. Selection was done largely by suggestion from the farmers group organising the organic farmers, with proximity being the main selection criteria. The closest village was located a two-hour motorcycle drive from Lira town where the farmers organisations office was located, which meant that the villages selected for survey were the ones lying in closest proximity of town. In the villages, the interviewed farmers were selected at random by taking at arbitrary route between households and trading centres. In Ntinda where the group of respondents was small, location was unproblematic since all members of the farmers group lived close to each other. The non-certified farmers interviewed were all from villages or households located immediately next to the surveyed organic farmers.

The companies operating in both areas had acquired fair trade certification in addition to their organic certification, but this is not believed to have influenced the survey result significantly, as the system was so new that so far only a few farmers had benefited from the extra advantages of fair trade.

**Questionnaire and methodology**

The questionnaire (see appendices H and I) consisted of 16 (main group) or 14 (control group) questions. Apart from finding out basic facts about the household (size, amount of land, crops grown), the questions were aimed at establishing the living standard of the respondent household, as the main goal of the survey was to find out whether the living standard of the household had changed in a certain time period. For the organic farmers, this period was the number of years they had been certified (an average of 3 years in Ntinda and 7 years in Lira). To maintain a comparable time frame between the main group and the control group, the average number of years that the organic farmers had been certified was used as time frame for the control group. So, in Lira where the organic farmer respondents had been certified for seven years on average, the control group respondents was asked questions about their standard of living seven years ago compared to their current standard of living. In addition to the respondents own assessment of the change in living standard, three indicators were selected to measure how the living standard and livelihood situation of the family had changed: number of animals and number of children attending school, now and prior to certification.

The results of surveying the number of schoolchildren can be considered a weak indicator of wealth, as primary education in Uganda is subsidized by the government. Furthermore, in the cases where farmers have been certified organic for a long stretch of years, the time period becomes so long that some children may have finished school, thereby making the 'before' and 'current' numbers unreliable in showing the effects of wealth increase or decrease on this particular indicator. On this background, the amount of animals owned and the assets acquired was chosen as primary indicators. This was added to the respondent's own assessment of whether a change in income and living standard had occurred.
Financial benefits

If the environmental benefits are largely intangible (at least in the short term), the economic benefits of organic production are the most immediately tangible to farmers, as they quickly feel the effects of the premium prices they receive from the organic buyers. The mechanism through which the households financial capital is improved is a fairly simple one: When the farmer has a stable link to a buyer who can guarantee a minimum purchase, the stability of the income increases. In addition, when the price for the products sold to the buyer is higher and fluctuate less than the prices that the farmer previously received, both stability and income increases. This income increase has been demonstrated in several studies. In a survey of 172 Ugandan organic farmers growing coffee, cocoa, pineapple and vanilla, Gibbon and Bolwig found that gross farm income was significantly higher for organic farmers selling crops for export, than the conventional farmers in their survey (Gibbon & Bolwig, 2007: 19f). The organic farmers examined also sold significantly larger amounts of crops, presumably because of comparatively better production abilities (higher yields), and higher and more stable demand from organic buyers.

An organic farmer with two of the assets his household has managed to acquire with the extra income from sales of organic produce: a house and a radio.

These results are concurrent with the field survey carried out for this report. The main objective of the survey was to examine how the living standards of the organic farmers had changed since their certification, in order to show how the changes in income affected their livelihoods. The results pertaining to immediate economic benefits were clear: when asked if the conversion to organic agriculture had improved the income of their household, 94,9% respondents answered yes. It is also noticeable that 17,7% of these respondents mentioned the income increase that they had experienced at other points in the interview, independently of the other questions. Only 27,9% of non-organic farmers from the control group stated that their incomes had improved during the same time-span as the organic farmers had been certified. The income increase amongst organic farmers was most noticeable in Lira where most of the farmers were only a few years out of the refugee
camp they had been placed in following a particularly bad period of the civil unrest that has affected the Northern districts since the mid-1980's\(^\text{10}\). Compared with the non-organic farmers in the same area, a larger share of the households who sold crops to an organic buyer had been able to acquire assets such as ploughs, animals or bicycles for the household. Of the of non-organic farmers in Lira, 35.2\% had been able to acquire no assets whatsoever in the course of the last 7 years, with only 3.9\% of the organic farmers being in this situation.

Looking at the crop prices in the surveyed areas were coincident with the observed increases in income. In Ntinda, organic apple bananas had a stable selling price of 0.25 USD per kilo, while on the local market, where bananas were sold per bunch, selling prices could go from 0.51 USD to 1.54 USD per bunch. Yields vary from 4 to 10 kilos per bunch depending on season, making a direct price comparison difficult, but it was obvious that non-organic farmers experienced a significant price instability that made their financial situation more precarious. Some respondents described difficulties in selling their crops on local markets at all during peak season when supply floods the market.

The fluctuating prices on local markets can contribute to worsening a the economic situation of a household. Poor rural families generally have minuscule amounts of money saved and very few assets to liquidate. In case of a crisis, there is very little buffer space to manoeuvre in, and this often leads farmers to sell crops on local markets at a time when prices are very low, or before the crop is fully matured. If we use the analogy of farmers using their crop as savings, a crisis in the household will make them deplete these savings before the full potential interest can be collected. This in turn makes the household more vulnerable to other crisis events, as well as more prone to food insecurity in cases where food crops intended for own consumption are sold. As organic prices are more stable, farmers do not suffer the dramatic price variations that occur on the local markets. This stability appeared to be very important to the farming households surveyed. Many respondents noted that local market prices were frustratingly fluctuating, and that the economic stability offered to them by a steady organic buyer was a major benefit to them\(^\text{11}\). The price stability described here is of course only valid for the export crops sold to the organic buyer. Even though all other crops on the farm is cultivated using the same organic techniques, this does not translate to added value on the local market where they are sold. For this reason, many of the interviewed farmers expressed a wish to become able to sell a larger selection of their crops as organic in order to decrease their dependency on the variations of local prices.

\(^{10}\) Farmers were allowed to leave the refugee camps during the day to tend their fields, making the overlap of the number of years certified and their time out of the camps possible.

\(^{11}\) The exact number of respondents who expressed this was not noted, but an estimate would be around a third of the organic households surveyed.
As we can see, being connected to an organic buyer that offers stable prices and steady marketing possibilities can contribute immensely to the financial security of a household, simply by giving the farming household an economical certainty that enables it to plan ahead on a scale that was not previously possible. Another contributing factor to the increased income is that organic the farmers were able to sell larger quantities of produce. As we have already seen, organic production techniques can increase crop yields significantly, especially when converting from a low-input traditional agricultural system. This was affirmed in the areas surveyed. In Lira, where cotton was a main crop, farmers were able to grow 500 kilos of cotton per acre per season, compared their neighbouring non-organic farmers who had a production of 200-300 kilos per acre. This translates to a income difference of 41 USD to 61,4 USD extra per acre for the organic producers, a notable sum for the smallholder farmers.

Looking further ahead in the product chain, there appears to be potential for further economic benefits, seeing how the processing and packaging stage adds significant value to export products. Dried apple bananas have nine times the net unit value of the fresh product (Malins & Blowfield :8), and value addition to sesame is 50 to 100 USD per ton (Gibbon, 2006: 13) – farmers selling sesame to the organic buyer in Lira got approximately 92 USD per ton. These are clear examples of the majority of the profits being made higher up in the value chain. While this may seem like a skewed system that treats the producers unfairly, it appears to be unrealistic that farmers take a bigger part in the processing stage. Two of the organic crops that are processed to the highest degree are sesame and cotton, and the treatment for both of these crops is done centrally by the exporters, using advanced equipment. The product chain would have to be restructured fundamentally if the producers were to play a significant part in processing. This could perhaps be accomplished through high-capacity farmers organisations or cooperatives, but with the current general state of farmer
organisation, this seems unlikely to happen in the immediate future. Generally speaking, the level of farmer capacity and organisation is at such a low level that many consider it unrealistic for farmer groups in their current state to engage directly in processing or exporting in any meaningful form (Taylor, appendix B: 69; Walaga, appendix G: 89f).

Putting the above results into the context of Scoones' livelihood theory, the conversion to organic agriculture results in a clear improvement of the financial capital of a household. Improvement of the financial capital is immediately tangible, and when interacting with the farmers it is clearly apparent that for them, economic benefits are by far the most noticeable aspect of their changed livelihood strategy. That the financial benefits are considered of chief importance by the farmers makes it an important selling point when expanding the organic method to new areas. Of the non-organic farmers interviewed for the survey, 77.5% expressed interest in pursuing organic production, most of them mentioning that they had heard about the increased income and market security that their neighbours had experienced. This further underlines the importance of the financial dimension to the farmers.

Labour

The higher labour requirements of organic production is a production aspect that has very different consequences depending on where in the world the production takes place. In Northern countries where wage levels are high, labour requirements is a factor contributing to increased production costs, but in many developing countries labour is one of the few resources that is abundant. The official unemployment rate in Uganda is at 1.9% (UBS, 2009: 16), but since the majority of the rural population is engaged in subsistence agriculture, accurate unemployment statistics are very hard to maintain, as practically everyone in rural areas is involved in some kind of production, making them technically employed. However, a large number of these people are living at an existential minimum, as indicated by the high poverty levels. This shows a surplus in labour that the agricultural sector is unable to absorb, partly because of the low productivity levels. Taking this into consideration, the high level of labour surplus in rural areas gives Uganda a comparative advantage in the field of organic agriculture. And while developing countries have trouble finding comparative advantages in other types of production, organic production is a niche in the world market that poor countries could exploit successfully. Inexpensive labour as a comparative advantage is often used by developing countries to produce cheap goods for the world market, often with rather mixed results. To an extent, the same critiques that are directed at this strategy can be applied to organic production in developing countries – producers earn a relatively small portion of a products final value, while middlemen such as exporters and processors make the largest share of profits, and producer countries become dependent on buyer countries. But in the case of organic production, the notable difference is that this type of production also contributes to food security, environmental sustainability, as well as giving people access to the global market, who would not otherwise not have had the opportunity.

The survey done for this report did not examine the labour requirement issue, but Gibbon and Bolwig's study of Ugandan farmers show a 20% to 29% increase in labour requirement when cultivating crops organically, depending on the type of crop (Gibbon & Bolwig, 2007: 12). While higher labour requirements for organic production are not a major concern in Uganda where the labour supply is abundant and cheap, it is still a factor. For example, in parts of the country where rural to urban migration is already a problem, it is at times difficult to get people interested in organic agriculture. Elderly farmers describe how agriculture in itself is by many younger people considered 'dirty work' that yields too few benefits compared to the efforts required. Organic agriculture becomes even less attractive due to the extra work requirements. This is an issue that
must be considered if organic production is sought expanded.

The change in labour requirements that the switch to organic production entails does not appear to have a significant effect on the livelihood resources of the household converting. If we consider available labour as part of a household's natural capital, the increase in use of this resource will not diminish it. There are instances where a household will hire labour from outside to assist in farming activities, in which case the extra labour requirement drains the financial capital. However, the very activity that is an expense for the household (harvesting, for example) will eventually become an income (sales of produce), making the overall effect on livelihood resources positive rather than negative. For the average rural household in Uganda, the extra demands on labour can therefore be said to be of minimal hindrance in the pursuit of an organic production livelihood strategy.

Food security

As mentioned above, smallholder farming systems contain a variety of food- and cash crops. Monocropping is rare in African organic agriculture as a whole (UNEP, 2008: 13), and in Uganda it is rare to find a rural household that does not at the very least grow at least three or four types of food crops. The survey carried out for this report did not include the food security issue in its questions to farmers, but during interviews respondents frequently mentioned that yields from their food crops had improved, and that this had increased the livelihood stability of the household. This fits with the increase in yields demonstrated above – since organic cultivation techniques were applied to all crops, the improvements in yields was happening to the food crops as well as the cash crops.

Food security was a concern in Lira, it being one of the Northern districts where years of civil unrest has disrupted food production. Many had only in recent years returned from refugee camps, from where they had had difficulties maintaining their farms and protecting them from rebel raids.
Nearly everyone had been affected in some way, either by having animals stolen or crops destroyed. This had made the farming systems more vulnerable to shocks, as the savings and assets had been completely depleted for a lot of households. As an unfortunate surprise, the second survey location in Ntinda was also found to be affected by food insecurity. Low food supplies in the households were described as being a problem for at least three months of the year, and considering that this is one of the more well-developed areas of Uganda, it appears that smallholder farmers generally have trouble sustaining themselves with food for the duration of the year. When asked what the causes of the low food production were, lack of access to affordable seeds, as well as unpredictable weather were given as the main reasons by the farmers. A group of smallholder farmers will have no chance to do anything about these causes, but the problems can be circumvented by the utilization of organic growing techniques that, as we saw earlier, can improve yields while simultaneously being resistant to unstable climatic conditions. Uganda is not a country where hunger is prevalent, but the recent few years have shown that a worldwide food-crisis can hit segments not directly connected to the world market. Food prices in Uganda rose 15.8% from 2007 to 2008 (UBS, 2009: 27), indicating that food insecurity is a problem on the rise, and with the population growing at the current rate it is only too likely that it will become more prevalent.

Having established that the farmers currently engaged in organic agriculture benefit from increases in both income and food security, this raises the question of how dependent the system is on market linkages. If it indeed is necessary to provide farmers with contacts to exporters to make the production system work, then it can be argued that the dependency on the state of the organic world market becomes too great. The debate on what should be the main priority – food security or export income – has so far been settled in that NOGAMU as the main player in the organic sector use the market-based approach where gearing the farmers for export is the primary priority. Looking at the current state of the organic world market, this appears to be a beneficial strategy. As for food security being neglected due to this approach, a 'one or the other' scenario seems unlikely for the type of farmers found in Uganda. Increased food crop yields seem to be a certain consequence of converting to organic cultivation techniques, and the production of cash crops do not appear to lessen a households ability to produce food crops. In order for the cash crop production to reach a level where food crops are no longer grown in substantial amounts on the farms, a level of intensification have to be reached that is not plausible in the immediate future.

Like the environmental benefits discussed in the first section of this chapter, parts of organic agriculture's effects on food security are not immediately tangible, but can be seen as avoidance of negative future developments. If the current food crisis is any indicator, large amounts of the rural population in Uganda are ill equipped to handle fluctuations in the food market. While perhaps having enough to eat in their daily lives, a lot of families are living on the brink of food insecurity, and the threat of future price hikes on the market pushing them over. The increased food security that organic cultivation techniques offer contributes to the farmer household's resilience to the shocks in local or regional food markets. Such an effect may appear insignificant at the moment, but could have significant impact in the long term.

In terms of livelihood resources, improvements in food security for a household does not directly affect livelihood resources, but it does have indirect effects on the household's ability to successfully pursue its livelihood strategy. When there is food insecurity in a household, resources are strained to maintain the existence of its members, and this affects all other areas where these resources might have been used. For example, if all available money go toward purchasing food, vital areas such as medical expenses and school fees are neglected, leaving the household unable to maintain its most basic assets. Thus, an improvement in food security will give a household a better chance of being able to maintain and improve all its livelihood resources.
Skills

As described above, the farmers need training in order to properly utilize and maintain their natural resource base. This, along with other training activities, constitutes a set of knowledge and skills that can be seen as an improvement of the human capital of the household. The training that farmers receive to become schooled in organic techniques are a prerequisite for their certification, but it has several benefits for the household. Apart from learning new techniques that can increase their crop yields and the stability of their farming system, they also are put in touch with a broader network than they are normally in contact with. Organic farmers have the opportunity to continuously increase their human capital, as they are connected to a framework of organisational support, as well as to their buyer contact, through whom they have better access to extension and training than they would otherwise.

Many of the farmers surveyed for this report noted that the training they had received as part of their certification process had improved their situation. The training also appeared to be a status indicator for some households, a visible proof that they had connections and access to resources that others in the community did not. This is not surprising – demonstrating to your peers that you exceed them in some form of capital is recognisable at any level in society – but it suggests that the access to skill improvement might also result in an improvement of the households' social capital.

Example of educational materials, illustrating simple techniques used to improve a smallholder farming system.

