

Regoverning Markets

Small-scale producers in modern agrifood markets

Innovative Practice

Uganda

The case of the Nyabyumba United
Farmers Group in Kabale district

Lucy Aliguma, Damalie Magala and Stephen Lwasa

Uganda Agricultural Economics Association



Uganda

Connecting small-scale producers to markets: The case of the Nyabyumba United Farmers Group in Kabale district, Uganda

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Uganda Agricultural Economics Association (UAEA)

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Regoverning Markets

Regoverning Markets is a multi-partner collaborative research programme analysing the growing concentration in the processing and retail sectors of national and regional agrifood systems and its impacts on rural livelihoods and communities in middle- and low-income countries. The aim of the programme is to provide strategic advice and guidance to the public sector, agrifood chain actors, civil society organizations and development agencies on approaches that can anticipate and manage the impacts of the dynamic changes in local and regional markets.

Innovative Practice series

Innovative Practice is a series of country case studies from the Regoverning Markets programme providing examples of specific innovation in connecting small-scale producers with dynamic markets at local or regional level. Based on significant fieldwork activities, the studies focus on four drivers of innovation: public policy principles, private business models, collective action strategies by small-scale farmers, and intervention strategies and methods of development agencies. The studies highlight policy lessons and working methods to guide public and private actors.

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These provide a summary of market changes taking place at national level within key high- value agrifood commodity chains.

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1 Executive Summary

Marketing agricultural commodities continues to be a salient issue particularly for small-scale producers due to rapid changes that are taking place in agrifood markets in middle and low-income countries. Yet public policy makers and development partners lack evidence upon which to support policy dialogue and intervention. The Regoverning Markets programme was set up to provide support for market research with an overall objective of providing strategic advice and guidance to the public sector, agrifood chain actors, civil society organizations and development agencies on approaches that can anticipate and manage the impacts of the dynamic changes in the local and regional markets.

Due to its success with connecting small producers to better markets, the programme selected the Nyabyumba United Farmers Group as one of the case studies to be documented. The case study demonstrates the main characteristics of innovation, how it has emerged over time and how its evolution has led to greater inclusion of small-scale farmers. The case study involved the use of secondary sources, focus group discussions and key informant interviews to collect information on the critical stages and success factors that led to the inclusion of small-scale farmers in the niche market.

The major research findings of the study were that to maintain this market, farmers needed to make tremendous changes in production, organization and marketing of their produce. Farmers adopted new technologies such as staggered production, micro-irrigation systems, new varieties, improved quality assurance methods, strict planting schedules and keeping records on planting times, amounts planted, availability of planting materials, harvest date and expected yield at harvest. Collective action and continuous collaboration of the farmers with research institutions derived positive results in capacity building of small-scale farmers and sustaining their participation in the dynamic supply chain. The main factors that enabled the farmers to sustain their inclusion in the chain included trust, mutual understanding and learning between members, strong group dynamics, effective local leadership, the common market, changes in individual attitude and commitment and also strong links and increased ability to experiment with Research and Development (R&D) organizations.

In conclusion, the Nyabyumba United Farmers Group case study demonstrates that participatory approaches allow farmers to achieve a better understanding of the challenges faced by each actor in the market chain and new innovations are important drivers that encourage farmers to move on together. Competitiveness is not static, but a dynamic concept, once achieved continuous adjustments must be made to maintain it. Furthermore, creation of a high level trust between the actors involved allows them to communicate efficiently, develop a shared vision and

strategically implement activities that put that vision into practice. Research and Development organisations can help bring together different actors involved in the market chain to enhance collaboration among the chain actors, build human and social capital and foster competitiveness.

The main recommendation is that the group should enhance its partnerships with the private sector for developing of more market-preferred products since it has the potential for product development and diversification. More income could be accrued by investing in processing and cost effective storage facilities for better competitive marketing opportunities. More technical, financial support and capacity building could be achieved through training and exchange visits.

2 Background

2.1 The agricultural sector

The Ugandan economy is predominantly supported by agriculture, which contributes about a third of the country's Gross Domestic Product (GDP) (MFPED, 2005). The sector is mainly semi-subsistence with low input and low productivity. It accounts for 85 per cent of exports and 77 per cent of the employed household population and provides most of the raw materials to the mainly agro-based industrial sectors. Food crop production dominates the agricultural sector, contributing about 64 per cent of the agricultural GDP, while cash crops provide 11 per cent, livestock sub sector 13 per cent, fisheries 6 per cent and forestry 4 per cent (MFPED, 2005).

The agricultural sector has grown rapidly in recent years and this growth is largely attributed to trade policy reforms, expansion in area of cultivated land and enabling economic and political policies. Despite these economic achievements, household incomes have remained low. The challenge facing Uganda is to provide the necessary support services to turn the widely dispersed small-scale subsistence agriculture into an engine of economic development. The sector has a high potential that can be realised only if improved agricultural practices are made available to and adopted by farmers. In a bid to eradicate poverty and improve the welfare of the majority of the population, the government of Uganda has implemented the Plan for Modernisation of Agriculture (PMA) to address constraints to low productivity, which include poor crop husbandry practices, low use of improved inputs, limited access to technical support and poor access to credit and market services.

The ultimate goal of PMA is to transform the predominantly subsistence farming into commercial farming, hence the need to empower farmers to access markets for their produce. Some of these market outlets are arising from the rapid expansion of urban areas, where food habits are changing, hence creating new market options for better organised farmers such as the Nyabyumba United Farmers Group in Kabale district that sells graded, high quality potatoes directly to a fast food outlet in Kampala.

The financial support to undertake this case study was provided by the Regoverning Markets programme. This programme has been established to provide research and support to the policy process that can assist producers, businesses, and policy makers to anticipate and respond to the rapid changes that are taking place in the agrifood markets. The overall aim of the of this programme is to provide strategic advice and guidance to the public sector, agrifood chain actors, civil society organisations including economic organisations of producers, and development

agencies on approaches that can anticipate and manage the impacts of the dynamic changes in local and regional markets.

2.2 Justification of the study

Owing to the success in connecting small-scale farmers to the dynamic markets, the Regoverning Markets programme selected the Nyabyumba United Farmers Group as one of the successful case studies to be studied. This farmers' group is located in the highlands of Kabale district, in south-western Uganda. The group started in 1998 as a farmer field school focussing on seed potato production and for several years successfully produced and sold potato seed. However, demand for potato seed began to fall and the group later got involved in ware potato production. This study aims to describe the main characteristics of the innovation, how it has emerged over time and how its evolution has led to the greater inclusion of small-scale farmers, pointing out the critical stages and success factors in the evolution of the innovation.

2.3 Objectives of the study

The objectives of the study were:

- To understand the keys to inclusion into the restructured agrifood markets, in order to address implications and opportunities for small-scale producers and enterprises.
- To identify what constitutes better practice in connecting small-scale producers with dynamic markets.

2.4 Organization of the report

The report comprises of six chapters. Chapter 1 includes the introduction, justification of the study and objectives. Chapter 2 presents a review of related literature of the case study and study objectives. Chapter 3 presents the methods and procedures of data collection, data analysis and presentation. Chapter 4 presents the major research findings. Chapter 5 presents the discussion, and finally, chapter 6 presents conclusions and recommendations.

3 Literature review

3.1 The status of marketing systems in Uganda

Rapid changes are taking place in the structure and governance of national and regional agrifood markets in developing countries, affecting the ability of agriculture to contribute to economic growth, poverty reduction and sustainable rural development. Small-scale agriculture, which supports the livelihood of the majority of rural poor, is poorly prepared for these changes and they are under increasing pressure to fulfil the new market requirements, which demand product quality, volume and continuity of delivery. Consequently, in today's commercial world, success in the market place is becoming increasingly important for livelihood development. This is a result of the increasing competition across the world whereby farmers are just not competing with their neighbours for local markets but also with farmers from other countries (Shaun Ferris *et al*, 2006).

Therefore, within this environment, understanding how markets function and how to engage in the market place is a vital skill, which encompasses an ability to identify, quantify and meet the needs, wants, and desires of consumers who create the market demand. Consequently, the success of the producers depends on the extent to which they adopt new technologies, access new types of information and gain new enterprise skills to enable them to evaluate and invest in new opportunities as they arise. Successful smallholder farmers will be those who can produce quality products and find ways of adding value to these primary products as well as engaging in group marketing.

The need for efficient agricultural marketing systems ranks high among the priority areas suggested by development partners and researchers for the development of agriculture in developing countries. North (2000) discovered empirically that the underlying causes of persistent poverty in developing countries stem from lack of incentives for smallholder producers to invest in more efficient and organized markets. Yet, a number of researches in Uganda reiterate that lack of efficient marketing systems and supporting policies are to blame for the observed slow adoption of both on-farm and off-farm technologies (IFPRI, 1999).

Under Uganda's agricultural policy framework, emphasis is put on fostering enabling policies linking producers to markets in order to come out of poverty. The goal of this policy framework is to generate and disseminate information that will contribute to the formulation of appropriate policies and enable researchers and producers to respond to market opportunities. Response to these concerns and recommendations opens the windows for a focus on developing more efficient systems of marketing agricultural products in the country. Thus, enhancing market opportunities, creating incentives, and empowering producers would lead to an

increase in incomes of market participants as well as farmers, and eventual economic growth.

Although increased marketing is advocated in developing countries, a significant proportion of traders face problems in striving to increase incomes. This is due to the risks and huge costs associated with marketing agricultural commodities, as well as a lack of information about more profitable marketing channels in the supply chain. In addition, due to poor infrastructure, trade restrictions and existing trade regulations, traders often encounter difficulties expanding trade within and outside Uganda. These problems, coupled with trade taxes, fees, commissions and tariffs weigh down the profitability of marketing activities.