This improvement of human capital may at first seem insignificant in the process to reduce poverty when compared to the financial benefits, but there are also longer term benefits to this aspect. Increasing the farmers human capital base equip them with tools and options that are otherwise not available to them. Being trained in compost technique is not only a knowledge transfusion with the
simple result of getting the farmer to increase crop yields. It is also a way to make the individual farmer more in control of his/her production system, and in turn the basic means that constitute the livelihood that the household is based upon. Furthermore, the aspect of skills and knowledge is connected to the economic dimension in another way. When the increase in knowledge and skills are applied to the farming system that make up the household's livelihood, a increase in the economic capital is the result. Furthermore, as shown above, organic production can result in significant income improvements for the individual household, and these two improvements work in tandem to strengthen the livelihood base of the household. When a larger quantity of subsistence maintenance can be gained from an unchanged amount of land, the resources available to the household can be said to have been put to a more efficient use.

The skills and knowledge instilled in the farmers through the training they receive increases the human capital of the household. This is perhaps the most significant effect that the conversion to organic production has on the livelihood resources of the organic household, since it is the prerequisite for all other effects on livelihood resources. The knowledge of organic techniques is what gives a farmer the practical tools to change the production system he or she depends on, into one that produces goods in higher quantities and of higher value.

**Markets**

At the first level of the product chain, the organic market is a buyers market. Producers are usually not under exclusive contract with the buyer (Gibbon, 2006: 22), but since the buyer has usually funded certification and in many cases hold the group certificate (Namwwoza, appendix B: 65), the lack of contract is more of a formality, as the farmer in practical terms has neither the resources or the contacts to form links to other buyers. In addition to this, exporting companies tend not to compete for suppliers, since there is a vast number of potential organic producers to choose from around the country, which makes it unnecessary and impractical to operate in the same areas as competitors. For the farmers, this means that they are dependent on the one company alone to provide them with the opportunity to sell on the export market. In practical terms, this does not have much consequence for the farming household's daily life, as Uganda's current position in the organic world market is rather favourable, with demand exceeding supply, and little chance of operators turning down. While this dependency is principally problematic, in practical terms it has yet to show adverse effects to the livelihoods of the farmers.

The point where this issue becomes relevant to a households livelihood strategy, is when looking farmers who wish to become part of the of the organic sector. The dependency on buyers, combined with the crucial importance of supporting organisations described earlier, create an obstacle to pursuing a change in livelihood strategy for the households who wish to become organic producers but who are outside the operating areas of the exporting companies. These households have virtually no chance of entering the market, and thus to pursue a different livelihood strategy. Since limits in demand is not the cause of this situation, there must be other hindrances to the expansion of organic production. The most significant of these hindrances will be analysed in the next chapter.

**Summary**

To summarize, conversion to organic agriculture has effects on several of the livelihood resources of a smallholder Ugandan household. Most of these effects can be said to be positive, with increases in both human and financial capital. If we apply Scoones' concept of livelihood strategies, the conversion to organic production can be seen as pursuing a strategy of intensification. Usually, the
amount of land used for cultivation is the same before and after cultivation, making extensification uncommon, at least in the short term. In the long term the opportunity may arise to pursue other livelihood strategies, such as extensification (buying more land) or diversification (starting a small business, for example). This stage does not seem to have been reached yet for the surveyed farmers. Of the 175 organic farmers surveyed for this analysis, only four had used parts of their increase in income to set up a business or other form of income generating activity, indicating that most are still at a stage where their entire income goes towards maintenance of daily expenses, leaving little money for larger investments.

The mechanism of intensification works as follows: the increase in human capital (receiving training) leads to increase in environmental capital (better utilization of the farming system), which in turn leads to an increase in economic capital (income from sale of crops). The natural capital base will not change in quantity, as the amount of cultivated land will generally stay constant. But the quality of natural capital does improve, making it possible for the farmer to gain more benefits from the same quantity. Scoones defines sustainability as a measure of how resilient the livelihood strategy is to external shocks and stresses (Scoones, 1998: 6), and comparing the organic farmers to the non-organic, the livelihood of the former does appear to have become more resilient.

The benefits that were obviously the most tangible to the surveyed farmers were all related directly to income. Several studies, including the one done for this report, shows that the conversion to organic farming has a significant effect on the income of the household. This can be attributed to the contact with a buyer that the farmer has established, and which ensures that the prices the farmer is paid for products is higher and more stable than on the conventional market. This is a very significant benefit for the farmer, and means that in addition to the increase in income, there is also an increase in financial stability. These two things combined, result in improved financial capital, as the farmers have moved away from subsistence-only farming and are now part of a mixed economy.

These are encouraging signs for a group of people that otherwise have few opportunities to improve their own situation. When speaking to Ugandan farmers, many express pessimism towards the future and often have little faith in new initiatives that could improve their situation. The increase in human capital that the organic farmers experience can offer them an alternative to this mind-set by giving them means to better affect their own situation and make a better living for themselves and their family.
Chapter 5 – Hindrances and challenges to expansion of organic agriculture

The previous chapter demonstrated that organic agriculture can create sustainable livelihoods for smallholder farmers in Uganda. The effects on environment as well as income and food security of farmers should be enough of an argument to expand organic production in order to reduce poverty and fight environmental degradation. This chapter discusses the barriers that prevent the expansion of organic production.

Projections of the future of the Ugandan organic sector vary. One scenario imagines the growth in the sector being tied to the growth of the international organic market, which is between 6 and 8 percent annually. This would result in annual organic exports reaching 16.7 to 22.9 million USD in the next 18 years (Tumushabe et al, 2007: xiii), which compared with the 2004/2005 export value of 6.2 million USD would be quite a significant growth. This scenario presumes a continuation of the passive role of the government, with NGO's and the private sector still being responsible for the majority of the growth. In a more optimistic scenario annual growth of the sector continues at the current rate of more than 35%, with consequently higher exports revenues. This presumes that government takes a very active role in supporting and promoting organic agriculture. These numbers indicate a growth opportunity for an economy that currently has trouble finding profitable export strategies. Despite this, the expansion of the organic sector in Uganda is not happening at a speed that the continuous rise in demand for organic products would warrant according to basic supply and demand theory. This indicates that there are hindrances to expansion of the organic sector. The most important of these will be discussed below.

Conversion costs

The conversion and certification process is expensive in any country, and in a developing country like Uganda, farmers are entirely dependent on external support to cover their conversion costs. These costs are paid by either by NGOs who have limited resources and depend on external funding, or by private companies whose willingness to train new producers depend on their own business strategies and projections of sales potential. The individual farmer therefore has very little influence in the matter of becoming certified organic, placing the ability to change the livelihood strategy of a household outside the household. This makes conversion one of the major hurdles of expansion of the organic sector, since it is an activity entirely dependent on the resources and activity levels of the supporting NGOs and companies. One of the factors contributing to the high certification costs is that many of the tasks are carried out by staff from the foreign certifiers, adding high wages and travel expenses to a already costly process. The establishing of UgoCert has helped some in bringing costs down (Taylor, appendix B: 69), but the fact that foreign-based certifiers still manage the majority of certification in the country indicates that there is potential for bringing conversion costs further down.

Organic agriculture has so far been spread on the initiative of NGOs or companies. But if organic agricultural techniques are so effective in improving crop yields and food security, why have they not been adapted widely through word of mouth from the certified farmers? Even for households who have no export links whatsoever there are advantages of using techniques such as compost and biological pesticides, which are fairly easy to learn. The practical answer to this paradox so far seems to be that farmers are generally reluctant to adapt new practises when they do not result in immediate financial benefits. That this is indeed the case is indicated by the slow spreading of
organic practices to areas where no organic buyers operate. Evidently, some degree of knowledge sharing happens in communities around the certified organic farmers, but not on a scale where the practices are widely adopted. Until a way is found to amend this, the spreading of organic techniques have to go through the current channels of formal training.

As described in chapter 2, recent years have shown a trend of increasing variation and complexity in the standards and regulations that producers and exporters must adhere to, increasing certification expenses as well as the amount of paperwork the producers and certifiers have to do. This appears to be of most consequence to processors and exporters, with farmers doing a minimum of little book-keeping and administration. The variation of organic standards across the world market also means that producers and exporters have to limit themselves to certain areas of the market, since multiple types of organic certification add considerably to the costs. Practically, this is not yet a big issue since most exports go towards European markets where the EU2092/91 standard is applicable in all EU countries, but in the long term differentiating standards could result in declining sales opportunities for organic sellers. If the current cross-institutional initiatives towards global harmonization of standards are effective, it could have a positive impact on this issue and hopefully have the effect of opening new markets to Ugandan producers.

The conversion period that a farmer goes through when switching to organic cultivation is in many parts of the world a necessary precaution to cleanse soils of residues from artificial pesticides and fertilizer. This need for a conversion period is based on a history of high-intensive agriculture that utilize high levels of chemical inputs in the countries where the organic concept was developed. However, in Uganda where most farmers are too poor to use significant amounts of chemical inputs, soils are generally not polluted by agrochemicals. Even though the conversion period for most farmers is reduced to one year because of this (Bio Fresh, appendix A: 62), for a low-income farmer in this situation, the conversion period becomes a bureaucratic obstacle rather than a effective tool for purifying the soil. This is especially the case where export crops are introduced that have little local marketability.

Capacities of organisations and farmers

That the resources of NGOs and export companies is a limit for developing the organic sector is of course unfortunate, but there are other reasons why the organic production in Uganda does not fulfil its potential. The reason that so little value addition is taking place in Uganda is not solely because buyers are hesitant to buy processed products. Another important factor in this (as in many other development initiatives) is the limits in local capacity, which are apparent at practically all stages of the organic product chain. Foreign owned companies feature prominently in the processing and export stages of the product chain, and with the private business sector in Uganda not being very developed, there are not many challengers to the dominant position of foreign companies. The capacity to assess and understand demands from export markets is critical, as is the ability to establish links to buyers. So far, the capacity to do these things are held mostly by the larger operators in the sector, and efforts to increase the capacity of smaller operators and farmer organisations have not yielded significant results (Walaga, appendix G: 92). The organisational framework consisting of advisory organisations, certifiers, and export promoters have been heavily supported by foreign donors, and are faring relatively well, compared to neighbouring countries (EPOPA, 2008: 32f), but if the organic sector is to attain a higher degree of independence, the producers and local operators need to become competent business operators as well.

Even though all farmers are given some level of training in the conversion stage, further improvement of skills and knowledge can be difficult for the extension personnel of NGOs and
export companies. Long distances, bad roads, and generally weak infrastructure makes it resource-consuming to reach all farmers, especially in fringe areas (Bio Fresh, appendix A: 60). This problem is not specific to the organic sector in Uganda – looking at developing countries in general, a common reason for the low impact of new developments in agriculture has been lack of infrastructure, extension personnel and subsidies (Goldman & Smith, 1995: 258). Amending this problem requires larger infrastructural developments that are beyond the scope of developing the organic sector alone, and current and future organic operators must therefore be prepared to calculate these costs as a permanent factor in their expenses. The logistical and infrastructural problems also contribute to another issue, namely the maintenance of the Internal Control System that is the backbone of securing that the organic standards are maintained. The day-to-day contact between operators and farmers are maintained by field staff that have to travel long distances to reach farmers. The further the distance, the more resource-consuming is it to maintain the desired level of contact. Most likely, this increases the chance of breaches of organic practice going undetected. The limits of infrastructure, combined with the average small size of farms, also leads to the problem of limited production capacity (UNEP, 2008: 35). When each farm produces only a small part of the total order it can be quite a logistical challenge for an exporter to meet larger orders on a consistent basis. While the current market status is beneficial for supplies since demand is higher than supply, the inability to deliver regular large orders, for example to supermarket suppliers, will at some point hinder the expansion of the sector. When interviewed for this report, several people in the organic sector expressed frustration that production capacities are difficult to upgrade. The solution to this problem is not immediately obvious. Attempting to upgrade production to mid- or large-scale agriculture would most likely undermine one of the primary functions of the sector, namely the sustainable livelihood benefits for large numbers of smallholder farmers. If organic production is to maintain its ability to function as a tool for improving incomes and environmental sustainability in rural communities, it is necessary to keep production based on the smallholder farms.

The above described limits to expansion that certification impose is partly affected by the sectors own ability to supply personnel. Trainers are needed for carrying out the necessary training of new farmers, and extension staff is needed to maintain contact with farmers and provide follow-up training. When sufficient personnel with relevant background is not available for hiring, this creates a bottleneck in expansion. NOGAMU, one of the primary suppliers of training to farmers, describes it as difficult to find sufficient staff for maintaining the desired level of activity (Nalunga, appendix F: 86). This is not surprising, as there is only one education institution (Uganda Martyrs University, a private university) that offers teaching of organic agricultural methods. However, it appears that educational background is not a determining when operators hire staff (Gibbon, 2006: 24), but it is not known if this is due lack of qualified candidates, or if there are other reasons. Nevertheless, a larger base of qualified personnel would increase general capacity in the sector, and would also lessen the need for employing expatriates to fill central positions.

With the organic world market is still in the early stages of development, with a restricted number of potential customers for sellers of organic products and weak organic sectors in most developing countries, Uganda is managing well so far. But as the market grows, competition will increase, and producers, processors and exporters alike have to keep up with competitors entering the market from Kenya and other nearby countries. Additionally, if Uganda is to make the most of these developments, the share of locally owned and run operations must increase in order to keep a larger share of profits within the country.

**The role of government**

The creation of a successful organic sector has in many countries been heavily supported by the
state. Whether through loans and subsidies to farmers, export promotion, or government-funded research, states have played an important part in supporting the transformation of a grass roots movement into an industry (Lockeretz, 2007: 1f). It can be argued that Uganda, where the agricultural sector is generally underdeveloped, and the private sector is still in its early growing phase, government support is even more crucial than in more developed economies. East African governments have generally shown little interest in supporting sustainable small-scale farming, with the majority of resources being channelled to supporting conventional agriculture (UNEP, 2008: 37). It is revealing that after more than ten years of organic production for export in Uganda, there is no formal acknowledgement of support to the organic sector. There is as of yet no organic policy formulated by the Ugandan government or the ministry of agriculture, and while there is some formal recognition of the development potential of organic agriculture (MoA, 2005: 68; Muwanga, appendix C: 74), this does not translate into concrete resource allocation. The state's agricultural extension services (NAADS) do not actively promote or create awareness of organic production, even though it is theoretically possible for farmers to apply to NAADS for support of conversion to organic cultivation (Walaga, appendix G: 91). The passive attitude that the lack of policy indicates is confirmed when talking to people working with the promotion organic agriculture (for example Taylor, appendix B: 68).

Another factor that makes the government's role problematic in the expansion of the organic sector is the conflicting interests of government bodies acting in the agricultural sector. An example of this is the Cotton Development Organisation, a organisation founded by the government, that has monopoly on distributing cotton seeds to farmers, as well as being a price-setter and buyer for conventionally produced cotton. At the same time, the organisation has an income from sale of pesticides for use in cotton cultivation. This is a highly problematic conflict in roles for an organisation that has a decisive influence in the cotton sector, and this has on several occasions created conflicts with organic cotton operators who felt that they were being underbid or harassed by an organisation that was put in place to act in the best interest of the cotton producers.\textsuperscript{12}

Another recent example illustrates the government's ability to interfere with organic agriculture, as well as serving as an indicator of its attitude towards the sector. In the mid-2000's, the Ugandan government launched a DDT-spraying campaign in an effort to combat the prevalence of malaria, a disease that claims hundreds of lives every day across the country. Spraying DDT near a crop field will, apart from posing dangers to the health of the inhabitants, make an organic farmers certification temporarily void, as DDT is a very potent chemical pesticide. It therefore affects the farmers livelihood rather seriously, as the certification suspension period can last several years. Despite lobbying from environmental organisations and from the organic sector, the spraying was carried out, causing widespread pollution of stored crops.\textsuperscript{13}

These examples highlight the obstacles that the organic sector face in order to expand within a agricultural sector where the state has the ability to interfere heavily. In general, public agencies are described as a hindrance to the development of the organic sector (Kidd et al, 2001: 26), and high levels of bureaucracy and corruption in the administrative and political system accentuates these problems, as widespread corruption makes it difficult to assess whether the interests being served are indeed those of the public. It should be noted that the lack of support of the organic sector in particular is a reflection of the Ugandan governments general attitude towards the agricultural sector in general. When less than 5% of the national budget go to the agricultural sector, it is clear that agricultural development is not a priority. The advocacy efforts undertaken by NOGAMU and

\textsuperscript{12} This story was told by several farmers and operator staff in one of the areas visited for the farmer survey. Several of the interviewed referred to cotton production in Uganda as a sensitive issue.