The problems associated with marketing are aggravated by the lack of supporting policies that enforce efficient marketing practices for smallholder agriculture. Therefore, although government and development partners give high priority to agricultural marketing as a key to developing agriculture and improving livelihoods of the poor, more information in the existing marketing systems is required before specific recommendations for development can be made.

The economic prospects of rural communities in many parts of the developing world, particularly in Africa, are not improving. Despite considerable gains in productivity of food crops, the income of farm households is, in most cases, falling over time because of a combination of weak local economic growth and increasing competition from global markets.

Smallholder farmers are facing increasing competition from medium-sized to large-scale farmers. As such, most small farming families are stuck on a production “treadmill”, whereby many millions of individual farmers produce the same undifferentiated commodities, using traditional, low-input systems. Inevitably, these farmers are price takers in the market and their food –security approach, which focuses on always increasing production, can depress the market situation even further. The options small farmers have to confront this adverse market situation are to:

- Improve the competitiveness of their products in local, national, and regional markets;
- Achieve economies of scale through collective action for production and marketing;
- Gain access to business development services that improve access to higher-value and / or more competitive markets and provide employment opportunities;
- Diversify into higher value crops and/or livestock linked to growth markets;
- Add value to products by changing farming practices to access higher income markets, enhance product quality and incorporate processing activities;

- Enter new types of business agreements based on forward sales (contract farming) or “appellation” that “lock in” buyers over longer time periods at advantageous rates;
- Find off-farm work options or migrate to more lucrative employment areas such as urban centres.

In an effort to address the problem of marketing, the government of Uganda has designed policies in the past that have led to changes in the instruments that ensure the agricultural marketing system meets its functions of delivering products to the right consumers, in the right time, space and form. However, the agricultural marketing system’s role of transmitting price and other information signals between producers and consumers is still weak and underdeveloped. This is due to various barriers (physical, social, institutional) that exist and cause producers to be fragmented and isolated from consumers. As a result, market development for agricultural products is still limited in various market locations in Uganda.

3.2 Importance of trade and recent reforms

In Uganda, trade is viewed as an important stimulus to economic growth. Uganda’s trade policy objectives have been pursued through liberalization, increased involvement of the private sector, deregulation, privatisation and participation in regional agreements, particularly the East African Community (EAC) consisting of Uganda, Kenya and Tanzania.

Since liberalisation, the market reforms have created opportunities to develop an efficient private and competitive agricultural marketing system in Uganda. However, the efficiency of output markets has remained low due to deficient institutions and infrastructure, partial policy reforms that failed to remove all policy barriers to development of competitive input, and commodity marketing (Nkonya et al 2001). This implies that policy reforms implemented by the government are necessary but conditions would still be inadequate for truly efficient markets.

The marketing of agricultural commodities is to date essentially a private initiative where the sector plays a dominant role, right from the farm gate to export level. The biggest percentage of food crop sales is handled by middlemen/agents who buy from farmers at farm gate or in rural market centres and bulk it for the big produce traders and exporters (local and foreign). With liberalisation, most of the agro-processing and marketing operations are in the hands of efficient participants. This has helped to bring down the unit cost of marketing, especially the financial costs. The lower transaction costs are not necessarily passed on to farmers because in most cases the middlemen (traders) benefit most and exploit farmers by offering lower prices.

It is a challenge for smallholder farmers in Uganda to understand the market demand, enhance their skills and capital requirements and be able to supply the required volumes of quality product at the right time of the season. To address this situation, development agencies, donors, NGOs and government programmes are trying to increase farmers' levels of competitiveness in the dynamic markets.

In recognition of these challenges, various value chain studies are being undertaken to understand the keys of inclusion of small-scale farmers into agrifood systems under different degrees of restructuring. This will help to understand some of the best practices in connecting small-scale producers with dynamic markets, and to bring these findings into the wider policy arena. Other initiatives are trying to study how to improve the competitiveness of smallholder production and their implications on opportunities in the dynamic markets.

3.3 Potato production in Uganda

Irish potato (*Solanum tuberosum*) is one of the main food crops grown in Uganda in addition to bananas, sweet potatoes, cassava, maize, beans and groundnuts. The crop is particularly suited to the land-scarce farm households at higher elevations and it fits well into the country's farming and food systems. It is high yielding, highly nutritious both in protein and carbohydrates, has a short maturity period and can be stored for a long time under good storage conditions. The major potato producing districts are Kabale, Kisoro, Rukungiri, Mbarara, Kasese, Kabarole, Masaka, Mubende, Mbale, Kapchorwa and Nebbi. Formerly, the crop was restricted to the south-western and eastern highlands of Uganda but has currently expanded to mid-elevations in the country.

Essentially, potatoes were a food security crop. However, today they constitute a major source of cash income to many rural and urban households resulting from increased demand due to population growth and urbanization. Annual production is currently estimated at 585,000MT with a corresponding area of 86,000ha, giving 6.7 tons per hectare as the estimated yield (Table 3.1). Of the total potato production in Uganda, 10 per cent is used as seed, 10 per cent is wasted and 80 per cent is consumed inside the country. The bulk of the potato crop in Uganda is sold as ware potato and consumed as boiled vegetable.

Table 3.1 Area planted and production of potatoes for the period 2000-2005

Year	Area planted ('000 ha)	Production ('000 tonnes)
2000	68	476
2001	73	508
2002	78	546
2003	80	557
2004	83	573
2005	86	585

Source: UBOS, 2005

Most potato farmers traditionally produce and sell ungraded, mixed varieties of potatoes at the farm gate. These farmers are poorly organised and have limited storage facilities, so sell most of their crop at peak harvest times, hence the low prices offered by the traders. Ugandan farmers have a number of potato varieties with various attributes from which to choose and the most common commercial varieties are the Victoria type followed by Rutuku. Both of these varieties are strongly adopted in south-western Uganda. Other varieties cultivated on a small scale include Kisoro, Kabale, Cruza, Sangema, Singo/Musitamya and NAKPOT.

3.3.1 Potato production in Kabale district

Kabale district has three potato growing seasons in a year: two in the rainy seasons (on hills, slopes and valley bottoms) and one in the dry season (in drained swamps). Normally the first season runs from mid-February to June. The second season, which is characterized by longer rains, starts from September through to November. In valleys and swamps the planting activities continue through December and January, (Table 3.2). The seasonality in production affects supply and prices. Usually, during the period from late August to early November, potato supplies are low and prices are high.

Table 3.2 Potato production calendar for Kabale District (1990-2000)

Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hill slopes	Harvest		Planting			Harvest			Planting			Harvest
Swamp land					Planting			Harvest				
Valley bottom	Planting		Harvest									Planting
Mean monthly rainfall (mm)	72.3	73.1	136.5	114.9	98.4	43.0	13.7	56.4	88.8	131.4	98.4	90.0

Source: FEWSNET Metrological data 1995-2000 and own calculations from the field.

The average land holding in Kabale district is three acres, with 6 per cent of the total holding under potato every year. Though there are several potato varieties in circulation, *Rutuku* (a local variety) and Victoria are the main varieties cultivated. Victoria type is particularly suitable for chips while Ugandan *Rutuku* is for crisps. Although the Ugandan National Seed Potato Producers Association (UNSPPA) is based in Kabale district, farmers still lament over good quality seed shortages. With the exception of Nyabyumba farmers who obtain seed from the Kachwekano seed producers, few farmers are able to access quality assured seed from the above source. They attribute this problem to the high cost of planting material of USH¹40,000-50,000 per bag, (Magala *et. al.*, 2005). Basing on the seed rate of 25 bags/ha, on average, a farmer would need USH500,000 to purchase seed for half an acre. Besides the problems associated with seed acquisition, farmers also mention low yields, changes in weather, access to water for production and diseases as being other factors that greatly curtail production.

3.3.2 Seed potato production in Uganda

Seed is one of the major inputs in potato production and a critical factor in enhancing crop productivity, although its production and sales in Uganda are extremely low. Most potato seed used is saved from the previous crop. The self-supply probably accounts for between 70 and 90 per cent for the seed used in a given cropping season (ASARECA, 2005). To address this problem, UNSPPA was formed in 1995 with the main objective of promoting the quality and quantity of improved seed potato in Uganda.

The National Agricultural Research Organisation (NARO) together with the International Potato Centre (CIP) and the Eastern and Central African Potato and Sweet Potato Network (PRAPACE), provided training and technical assistance in seed multiplication and certification for selected farmers from Kapchorwa, Kabale, Kisoro and Nebbi who later formed UNSPPA. UNSPPA sources foundation seed from NARO/Kachwekano Zonal Agricultural and Research Development Institute (ZARDI), which it supplies to its members who in turn produce certified seed for sale to other farmers, (Magala *et. al.*, 2005).

Since its formation in 1995, UNSPPA has filled an important and vital niche in making inexpensive, abundant and nutritious potatoes available to the expanding Ugandan population. Their sole objective has been to produce and distribute quality seed potatoes to other farmers in the country. The association started with only five members hailing from Kabale and Kisoro districts in south-western Uganda but has been steadily expanding in membership and area of coverage. There are currently forty-three members drawn from the major potato producing districts of Uganda: namely, Kabale and Kisoro in the south-west, Mbale and Kapchorwa in the east and

¹ Ugandan shillings.

Nebbi in the northern region. The association has been working hand in hand with NARO networks and Non-Governmental Organisations (NGOs) with similar objectives. The organization has evolved over time, with Kapchorwa district forming its own association based in Kapchorwa and Nebbi catering for the north, which is currently dormant due to numerous problems.

3.3.3 Potato processing

Uganda has a range of processed potato products of which chips and crisps are the most common. Potatoes are also used to make vegetable burgers and other meat products. Processing potatoes into food products like, crisps, chips and dried products is increasing significantly especially in urban areas and the industry provides employment opportunities in cities (IITA-FoodNet *et. al.*, 2001).

Processors ensure they obtain quality supplies by requesting their suppliers to resort and pack ware potato according to their specifications, for which they then offer a premium price. Processors pay US\$40,000-50,000 per bag for sorted potato compared to the open market price of US\$32,000-37,000 per bag. The mushrooming fast food restaurants and take-away outlets in the major towns and cities, characterized by sale of chips, indicate the changing eating habits and potential for potato processing in Uganda.

(a) Chips

Hotels, restaurants and take-away (fast-food) outlets are the main business enterprises that process potatoes into chips. Of the total processed potatoes, chips account for 80 per cent as evidenced from the fact that most of the bulk buyers are processors from the fast food and restaurant sectors (ASARECA, 2005).

(b) Crisps

Potato crisps command a very limited market share as they are mainly considered to be a snack targeted at school children and a few urbanites. Currently, crisps processing businesses operate on a cottage industry basis with low-level technologies but with the potential to advance both technology and business-wise if they meet international quality standards (Ferris *et al*, 2003, IITA-Foodnet *et al*, 2001). The main processors of crisps in Kampala City include Tomchris enterprises, BRINA Superior and TAM-TAM crisps. There are other several processors with a processing capacity ranging between one and two bags daily.

Figure 3.1 One of Tomchris enterprise's employees slicing potatoes for crisp making using a hand slicer



Other innovative products that can be made from potatoes, include:

- Potato sticks – a snack, which can be made from small potatoes
- Potato *bagia* – as a substitute for gram flour in *bagia*
- Crinkles – designed differently from ordinary crisps
- Potato balls – mainly for parties such as weddings
- Potato powder – for baby food

The following can be obtained from the by-products:

- Starch from the peels, which when cleaned, pressed and dried can make a variety of snacks
- Bio-gas from the effluent water
- Fertiliser from these products

3.3.4 Potato marketing

Farmers do not usually harvest their potatoes until they identify a buyer or decide to consume some of the crop. This is due to the high product perishability and limited on-farm storage facilities. Travelling traders/brokers also rarely buy from farmers before contacting their buyers in major urban centres. Since there is almost no off-farm storage, rapid movement from farm gate to final consumer characterises potato marketing. The key players and their roles in potato marketing are summarised in Table 3.3 below.

Table 3.3 Roles of key players in the potato chain

Key players	Summary of roles
Farmers	Produce marketable potato and supply to the market
Brokers/commission agents	Link producers and traders. The commission agents purchase potato directly from farmers on behalf of wholesalers
Daily labourers	Harvesting potato, stitching, loading and unloading
Primary wholesale traders	Purchase potato either from farm or from nearby district markets and transport to terminal markets
Transporters	Transport potato from production to consumption zones
Warehouse owners	Store unsold potato for a few days until distributed for sale
Secondary wholesalers	Based at terminal markets, they collect potato from primary wholesalers and resell to retailers, supermarkets, hotels, restaurants, processors etc.
Processors	Process potato into chips (hotels) and crisps (small scale processors)
Retailers	Sell potato to consumers from retail outlets
Consumers	Purchase potato for home consumption

Most traders grade potatoes mainly on size and variety. Most of the graded potatoes are supplied to fast food restaurants that require larger potatoes. Most post harvest losses come from rotting due to the type of potato and the harvesting methods. Traders mainly reduce these losses by stocking smaller quantities (especially during the rainy season), selling at a lower price, sorting, removing the rotten potatoes, increasing aeration and spreading the potatoes on the ground.

3.3.5 Opportunities and constraints in the potato sector

Although the potato sector is faced with many constraints like other crops, there are opportunities for it to develop:

- High demand (fast foods industry, institutions)
- Potential for value addition at various points along the chain (there are actors who have started adding value to the crop e.g. micro irrigation and appropriate storage facilities at production level, processing facilities for crisps, frozen chips etc)
- Dry matter/starch content of the crop is high which makes it possible to get non-foods products from it e.g. starch.
- The crop is very popular with young people and urban families
- Frozen storage possibilities can be explored
- There are niche markets for various products e.g. frozen chips
- Wide utilization

There are also constraints in the sector:

- Inadequate working capital. Chain actors lack capital to take on some of the new technologies such as improved packaging material, inputs and cooking facilities.

Coupled with limited marketing expertise, exploiting regional and international markets in case of processors is a problem because they cannot meet the required quality standards. Farmers complain about the high cost of inputs, which partly affects crop productivity.

- Unreliable supplies. Uganda's agriculture is rain-fed, hence potato production and supply is largely influenced by weather changes. Furthermore, irregular supplies are due the fact that most farmers produce potato on a subsistence basis and they are not properly organized to market their produce collectively. Farmers find it difficult to ensure regular supplies and contracted quantities to potential buyers.
- Limited market information. The majority of the market actors have limited or no access to reliable information about the potato market regarding prices, volumes, demand market opportunities and prospects. The brokers control the flow of market information, especially concerning market opportunities, making it difficult for other actors to penetrate better markets.
- Poor organization along the chain. The potato chain is characterized by informal relationships and poor co-ordination and organization. There are no standard measures in place to ensure uniformity in weight, size or variety at the level of wholesale marketing. There is a tendency to mix young and mature potatoes, different sizes and varieties and this greatly affects the quality. Traders charge higher prices for further sorting and grading for selected customers who emphasize quality.
- Lack of appropriate varieties for processing. Currently, there is only one variety that is suitable for processing in the country, namely Musitamya/Singo. This variety is a low producer and is grown only in specific parts of the country. This heavily curtails availability of supplies in some seasons. However, NARO/Kachwekano is currently working on a new potato variety (393382.44), which has a higher potential yield and has performed quite well in as far as the desired attributes for crisp processing are concerned.
- Lack of packaging materials. Processors lack packaging materials because good quality packaging material is expensive. Shelf life of the crisps packed in polythene bags is estimated to be thirty days. Because of its transparency, light destroys the product, and within thirty days, the crisps acquire smell. Aluminium material is needed from abroad, which could preserve crisps for six months if they were to export.
- Poor post-harvest and storage facilities. Potatoes are perishable and because farmers lack proper storage facilities on-farm they only harvest upon identifying potential buyers for their crop. Therefore they cannot regulate supplies on the

market to influence better prices thus affecting their incomes. Travelling traders/wholesalers sometimes are forced to undercut the prices to reduce on post-harvest losses and costs.

- Poor quality potatoes. The quality of potatoes presented for marketing is generally low particularly due to the lack of improved technologies in potato production and handling techniques. The main causes of quality loss are disease and pest damage, bruising during packaging and transportation, poor sorting and grading, and greening.
- High cost of transport. This is especially in getting the commodity to urban markets. This constraint is exacerbated to a large extent by the commodity's perishability and bulkiness. The Irish potato growing areas are geographically isolated from urban markets, hence the high transport costs.

Given the constraints mentioned above, members of Nyabyumba United Farmers Group in Kabale district in collaboration with a number of R&D institutions attempts to penetrate and sustain one of the niche markets by adopting a series of innovations in the supply chain, as presented in section 5 of this report. It is envisaged that information about this case study will provide lessons learnt and development intervention strategies to guide other public and private sector actors in stimulating participation of small-scale producers in the dynamic supply chains.

4 Methodology

4.1 Study area and description

Nyabyumba United farmers' group is based in Kamuganguzi sub-county, Kabale district, 422km from Kampala, the capital city of Uganda. Kabale district is part of the south-western highlands of Uganda with a total land area of 1,730km² and a total population of 471,783 people (Pearson, 2004). The study population included farmers, local group leaders and officials from UNSPPA, NARO, Africare and CIAT. Primary data was collected from Kabale district, one of the major potato producing districts in south-western region of Uganda.

4.2 Data collection methods

By use of a checklist, primary data was collected from a selected sample of farmers, traders and brokers through personal interviews. Key Informant Interviews (KIs) and Focused Group Discussions (FGDs) were conducted during which in-depth information on the aspects of potato production, processing and marketing was obtained. Secondary data was obtained by reviewing existing literature on the potato sub-sector. Data was collected on: group membership, changes in household incomes after the innovation, acreage under potato cultivation and quantities produced and supplied to Nandos over time. Discussions were conducted on sustainability issues, critical skills and competencies that allowed the farmers to implement the changes, potential for up-scaling as well as on the roles played by the supporting agencies such as Africare, CIAT and NARO. Challenges facing the group were discussed as well as their future plans.

Information was gathered on key drivers in terms of policy principles, business models, collective action and support systems as well as on costs and benefits associated with the innovation. In addition to primary data, secondary data was collected on the potato sector and on national and agricultural policies.

5 Results

5.1 The innovation

Potatoes (locally known as “Irish potatoes”) are mainly grown for food security and cash purposes. As farmers in the south-western highlands realised the need for cash, there was need to increase production. Yet increased production depends a lot on a good and sustainable seed system. Farmers in Kabale then formed an association for seed multiplication under the umbrella of UNSPPA. The success in dissemination of improved seed potatoes resulted in increased production of ware potatoes. However, farmers were fetching low prices compared to their production costs. UNSPPA then realized that unless measures were taken to facilitate better marketing of ware potatoes, the demand of seed potatoes would decline.

It was from this point of view that UNSPPA developed the idea of creating direct linkage between producers and processors or major large-scale retailers as one of the strategies to realise better markets and price margins. Ultimately, processors would easily access quality potatoes. As a result of being UNSPPA members, Nyabyumba United Growers Group was linked to one of the fast foods restaurants in Kampala, known as Nandos. PRAPACE in collaboration with NARO, Africare and CIAT, identified this market. Later, an agreement was made between Nandos and Nyabyumba United Growers Group to supply ware potatoes, mainly of Victoria and Rutuku varieties. Since then, this group has been supplying their produce to Nandos making reasonable profits. This arrangement has also encouraged more farmers to engage in the business and compelled the group to identify more markets for their produce.