\textsuperscript{13} This story was collected from various interview sources, as well as Dissing, 2007.
EPOPA to improve conditions for organic agriculture have so far yielded moderate results, but it currently appears that it is difficult to interest the government to invest in agriculture on a significant scale.

On a final note, the future prospects of agriculture in Uganda must be considered. In other developing countries governments have encouraged and subsidized the use of agrochemicals, often leading to widespread use of these agrochemicals even amongst poor farmers, causing many of the environmental problems associated with use of chemical pesticides and fertilizers. There are no immediate signs that such a development is imminent in Uganda, but seeing how the government is overall positive to the use of agrochemicals, it may well be that policies that seek to promote and expand intensive farming methods are implemented in the future. If the organic sector is expanded, with resulting improvements in living standards and food security for farmers, this could perhaps demonstrate another path towards a more productive and poverty-reducing agricultural production system that does not rely on resource-depleting techniques to sustain itself.

**Summary**

As we saw chapter 4, factors outside the farmer household act as an all-important catalyst for the change in livelihood strategy. Without external support, it is simply not realistic in any way that a household with four acres of land and very few assets to their name would be able to acquire certification, form contacts with exporters, and sell their produce on world markets on a regular basis. Certification is the major bottleneck in the system, as this is the most expensive step in conversion. In addition to this, low capacity at most levels in the sector means that there is still a vast need for external support. That the organic farmer is so dependent on export companies, NOGAMU, foreign certifiers and development aid can make the entire venture appear as yet another donor-created white elephant, and while it is true that the dependency issue is problematic, this goes for a wider array of sectors – nearly 40% of Uganda's national budget is funded by donors (Walaga, appendix G: 91). There is however, an aspect of the implementation strategy of organic agriculture in Uganda that makes its chances of self-sustenance higher, namely the market-oriented approach of connecting producers to the world market. Combining the fact that initiatives seeking to convert smallholder farmers to organic product are most effective when they include immediately tangible economic benefits, with the fact that a farmer successfully connected to the market will need less long-term support, the strategy of market-orientation has a higher degree of sustainability than solely donor-funded initiatives. However, as limits in funding is only half the problem, the gaps in capacity needs addressing as well in order for the strategy to work optimally.

The underlying obstacle that needs to be overcome in order for expansion of the organic sector to be scaled up, is that agricultural development in general needs to be higher prioritized by both government and donors. With increasing pressure on land and scarcity of resources all around, a more sustainable agriculture is needed. Because of increase in population and frequent hunger catastrophes in the developing world, the focus in agricultural development is often on increasing yields and outputs. But with weather patterns becoming increasingly irregular in many parts of the world and variations in harvest yields having potentially catastrophic consequences, it can be argued that a shift towards a agricultural production with a more stable outputs is more relevant than trying to increase peak yields. On average, organic agriculture does not provide the same amount of produce as maximum yields from conventional agriculture does, but organically grown crops are generally more resistant to extreme weather, and more likely to produce output in spite of variations in growing conditions. Considering this in addition to the other results of this report, it can be argued that organic agriculture offers a viable path to sustainable development.
Conclusion

The widespread poverty problems in Uganda have no easy solution. Impact of the millions of dollars used every year on development initiatives is showing, and progress is being made, but the fact remains that over 40% of the country's population still live in absolute poverty. Despite general improvements in health and income, millions of Ugandans still have little hope of raising the living conditions for themselves and their family to a level that by any standard could be called decent. That a catch-all, magic bullet solution will come along to amend all ills is surely beyond anyone's expectations, so instead a variety of approaches to development must be utilized.

Looking at who make up the vast majority of the Ugandan population, smallholder subsistence farmers stand out as the largest group. Some characteristics of these farmers of course vary across the country's different regions, but the core conditions of their livelihood bases are common to all of them: they depend on the land they live on to feed them. The state of the natural resources they use in order to sustain their agricultural production is directly decisive to their quality of life, and their management of these resources therefore become consequential for the livelihoods of future generations. While traditional farming methods have sustained the population relatively well through history, the 20th century brought a myriad of changes that affected many aspects of the general population. Especially the continuing and explosive population growth has contributed to a strain on the natural resources that makes the future prospects of many farmers a lot worse than they have previously been.

Organic agriculture is a way of managing the natural resource base of agriculture in a way that sustains the resources for future use while increasing size and stability of crop yields, compared to previously used cultivation methods. This is done by implementing a system of relatively uncomplicated techniques such as composting, intercropping and use of biological pest control. As these techniques will generally increase crop production, the largely subsistence farmers will experience a higher degree of food security in the household. In addition to the improved food security, organic farmers in Uganda are usually connected to an organisation or a company that exports their products to the organic world market. This provides the farmers with a substantial increase in their income, when compared to selling their produce on local markets. Furthermore, the financial stability of the household increases because the world organic market is a lot more stable than local markets. In short, by acquiring the knowledge and skills needed to produce organic, the human capital of a household is increased. This leads to both an increase in natural capital since more output can be extracted from the same amount of land and resources, and an increase in financial capital because a higher level of income is secured from sale of crops. In sum, this makes the household's livelihood more resilient to stresses and shocks, and thereby more sustainable.

The one major disadvantage of organic production that affects Ugandan farmers the most is the costs related to converting to organic agriculture. Certification, training and inspection systems are so costly that the farmers themselves are not able to finance the process. This means that a framework of supporting organisations (mostly funded by foreign aid) are needed to fund and facilitate the conversion process, creating a dependency problem. Another major factor that hinders the expansion of the organic sector is the lack of recognition and support from the Ugandan government, making self-sustenance of the organic sector within the country even more unrealistic.

In conclusion, organic agriculture has strong potential as a tool for development because it helps to alleviate poverty by creating a sustainable resource base for farmers, which in turn enables them to create sustainable livelihoods.
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Appendix A - Bio Fresh officer

Q: How many farmers are you working with, and what products are you buying and selling?
A: We are currently in 11 districts. We deal in pineapple, ginger, apple bananas, passion fruit, jackfruit. We also deal in avocados, but in small quantities. The main products are: pineapple, ginger, apple bananas and passion fruit.

Q: Are you working with farmers groups of different sizes?
A: We deal with small outgrowers – smallholder groups in all districts. We do farmer identification, where we get a group, start their office and then it goes on expanding. NOGAMU assists us in farmer identification, they can come in and identify the groups. They come and give us the information, and then we do the extension.

Q: How much produce do you move in an average month?
A: It goes up to 12 tonnes per week. So in a month that is 48 tonnes. But we started as a small company, with two tonnes per week, and then it kept on increasing – 2 tonnes, 4 tonnes, until we reached 12 tonnes per week, of all the product.

Q: When did you start?
A: The company was registered in 2003. It underwent conversion, so the first organic export was made in 2004.

Q: Who do you sell to?
A: We have a client in Germany, who buys and distributes in Germany. That’s our main contact there.

Q: So you sell on this market only?
A: Yes.

Q: It there a reason you are focusing on this market? Have you tried other markets?
A: We have tried in Sweden, but that is still in a [early] process. We don't deal in local markets, we haven't tried in Africa.

Q: In the organic sector demand is often greater than supply. Can you satisfy the demands of your German buyer?
A: We satisfy the demand as per now, but due to seasonal variation, you might find that one product at one time...okay, most of our farmers are poor farmers, they depend on the climate, the rain. So in some seasons you may find that some products go scarce. But that is for a short period. That thing can fail to meet the order. But throughout the year, the order is met. Failing to meet the order is very small. Generally, we are able to meet the demands.

Q: What are the challenges in working with very small farmer groups, as you do?
A: At times we find farmers who fail to comply with organic standards. But we do it [try to avoid it] by giving them training. The logistics and the distances are the main challenges. But we operate in different districts because of the seasonal variation. One crop can be scarce in one district, but it is available in another district, so we are able to pick it from there. So we keep changing from one district to another. When we get the order, we distribute it equally. We can say like, one week you can go to Luwero, the next week to Mbarare, the next week you van go to Kajunga – different locations, so that you can be able to meet the demand. Because if anything happens in one area and the crops run out it is a problem.
Q: You mentioned transport as a challenge?
A: Yes. As part of our business, we have to incur the costs, so we have to inject the money. In some areas where vehicles cannot penetrate, we use motorcycles.

Q: I imagine that these challenges have to do with the nature of the products you deal in?
A: That is maintaining the shelf-life. What we do, we don't encourage farmers to harvest – we do harvesting by ourselves, our field staff go there to harvest. They transport it on that very day while it is still fresh. Also, what we do when we are in the field, we do what we call sorting. We sort out the ones who are damaged so we remain with quality products. We then bring them here [to the main office in Kampala], and then sort them because during the transportation they can be damaged because of bumpy roads and that kind of stuff. From here we take them to the airport to the cooling facility. That is how we maintain the quality.

Q: What is the timespan between a product being harvested by field staff and the product being flown out of the country?
A: [For example,] someone going to Mbarare travels on Wednesday night, he sleeps there because it is far. On Thursday they do the harvesting, on Friday they come back. We do the packing here and now [Saturday] they are at the airport cooling facility. The shipment varies – we can have a shipment on Friday, we have another on Sunday and another on Tuesday. So yesterday we had one, today we took the apple bananas to the cooling facility so those ones will go tomorrow. So the timespan varies from 1, to 2, to 3 days. The rest is at the cooling facility, we don't keep product here.

Q: Do you transport all produce by plane?
A: Yes, it all goes by plane, because a ship will take a lot of days. An experiment was done and it spent like 26 days, and a pineapple can't stay [fresh] for that long.

Q: Do you ever get in situation where farmers break the contract you have with them?
A: That is normal, but we have tried to minimize it by way of extension and training. We give them training that encourages them to stay in the system. We show them how things are done, the benefits, so the farmers are very aware.

Q: Why do the farmers break contract?
A: When it happens we do sanctioning, because our certifiers require that we sanction farmers if there are deviations from the organic standards.

Q: What are the sanction option you have if there is a breach of standards?
A: Excluding from the group.

Q: For a certain period of time or indefinitely?
A: It will depend on the action. It is usually one year. We have some sanctioned farmers who are suspended indefinitely.

Q: What did they do?
A: They spayed chemicals, which is not allowed in organic. Some of them did not attend the farmers group meetings, and under fair trade agreements they are supposed to be together, they are supposed to have regular meetings. A group organize meetings and call them [the farmers] for training, and if the farmer can not comply with that he will get a warning and then a sanction.
Q: So you are also fair trade certified?
A: Yes.

Q: When did you become fair trade certified?
A: Last year.

Q: What are the additional things you have done for the farmers now you are fair trade certified?
A: We have done bore-holes, in Mbarare we have given them [water] tanks, and more things are coming up. We do it on a rotational basis, so when we do for Mbarare this year, next year it will be another district, so we keep rotating. Fair trade [benefits], we have done it for staff here at Biofresh, like staff development and training in fair trade.

Q: Have you experienced getting a different price, now that you are fair trade certified, compared to previously when you were just organic certified?
A: Yes. It means that it is feasible to do the improvements for the farmers.

Q: How do you handle problems, like outbreak of crop diseases?
A: When the farmers inform us, we contact consultants and experts. We go there and assess the situation, and then we can start giving the remedy. We train the farmers to give the remedy. Like in Mbarare [where there are problems with apple banana plant diseases] we went there with Jane [the training officer] from NOGAMU and gave the farmers training in using organic pesticide, they buy it from NOGAMU. But it is a big problem, because these diseases are hard to control, so we are trying our best to contain it. Organic pesticides do not always work, so it is complicated.

Q: Have you ever come across a situation where a disease could not be treated with organic pesticides, and you had to switch to another crop?
A: In Mbarare we are focusing on that, because farmers are now resorting to growing other crops like avocado and fruits, because they have realized that the problem is becoming intense so they want to switch to other products.

Q: Organic agriculture is a integrated production system that has the potential to improve both social, environmental and economic conditions in the farmer household. The economic benefits are obviously there for your producers, but are you integrating the other aspects in your work?
A: The environmental aspects – farmers are discouraged from burning bushes, which would destroy the biomass. You can see our farmers, the way they do their thing, the cultivation, is conserving the environment. We also discourage charcoal burning, use of DDT. We tell them to refrain from using all these things [chemicals]. This helps them to protect their lives.

Q: What about the issue of food security? Is this something you actively work with, or something you see as a side benefit?
A: We see that as a side benefit, because if there is food security for the farmer, the better for us. We get problems from the farmers is they don't have food, if they sell their food. We encourage them to sell food, but also to keep some for home consumption.

Q: Is this part of the training you give them?
A: Yes, we deal with cross-cutting issues. That is part of the fair trade system. We encourage the farmers not to starve their children, we encourage the farmers to lead a good life.
Q: One of the biggest problems in organic agriculture is the conversion period – the cost and the time it takes is often a big challenge for the farmers. How do you deal with this issue in Biofresh?
A: We visit them during extension, but there is nothing we can do for them [at that time]. We can't buy their products during conversion, so we encourage them to sell locally, because sometimes they have a lot of produce and we can't buy all of it. So what we encourage them to do, it to not forget about the local market.

Q: How long is the conversion period?
A: One year. Most of the land in Uganda is organic by default. But if there have been a history of chemical use, the conversion period is three years. But we haven't experienced that yet. Because those farmers [who have used chemicals], we don't even register them because we know that they are so hard to maintain.

Q: But it must be quite a cost for you to maintain the training and extension for the first year without getting any income from the produce?
A: We have partner organizations who help us. We've been working with EPOPA, but now it has closed. We have NOGAMU. PIP (Pesticides Initiative Program) sometimes gives us training.

Q: My next question has to do with the sustainability of the sector. When you look to the future, do you see the sector becoming less reliant on donor support and more self-reliant?
A: Yes, I see a future where we are more self-sustained. When the donor have given the initial support, a company should be able to meet their own costs. Cost of certification, cost of training and so on.

Q: Is that in the short term or the long term, meeting the conversion costs?
A: That will be in the long term. We are still dependant on support.

Q: How do you see the attitude of the government towards the organic sector?
A: The government's policies are not very much in line with organic agriculture. They are promoting DDT, which have been spayed in some areas of the country. A organic policy has not been developed yet, and it is very hard to work without a policy. We are hoping it will soon be developed, but as per now it has not come out right.

Q: Are you operating in the areas where DDT has been sprayed?
A: Fortunately, we don't have farmers there.

Q: Do you envision a future where the government would go in and support something like conversion costs, or is that unrealistic?
A: As per now, I would say no. I know their position, they haven't come out being supportive. But there are some instances of support, for example through NAADS or other programmes. But maybe in the future they can come out and support organic agriculture, who knows?

Q: Have you done any user surveys or surveys of livelihood improvements of the farmers groups you are working with?
A: Some surveys have been done, it was done briefly by FLO. But we haven't done a complete survey about it.

Q: Do you ever get complaints from farmers?
A: We haven't experienced any farmers complaining. They are saying the price we pay them is
okay. But complaints do come up about the orders being too small. But of course we can't do anything about that, it is the client who gives us the order.