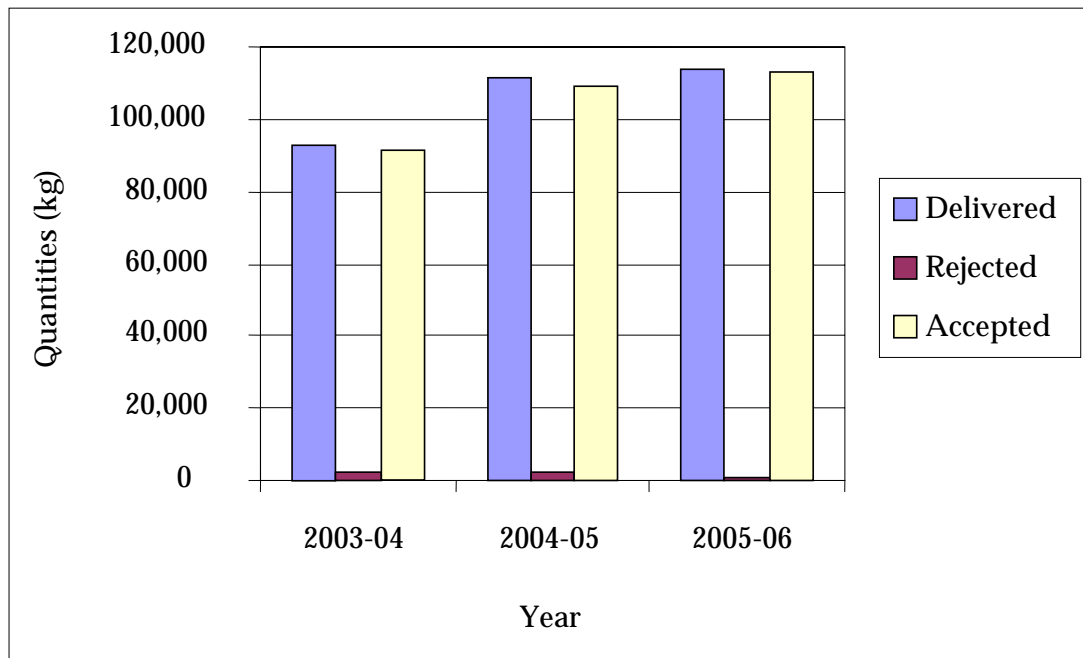
Nyabyumba Farmers United Group comprises of five sub-groups with a current membership of 120; 60 per cent are female, as shown in Table 5.1. Formally known as Nyabyumba Community Development Group, with 40 members, it was formed in 1998 as a Farmer Field School (FFS) whose main focus was on seed potato production. In order to obtain the required quantities, more farmer groups were mobilised from other villages to join the group. Members are obliged to pay a subscription fee of USh20,000 (US\$11), attend group meetings and grow potato in order to satisfy their new market requirements. The group has a constitution that clearly stipulates the roles and regulations by which members must abide.

Table 5.1 Nyabyumba United Farmers sub-groups

	Name of Group	Male	Female	Total
1	Nyabyumba Community Development Group	20	20	40
2	Rushongati Farmer Run Field School	6	17	23
3	Rushebeya Farmer Run Field School	4	8	12
4	Nyabyumba Church Of Uganda Farmer Run Field School	6	17	23
5	Kikore Tokorehamwe Farmer Run Field School	8	14	22
	Total for all five sub-groups	44	76	120

Since the formation of the group, both the volumes and quality of potatoes supplied to Nandos have increased to meet the client’s demands. The improvement in quality of potatoes supplied is depicted by a reduction in the rejects as farmers had to learn how to grade and sort their potatoes as shown in [Figure 5.1](#).

Figure 5.1 Quantities of potatoes supplied to Nandos by Nyabyumba Farmers United Group (2003-2006)



Initially potatoes were rejected because of size. Nandos wanted potatoes of above 80mm diameter whereas the majority of the farmers produced smaller potatoes. The group informed NARO of the problem and in 2004 NARO set up experiments on different fertiliser application rates and spacing. These experiments were implemented by the five FFS, which tried out different spacing and fertiliser application rates. Finally, they realised that a spacing of 30x30 and 30x80 produced larger potatoes and this spacing was recommended to all the farmers. The recommended fertiliser application rate ranged between 80kg/ha and 120kg/ha depending on location. A rate of 120kg/ha was recommended on the hilltops and 80kg/ha in the lower areas. These experiments lasted over a year and all members of the group participated in all activities from planting to harvesting but under the guidance of NARO technicians who took records. Failure to meet the grade was a costly exercise for them, but over the first eight months, the level of rejects fell from as high as 80 per cent to less than 10 per cent. By December 2004, the farmers were consistently supplying potatoes that met Nandos stringent quality requirements.

Members' revenue and net profits have been on the increase ever since they started supplying Nandos as illustrated in Figures 5.2 and 5.3. The increase in revenue received by the group has resulted in increased household incomes of the members thus improving the general welfare of their families.

Figure 5.2 Revenue realised by Nyabyumba Farmers United Group

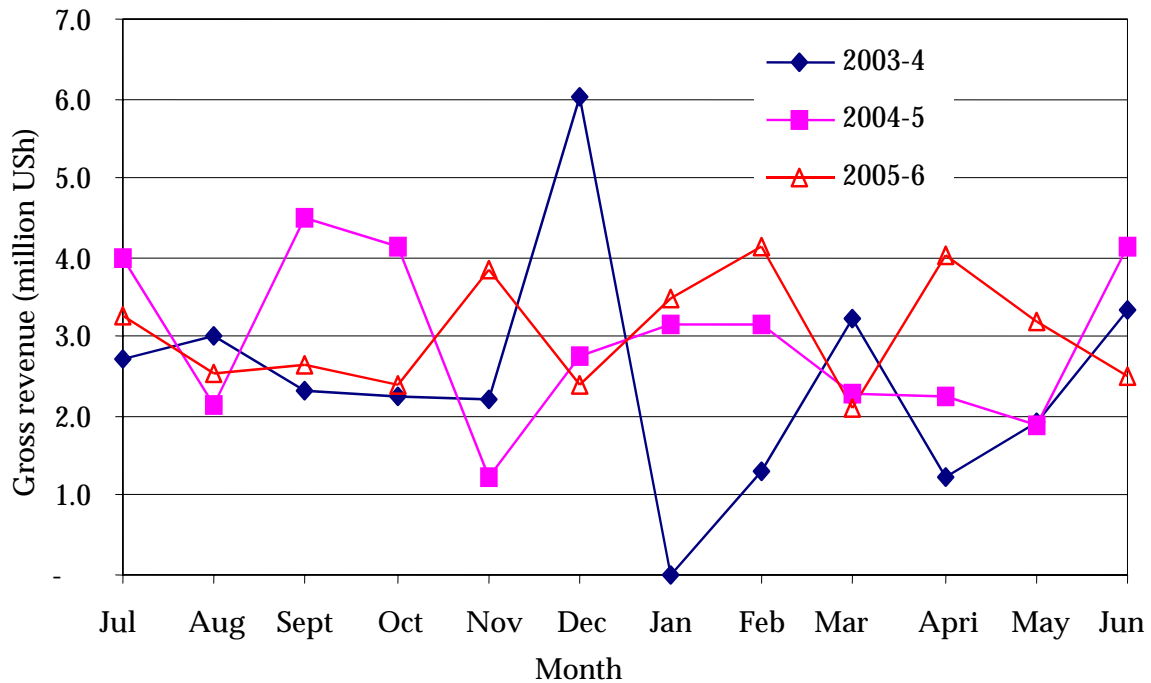
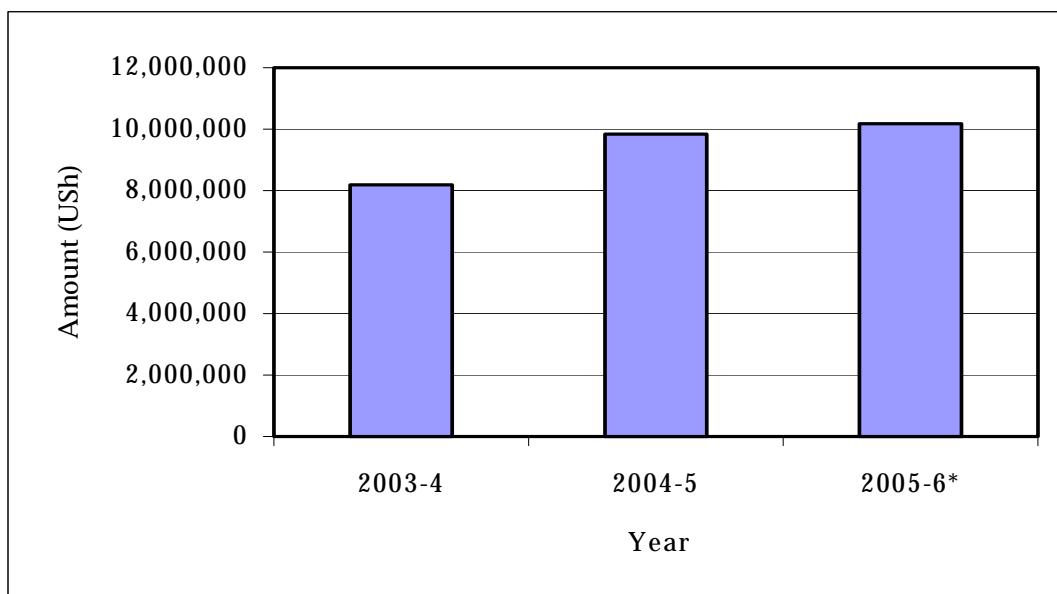