Q: Do you ever turn down new farmers groups who approach you?
A: Every group that comes, we take it. Because we would like to have more. Like 500, 600 farmers, because currently we have 200 farmers, and we would like to expand to 300.
Appendix B - Alastair Taylor, Branch Manager and Senior Consultant, EPOPA

Q: When you initially contact the farmers, is it hard to sell the idea of organic agriculture to them?
A: Not really, because many of them are already practicing organic agriculture anyway. So the production side is not so much of an issue. In the traditional commodity projects we normally decide 'well this is a good area for the production of A, B and C', and if the crop is already produced there and the risk of chemical contamination is low, then the organic conversion will be easier. Then we normally do what we call mobilization, so the buyer will normally go there and say 'we are planning to buy sesame seeds', and then there's a general announcement, they move around different parishes to farmer meetings, they explain a bit about organic, they explain what the buyer has in store, and then welcome people to register. So then they register for the project. And normally, because, one: there's a guaranteed market, two: there's a higher price, three: it doesn't really cost them anything anyway, they sign up. But of course there's always a few that don't, and that is, I think, a change from the late 90's when originally [intelligible] they thought that the whole area would be organic, and they would act completely as a group, and if one fail they all fail. But then that was very difficult, because often one [farmer] does fail or doesn't want to be organic, or specializes in growing tomatoes which is very difficult to grow organic. People have their strategies why they don't want to. But in those areas of commodity growers – cotton and sesame in the North, cotton and cocoa, these types of crops – generally the majority of people would become part of the project. And therefore, really, on the husbandry side, as they introduced organic they also introduced good agricultural practices. So they would say 'the cocoa has to be properly fermented' or 'the coffee has to be pruned and has to be picked properly, we want bigger cherries', etc. So those things may have been a threat to some farmers, but that was more on the marketing side. So normally they would sign up, and then wouldn't deliver, because either they didn't want to take the care of getting the quality crop.

Q: So is it fair to say that the farmers don't see the conversion as a risk because it is so similar to what they are already doing?
A: Yes.

Q: You write that the trainers who train farmers encourage them to not neglect the local market. Do farmers still produce sufficient food crops for own consumption/local market after having become producers of organic export commodities?
A: Yeah, the government policy is that food security should be in the market, so that you and I, we live in Kampala, we're food secure, we don't need to grow anything, we can buy it. And that was the idea of the government, that that should be the case throughout the system – trying to break farmers out of this subsistence farming. I personally come from a more sustainable agricultural background, working with local organizations who believe that it is really important that farmers still consider their own food security. And I think maybe, as I moved into EPOPA, that came back a little bit stronger, the emphasis that we shouldn't focus just on the cash crop, we should also focus on the whole farm system. Which of course is in line with organic anyway, but are not necessary, say, to achieve the objectives of EPOPA, because it focuses 100% on the cash crops where farmers get an income to buy food on the market. But there can always be problems with cash crops. Some cash crops it's ok - sesame you can eat, tropical fruits you can eat, but many of the others you can't. Coffee, you can only drink so much, and cotton you can't do anything with. There's a case right now, because of all this fuss in the cotton sector, one of the organic buyers is not buying. So then what do the farmers do with their crop? World market prices can go up and down, so if it's a food crop like sesame, sometimes the local price can be higher than the export price. And therefore
sometimes when an exporter may stop buying, when the local price is higher, the farmer can still sell locally, so it's not so much of a risk. So there are risks. Vanilla was another example, four years ago it was booming, 100.000Ush a kilo. Now its 3.000Ush a kilo. That's a huge, huge difference, and now the farmers are saying 'well, we're not gonna sell at that price', they don't see it as worthwhile. And if their livelihood was based on vanilla, it makes it very difficult to plan. So I always thought that it is good to include some home food security alongside the organic cash crop. And in some crop, like the field crops, cotton and sesame, there need to be rotation anyway. The other thing is, that often risk to the organic crop can come from home production, particularly vegetables. As I said, it is very difficult to grow tomatoes. If they grow tomatoes, they're likely to spray, and if the inspector finds the spray from the tomatoes they say 'well, perhaps you used that on your cocoa'. So we also thought it was important to look at those home crops as well. And often, this is quite common as well, people spray their cows for ticks, and they spray near the vanilla or something, and then they can lose their certification for a while or having some sort of sanction against them. So you just can't look at the cash crop, you have to look at the whole farm, 'cause they are all integrated together.

Q: Organic agriculture is a system that has the potential to improve both economic, environmental and social conditions. Some people argue that the focus should be on the economic aspect, that when farmers are getting sufficient income, the other aspects will sort themselves out. How do you see it?

A: The reasons for that I've already given you – we actively encourage farmers to consider their food security situation, a bit separate from their cash income. They need the cash for school, they need the cash for health, they need the cash for salt and other things, mattresses, etc. But they don't really need the cash for food. That was our basic message, they can grow their own food. That's really what we encourage. Although there are exceptions, even traditional exceptions. For instance where they are growing cocoa and vanilla in [intelligible], traditionally, the farmers in the lowlands grow cash crops, cocoa and vanilla, and not grown food. And then the farmers who are up the hills from them, maybe 1.000 meters above but only 1.000 meters away almost, are growing food crops. So there's always been that traditional thing where the farmers on the hills have grown the food and then sold it to the people [in the lowlands]. So that traditional system is fine. But where there's not that tradition, we try to emphasize the food crops. An then an extension of that has been looking for answers to the organic threats within the food crops. So within the EPOPA programme, we ran a small research looking at organic ways of controlling pests and diseases on common vegetables – tomatoes and cabbages. Looking at intercropping or companion cropping, looking at the chemical spray, because of those threats that the food security was presenting to the organic crop. And then also when you're dealing with communities, you may be looking at the cotton, but if someone has a problem with their sweet potatoes you can't just say "that's not my department"; you have try and help to find an answer to that problem as well. So you find that is integrated as far as our approach to them is concerned.

On the economic side: EPOPA had quite a lot of interest to get some of the buyers to go fair trade certification as well as organic. But in Uganda, almost without exception, the relationship between the farmer and the buyer is on a contract basis and therefore they didn't really fit the fair trade model. And also there's a certain resistance, so the fair trade in Uganda would be the buyers as middlemen between the farmers and the markets in Europe. But we were quite careful in selecting exported which we worked with, and one of the criteria for selection was that they were fair in their trading practises. And many would argue that they are paying a fair price, they are not trying to cheat the farmers. Okay, the price goes up and down, the world market goes up and down, but they are offering the best price they can. Within EPOPA we would also monitor that, and if we felt that there was unfairness in the price, we would mention that to the exporter partners. Although that rarely happened. So although we didn't practise traditional fair trade, there was a fair trade element
to it, a checking of the systems. And actually that was looked at by these researchers from the
Danish institute [DIIS] looking at the economic impact on those cocoa farmers.

Q: In the European organic sector, one of the consequences of the expanding market is the
producers who enter the market for economic reasons only, producers who are only
concerned with fulfilling the minimum requirements. Is this an issue in Uganda?
A: The background is very different from Europe we farmers are generally converting from a
traditionally quite high-input system to an organic low-input system. Whereas here, people are
generally converting from a zero-input system to an organic system. And when you are visiting farms
here, you would be hard pressed to know which are certified and which are not certified. There's
very little difference. But that's not to say they can't do more. As I said earlier, before I worked for
EPOPA, I worked for a local NGO who, among many other local NGO's were promoting
sustainable agriculture. Looking at the traditional agriculture that farmers are practising, and saying
'what more can we do with that?'. And a lot of what more we can do is organic practises – better
rotation, better soil conservation, better fertility building, etc. Unfortunately, I think, even the
certified organic farmers are still not making the most of what they can do. I mean, there's been
improvements, I think perhaps more in the permanent crops than in the annual crops. So the long-
term organic coffee projects, the long-term cocoa projects, vanilla, you can't do much with vanilla
anyway, but you see that [in these cases] there's been an improvement. Maybe there's been tree-
planting so now the shade is better, maybe the management of the trees is better so now the
production is better and more consistent. But still in the annual crops and the food crops,
they are still not properly considering fertility building.

Q: So that is an area where there is room for improvement?
A: Yes. There could be more done to look at fertility building particularly, on the annual crops. All
around there has been a real absence of practical research orientated towards organic production,
whether it's seeds, whether it's production technique, pest and disease control – there's nothing
done.

A: Exporters are more willing to take on more farmers rather than increase production a the
existing farms. Is this an issue you come across?
Q: I think that's true. I think they are interesting in improving quality, so that where their interest in
improving coffee and cocoa management comes in – it improves the quality of the end product. But
yeah, generally if they want more production, they just take on more farmers rather than looking at
how to increase the yield. There is a project now that is post-EPOPA, with the Dutch embassy and
an exporter and a farmers association in Lira, looking to increase the productivity of chili, cotton
and sesame. And that was instigated by the exporters so, yeah, they had an interest to see farmers
producing more. But generally that's not the case. The exporters employ field officers, and those
field officers carry out internal inspections and they also offer crop husbandry advice. So hopefully
some of that advice is rubbing off and improving production. But it's not really like a farmer in the
UK or something where the farmer is trying to increase production to improve income. And maybe
even at the farmer level it's not so strong – they generally increase their acreage, rather than try and
increase their productivity.

Q: Because it is not considered as cost efficient to improve practises to increase yield?
A: Well, I don't know if they really carefully thought of the cost. Probably more the effort. It's just
easier to plant more.

Q: Do you see it as a problem that some organic farmers sell their produce meant for the
exporters on the local market, sometimes prematurely or at a lower price?

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A: I don't know if it's a problem, but it's a fact. If it's a commodity type crop and an exporter came to me and said 'I want to buy 100 tons of sesame', I'd say 'Well, you need 1,000 farmers for that'. In theory, if each one produces 100 kilos. I'd say 'Actually, you should register 2,000 farmers', because generally you find only half of the crop coming in. And there's so many reasons why that's the case. In the case of the permanent crops, coffee and cocoa, it has something to do with the quality criteria of the end product. The organic buyers say 'We're only going to buy completely dry coffee, coffee of a certain size. Cocoa, only properly fermented cocoa.' And so farmers don't want to take the extra effort to reach that, use two extra days to dry the coffee properly, or the seven days to ferment the cocoa properly. Then there's always buyers who want to buy this lower quality, and instead of waiting one week to get the money, they [the farmers] get the money in one day.

Q: So there is a reluctance in the farmers to spend more labour than is absolutely necessary?
A: The figures are half and half, so maybe half of them are prepared to do it. But it is also a matter of attitude for the exporter. For instance in the cocoa project, in the beginning the exporter was buying both fermented and unfermented cocoa, although it wanted the fermented. And them, after some years, it said 'We're not now only gonna buy the unfermented'. But as long as they were buying both, and this also happens with coffee companies who buy premium and un-premium, then they are sending out a mixed message to the farmer as well. So I think it's partly their fault that they weren't saying 'We buy this, or we don't buy at all'. Whereas from the farmer side, they are looking at a bigger cost. If the conventional buyer is offering 500Ush a kilo for coffee, and the organic is buying at 600, he's thinking 'I get 100Ush extra per kilo, but it's taking me three extra days to dry the stuff...'. Then they can weigh that it's not worth it per kilo. It's only a 'is it worth it' calculation, it's not a calculation on a piece of paper. But I've had farmers express that for the extra effort they don't think the reward is enough. But I think more often, it's more to do with instant decisions, that somebody falls sick in the household and they need to get the money – now. So you have coffee that is not dry, but you sell it to anyone willing to pay for it. You take it to the store, and the organic store happens to be shut, but you planned for that money, so you take it across the road to a conventional buyer. I think that that is probably more of a driver. Because in all cases what is a fact is that they are using their crops as a bank account. They are storing their money in their crop. And that's why you see sometimes very small deliveries, people bring 10 kilos of something. They have another 200 kilos at home, they just need the money from that 10 kilos.

Q: Because the households are so poor that there are no buffers or reserves, they can't afford to wait?
A: Yeah, they need the money instantly. And of course, when you're selling 10 kilos, the difference of 100 shillings is not so much, whereas if you're selling a 100 kilos, then the difference of a 100 shillings becomes more significant. Any of us are less fussy when we're dealing with small bits of money - although the actual percentage difference is the same, the actual feeling of the money you're missing is not so great. That applies to us and it applies to them.

Q: Why hasn't supply of organic products been able to live up to demand? Is it because the market is still very small?
A: I think so. Part of the impact of EPOPA was the investment. There's still a lot of investment [needed] to convert to organic. In Europe or the States where there's subsidies, incentives for farmers to convert or help them through the conversion period. You could say that EPOPA was taking that role in the countries where it was operating, Uganda and Tanzania. It was giving free technical support and it was giving a sort of cost sharing over the conversion period. And that really encouraged [farmers]. When EPOPA started in the mid-nineties, the demand was not clear. And the companies that were involved in the early days were less sure of the market. Now we're in the 2000's, companies are quite convinced that there's a market for the organic, and therefore people are
coming to us and saying 'Can you help?'. And even post-EPOPA, as we continue with that as Agro Eco, that's continuing to be the case. But then if you say 'Well alright, you're gonna have to pay for field staff, you have to pay for certification, you have to pay for our technical advice'...They can see the market, but they are also thinking that if they have to invest 20,000 dollars in that conversion process, and then still not get the reward until another year or so, it may balance the equation to make them stay as they are, even though they know the demand is there, they can't meet the demand because there's that bridge. And that is still the case today, and that is why I would argue that EPOPA was very effective, but there's still opportunity to continue something similar, whether from the government, from a donor, or from whoever. Because the world over it is recognized that there is a hurdle that you have to jump over.

Q: So conversion costs are a hindrance in spreading organic production. What are the other major hindrances here in Uganda?
A: I think government interest has been lacking. If the government really saw it as a pro-active option ten years ago, then it would have rolled much more. And then research and other things would have rolled along with it. So that's been quite a hindrance. There's been individuals within the government that have been supportive, and Uganda Export Promotion, Uganda Investment, sort of a sub-government body dealing with more commercial interests, are seeing opportunity in organic. But the Ministry of Agriculture and the Ministry of Environment, who could have seen the opportunities of organic, have been slower in picking it up. Now there's growing interest, and we're hoping that this year there might be an actual policy for organic agriculture, which will be good. The other things is, say like in fruits, there's been fresh fruit exports, but dried fruit exports have been on a quite small scale, and yet the demand is very high. But then of course you have to invest in larger scale drying facilities – mostly the drying is small. So again you come up against the risk and the finance opportunity to really scale up in that area, and that's true for a number of processed products. Another reason could be the shortage of technical support, but I think that is now changing. There was EPOPA, Agro Eco, there was NOGAMU which is building capacity. And now Uganda Martyr's University has this degree course [in organic agriculture]. So I think now there's increasing technical capacity to support the organic.

Q: Can you see a future where a government body like NAADS could provide technical support to the sector?
A: Yes. I think Uganda now has recognized the importance of organic. It may not be a massive sector, but it is a significant sector – everybody mentions it. But that means that the opponents of organic have also become more vocal, and I think that this whole fuss in the cotton sector is an example of that. When organic was small and not really very significant, they didn't worry about it. But it has not gone away, it has continued, there's increasing interest, and then you find that those who are for and against become more divided. And I think that therefore we could face more opposition. And that's why I think that the type of research that DIIS is doing on organic impact is very important to really show that organic can improve livelihoods, provide more sustainable livelihoods.

Q: The sector is still very dependant on donor support. Do you see this changing in the future?
A: Most EPOPA projects which we left have continued to expand, mainly using their own resources, actually. So that's a good sign. Once the hurdle has been jumped, then expansion can be handled internally, because people have seen the opportunity, maybe they're even responding to an actual market demand, now there are buyers who say 'Next year I'll buy an extra 1000 tons of cocoa'. So they expand according to that. So in a way, for a current project to expand, it's a self-rolling thing. Another aspect that I believe in, is...you know, to export is not easy – apart from organic, there's a lot of other barriers to trade. One thing is a lot of finance you need up front. You
buy from the farmers two months ago, and you're not gonna get paid by the buyer in Europe until another two months. So maybe you have a 4-6 month time lag in your cash flow. So the thinking that farmers groups can become more involved in agricultural trade...they like the idea, but the idea is not so realistic, probably. But the companies that export, often they have higher demands than they can match. So then we thought, with NOGAMU, that if we can get farmer groups certified, then they could supply the local export companies so they can get a premium price for their product. They would sell to the export companies, so that would be better for them, they would get paid much more quickly, they wouldn't have to be involved in all this export hassle. But they would have to pay for their certification. Now, with UgoCert, certification has become easier and more convenient, a bit cheaper. But still, it may be 1000-2000 dollars a year, which for a farmer group is still quite a lot. You can't pay it bit by bit, you have to pay it in a chunk. So until farmer groups move to that level...