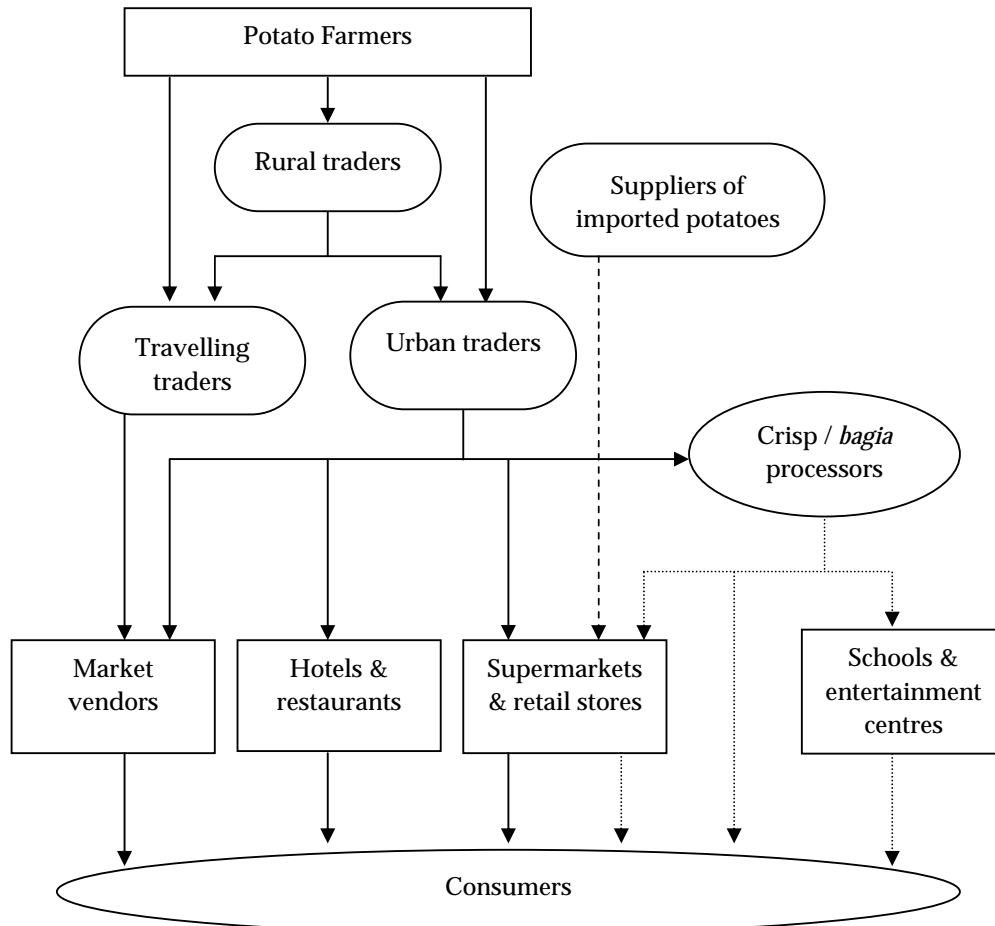
Figure 5.3 Estimated net profits realized by Nyabyumba Farmers United Group



5.2 The supply chain and its segments

Available literature clearly reveals that the potato sector is uncoordinated and fragmented with farmers, brokers, travelling traders, retailers and other actors in the chain working in isolation of each other. The few linkages in existence are still in their infancy. The most commonly used route in marketing potatoes is where producers sell their potatoes on cash basis to wholesalers who in turn transport them from their respective cultivation areas to urban centres. Several transportation means are used in this process, including bicycles, head loads and wheelbarrows. However some producers sell directly to consumers and others display the potatoes by the roadside. Potato stakeholders are mainly farmers, brokers, retailers, wholesalers and transporters. Figure 5.4 illustrates the potato supply chain through which the crop moves from the farmer to the consumer.

Figure 5.4 The Ugandan potato supply chain



Source: ASARECA, 2005

The fresh potato channel is the backbone of the potato business. This channel is the most reliable to farmers since it handles almost 100 per cent of the domestically produced potatoes. The reward that accrues to the participants along the channel depends on the volume of potatoes traded, and the quality and variety demanded by the consumers. The main characteristics of the chain actors are presented below.

5.2.1 Farmers

In most cases, farmers are both producers and consumers because significant quantities are consumed on farm. The farmer and village trader/broker agree on harvest date, sorting and packing. In most cases it is the farmer who harvests the potatoes while the village trader/broker provides the packing bags and does the sorting and packing. Individual farmers rarely transport and wholesale their own produce at urban markets. Most often, produce is sold at the farm gate on a cash basis. Farmers also occasionally sell by the roadside, or at weekly local markets.

5.2.2 Village traders / assemblers

Traders know when the local farmers are ready to harvest and are usually in contact with transporters, wholesalers, buyers and financial service providers. Upon identifying farmers, the traders negotiate the price and marketing arrangements on behalf of the large buyers. When a wholesaler requires potatoes, he will call his contact (village trader), agree on a price and other marketing arrangements and the village trader will assemble the product. Village traders/assemblers also sell to travelling traders from Kampala and other towns.

5.2.3 Brokers / wholesalers

In most cases in the potato market chain, the role of wholesalers appears to be taken over by brokers, who have become one of the most prominent participants in the potato marketing chain. In rural areas, brokers are the contact between travelling traders and wholesale buyers and farmers, as well as the key link between farmers and traders. Brokers do not invest any money, but thrive on a commission rate per bag, which is negotiable between travelling traders depending on the market forces. After agreeing a price with the travelling traders, brokers then sell at whatever price they can negotiate with the buyers. These buyers may be retailers, ranging from supermarkets to other urban markets in and outside Kampala city, or hotels, restaurants and fast food outlets that mainly process potato into chips, crisps, boiled vegetables, soup and salad. Brokers are an organised and influential group in the market (especially at St. Balikuddembe market) and few travelling and village traders are able to sell directly to the large buyer or urban retailers, even though they are classified as wholesalers.

5.2.4 Traveling traders

Travelling traders are traders who own trucks or hire trucks to purchase ware potato from production areas. Such traders have no direct contact with the buyers whatsoever, so they rely entirely on brokers through a 'gentleman's agreement'. Upon agreeing a price with the travelling trader, the broker then negotiates for a 'good' price with the buyer. However, the trader may reduce the price in the case of low turnover to avoid overhead costs such as transport surcharges from truck owners, overnight parking and lodging.

5.2.5 Retailers

Potato retailers range from supermarkets to village roadside sellers. In urban areas, market retailers buy 1-5 bags from brokers and then sell them in heaps of various sizes and grades for amounts ranging from USh100 to USh2,000 per heap. This wide range of heaped products aims to cater for the needs of all income groups. A heap sold at USh1,000 weighs an average of 3kg. Retailers sort and grade potatoes according to variety and degree of freshness.

5.3 The macro and meso context

5.3.1 The macro economic environment

Uganda's economic policy framework emphasises inflation control, strong growth in private investment, fiscal consolidation and increased revenue generation as its main objectives. The main thrust of government policy for the period 2000 - 2005, was to maintain high GDP growth rates through increased private investment, production and exports. During this period, strong growth in the industrial and services sectors resulted in improved GDP growth rates, with an average of 5.6 per cent per annum. On the other hand, the growth in agricultural sector GDP followed a generally declining trend from 4.6 per cent in 2000/01 to 1.6 per cent in 2003/04 to 0.4 per cent in the year 2005/06. The slowdown was mainly attributed to the prolonged nationwide drought.

Table 5.2 The changing structure of the Ugandan economy

GDP Shares Sector (%)	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Agriculture	40.8	39.9	39.0	37.6	36.3	34.0
Industry	18.6	18.9	19.3	19.7	20.4	20.5
Services	40.6	41.2	41.7	42.7	43.3	45.5
	100.0	100.0	100.0	100.0	100.0	100.0

Source: MFPED, 2005. Background to the Budget, 2006/07

During this five-year period, the structure of the economy was slowly transformed. The agricultural sector's contribution to GDP fell from 40.3 to 34 per cent, while the services sector's share of GDP increased by 3 per cent (Table 5.2). The industrial sector's contribution to GDP also grew, but at a more modest rate. A review of key economic indicators for this period reflects a fairly stable macro-economic environment with inflation maintained at below 5 per cent per annum. Partly as a result of this, there was a steady increase in exports and Foreign Direct Investment (FDI). Exports, which were growing at about 2 per cent in 2000/01, increased by 21.0 per cent in 2004/05 and 11.6 per cent in 2005/06. It should be noted that Uganda's performance in terms of private investments as a percentage of GDP remained consistently below the average for sub-Saharan economies.

In an effort to improve the contribution of the agriculture sector to GDP, the government is implementing various strategies aimed at commercialising agriculture, such as the Plan for Modernization of Agriculture (PMA), Medium Term Competitiveness Strategy (MTCS) and the Strategic Exports Programme (SEP). Under these strategies, the government has established programmes geared towards promoting production, processing and marketing of various crops as presented below.

5.3.2 Policies impacting on the agricultural sector

Government policy on agriculture can be deduced from various policies, such as the Poverty Eradication Action Plan (PEAP), the Plan for Modernisation of Agriculture (PMA), the National Agricultural Advisory Services (NAADS), the Rural Development Strategy (RDS), the National Agricultural Research Policy (NARP) and the Uganda Food and Nutrition Policy (UFNP). All these policies are guided by the government's macro-economic and public service policy reforms of liberalisation, privatisation, decentralisation and democratisation. In addition, these policies are derived from and based upon the basic principles aimed at poverty eradication.

(i) Poverty Eradication Action Plan (PEAP)

The PEAP is the guiding framework for eradicating mass poverty in Uganda. It is the comprehensive national policy framework that guides development planning in Uganda. It adopts a multi-sectoral approach, recognizing the multi-dimensional nature of poverty and the inter-linkages between influencing factors. Poverty eradication is to be realised through successful implementation of a number of priorities, one of which is the development of the agricultural sector. In light of the fact that the bulk of the population live in rural areas and earn their living from agriculture, the success of efforts to reduce poverty will depend on increasing agricultural production and expanding non-farm employment.