But we are trying to work with farmer groups. And then all the time they feel this attitude in Uganda, unfortunately, that when you sell to somebody who's then selling [the product], that you're somehow being cheated. If only you could sell to that end person, you'd do much better. And they don't realize all the complications. So quite often I've put farmer groups off thinking about exporting, but [instead] thinking about local market.

Q: So it's too costly for the farmers to go all the way with exporting?
A: Yeah. But it's a nice idea...

Q: Are there any farmer groups at all who have been able to do it?
A: Well, you could say maybe the [intelligible] coffee cooperative. But that would be the exception. There's not many coffee unions left now. So maybe if the co-ops really pick up to a certain level as they were in the past, without the government interfering.

Q: What happened with the cooperatives?
A: the basic history is that the officials became too powerful, and then they became government appointees, and ultimately they weren't there representing the members, and the members wouldn't get paid. So a farmer would supply to the co-op, but not be paid, or not be paid for a very long time, or not be paid the price that they were expecting to be paid. And that was basically why it all fell to pieces. But now, I mean, farmer groups are all the rage, but in a way, what's the difference between a farmers group and a cooperative? Just the name.

Q: Have you felt the slowdown in growth of demand that is one of the results of the financial crisis?
A: I've not heard that from anybody. A couple of people have asked me that, and I've not heard anything from the exporters that we're involved with. What seems to be more of a problem seems to be this varying of exchange rate, you know, the dollar is high, then it's low, the pound fluctuates...so people are complaining that they're losing a lot of money because of changes in the exchange rate. Because they're buying here in local currency, and then sell in a hard currency. And it's very difficult to predict what these currencies are gonna do in three months time. So that has been more of a complication. Maybe that is due to the credit crunch, I don't know. I mean, Uganda basically is still selling bulk crops, basic ingredients rather than end products. So you would expect the lag to be a bit slower. And, say, for coffee and cocoa, most things are bought well in advance, so people have stocks of things. So it may be a couple of seasons away before the impact of this current time is impacting on the back years, because the order for next year has already been done. So as yet I've not heard anything. I'd be interesting when we go to Biofach in a couple of weeks, to see what the feedback is from the exporters.
Appendix C - Musa Muwanga, Chief Executive Officer, NOGAMU

Q: Can the supply of organic products from Uganda meet the demand?
A: For most products, the demand is higher than the supply. That has been a challenge for the last 3 or 4 years. It is still continuing because demand is growing, and supply is growing – but not as fast as demand. The challenge is that we are dealing with smallholder farmers, and it's a process to organize farmers, prepare them for certification and have them certified. It's a long process and it takes a while. And it's also a very expensive process. So as much as we see the demand which is coming in on a daily basis, it takes a little bit more to match the supply with demand.

Q: What are the major challenges in scaling up production?
A: The main challenge is having farmers certified. Of course the certification is expensive, but it is not the main thing. The main thing is that the process to prepare farmers for group certification is long and resource consuming. Even before you invite the certifier to inspect and certify them, you must prepare the farmers, you must have a documentation system in place. You must train them in this system, how it will help them to improve quality, how it will help them to attain traceability which is the basis for certification. It requires a lot of training for these farmers, so it is both time-consuming and resource-consuming. Sometimes you have the time, but you don't have the money to take them through, and sometimes you have taken them through, but you don't have the money for the final certification. So that is the whole challenge – the resources to take many farmers through this process.

Q: Is value addition happening on a sufficient scale, or are there areas for improvement?
A: There is a limitation in the capacity to add value. If you take a product like pineapple, only 40% of the pineapples can go to the fresh market, basically because our pineapples here are big, and it's only 40% of any production that can meet the size expectation of the European market. This means that 60% should have gone to the market, but can't because of the size. Even though the demand is big. Now, the other way to still get these pineapples to the market is to process them, either into pulp or juice or dried fruits. Now, there's a very big demand for dried fruits, and ideally all the remaining 60% of pineapple would be dried. But the capacity to dry is limited because you dryers that are very expensive, and most of the smallholders can't afford these dryers. Neither can most of the companies which are small to medium companies – they don't have big capital to invest in large scale drying facilities. They can afford one or two dryers, and these can only dry one or two tons a month. And if they manage 10 tons, you still can't manage [to make sufficient profit]. But you have the product, the fresh fruits to dry, and the market is there. But in the middle you have the drying capacity as the limitation. So you can't add value to take advantage of the high market demand. So that becomes another challenge.

So, the lack of capital to build small and medium companies, and for smallholder farmers to invest in drying facilities which can generate sufficient volume, is limited. So as much as there's opportunity to add value, it's a costly investment which is not affordable to most of the small and medium companies. So this becomes another limitation – this time it is not the market which is limiting, but the capacity.

A: Some argue that farmers should focus on cash crops to earn money to sustain themselves. In NOGAMUs work, how do you weigh cash crops and food crops?
A: First of all, food production is not a problem here in this country. There are many reasons why this is so. One is because of the farming system: the farming system in Uganda is such that there is no farmer who will grow [only] one crop. You will not find them. They will grow several crops – even if you try to convince them to grow one crop, they won't. So when they grow a crop like
coffee, they will [also] grow maize, beans...they will grow their domestic consumption crops for their own use, and then they will have one or two commercial crops. So food security as such is not a very big constraint – in general. Of course there may be some small pockets that...but in general, it's not a very big problem. Having said that, it's very important to understand that the biggest problem to most of the farmers, to most of the population here...you have to understand that 80% of the population here are smallholder farmers. 30 million people, and 80% of them are farmers, which means that the total livelihood, for a big part of the population, is farming. Which means they have to grow their livelihood in terms of food. In terms of income, to [fund] other social aspects like healthcare, like education for their children. Everything you can think about is from the farm. So you can not think about food only, you have to think about the other part of their livelihood. And that is what we see in practise is their biggest limitation. If they don't have income, it's a very very bad situation for them. Because they cannot sell any other thing – they can only sell their food. So there must be a solution. And when you ask farmers about their biggest problem, it is market, not food. Because food, they have more than enough. But they need to buy clothes, go to school, healthcare. They need to do that, and they can only get income from their farming. So income from farming is very important. But what we have seen in practice is that, for most of the farmers, if a farmer does not have access to the market, they will be demotivated. If he has been growing crops on about 2 acres, the following year he will grow 1 acre, and the following year he will grow half an acre. Because there is no motivation to grow more. For his food, he only needs a quarter of an acre – enough food to feed his family for the whole year. But he can't grow more than that if he has no market for it. What we have seen in practise is that farmers get demotivated when they don't have the market. And eventually that also affects their food security, because they will not have the motivation to grow any more crops. And eventually, they start growing even too little for themselves. But what we have seen is, those who have access to markets, every year they are expanding production. And when they expand, they are not only expanding the commercial crop – they are expanding all the crops. So the motivation to expand production is very high. And what we have seen in practise, is that the farmers who are linked to the market are also the most food secure.

Q: That is also what I found in my interviews with farmers – even farmers who seemed to have plenty of land complained of being food insecure.

A: Yes. Because there is no motivation to grow. And it is a very difficult situation, because those who are not linked to the market, or those who do not have access to sell their products anywhere, even at the domestic market, they have land, but they're not growing. How will they grow crops which will not be sold? And because of that kind of demotivation and loss of expectation, eventually it affects their food security.

Q: Organic agriculture is a integrated system that has potential to improve both environmental, social, and economic conditions. How do you in NOGAMU weigh these aspects in your work?

A: For us, they are all very important aspects, and we don't promote one as a substitute for another. But having understood that environmental, social and economic aspects are all very important aspects, you have to draw a strategy – how to achieve those. Bearing in mind the socio-economic implications on the people we are working with. Having understood that, we realized that our strategy to achieve all these three is through market promotion. As I said, when farmers are motivated, you can't go...and this is where most of the programs focusing on food security have failed...you have to understand the thinking of the people you are targeting. For them, they think they can grow food for their home consumption. But they have pressing needs, and to them, food is not the most pressing need. So if you don't think in their perspective, the program will not have success. To them, their pressing need is to take children to school, to have healthcare, to have clothing, that is their pressing needs. And if [the program you are doing] does not solve all those,
you will not be successful. So programmes which have been purely on food security, without addressing the economic aspects, they have not succeeded with farmers. There have been programmes which have tried to use organic farming to improve food security, to protect the environment, etc. Without anything about market. They have not been successful. It is all in the strategy. The objectives are, you want social, environmental, economic [benefits]. But you must think of a strategy which fits with the population you are targeting. That fits in their thinking, in their cultural setting, in their way of appreciating things. And what we have seen in practise is, that when you bring economic aspects it's easy to implement environmental and social [aspects]. Because people see a benefit in totality. And that's what we have seen, when you look at groups that are linked to the market, when you bring in an environmental issue, they will take it up very fast, because they don't want to lose the market – it is their income. So they will implement soil conservation measures, protection of the soil against erosion, planting trees – they will do all this if there's a market. Because they know that this is their livelihood, this is their market. We have had programs where we encouraged consumption of domestic crops, and they will grow these very fast. Because of the economic linkage of this whole program. So that is the strategy we use. Our programs are all market driven. Our driving force is linking farmers to markets, linking them to a sustainable income source. But in our implementation, we don't focus on the crop for marketing, we focus on the whole farm in totality. Addressing food issues, addressing environmental issues, and social issues. Our training materials, everything is built on a [intelligible], but there is a driving force – the market.

Q: Do you see it as a problem that many farmers sell part of their produce on the local market?
A: It's not a problem. And there are reasons why they sell on the local market. Sometimes a farmer is certified, and the export crop on their farm is coffee or pineapple. But they also grow beans and maize. The whole farm is certified, but maize and beans are not export crops, so they have to sell them on the local market.

Q: Well, I'm referring to the cases where farmers will sell their export crop on the local market.
A: That will happen in some instances, for example pineapple. The pineapples are certified, but if you want to sell fresh pineapple [to the exporter], you can only sell 40% because the rest are too big. So they either have to process them, but they can't because their capacity is small. So they remain with pineapples to sell on the local market. So those are the scenarios that exist. It is not that the [export] market is full, but because of their size, some of the fresh pineapple can't go there.

Q: I have also heard of cases where, for example, a coffee farmer will sell the coffee on the local market prematurely, because they are in need of quick cash.
A: That happens. Even when they get a higher price at the organic export market, sometimes they have pressing needs, for example a sick child. If the project or company which is working with them can not advance them money before the coffee is ready, the farmer will have no choice but to sell the coffee [on the local market]. To them, the insurance is the produce they are growing. So at any one time they get a problem, they refer to their products. So either the buyer must pre-finance them; some do – they give them money in advance, even before they collect the coffee. If they don't do that, when the farmers get a problem they have to sell the coffee. Cheaply, but what else can they do? For them, it is the logical solution to their immediate problems.

Q: How are you working with cooperatives or farmers unions?
A: I would say that we have multiple approaches, and different approaches fit in different situations. There are situations where the farmers are already organized, they are in a cooperative, and they are
selling to a specific buyer. So before they are even certified, they are organized, they have leadership.

In some other situations, you will find that the product is there, but there is no farmer organisation. You have to organize them, build leadership in them, train them in leadership and group dynamics. And then, once there is leadership, you help them, you certify them, you link them to a buyer. So they start working as a group, yet originally they were individual farmers having the same product.

There are other situations where the buyer organizes the farmers. The buyer certifies and registers all of them. He registers them as individual farmers, but he buys from them as a collective. So different approaches are working here. They are all feasible, it depends on who has the initiative – is it the buyer, is it us helping the farmers, is it a existing cooperative wanting to be linked to the market? So we handle it case by case, but we use all approaches.

**Q: Does it ever happen that a cooperative contacts you and says 'We want to be linked to the export market'?**

A: One thing you need to remember is that there are very few formally registered cooperatives in this country. There are a number of farmer associations, registered at the local level as a group of farmers with common objectives, but not fully registered as a cooperative. We have had cases where a association of farmers have approached us. We reorganize them, we strengthen them, we certify them, and we link them to the market. But there are very few cooperatives in the formal sense of the term.

**Q: Given the somewhat troubled history of cooperatives in this country, do you see it as likely that this organisational form will expand?**

A: To me, the objectives are the most important thing. Because when you organize farmers, whether you call them a group or an association, it doesn't matter. What matters is that they are working together, they are selling together, that they are getting the benefits of working together in terms of negotiating the price. But not these forms of unions of long ago where you have 20,000 farmers, 50,000 farmers in one union that has sub-cooperatives and so on. I think that will take a long time to come by. But I see this approach of farmers coming together forming an association, linking them to the market as an association of farmers, that I see expanding a lot. But the formal unions and the cooperatives as we used to know them? There is no incentives for that. There are initiatives, even at the government level, but the history of them here, they have been corrupt, inefficient, taking the farmers for a ride...That history is so strong that the motivational incentives to overcome it will [need to be] big. But it doesn't mean that the farmers are not organizing themselves, they organize as simple groups, as simple associations.

**Q: Have you surveyed the farmer responses to the services you provide to them?**

A: We have not done a formal survey as such, but all our programs are two-way, bottom-up. So everything we do, including our strategic plan as a organisation, they are all bottom-up. So for instance, if we get the feeling from the people that they want things a certain way, we always...That's why our strategic planning takes almost a year. Because it has to go down to the grass roots and bring the view and go back, several times. So when you see what we are implementing, it has really come from bottom-up. And that's what you see our programs in term of implementation – the response from the people is very high. Because they are actually addressing the real needs of the farmers, the people who are involved. Not only the farmers, but also the companies. We are probably one of the only associations where you have almost a 100% of all the sector players in the association. And very active, not just membership. And every year, participating in all the activities. Because of the way we design our programmes – they are all bottom up. We are not sitting here, saying 'we want to do this and this'.
Q: Have you ever been in a situation where a farmers group cancelled its collaboration with you because of dissatisfaction?
A: No, we have not seen that. Not even the companies. Since organic started formally in Uganda we are seeing more companies coming in, and we have not seen anyone going out of business. Whereas it is opposite in the conventional [sector]: everyday there are companies going out of business. But since organic started, the number [of companies] have just been growing, we have not seen [companies] going out. For us, that is an experience we have not had.

Q: As the organic sector is growing, the opponents are starting to come forward. How do you see this happening in Uganda?
A: We see now that the opposition is increasing. There is a lot of campaigning, sometimes in the papers, articles written to create negative impressions in the public – people are paying for these articles...

Q: What are the interests of these people?
A: Some of these [opponents] are representatives of chemical companies, so that is their business. If they see a bigger number of people and companies, that is destroying their market. So the interest is as simple as that.
This country is interesting...you need to understand the thinking of the people, and work on that. And many times when people come up with programmes, they don't work on the thinking of the people. And those detractors of organic, that is exactly the problem they are facing – they will put the campaign, everything, in the public media, because they have the money. We don't have the money. For us, our approach is to work with the people on the ground. When people see benefits, not even the [intelligible] can change them and divert them. And that is what we have seen, practically. While these campaigns are going on, GMO campaigns, with scientists, government ministers, etc....For us, our approach is to go to the ground. We show people the practical benefits. Those who have been linked to the market, they see how much income [they can make]. Sometimes four times as much! Those who have been linked to the market, they have remained there. Ten years supplying the market as farmers. Every day, every month, for ten years, consistently. Those who enter, they never fall back. In addition to that, they are earning four times as much. You can't convince these farmers otherwise, whether it's a government directive or something else. So as much as detractors have tries, we are not worried. What we do is, we continue our programs with the grass-roots. We are struggling to make sure that the people we target benefit. And the rest will be history. We will not fight government, we will not fight detractors. The people themselves will fight them. And that is our approach.

Q: How do you see the attitude and role of government in the organic sector?
A: Dealing with government is a slow process, and you must understand how governments work, the bureaucracy. Sometimes it's a big institution, sometimes one person is supportive but then maybe ¼ are negative. Then one positive person is pushing something, the negative people are [pushing the other way]. So that is how we work government – one step forward, many steps backwards, and you make another effort. But we see progress. Because the organic sector, you cannot ignore it anymore. It's the fastest growing sector. Last year, overall agricultural exports went down. But organic exports went up. So you cannot ignore the organic sector anymore, you have to work with the organic sector.
We have people we are working with in the government, in the Ministry of Agriculture. We have been working with them, they are now working on a organic policy. Last week we were with them, they visited farms to do the [intelligible] consultation which is supposed to start next week. But of course while these processes are going on, there are also some negative people, but we have to handle all of them as they come. So we make gains as we fight some other things which we haven't
solved yet.

**Q: Do you see the sector becoming more self-sufficient and less reliant on donor support?**

A: Yes, I think so. Of course, at any one time the players need some support. But what we have seen is that as long as the players get support for at least three years, whichever group you go to, they attain certification, they start selling. They don't need any support any more. And that is what we've seen. They continue paying for their certification because they are getting an income, they are getting a profit. So once they are sustainably linked to the market and they start selling, they don't need support anymore, they become sustainable and continue on their own. Where the support is needed is in the first three years when they are going through the adjustment, training, mobilization, group strengthening – those are important investments. And you need donors, because our government may not support the farmers themselves. But what is promising is, that those we have taken through the process, they don't need donor support anymore.

**Q: Do you see a future where the government would be able to provide the conversion subsidies, rather than donors?**

A: That is why we are pushing other projects like the policy. Because government can't invest in any sector when they don't have a policy. So the first step is to get the policy, the next step is to lobby so that government commits resources to implement the policy. And one of the aspects in the policy would be to support farmers who are undergoing conversion. So I can remain positive, but I can't guarantee that government will make those important steps. And it is the main reason why we are pushing this policy. It's a very important sector for this country, and it's an area where we as a country have the highest comparative advantage. It is a very big opportunity for this country, so that is why we are pushing government to take an interest to invest in the sector, so that it helps to alleviate poverty in line with the government programmes for poverty alleviation and development of the incomes of vulnerable communities. So in the future we see opportunity, but we don't know how it will end. We'll keep on pushing.
Appendix D - Charity Namuwoza, International Market Officer, NOGAMU

Q: What are the key organic exports for Uganda?
A: Cotton and cotton products such as yarn, fabric and finished cotton products. Then we have coffee which goes to the EU, Japan and the US. Then we have sesame. We have a range of fresh and dried fruits – mangoes, papaya, pineapple, apple banana. Then we have spices like vanilla, black pepper, and cardamom. Then we have cosmetic products such as shea butter. Then we have essential oils. We are still developing those, but some that are ready are lemongrass oil, citronella, geranium, and rosemary. Those are the major export products.

Q: Who are the primary buyers?
A: Germany takes a lot of fresh fruit. The Netherlands, Switzerland, the UK, France. Denmark, a lot of fresh and dried fruit there. Also Ireland and the US. Small quantities are being sold in Japan. Some fresh products go to the Middle East market.

Q: Is the market supply- or demand driven?
A: We support export companies to participate in international trade fairs, to promote and exhibit their products, and have face to face interaction with the buyers. There are potential buyers there – of course its a process, but that's how the demand is created. We also have walk-in visitors at our organic trade point. We normally receive visitors from members of NOGAMU, but we also get buyers coming directly, wanting to get in touch with exporters, farmer cooperatives ans [intelligible]. We also get enquiries through the internet. Each of these categories has been growing.

Q: What do you do to assess demand?
A: We have a database of buyers who are interested in different products. Some we have, others we don't have, some are still being developed. Each product has different demand, but from the estimation we've done, there is a lot more demand for dried fruits and the other product.

Q: How would you describe the average organic producer in Uganda?
A: They hold between 1 and 4 acres of land. Those are smallholder farmers, and they constitute 90% of the production base in Uganda. We have very few cases where a farmer holds more than 5 acres.

Q: How much of the price on the organic product does the producer receive?
A: That depends on the product, and on the demand. Prices keep changing, depending on the supply but prices of organic products are more stable when compared to conventional products. Because quantities are small, and demand is still a lot more than supply. So the chances of the prices falling are low.

Q: So the demand is actually greater than the supply?
A: A lot! There is a big mismatch between the current demand for organic products and the supply. And the demand keeps growing.

Q: Are you competing with other countries for the same markets?
A: Uganda still maintains a leading position in Africa, in terms of having the biggest acreage and certification, but also in terms of having the greatest number of farmers involved in organic farming. But most importantly, in terms of production, we are still leading. We have competitors, especially the West African countries, and that is the reason that most of our prices are not competitive on the international market – because of the proximity of the West African countries.
compared to our proximity, given that we are a land-locked country, they have the advantage of shipping in a shorter time. If you are a businessman searching for a product, you want to have the cheapest, best quality product.

Q: How much certification is done by you on a national level, and how much is done by international organisations?
A: I would say 90% of the certification is done by international companies. We have a local certifying body, which is not yet internationally accredited. But they have MOUs with international certifying companies. So they sort of sub-contract from the accredited companies.

Q: Do you ever come across cases where producers are not adhering to standards?
A: Yes, but we should note that 80% of the farmers in Uganda are practising traditional farming which in so many aspects is similar to organic farming. There are aspects that are different, but in essence they are practising organic farming. So the chances of not complying are slim. Non-compliance comes in different forms. Some are not maintaining good soil fertility management. Some are persuaded by [other programmes] to use fertilizer. If I should put it on a scale of 1 to 5, where 1 is not complying and in 5 they are complying, I would say that on average it is between 3 and 4.

Q: What is done in cases of non-compliance?
A: There are sanctions. They are kicked out of the system, which means that they cannot continue to be organic producers. They are kicked out for some time. Then after 1 or 2 or 3 years, depending on the kind of non-compliance, they can come back.

Q: How do you see the future of organic exports in Uganda?
A: Overall, the future is bright. But we still have some constraints that we must address if we are to take advantage of unfolding and increasing market opportunities. One, we still have low volumes from the producers. Even from the big farmer groups, the volume is low, compared to the demand. We still have a big gap to fill, in terms of having volume. And in business, if you can do big volume, then you have the deal- someone would rather deal with you than anyone else. So we have a challenge of scaling up the volume to be able to take advantage of increasing demand. That means clustering farmers, getting them into groups. And that takes money. Getting a group focused on organic production in the same geographical area takes money, time and resources. Also, the cost of certification is out of reach for most farmers, to the extent that in most cases here in Uganda, the exporter holds the certificate. Because the exporter has the money to invest in certification, which a normal farmer wouldn't. That makes them dependent on the export. But if they had the certificate, they could sell to anyone. So if you are a farmer in a group whose certificate is owned by an exporter, it would be hard for you to sell to another exporter because you don't hold the certificate.

So we need to empower farmers – we have to convert these 80% who are doing traditional farming into certified farmers.

The other challenge is that, being a landlocked country, we are feeling the high transportation costs. But NOGAMU, as a umbrella organisation, may not address this in the short run. So we need to improve our transportation situation. We used to have a rail line connecting Uganda and Kenya, we need to reinstate that. Secondly, the fuel prices are up.

In all these things, we lose competitiveness. We need to improve our business skills, communication, export managing skills, things like that. The new have to ensure that key players in the organic value chain have access to well-analysed data, a well-analysed marketing foundation.
**Appendix E - Derrick Tenywa, Local Market Officer, NOGAMU**

**Q:** How would you characterize the market for organic product in Uganda?

**A:** It started as an initiative from NOGAMU members around 2001 when NOGAMU had just started. That's when they came up with the idea of selling organic products on the local market. The aim was to increase consumption of organic products in the local market, and at the same time increase the sale of organic products. Not only exports, but also local sale. So that's when we came up with the idea of an outlet specifically to sell these products. Because initially people were saying 'What is organic?', because it was a new concept. But in 2001, around there, it looked like a new concept, whereas in actuality it was not very new. Because not much had changed from the traditional way of agriculture. Only certain standards needed to be worked out.

So the local market started officially in 2002, that was when this outlet was opened up. It started with only a few items from farmers that had already adopted organic farming. So they had a few fruits and vegetables, including local varieties. Surprisingly, it was mainly the bazungu [whites] who started coming to buy what had been displayed. They were the ones who knew about organic. The first chairman of NOGAMU was white. Almost 90% of customers were whites around that time.

In 2003, NOGAMU recruited a local marketing officer. I came on board in March that year. My major duties was to identify potential producers of organic products that can be sold through these local outlets. And also to build their capacity so that they can be able to sell the required quantities of product. So we started with that, I did my work to identify as many producers as possible. Much as a lot of them were not as organic as it claimed to be, there were a lot of things that had to be done. But we went on ahead and took them on. They were not certified organic, but they were practising organic according to the history they were giving. Somebody can say that they have not been applying chemicals to the crops for a period of over five years. Not because he doesn't want, but sometimes because he simply does not have the capacity or resources to buy input.

**Q:** That is what's called 'organic by default'?

**A:** Exactly. So there were [initially] around 15 that supplied products. We didn't have many processed products at first. The first processed product that we had here was juice concentrate and fruit wine. And after 7-8 months, in 2003/2004, we managed to get more suppliers to sell on the local market. The approach we used was taking on those who practised organic by default, even though they were not certified, so that we could have a variety of products on the market. And then we work on the other requirements, things to do with standards and labelling. So in 2004 we had around 20 suppliers. They supplied fresh fruits and vegetables, and processed products made from fruits – concentrates, wine, dried fruits, dried vegetables like mushrooms, honey, as well as some others. By 2005 we had more than 30 suppliers, only supplying this shop [in Kampala]. Some of the suppliers were also supplying the export market.

We also did some promotion by engaging in national trade shows. This had helped us to disseminate information, to get to know producers from different areas and maybe interest them to be part of the organization.

**Q:** So in effect you are using two different systems for the producers who supply the local market, and those who produce for export.

**A:** Yes. The standards remain the same, but this system is a bit flexible in that we encourage the verification done by the producers themselves. One challenge we found was that most of the farmers were producing individually. We tried to encourage them to associate into groups, then they get trained, for example in organic standards. Certification is actually a marketing tool, and most of the groups that are certified are selling on the export market. So for those that are targeting the local...
market, we became a bit flexible. By doing monitoring, and encouraging them to verify themselves, especially when they are working on groups, to insure that everyone is following the required standards. And in case somebody is not following the requirements, they have penalties. They can throw a farmer out, or tell him or her to restructure. That system was introduced in 2006, the participatory ranking system. That is the system that is being used by those who are targeting the local market. It is only being used by these producers – if someone wants to produce for the export market, they have to use the Internal Control System. That system is not very flexible, and it involves a lot of paperwork. But this [the participatory ranking system] is a bit simpler – you don't need a lot of paperwork. The farmers only need to monitor and verify themselves. And also NOGAMU, as the main selling point, has to insure that these people are actually doing what they're supposed to.

Q: Is this the only outlet for organic products in the country?
A: In 2005 we came up with an idea of expanding, because NOGAMU is a national organization with many members in different regions. So we came up with an idea of establishing other outlets, so that we can also help farmers who are in other regions to sell through similar outlets. So in 2006 we started looking at potential outlets. We started with one outlet in Kanungo in the South-West. We worked with partner organizations to identify partner members there, and we sold the idea to the group. We have another outlet in Bwindi. In Bwindi, the target was actually the tourists who visit the impenetrable forest there. We decided to have an outlet there, and it is still operating there.

Q: Placing the outlet there indicates that you consider foreigners a big part of the costumer base.
A: The [farmer] members in that area are not really benefiting much from the shop here in Kampala. So we wanted them to grow crops that could be sold through hotels and restaurants. The clientel there are mainly the whites. We thought that these tourists have certain products they like, and by putting an outlet there and then training the farmers there to grow these varieties, they could be earning. That was the idea. Another outlet we established, was in 2007 in Fort Portal. We worked with a partner organization called Satnet who identified groups of farmers who became members of NOGAMU. The outlet is operated by a private company which is a member of NOGAMU. Then another [outlet] is in Jinja. We also have another plan to target every region in Uganda. There are four regions – Eastern, Western, Northern and Central. Our aim was to establish a outlet in the Northern region, in Lira town. We had a partner organization there, but they are currently having some problems with organic cotton there. The reason we don't want to do it ourselves is that we cannot do the management of the outlet, so therefore we identify partners.

Q: What is your experience with these partners?
A: They manage well. It has been a learning process for us. [In Lira] we came in with our own resources, the partners did not have any input, they just identified the location of the farmers. And it didn't perform well, compared to the ones in Jinja and Fort Portal. There we identified private partners who had an interest. We are also targeting other bigger towns, because there are so many private companies coming in with interests to open similar outlets.

Q: Can the outlets run without financial support from NOGAMU?
A: Yes. We only provide initial support, like helping to pay the rent for the first six months. So they are doing it independently. Now, about the products. You may find that you can not get all the products within the region. So some products, [the other outlets] get them from the NOGAMU shop [in Kampala]. Or else we link
them directly with the supplier. With the fresh products, we encourage as many producers as possible from within the area. Like Fort Portal, they are not getting anything fresh from here [the Central region]. It is only the farmers there who are selling [fresh produce] through that outlet.

**Q:** Is 'organic' a recognized brand in Uganda? Does the average consumer know what it means?

A: What we have seen, having created awareness among the consumers, is that quite a lot of people are coming over. They know that these are products that are not contaminated, they are grown naturally. The average consumer may not be ready, but there is a certain class of consumer and is able to buy. The advantage that we have is, that these products are not so highly priced. It is only a few products like tomatoes, cabbages and watermelon where the price is slightly higher because the production process is not easy.

**Q:** So the price level in this shop is similar to prices in local markets here?

A: Not quite, but it is close. Mostly the products like tomatoes are priced higher. The farmer will have to spend more effort cultivating those things when not using chemicals. So you find that the price of tomatoes here goes at 2.500 shillings per kilo, whereas in any other market it goes at around 1.500 shillings.

But the reason for the pricing [of the other products] is that we want to encourage as many consumers as possible, to interest them in organic.

**Q:** Is there a clear demand for organic products in the local population?

A: When we used to go to the supermarkets to introduce organic fruits there a manager could tell us 'but in Uganda, almost everything is organic, so why should we go for that?' So that's what you find, that when you introduce organic, the consumer may not buy it. Because people think that what is grown in Uganda is organic, which is not true. You will find that the soil, because of bad practices, the soil will get exhausted. If you don't manage it properly, you will require chemicals or artificial fertilizer to use on the soil so that you can produce something. So it is a wrong perception that everything grown in Uganda is organic. It is not easy to find a organic tomato. It is only when someone has been trained in pest management that you can have an organic tomato.

**Q:** Is there a sufficient consumer local base? Some would argue that organic products are a luxury good, and that many people in this country simply cannot afford to choose luxury products.

A: We don't have a problem with the consumer base, especially for those who know what they want. Consumers can tell the difference between what is grown [traditionally] and what is grown as organic. Consumers of organic know that there are certain standards of organic that are followed. They [are also aware] of the supply chain, there are many things involved. Even when products have been grown naturally, they may become contaminated at many point in the supply chain. So you may not get the same benefits as when you are buying organic. So that is why you find with the consumer base, those who understand what organic is, they don't have a problem buying it.

**Q:** How stable is the consumer base? Do the sales fluctuate along with the conventional market?

A: From 2003 when we opened the outlet, to 2008, there has been a steady increase. Which, to us, is a indicator that the demand is growing for these products. In 2003 we had a few million [Uganda shillings] in sales, in 2005 we had around 35 million in sales. In 2007 we had 58, and last year in 2008 we had 71 million in sales. Since 2005 we have increased the range and variety of products that are offered.
Q: What are the differences in the crops produced for the local market, and those produced for export?
A: The differences is in the variety. For instance, vegetables. Some varieties are produced for export [only], while some varieties like tomatoes and cabbages are consumed locally. Things like chili is mainly for the export market. But when it comes to the procedure of producing, the procedures that are followed for producing for the local market are exactly the same as the ones producing for the export market. The only difference is the certification part. For the export market, the product has to be certified organic, whereas here there is no rigidity in that. You don't need certification to sell on the local market.