(ii) Plan for Modernisation of Agriculture (PMA)

The main objective of PMA is to eradicate poverty, ensure food security, create gainful employment and manage the resources on a sustainable basis. The expected outcome of this policy framework is to eradicate poverty through multi-sectoral interventions that enable the people to improve their agricultural livelihoods and household incomes in a sustainable manner. There are seven priority areas identified in this plan that require sustainable investment of public-sector resources in order to transform the agricultural sector. These are: agricultural research and technology development, agricultural advisory services, rural financial services, agricultural education, agricultural marketing and agro-processing, sustainable natural resources management and supportive physical infrastructure.

(iii) National Agricultural Advisory Services (NAADS)

NAADS seeks to increase farmer access to information, knowledge and technology through effective, efficient, sustainable and decentralised extension with increasing private sector involvement. The programme objectives are to promote market oriented/commercial farming, to empower subsistence farmers to access private extension services, technology and market information and to promote farmer groups to develop their capacity to manage farming enterprises. NAADS also creates options for financing and delivery of agricultural advice with emphasis on subsistence farmers and a gradual shift from public to private delivery of agricultural advisory services.

(iv) Rural Development Strategy (RDS)

The specific objective of this strategy is to increase farm productivity of selected commodities, increase household outputs of selected agricultural products, and ensure stable markets for these agricultural products.

(v) National Agricultural Research Policy (NARP)

The objectives of this policy are to promote delivery of quality and efficient agricultural research services, empowering farmers by involving them in identifying and prioritising their research needs and procuring research services. The policy provides guidance to the NARS in the formulation and rationalisation of agricultural research programmes, utilising the best science to implement research programmes, and put in place a sustainable funding mechanism that will harness resources from both the local and international, public and private sectors for agricultural research.

(vi) Uganda Food and Nutrition Policy (UFNP)

The specific objectives of this policy are to ensure availability, accessibility and affordability of food of sufficient quantity and quality to satisfy the dietary needs of individuals, promote good nutrition of all the population and incorporate food and nutrition issues in the national, district, sub-county and sectoral development plans. Furthermore, the policy will ensure food and income security at household, sub-county, district and national levels for improving the nutrition as well as the socio-economic status of the population, and to monitor the food and nutrition policy situation in the country.

Other policies include the Marketing and Agro-Processing Strategy (MAPS), Water for Production Policy, Land Policy, Land Use Policy, Strategic Exports Programme and the Ministry of Agriculture, Animals, Industry and Fisheries' (MAAIF) Agricultural Sector Investment Plan.

5.3.3 Institutional and political environment

The institutional set up in Uganda

In Uganda, there are various organisations and institutional arrangements that cater for the delivery of services in an efficient, effective and sustainable manner. The main institutions implementing agricultural policies in Uganda include MAAIF, the PMA Secretariat, NAADS, NARO, the Cotton Development Organisation (CDO), the Uganda Tea Authority (UTA), the Dairy Development Authority (DDA), the Uganda Coffee Development Authority (UCDA), the Uganda National Seed Authority, the Uganda National Bureau of Standards (UNBS) and local government, private sector and farm level organisations. The key players in Uganda's agricultural sector include:

- The public sector, comprising of central and local government;
- The private sector, which includes farmers, livestock keepers, fisher-folk, foresters, traders, small-scale entrepreneurs and manufacturing and processing industries;
- Civil society, comprising of Non-Government Organisations (NGOs), Community Based Organisations (CBOs), academic institutions and the general public; and
- Development Partners (DPs)

(i) The public sector

Central government comprises of a number of bodies including the executive, parliament, security, and law and order. The role of central government is to ensure the security of people and property and provide a stable macro-economic environment, basic infrastructure and social services (health care, education, safe

drinking water) to the population. The decentralisation process has given greater authority to local governments at the district and sub-county levels to plan and implement programmes laid out by central government. This has increased the people's participation in decision-making and development issues that are relevant to their needs.

(ii) The private sector

This is the largest category of the stakeholders in the agricultural sector. It includes farmers, traders, processors and service providers in rural finance, land surveying and the legal profession. Subsistence farmers producing a wide range of agricultural commodities mainly for domestic consumption dominate this sector. Agricultural transformation and structural change demands that other segments of the private sector services are expanded and their quality of services improved, thus creating employment opportunities, which in turn will increase the demand for farm products. The government's role is to institute conducive policies, rules and regulations, and to improve social and economic infrastructure.

(iii) Civil society

Civil society comprises of NGOs, CBOs, individuals, unions, professional bodies and associations that are involved in the promotion of effective and sustainable delivery of agricultural-related services. Since the mid-1980s, there has been tremendous growth in the number of NGOs, CBOs and other categories of civil society organisations, all of which enjoy freedom of operation and collaboration with the government. The government recognises the importance of national partnerships with NGOs and CBOs in the delivery of basic services. The main International Non-government Organisations (INGOs) and NGOs contributing greatly to the potato sector include Africare, ASARECA, CIAT, PRAPACE, IFPRI, SASAKAWA GLOBAL 2000 and A2N.

(iv) Development partners

Development Partners (DPs) include the multilateral and bilateral organisations and agencies that support government and community organisations in the agricultural sector through grants and soft loans. They also include international NGOs through which such agencies implement their programmes. In Uganda, they provide significant resources and sometimes dominate the policy formulation processes articulating sector support areas and determining the manner in which these resources are put to use. The main DPs providing support in the agricultural sector include the Danish International Development Assistance (DANIDA), Department for International Development (DFID), German Technical Co-operation (GTZ), International Fund For Agriculture Development (IFAD), United Nations Development Programme (UNDP), United States Agency for International Development (USAID), European Union (EU) and African Development Bank (ADB).

The political environment in Uganda

Uganda as a country is relatively stable politically apart from northern Uganda, which has since the mid-1990s experienced conflicts and insurgency due to rebel activity. Security in the country has long been recognised as a precondition for improved human welfare and one of the key factors necessary for achieving all other goals of the PEAP and aspirations of government. The government has developed a Defence Policy framework, which analyses security challenges and identifies the roles of different government agencies in addressing them. The Security Policy framework gives a major role to the National Security Council, created by the National Security Act in 2000, in co-ordinating security related actions.

5.3.4 Consumer characteristics and trends

Consumption and utilisation data show that potato is essentially consumed as food. It is estimated that about 10 per cent is used as seed, 10 per cent is wasted and the rest is either consumed domestically or exported. The bulk of the potato crop is sold as ware potatoes and eaten as boiled vegetable. Since there are no significant exports from Uganda, about 80 per cent of production is consumed by the Ugandan population. The main processed potato products are chips and crisps and the advent of urban take-away and the entry of fast food companies from outside the country have increased potato processing for chips. Fast food restaurants, tourists, and urban consumers appear to be the principal sources of growth for this new market segment. In addition, supermarkets are increasingly becoming significant outlets for potatoes in Uganda. The main consumers of chips are the working middle class and significant quantities of crisps are consumed in schools. Consumption levels of chips and crisps are high at the end of the month and during festive seasons and public holidays.

5.3.5 Structure, composition and degree of evolution of agrifood systems

An agrifood system comprises that set of activities and relationships that interact to determine what and how much, by what method and for whom, food is produced, processed, distributed and consumed (Fine, 1998). In essence, food systems go beyond production aspects to include preparation of agricultural inputs, processing, distribution, access, use, food recycling and waste. The perspective of a food system thus helps to track and understand how globalisation is transforming the diversity of localized food systems into an integrated and more linear world system based on the principles of comparative advantage, standardization, geographical division of labour and control by a few large corporation and trade agreements (Pimbert et. al., 2001).

In Uganda the majority of farmers practice subsistence farming with an average land holding of less than two hectares. Though agriculture's contribution to GDP has been declining over time, the sector continues to dominate the Ugandan economy (UBOS, 2004). About 86 per cent of the population lives in rural areas with about 77 per cent of the active labour force in those areas depending on agriculture as the main source of livelihood (MFPED, 2004). Farmers basically rely on the hand hoe, with low capital investment and productivity. Before the 1990s, the Ugandan government intervened in production and marketing of foodstuffs by providing subsidies to farmers in the form of farm inputs and controlling crop prices through Produce Marketing Boards.

During the 1990s, several public institutions in Uganda were restructured and divested to conform to the general policy reforms. The reforms were geared towards enhancing growth of the private sector (Nkonya, 2004). Although recent studies have indicated that, in the 1990s, in the short term, structural adjustments and market liberalization policies stimulated agricultural commercialisation, liberalization of exchange rates and the withdrawal of government involvement in direct procurement and distribution of input materials have increased the cost of imported agro-inputs (TSR, 2004). Liberalization of economies and the withdrawal of government intervention in domestic markets have resulted in price and quality standards being set by international markets. Producers hence find it hard to penetrate better markets both at local and global levels. This difficulty is due to high costs and entry requirements to comply with the quality standards and code of conduct demanded by different actors along the supply chains.

The financial sector was liberalized, thus allowing private banks and micro finance institutions (which emphasize the practice of small-scale savings and lending) to operate. Despite the increase in the number of formal and informal credit providers, credit finance in the rural area remains insufficient. Nkonya et al. (2004) reported that although 95 per cent of the surveyed households had access to credit; only 20 per cent obtained formal credit while the rest relied on informal credit sources. Moreover, not all loans are spent on farming activities. Utilization of such services however was found wanting due to lack of knowledge about the services, tight repayment schedules, high initial capital requirements and the lack of loans for agricultural purposes. Other factors like better road networks, marketing systems, better social services in relation to education, water and sanitation and general health have an influence of agricultural production.

In an attempt to improve on the delivery of extension services to a wide spectrum of farmers and at a low cost, the agricultural sector uses the group approach. Farmers are organized into small groups within their localities. However, most groups are characterized by insufficient organizational capacity to manage their activities in a sustainable manner. Group members perceive the structures as a media through which they receive government and non-government interventions but not as a

means to solve their problems. Furthermore, the groups have limited cohesiveness and management skills to influence planning and implementation of their activities (Kataama, 2002).