Q: For the farmers who produce for both the local and the export market, is that a strategy on their part, or is it something that you encourage them to do?
A: If someone is selling on the export market, they need to follow all those standards that are in that market. So he doesn't need to separate the products. So if he has something that is not sold on the export market, he can easily sell in on the local market.

Q: But the farmers that are producing for your outlets are only producing for the local market?
A: Yes.

Q: Do you see it as a problem that some organic farmers who are connected to a buyer will at times sell their product on the local market?
A: It is not a problem in that if the export market cannot take everything, then the farmer remains with no alternative but to sell on the local market. The only challenge is that the farmers have put a lot of effort into producing these things as organic. But when the products are sold on the local market, they are bought as conventional. The products have not been differentiated, they don't have labels to show that these products are organic and should be bought as such. We have a farmers group that bring in pineapple and avocado, they are organic certified. They supply a supermarket, but when you go to that supermarket, you can't tell whether [the products] are organic or not. Because there is no mark. On the processed and packaged products there is information that the product is organic. But on the fresh produce there is none. But we are working towards that. We are encouraging companies to start labeling, packaging the vegetables and labeling things like fruits.

Q: But what about a situation where the farmer sells the products prematurely on the local market to get quick cash?
A: I don't think that really applies. Because the issue of quality is very important, also to the local consumers. For example, if you are selling a pineapple prematurely, I don't think anyone will buy it. Only one case where I think it can happen, is with passion fruit, because there is a part of the year where they are very scarce. So farmers used to do something to make them ripen. But consumers were not getting what they want, because if a consumer buys it and finds out it is not mature, they [will not buy again]. So whether it is the local market or the export market, the issue of quality is very important.

Q: The cases I've heard about, where organic farmers have sold their products prematurely on the local market, were concerning coffee.
A: The issue was there some time ago. It was a big issue, especially just after privatization of the sector, when the government privatized the drying of coffee. So many buyers came on board and wanted to engage in export. Initially, it was only one company that was exporting coffee from Uganda. Privatization changed everything – because there were so many buyers coming on board, there was a lot of competition. To such an extent that the buyers started buying immature coffee.
The affected the quality, which became poorer and poorer. So the price of coffee dropped so much. So they had to go back, reorganize themselves, and start working on the quality of coffee. So the problem [you are referring to] has been solved.

**Q: Some claim that the production of organic farmers can be a factor in increasing food prices in a area. Is this something you have seen happening?**

**A:** I don't think the rising conventional prices are caused by organic. My feeling is that it has to do with the seasonality of these products – sometimes they are in season, sometimes they are off-season. The prices keep fluctuating – you will find that one kilo of passion fruit during off-season goes for 2,500, whereas when it is in season it can cost as low as 600. This is the cause I think. I don't think it is because the price for organic is high, and [the conventional farmers] wants to make their prices high also.

**Q: How do you see the future prospects of the organic market in Uganda?**

**A:** Based on my six years in the organic sector, [I will say that] the future for organic is very bright here. Not only in Uganda, but in the East African region. The East African region has not been exploited [as a market] very much, but we as an organization have now started to collaborate with organizations in the East African countries. And I'm looking at the market as a very bright market. It is a market that will progress in the next five years. You will find that the price for a product like dried pineapple can go for 2,500 per 100g bag on the export market in Europe. And you will find that it is the same price being offered here. And somebody who wants to export [to Europe] has to go through a number of things, so many requirements. And where he is selling the product, there are restrictions that keep coming on. We have issues to do with sanitary conditions, these kinds of things. So a producer may feel that he is more comfortable producing for the local market than for the export market.

**Q: So are you saying that the profit ends up being higher on the local market?**

**A:** I'm looking at some of the products, like dried fruits...I don't know, we need to get some actual statistics from the exporters themselves...But if a bag like these pineapples goes [on the local/regional market] for 2,500, 100 grams, good. Even if it goes for 3,000 on the export market, that difference of 500, when you have put in so much effort on fulfilling the requirements, and the export market is also competitive, [you may end up making a lesser profit]. And that's why it's important to develop the local market. That's why I'm saying that when you create awareness amongst the consumers, you'll find that they will be able to consume, and the market will evolve. And these products, initially they were being bought only by the whites, they were the only ones who knew what it was. But you will find now that [even] schoolchildren now know what these [points to bag of dried pineapple] are. And they are buying them. When you go the supermarket where organic producers supply and see who is picking these products, you will see that it is the locals who are picking. Which to me is an indicator that the future of organic is very bright.

**Q: Do you see the sector becoming less reliant on donor support?**

**A:** The issue here is to build the capacity of the producers, so that they can know what is required, whether it is for the domestic or the export market. I think the sector will continue, whether the donor money is there or not. The thing to work on is to build the capacity of the producers so that they can produce quality products that are competitive on the market, so that they can be sustainable in the market.

**Q: How do you see the governments role?**

**A:** Initially, the government didn't show much interest in the sector. I think that was due to
ignorance, they didn't know what was happening. But as information and data continued to come in, the government is now reconsidering the issue. The Ministry of Agriculture is now handling a policy on organic agriculture, which means that the government is now starting to get interested, and they are now starting to understand that the sector can be very important for the small-scale farmers in Uganda.

Q: Does the government recognize the local market for organic products, or are they more focused on the export market?
A: They are more focused on the export market, because that is where they have a lot of data on the sales. There is not a lot of information on the local market. Because we only have records from our outlets. But that will not give you the right picture of exactly what is happening, because there are some organic products that are sold as conventional. They are sold in other places, so we don't have records.

Q: Do you make estimates on the sales figures for the local market?
A: What we have done, we are starting to get records from the suppliers, so that by the end of this year we can know how much has been sold domestically. That will be very helpful when adding up how the domestic market has been developing.
Appendix F - Jane Nalunga, Training Officer, NOGAMU

Q: Can you describe your duties as a training officer?
A: I'm responsible for training and extension. Under training we have different training programmes – regional and national training which cover general topics for our members. We do a kind of formal training assessment, and then we decide together with the marketing people what we should be training on in that particular area. Because training is very closely related to marketing. All the training we do is geared towards finding markets for our members and keeping them in the market. Which means focus on meeting marketing requirements. So our training starts right from production, harvest and post-harvest, processing and marketing issues. Every year we’ve been having one national workshop on marketing. Then, regional workshops, because when you look at Uganda, we have different crops and different needs in the different parts of the country. So we’ve been having one workshop for each region. We have the central region, the eastern, the western and the northern region.

Q: How do you select the farmers you are working with?
A: I wouldn’t say that we select them at farmer level. NOGAMU basically works with groups, although of course there are some individual members. And the groups have all applied to become members of NOGAMU. It is amongst the groups who are members of NOGAMU that we select the people to be trained. And we always ask the group to select, because afterwards we would like the people who have been trained to go back and train the other members of the group.

Q: Have you had issues with farmers who don’t respond to the training?
A: We have had a few cases where a few people do not pass on the information, but the majority do.

Q: Do the farmers see conversion to organic as a risk?
A: The Ugandan case is quite different from other areas of the world. The kind of traditional farming practised here is very close to organic agriculture. There is a case I usually use: banana producers. The difference between organic banana production and traditional banana production is very, very slight. Most of the recommended practices in organic agriculture are the practices that are traditionally done here, like mulching, using shade trees, adding organic manure to the plantation. So to the Ugandan farmer, the change is not very big. Except for those areas where soil management has been neglected. But for most people the change is not very big. Even the cost – people say that producing organic is very expensive. Here in Uganda, producing organically is much cheaper than conventional. Because most of the inputs the farmers use are available on the farms. So it is part of the farmers day-to-day work. It is only the knowledge they have to increase, in soil management and pest management. In soil management there is not much worry, the main worry is in the pest management, especially diseases. Farmers know very little, if anything at all, about diseases. So generally they don't see it as a risk to convert to organic. Except for some crops, like tomato. Because tomato is very prone to disease, like blight. And the way it was introduced was, there is a local variety that has been with us for many years. But when they introduced the high yielding variety of tomato, they were introduced together with the spray. So most people believe that you really have to spray them. Of course there are some organic tomato producers, but you have to have a certain level of knowledge.

But for most of the crops that are produced organic, like cotton, sesame, cocoa, coffee, bananas, I wouldn't say that farmers see it as a big risk.

Q: Do you ever have to turn down farmers groups who contact you?
A: Yes, we have to limit the number of farmers we take in per year. They write a request for the
regional workshops, for the national workshops we invite them. But we also give them an opportunity to request for training of their own. We have been doing a maximum of ten workshops per year, but sometimes we get more applications than we can handle with out resources.

**Q: How do you deal with the farmers whom you can't train immediately?**
A: We either link them to our members in the region, or we postpone them, it depends on their needs.

**Q: Are you generally able to keep up with the demands?**
A: NOGAMU is not a training body, we work with partners. We have been able to meet most of the demands, because we do not do all kinds of training. It is where we see that it is really required, or nobody else can provide it. That's what we handle.

**Q: Organic agriculture has the potential to improve both social, economic and environmental conditions. How do you weigh these three aspects in your work?**
A: The good thing is that these three issues are kind of interlinked. When we improve the production aspect, we automatically improve the environmental part. For example, when we improve the soils and the micro-environment, we focus on production. Production starts with the soil. We use the slogan 'Feed the soil, so that the soil feeds you'. So by improving the soil by using manure, planting trees, using shade trees, this will automatically contribute to the improvement of the environment. When the farmers sell the crop, the economic part will be catered for. And the social part mostly comes from working in groups. Because we encourage them to work in groups to be able to make marketable volumes. Leadership skills are developed, because they must have leaders [in the group] like a chairman, vice chairman, treasurer. And as they work together as a group, you find that they develop a kind of relationship amongst themselves. So the social value improves along with the environmental and economical.

**Q: And what about the improvement of social conditions on the household level?**
A: That also improves. By the time organic agriculture started in Uganda, it was mainly the women who were dealing with it. But as they realized that it had that economic focus...for example, in some parts of the West there was a survey carried out that found that cash crops are grown by men and food crops are grown by women. But when they saw that organic agriculture had an economic aspect, it built a closer [intelligible] between the husband and wife. Because the man had to cooperate more with the woman to be able to join the organic stream and take advantage of the market. So I would say that organic actually improves those relations. When you look at people who are members of organic groups, their relationships and interactions are better than the conventional farmers.

**Q: Do you also incorporate the social aspects in your training?**
A: I think that comes in terms of gender. Because gender is usually one of the cross-cutting issues in our training. And we also [train in] group dynamics. How do people relate in groups, how do they carry forward the group, etc.

**Q: Are you mostly focused on cash crops for export or food crops for own consumption?**
A: We usually work with the crops that are already there. If it is a group of cotton [farmers], we address the needs of that first. But we do not neglect the food. Because in organic we believe that a hungry family cannot sustain the economic needs for producing the export crops or the market crop. So we cover two the general aspects of production. We cover at least the general aspects [of food production] in our training. There was one group in Luwero, pineapple growers. We went through a analysis on what they spend their money on. And
we realized that most of the money earned from pineapple went to buying food. Yet the food could be produced along with the pineapple. So we had to change the strategy. We always do such an analysis to see that the farmer does not end up in a vicious cycle.

Q: What do you see as the main hindrances to spreading organic agriculture in Uganda?
A: Organic agriculture is knowledge sensitive. Much as I said that there isn't much difference between traditional agriculture and organic agriculture, knowledge is still needed. We have very few qualified trainers in organic. In NOGAMU we are only two, my assistant and I, and we usually get trainers from outside, because we can't handle everything. But the people whom we contract are not many, so that is one of the limitations: the number of organic trainers still need to be increased. We've been training some trainers, but the need is overwhelming.

Another thing is that there are labour constraints. Most of the youth no longer want to work [in agriculture]. They want to move to urban centres. So some of the farmers are no longer doing the cultural practises that they use to do traditionally. In some areas there is a shortage of labour. And the will to work...some people are not willing to work. And this is not much different from conventional farming. Our level of mechanization here in Uganda is very, very low, whether conventional or organic.

Q: How do you see the government's role in the future of the sector?
A: If they could change their attitude it would be very good. To me, organic agriculture is the best way to go for Uganda. Most of the Ugandan farmers are poor farmers. It's cheaper for them to use cow dung, plant jackbeans or other nitrogen-fixing plants, or use mulch, than it is to buy a bag of NPK which is 7.000. Somebody who does not even have 1.000 in his house, asking him to buy artificial fertilizer for 7.000...

The poverty levels are increasing. So to me, it would be better to start with what people have than to tell them to wait until they can afford [expensive inputs]. Because if they can't afford now, I would not expect them to be able to afford in 10 years, because the prices for fertilizer are also going up. What people learn at the universities is how to use artificial fertilizer – organic agriculture may just be briefly mentioned in one lecture. There is only one university that has started a course in organic agriculture, Uganda Martyrs University.

Usually what you are told is how to use fertilizer, but when you go to the field, you will find different schools of thought. Some think that it is bad for the soil, others think it is just for the progressive farmers, others think that it is too expensive, beyond their reach. So if there could be a change in the training that the government agencies are giving...

Q: Are the Internal Control Systems working in the farmers groups?
A: Yes. For the groups we are working with, they are working. And I think they are helping a lot with the internal organisation. And it controls the produce. Because the organic prices are higher. So to avoid any other non-organic product coming in, the ICS is very good.

Q: Do you see the sector becoming more self-sustained and less dependent on donor support in the future?
A: This will really depend on the market. The international market is controlled by several actors. But if the local market continues to grow at the same rate, or a higher rate than it does now, I think that eventually the organic sector will become self-sufficient. And if the organic policy goes through, if it is implemented and government starts supporting, that will be a big strength. Because right now we are not part of the government at all.
Appendix G - Charles Walaga, Chief Executive Officer
UgoCert Ltd.

Q: What is your function in UgoCert?
A: As chief executive, I'm responsible for all the aspects of the company, ensuring that our clients are provided with high quality service, ensuring that our staff have the right competences, developing their skills, maintaining the quality system in the company, and developing the business of the company.

Q: How do you cooperate with other certification bodies?
A: As you know, KRA V and IMO were the first certification bodies in Uganda in 1994. And in 2003 KRAV made a decision to end its operation in Uganda, to end its international operations. So IMO took over most of the projects that were being certified by KRAV. But we also have other international certifiers in the country like EcoCert – they have been in the country since 2002. We also have BCS, we have Soil Association, we have Ceres.

UgoCert operates in competition with some of them. We have a cooperation arrangement with Ceres, we had one with IMO. We had a cooperation agreement with IMO in the past, we signed a new one last year. But IMO has more or less not been sincere in implementing that cooperation, and I should say now that we are no longer in active cooperation. They was no sincerity when they were signing it, they just wanted to get access to our clients. So we now remain with implementing a cooperation partnership with Ceres. They subcontract us to do some of the inspections in their projects, which we do. And we also ask them to provide certification to those standards that we are not yet accredited to and which we have no immediate plans of getting accredited to, because its very expensive maintaining every accreditation. If you get accredited and you have only one client, the client cannot cover the cost of accreditation, so as one of our operating strategies we plan to maintain long-term partnerships with some selected and willing international certification bodies. Ceres has shown that it is willing. Over time, since 2004, we have discussing cooperation with Soil Association, but it does [seem] that they are not in it. We will probably try to persuade further next week when I'm in Biofach, and that will probably be the last attempt. If discussions fail to come good...we cannot discuss forever, we will close that line.

Q: Do you experience differences in certifying locally owned companies and foreign owned companies/joint ventures?
A: The international companies usually don't find problems in paying the certification fees, the local companies are struggling. Most of the local companies depend on financial support from some development programme or business support programme by donors. But the international companies – I know that some have accessed donor financing for certification, for developing their own quality systems. But when that funding has ended, they have not had any problem maintaining.

Q: Is that because of their international experience?
A: For most of the international companies, dealing in organic products is just an addition to their mainline. So they are already in the market. They are big and they can finance the certification on their own. And also if you look at the cost of certification as a percentage of their turnover, it's negligible. Whereas Ugandan companies are really very very small companies, I wouldn't even call them medium scale companies. They are small companies just starting. Some were [dealing] in conventional products and found that it is no longer profitable, so they have moved to organic, but they are struggling to establish firm links in the market. The market out there is not very kind to small dealers. For the small operators the operation costs are so high, including the certification costs, because there are some costs that are the same whether you are working with 20 farmers or
200 farmers or 2,000 farmers or 20,000 farmers, so you run into problems. Likewise I think that small dealers are not well respected in the market, so they are always complaining about consignments that have been condemned, or their clients claim that the consignments was condemned or destroyed, or was poor quality. So they say they get all types of [intelligible] which the big exporters never experience. The big exporters have got a huge network. Some of them are just local subsidiaries of huge companies – if we talk about the coffee companies here, they may have local names but they are all part of the big coffee companies. I think the five big coffee companies in the world all have subsidiary companies here, but they don't have those names. We have to be very careful to find out who is who.

Q: And those companies can draw on the resources of their mother companies.
A: Exactly. And you will never hear those companies say 'My coffee consignment [was condemned]'. It [the product] is confirmed here by other companies that certify exports, they keep samples of all they have send. If you make a complaint about the consignment, they call their mother office, or send someone. So it's really good when you get big, it's terrible when you are small.

Q: What are the challenges in certification on a smaller scale – group certification of small farm groups and so on?
A: Basically the system is the same. The Internal Control System and the compliance system that you are required to put in place is the same whether you are a big company who is organizing the farmers, or it is the farmers that are organizing themselves. Now, big companies have the means to employ experts to manage that system. We have only two farmers groups that have been able to put that system in place. And we have another 3 or 4 farmers groups that are struggling, have been struggling for the last one or two years, to put that system in place, and they have not been successful. The internal compliance system and the Internal Control System requires knowledge and skills, and the knowledge and skills can only be obtained through training. And you must have had a certain level of education to be able to understand the training, to be able to acquire the skills. And to put the system in place requires financial resources in terms of stationary – you need a computer, you need an office, an operating space, you need a filing system. Because the quality systems, they are all about documenting, all the time. You must have good communication system, you should have access to internet, and that brings in other skills. And most of those skills are not available in the small farm associations, they are not there. And they can be acquired by employing somebody who has them, but which farmers groups have money to pay such a highly qualified person? They are not able to afford that. So the farmers groups are usually struggling. Some have been able to succeed, by being provided with support from NOGAMU. Because NOGAMU managed to get some funding, I think, from International Trade Center, to support smallholder groups to establish Internal Control Systems and what have you. They've got that support, and NOGAMU has helped them to put in place the ICS, but we also do not know for how long...because I think the assumption from NOGAMU is that 'Look, if we get this financing, we'll train these farmers, we'll train their leaders, we'll assist them to establish the Internal Control System, and they'll acquire the skills, and they'll be able to run it thereafter'. I doubt that those groups will be able to run that system. But we will wait and see, I've told them that there are some minimum requirements for a group to be able to run that system. And if the group hasn't got those minimum qualifications, they'll never be able. Because it's a technical system. The authorities are continuously changing requirements. And they are continuously sending them to us, and to the farmers. The problem is, even I here in a certification company, it's a big challenge keeping track of those changes. And then looking through the whole quality system we run here to see where the changes need to be made, the farmers will have to do that. Now, farmers in Uganda are not known to be highly literate and to be comfortable with a lot of paperwork. Farmers usually maintain
minimum paperwork. This certification requires quite a big amount of time to be spent on paperwork.

**Q:** So you're saying that for the ICS to work properly, there need to be a certain level of capacity that is not there yet in the farmers groups?

**A:** Yes. The capacity is not there, for most of the farmers groups.

**Q:** Would it be more beneficial for the farmers groups to align themselves with a company than to organize themselves?

**A:** The problem is that when we are talking about farmers groups, we are talking about 30-40 farmers. They themselves cannot run a sustainable marketing operation. Their production, if you've seen the farmers in Uganda, the production of 30 farmers is so low, even if they bulk it. So I fail to see, even if they get initial donor support to employ someone to put the system in place...at the end of the donor support, the quantity that the 30 farmers produce will never be able to sustain the salary. So if we're talking about a farmers association of 2.000 farmers, maybe there you can begin saying 'Okay, we can develop the capacity of this farmers group to become a viable marketing entity, to create a marketing cooperative'. Because you know that you can now work out the cost of the operation and how much you'll need to spend on staff.

So for me, if you have group of 30 farmers, I would say link them directly to a big company. [Otherwise] it is not viable. But most NGOs do not accept that. Because they [work with] farmers empowerment, that the farmers should be able to decide where to sell. Because linking [to a exporter] restrict their market opportunity, they cannot market elsewhere. Because the exporter is going to invest, and probably he will own the certificate. For me in these things, there is no utopia. We usually have to go for the best alternative, as we think it should be for these farmers, other than this utopia. The NGOs...it's very good to think about that perfect world where farmers can have their 20 tons of coffee, go to the exporter who will offer 1.000 dollars per ton. The go to another one who offers 1.200, and to another one until they get the best offer. That is the best [situation], but sometimes it is not possible, so you have to find a way and say 'Okay, does this arrangement bring some benefit to the farmer'?. It does, it secures for them a market, and they can concentrate on production. And probably expanding, and maybe in five years time they can break free, when they have acquired the capacity to manage their own marketing, they have the adequate quantities, etc.

But the way I think it should be is not the way I see it being practised, so there we are.

**Q:** I understand that UgoCert has been successful in advocating for the government to establish a national organic standard?

**A:** Yes. The advocacy for organic agriculture in Uganda has been going on since probably 1998, 1999. We have come from very far – it has taken time, we've implemented a number of strategies to attract the interest of policy-makers and raise awareness amongst policy-makers and politicians on the viability of organic agriculture. And the certification and marketing of organic products, the growth of organic products – all those have been used to interest policy-makers. Now, the organic sector faces enormous opposition, but its supporters continue to increase. So we could have done better, but we have also come a long way. Effort is still needed, but I believe that the effort needed is on research to generate the necessary information that can establish the viability of organic agriculture, or establish that it is not viable. So that is for me the crucial stage we are now at. We require scientific research, real empirical research that can inform the sector and other. It is now the major hindrance, because there is certain types of research to convince those who are still resisting organic agriculture.

There are also major agronomic challenges that will need to be overcome before many other who are sceptical to organic agriculture come on board. For example, there's CDS pest control challenges. And the challenges of phosphor mining will also have to be overcome. So again, we will
need real strong research on organic pest management, and if that research can generate practises that will be effective in reducing pest losses in crops like cotton. And then for soil fertility management we have to find effective organic amendments for phosphorous deficiency. That would go a long way.

Q: In Europe, a current challenge is that, with the growth of the sector, producers are entering the sector who are only concerned with fulfilling the minimum requirements, thus neglecting the integrated aspects of organic farming. Is this a problem in Uganda?
A: We have people who have been in the organic movement in Uganda for many years who we can think of as the ideological parents of formal organic agriculture in Uganda. Let me stress the word 'formal'. But then of course we also have opportunists who have come into the sector to take advantage of the opportunities offered by the premium price on organic products. So we certainly have them. Now, I must also point out that most of the products for the formal organic market produced in Uganda are usually for export. NOGAMU has tried to establish local outlets for organic products, both certified and non-certified. So those efforts are there – they have regional outlets, they also have an outlet here [in Kampala].

The other thing is, when we were starting the movement here in Uganda, we said 'What do we really understand by organic agriculture?' Because there was a characterization of the agriculture practised by smallholder farmers as organic by default. Now the question was, what is organic about the traditional practises? And how traditional are the practises, and what do we understand by “traditional”? Some take traditional practises to mean ancient practises that are started [a long time ago] and have not changed over time. And the question is, is that possible in human civilization, that conditions change, but people do not change their practises to adapt? So is it true that these practises have not been changing? Are we saying that their foundation is based on indigenous farmers knowledge? So we developed a concept and said 'Okay, we shall leave it to the Europeans to call it organic by default, whatever that means'. But not many of them will compliment the farmers who have tried to use chemicals and abandoned them. In some situations, [the case] is not exactly that they have not used fertilizer. Many of them have used fertilizer, and have abandoned it, and you can always find out the reason why they have abandoned it. Others have used pesticides, and they have abandoned it, others have used pesticides and have continued to use it. So the situation out there is a little bit mixed. But if you go to the farmers and say 'We know you've never used pesticides', they say 'Yeah, we've never used it'. You say 'We know you never use fertilizer because it's expensive', they say 'Yes, we've never used it'. But if you go and ask 'Why are you not using fertilizer frequently? When did you last use fertilizer?' Then maybe you get a good explanation of their perceptions and the challenges they face.

We fail to understand what that means, “organic by default", we don't know. Some take it as compliment, that the farmers are understanding the practises of organic. Others take it to mean that it is organic by mistake (laughs). So I have abandoned the term, I don't want to use it. We say there are some farmers that have developed local farming practises that are compatible with organic principles and practises. Now, as a practise we never go to a farmer and give him a certificate and say 'You are organic by default'. No. They'll still pass through a one year conversion period where we see if they are implementing the practises in a systematic manner. Okay, farmers have always been incorporating organic matter into their soils, either as mulch or as manure. And now we want to see those practises being implemented in a practical manner. We want to see the abandonment of those practises that are destructive. For example, one of the major traditional practises of destroying [intelligible] grass is, they pick it, dry it, and burn it. So we said 'The picking, the weeding, all that is very organic. The drying, that is very organic, other than using Round-Up to kill it. But the burning is not'. It can be put to better use. We want to see those destructive practises being abandoned, we want to see a more systematic handling of, for example, weeds and organic matter.
on the farm. We want to see them handling the green manure in a more systematic way, operating it in the soil. We want to see the traditional fallows under sustainable circumstances. In many areas where land is now scarce we want to see them actively managing their fallow lands and sowing them with legumes. We want to see such things, and then we can conclude that the farm is a good organic farm.

Q: How do you see the future of the organic sector in Uganda? Will it become more self reliant, and less reliant on donors?
A: Is there in the world, even in Denmark, a movement like NOGAMU that does not depend on donor funding? I know of none. We belong to IFOAM. We have to realize, the problem in the developing world is that...and it usually comes from the critics...if you look at the conventional farmers associations, they also depend on government subsidies, on donors, etc. Now, when we look at a movement like NOGAMU, we have to look at several things. What is NOGAMU doing? NOGAMU is involved in mobilization, lobbying and advocacy, raising awareness. In its work, does it generate public goods? It does, in addition to the private benefits it generate for the farmers and its members. But it does generate public goods. Who is going to pay for the public goods? If there is a donor willing to pay for that, I think that is well and good. But to say that NOGAMU is going to be self-sufficient means that it is going to generate an own income and also the resources raised from its members. Now, that would be a very, very exclusive organization. But the mission of NOGAMU is to spread organic agriculture. Not only to empower its maybe 200 members, focusing on providing services to only the 200 members, and then charge for the service. So organizations that generate, in addition to other benefits, generate public goods should never be criticised for being dependent on donors. One should never conclude strongly, because the basis of those conclusions can seriously be questioned. To just conclude that it is not sustainable...in which way is it not sustainable? Examples of older organizations like NOGAMU is that they are still surviving. They still get donor money. So for you to determine whether NOGAMU is sustainable, you have to determine whether organic agriculture is sustainable in the long run. As long as organic agriculture is attractive, as long as organic agriculture continues to be a superior production method generating public environmental goods, showing its capacity to address the negative impact of conventional agriculture...as long as it continues to be relevant, NOGAMU is sustainable. Because then there are always going to be people who are going to donate to its cause. If organic agriculture becomes irrelevant, then NOGAMU is not sustainable. So my judging of NOGAMUS sustainability, I look at the relevance of the message they are spreading.

Q: How about the attitude of the government. Do you see a future where the Ugandan government subsidizes for example certification costs, rather than foreign donors?
A: No, they will not. Because the government of Uganda is in itself subsidized, it depends on donors for more than 40% [of its budget]. So where will they get the money? How the government usually supports the agricultural sector is, they remove taxes on exports. Now, where I would say that they could subsidize or meet the costs...it is still donor money. It's donor money through the NAADS program, but you could say that it is government money. What happens with that money is, the farmers at sub-county or district level decide the service they want. They can say 'We want to spend the money this year on certification'. The can access that money.

Q: The tax breaks that the government gives the agricultural sector can be seen as a subsidy.
A: If you're looking at subsidies, the organic sector in Uganda is subsidized in a way. Because the government is paying extension services, the government has removed most of the export taxes that were being levied.

Q: But you don't see a government that is willing to go in and actually fund...?
A: You know, this business that I've been reading about in the EU or America, the senate setting aside budget support, so many millions to the organic sector...([laughs])...that would take time. You know, the organic sector is amongst the least funded sectors in Uganda. And then you see more than 80% of the population making their living from agriculture. It [the agricultural sector] gets 4% of the national budget ([laughs]). So you have to look at that scenario. With most of the money of that 4% goes into maintaining salaries for the bureaucrats, the ministry, etc. It is the whole agricultural sector that is heavily underfunded. The amount of money that reaches the district level trough the NAADS program, there is high competition for it. And for the moment, the conventional agricultural promoters have leeway. They are stronger, and they are able to access those funds. But I must also point out that most of the activities that are being supported are not no-organic. Farmers are trying to access improved seeds – not GMOs. They're trying to access improved livestock, they're trying to access implements. I have not heard of any farmers saying that that money should by pesticides or fertilizer. They are trying to access training, extension services, that is what I've seen. So I would not say that it is bad down there, it is not. It is only that I have not heard of farmers who have tried to access that money to meet certification costs.

But I should also point out that there are several funding opportunities to obtain funding for certification activities. There is the Private Sector Foundation, I think that is EU money or World Bank money. It supports the private sector, they meet 50% of your costs, right from establishing the quality systems and what have you. There is International Trade Center money coming from NOGAMU. Of course in the past we got huge quantities of money from SIDA through the EPOPA programme. I know that there are USAID funded projects on support to farmers, commercialization of farms, linking farmers to markets. They advertise and say you can apply for money for quality systems and what have you – I know its there. Danida has got a program, they also fund all these things, farmers access to markets, etc. So it's all about organizing yourself. And it takes a certain capacity to write that proposal, and a group of 20 farmers...you're not going to interest them [the funders]. Because they are looking at high impact in a project. So if you are [a group of] 2,000 farmers, I'm sure they will look at you. But if you apply as 25 farmers...it's a waste. So I will not complain and say that the European farmers have got a lot of subsidies – we have them here. The subsidies are here, it's just [a question of] accessing them. But even for the European farmers, there's a lot of paper work to get those subsidies. He doesn't just sit at home and they come. It's the same here – the challenge, the barrier is the lack of farmers capacity to be able to access these things.
Appendix H – Survey questionnaire for main group (organic farmers)

Size of household (family members)?
Size of land cultivated by the household?
Types of crops grown?
Types of crops sold?
How long have you been a certified organic producer?
What were the sources of income for the household before you became certified?
What are the sources of income for the household now?
How many animals did you have before becoming certified?
How many animals do you have now?
How many of your children went to school before you became certified?
How many of your children go to school now?
Has becoming a certified organic farmer improved your income?
Since becoming certified, have you been able to acquire any assets?
Before becoming certified, was your household income sufficient for maintaining a decent standard of living?
Is your current income sufficient for maintaining a decent standard of living?
Do you plan to continue producing organic?
Appendix I – Survey questionnaire for control group (non-organic farmers)

- Size of household (family members)?
- Size of land cultivated by the household?
- Types of crops grown?
- Types of crops sold?
- What were the sources of income for your household X years ago?
- What are the sources of income for your household now?
- How many animals did you have X years ago?
- How many animals do you have now?
- How many of your children went to school X years ago?
- How many of your children go to school now?
- In the last X years, have you been able to acquire any assets for the household?
- X years ago, was your household income sufficient to maintain a decent standard of living?
- Is the current income of the household sufficient to maintain a decent standard of living?
- Have you considered becoming an organic producer?

X = calculated average of the number of years the respondents in the main group of the surveyed area had been certified organic.