In view of the above, PMA as a strategy is therefore working towards facilitating the creation of an efficient, competitive system for processing and marketing of agricultural commodities and developing financial markets and rural infrastructure. The need to develop high yielding and labour-saving technologies and diversification of agricultural exports through production for non-traditional crops are major factors necessary to commercialise agriculture. This is the framework under which Nyabyumba United Farmers Group, the case study discussed in this report, operates.

5.4 The history of the innovation against the evolution of the supply chain

The Nyabyumba United Farmers Group started in 1998 as a community development entity comprising of 40 members. Other groups who realised the benefits of producing and marketing as a group joined later. Table 5.3 presents the history of the innovation and the evolution of the supply chain by the group and Figure 5.5 illustrates its current supply chain.

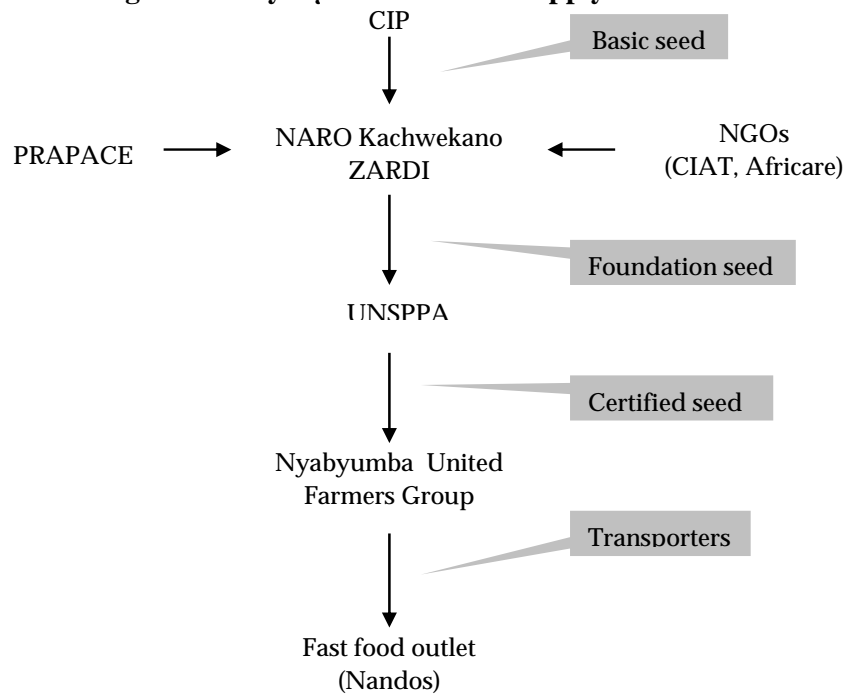
Table 5.3 Evolution of the innovation by Nyabyumba United Farmers Group

Date	Supply chain event	Innovation event
1998	Africare supported farmers to form Nyabyumba Community Development Group to modernise agriculture mainly to consider farming as a business. Africare realised the need to increase production of potato in Kabale.	Mobilised 40 farmers to form Nyabyumba Community. Development group based on a farmer field school focussing on seed potato production. NARO supplied five bags of improved seed to Nyabyumba farmers for multiplication. Trained Nyabyumba farmers in improved crop agronomic practices such as natural resource management, crop rotation and soil fertility management emphasising the use of crop and animal residue as manure. All this led to increased potato yields.
1999	The increased potato yields attracted many visitors from NARO, CIP and Africare. Joined UNSPPA.	Nyabyumba farmers requested training from the visitors on control of late blight and bacterial wilt. Given FFS to learn control of late blight and bacterial wilt in collaboration with NARO, CIP and Africare. Led to over-production of seed. In collaboration with Africare, CIP and CIAT, more Farmer Field Schools (FFS) were formed to get more training in pest & disease control. 30 members from the Nyabyumba farmers group graduated and went out to train others. Formed Nyabyumba United Farmers Group from five FFS to improve efficiency in production and marketing.

2002	The five FFS engaged in seed production, which led to increased output.	In collaboration with UNSPPA, PRAPACE, Africare & CIAT, a marketing team was established comprising of members of the farmer group and service providers to evaluate market options. Farmers and Africare developed an action plan to identify critical points in the production – sales process and making provisions for the types of actions and investments required to supply. The team conducted a participatory supply chain analysis to assess the actors and services involved in production, handling, and selling potatoes to various market outlets. Nyabyumba farmers group approached PRAPACE to identify markets for their potatoes. Meeting was held with Chairman Nandos, Africare and CIAT.
2003	Identified the need to supply quality potatoes to a niche market (Nandos) on contract basis.	Nyabyumba farmers visited Nandos to negotiate a contract with Nandos. The contract specified price, variety, volume, quality, frequency of supply and terms of payment. Signed agreement to supply 60 bags (120 kg) per month at USh320/kg.
Sept 2003	Nandos established standards for the potatoes to be supplied in terms of quality and quantity.	Received more training from NARO on spacing and fertiliser application rates to attain the desired size of potatoes. Opened account in Centenary Bank because Nandos paid by cheque and also to be able to access loans.
2004	Supplied potatoes of 80mm in size.	Attained the actual size of potatoes and supplied potatoes without rejects. Meetings held between farmers, the facilitators and Nandos staff to undertake a cost-benefit analysis and confirm the viability of direct sales.
Aug - July 2005	Nandos demanded continuous supply of potatoes.	To ensure production during the dry season, the group installed drip irrigation, acquired a motorised pump and planted in swampy areas. Obtained supplies from Kisoro to raise quantities. Bought land for group production.
2005	Nandos payment made at the end of the month.	Formed a Savings and Credit Cooperatives Organisation (SACCOS) for members to borrow from to cater for daily household requirements.
2006	Identified another source of income for the group.	Formed Nyabyumba United Farmers Company* to be recognised and do business by providing services in modernising agriculture.

* The objectives of Nyabyumba United Farmers Company are to: increase household incomes of members; train in modern farming methods like commercialising agriculture; train families how to work together; train in environmental sustainability and; become service providers under NAADS.

Figure 5.5: Nyabyumba farmers supply chain



5.5 Explaining inclusion or exclusion

The farmers belonging to the Nyabyumba United Farmers Group have gained inclusion in the marketing chain as suppliers of primary products. Their inclusion is strengthened by the fact that they are able to enter into contractual agreement with a major buyer from the private sector. Under the contractual arrangement of ware potato growers, the farmers are coordinated by UNSPPA whose role is to provide advisory services and make sure there is a constant supply of seed potatoes to help farmers ensure continuous production. This constant capacity building, especially in the technical aspects of production, has helped the farmers to produce a high quality crop as required by the buyer. Members of the group are graduates of farmer field schools. Having received financial assistance from Nandos, the farmers currently use micro-irrigation in order to achieve consistency in supplies. This is another requirement by the buyer that is crucial in sustaining the group members in the chain.

5.5.1 Organizational, technological and financial changes implemented by the farmers

In order to remain viable in the new enterprise, the group had to make changes in management techniques as well as in technology application:

Organizational changes

The group set up a management committee and members received basic training in record keeping and accounting. Various committees were established and members elected to the posts of chair, secretary, treasurer, marketing officer and lead farmers², among others. The group developed a simple business plan and a longer-term vision – one that can be implemented by members without difficulty.

Technological changes

To ensure continuous supply to Nandos, farmers adopted new technologies such as:

- Implemented staggered production
- Re-invested profits to improve production by installing micro-irrigation systems
- Planted new varieties such as Victoria
- Planted in wetlands
- Built stores to improve on post-harvest handling losses
- Purchased potatoes from other farmers especially when their stocks were low
- To synchronise production, farmers took on strict planting schedules specifying planting times, amounts planted, availability of planting materials, harvest date and expected yield at harvest
- Planting density of the potatoes was changed to increase the size of the tubers
- Farmers cut off the plants above the ground a few days before harvesting to reduce tuber moisture content and extend storage life

Figure 5.6: Nyabyumba farmers identifying the desired size of potato in collaboration with Nandos officials



² Lead farmers were selected to monitor production and to take part in marketing and this would assist in controlling for quality.

Quality assurance changes

- Farmers started growing one specific variety suitable for making high quality chips.
- Farmers learnt how to grade and sort their potatoes.
- Farmers in upland areas adopted micro-irrigation in order to improve on the quality of off-season tubers.
- The group improved on the seed supply system to meet their needs and to supply other farmers with high quality, disease free seed potatoes.

Financial changes

The group owns a joint account to ease transactions with the chain actors. Members pooled their own resources and borrowed US\$3 million within the community to cover the first three to four months.

Market linkage innovations

- The group owns a mobile phone to address communication problems.
- The group continuously tries to identify other market options.
- The group analyses its profits and monitors the quality of the produce from time to time
- The group purchased a truck to reduce transport costs.

5.5.2 Critical skills and competencies that allowed the farmers to implement these changes

- Strong group dynamics as farmers continue to work as a group.
- Effective local leadership.
- Changes in individual attitude and commitment.
- Strong links and increased ability to experiment, with support from R&D institutions.
- Farmers were graduates from farmer field schools.

These farmers managed to sustain their inclusion in the chain (while others were excluded) because of the following:

- Trust among the members
- Established by-laws
- Good leadership and transparency
- Common market
- Continuous collaboration with Africare, CIAT and NARO, which enhanced group dynamics

- Holding frequent meetings
- Continuous source of income from group production and marketing
- Participatory approaches, which greatly improved the group's ability to take collective action.

5.5.3 Public and private organisations collaborating with the group

Both the public and private sector played various roles in order to enhance the group dynamics, e.g. providing technical support to the group, such as training. The major players included NARO, CIAT and Africare and their profiles are outlined below.

(i) NARO – Kachwekano ZARDI

NARO's mandate is to undertake, promote and coordinate research for crops and livestock and ensure the dissemination and application of research results. Kachwekano ZARDI, entrusted with research on potatoes, is one of the nine institutes through which NARO's mandate is implemented.

(ii) CIAT

CIAT is a non-profit organisation, which conducts socially and environmentally progressive research aimed at reducing hunger and poverty and preserving natural resources in developing countries. CIAT is one of the 15 centres that make up the Consultative Group on International Agricultural Research (CGIAR). CIAT helps rural communities build sustainable livelihoods by fostering strong, mutually beneficial relationships among national research institutions, non-governmental organisations, the private sector and most importantly farmers themselves. By using a bottom-up approach, CIAT can meet three crucial challenges that people face: enabling rural innovation, improving the management of tropical agro-ecosystems and developing the potential of agricultural biodiversity while ensuring better access to new crop varieties.

(iii) Africare

Africare works in partnership with African communities to achieve healthy and productive societies. Africare's approach places communities at the centre of development activities. Africare believes that only through strong communities can Africa feed itself, appropriately exploit its natural resources, educate, care for and protect its children, promote the economic well being of African people and live in peace. Africare's programmes address needs in the principal areas of food security and agriculture as well as health and HIV/AIDS. Africare also supports water micro-enterprise development, governance initiatives and emergency humanitarian aid.

(iv) PRAPACE

PRAPACE is a French acronym for Regional Potato and Sweet potato Improvement Network in Eastern and Central Africa. Currently it collaborates with potato and

sweet potato programmes of ten ASARECA (Association for Strengthening Agricultural Research in Eastern and Central Africa) member countries in the region. These countries are Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania and Uganda. The network is under the auspices of ASARECA and is affiliated to CIP, which provides a backstop for the flow of improved germplasm, scientific information, training, and administrative support. The network is funded by USAID.

5.6 Forms of costs / benefits of inclusion

To implement the desired innovations, members had to forego some of the opportunities at household level. For example, to step up their working capital, some farmers were forced to borrow funds at a cost, sell livestock assets such as cows, goats and poultry and reduce their area planted for other crops because the majority are subsistence farmers. In addition, farmers had to invest more time in this venture by attending training courses and spending more time on their potato farms. But all these positive changes could only be achieved through an ability to change their social and psychological behaviour.

Besides farmers benefiting from direct linkage to consumers and processors, Nyabyumba United Farmers Group having gained confidence in Nandos has also enjoyed some other benefits. These include acquiring a loan to enable them to acquire transport facilities and a contribution towards the purchase of water pumps for irrigation of their gardens during dry spells.

Costs

- Selling off their livestock to get money to grow potatoes
- Borrowing
- Reduction of acreage under other crops
- Reduced leisure time
- Invested time in training

Benefits

- Majority have built better houses
- Over 40 members harvest 100 bags every year implying improved productivity
- Majority have acquired more land, close to ten members have purchased land of more than five acres
- Many have bought exotic cows each worth US\$800,000
- Six members have bought mobile telephones

In terms of production, previously farmers were harvesting an average of 9.7 bags totalling approximately 1,164kg/year but they now report an average of 62 bags with approximately 7,440kg/year. They have acquired better skills in sorting, grading and storage and can confidently distinguish between good and poor varieties. In terms

of social benefits, farmers stated they could now pay the school fees for their children and had improved their nutrition because they could afford to buy meat, milk and eggs for their families, bought more land for farming, acquired household assets including radios and clothing, improved/constructed houses and increased their livestock herds. Most indicated that they were able to hire labour for the various activities in production of potatoes. Six members reported owning mobile phones, each worth at least US\$150,000, while they could meet their food security needs in their homes because they could now supplement available foodstuffs with animal protein foods like meat, eggs or fish by using proceeds from their potato crop.

A remarkable change in sources of household incomes has been realised by the group members. Initially most of the member farmers were involved in selling labour, with females selling their labour to neighbouring villages and the men to other districts, as well as growing potatoes and sorghum as the major household incomes. With the introduction of the Nandos market, all of them spend about 90 per cent of their time on growing potatoes. Yields have increased by over 70 per cent due to the improved agronomic practices being implemented by the farmers (Table 5.4). The general welfare of the majority of farmers' families has been improved.

Table 5.4 Estimated increase in potato production for selected group members

Farmer	Estimated Production (bags)			
	At the start	After	Increase	% increase
1	8	40	32	80.0
2	13	24	11	45.8
3	5	30	25	83.3
4	5	45	40	88.9
5	6	45	39	86.7
6	10	40	30	75.0
7	10	48	38	79.2
8	6	20	14	70.0
9	2	20	18	90.0
10	30	60	30	50.0
11	3	13	10	76.9
12	3	8	5	62.5
Total	101	393	292	888.3
Average	8.4	32.75	24.3	74.03

5.6.1 Cost and benefit analysis for delivering potatoes to Nandos

Costs incurred by the group in delivering the potatoes as estimated by CIAT indicates that the group realises some profits although they need a lot of working capital (Table 5.5). These estimated costs assist the group to calculate the profitability of their enterprise.

Table 5.5 Cost structure for delivery of 47 bags of 120 kg bags every two weeks

Production	USh/bag	
Seed		
Fertiliser		
Pesticides		
Labour		
Total	12,000	
Post-harvest handling and transport		
Post-harvest handling and transport	USh/bag	
Grading, packing, sewing	100	2 persons for 1 day at 2,500/- 50 bags
On-loading	200	200/- per bag
Off-loading	300	300/- per bag
Bags	500	500/- per bag
Book keeping and accounting	40	2 days per month for 12 months at 2000/- 1200 bags
UNSPPA charge	1,000	1000/- per bag
Transport to Kampala	6,000	6,000/- per bag
Escort cost	800	Transport 15,000/- and 25,000/- accommodation and food per trip
Rental of store	100	5,000/- rental per month and 5,000/- security per month
Sub total	9,040	
Other costs (bank charges, depreciation, etc.)	1,808	Bank charges, depreciation, minor inputs
Total	10,848	
Total cost	22,848	
Net profit	9,352	
Price to farmer (suggested)	20,000	
Capitalisation	1,352	Difference between selling price and total costs (production plus profit, handling, transport)
Capital	USh	USh/bag
Weighing scale	50,000	8
Working capital	2,039,424	4 times the cost per bag for 47x120kg bags
Total capitalisation per year	1,525,056	1,352/- times 1,128x120kg bags
Proposed membership fee/member	10,000	

Source: CIAT, 2005

5.6.2 Constraints faced by the group

The major challenge is how to address the issue of rain-fed agriculture, which affects the desired size of potato tubers and eventual yields. They attempt to address this problem by planting on time, applying fertilizers and manure, and hiring valley farms.

Other constraints faced by the group include:

- Poor roads that become impassable (especially during the rainy season), leading to untimely delivery.
- Thefts both in the fields and during transportation to markets.
- Disease, especially the bacterial wilt that is transmitted from the top hill fields when it rains to the lower fields.
- Land fragmentation.
- Inadequate working capital to build storage facilities.
- Payment schedule by Nandos (at the end of the month) affects operations.
- High charge of transporting potatoes from the fields to collection centres; one bag costs USh3,000 to be transported.
- Lack of money to purchase inputs in bulk or lend to members on credit.
- Inadequate transport to deliver potatoes on time.
- Competition from other suppliers who supply at lower prices.
- Land shortage.

5.7 The potential for up-scaling / replication

(a) The potential for up-scaling this innovation and/or for replication elsewhere is based on the following findings:

- Nyabyumba farmers appear to be more focused as they intend to increase their production levels to satisfy other niche markets. They have plans to purchase a new truck with a bigger capacity of 2.4 tonnes, to establish formal offices/collective storage facility and a village bank as well as to purchase more land as a group. These ideas are signs that the group has the potential to scale up its operations.
- In addition to the improved yields, most members have increased acreage under potato production. There are currently 120 members and about 60 per cent of these own potato gardens ranging between 1 and 3 acres, 30 per cent have less than 1 acre under potatoes and 10 per cent have potato fields of over 3 acres.
- The acquisition of assets through collective action, such as land and the construction of collection and storage facilities, as well a truck to transport their produce from Kabale to Kampala improves their efficiency.
- All members have improved their potato production and marketing skills and they appreciate the importance of group production and marketing.

(b) The preconditions that made the innovation a success include the following:

- The time frame since the formation of the group made it possible to build social capital.

- The participatory market approaches employed by both the farmers and service providers in identifying markets and making joint marketing decisions enabled the actors to better understand the challenges faced by other chain actors.
- The ability of the farmers to learn quickly and innovate to respond to new challenges.
- Farmers were able to re-invest their initial income to improve on production and post-harvest handling.
- The ability of the farmers to test and adopt new innovations at critical points in the enterprise process.
- Sound and transparent leadership.
- Communication between the buyer and the farmers improved farmers' confidence and negotiating power.
- The increased yields which motivated members to remain in the group and other farmers to join.
- Commitment and active participation of the members.

(c) The innovation is expected to be sustainable because of the following:

- The trust built between members and the set of by-laws followed by the members. The group encourages participation of both men and women whereby husband and wife work together.
- The common market that all the members supply plays an important role in keeping the group together.
- The group holds meetings very often to discuss how to address their challenges.
- Fear of God, embedded in the minds of the majority of the farmers.
- The involvement of organisations such as Africare, CIAT and NARO, which offer continuous advice and sensitisation.
- The increase in yields motivates the farmers.
- The introduction of the Savings and Credit Cooperatives Organisations (SACCOS) that assists members with some money to meet household needs as they wait for the payment for their supply at the end of the month.
- Registration of their organisation as a company to render services at a cost, hence a source of income.
- Identification of other market outlets. Members sell improved seed to other farmers and they also have plans to supply reasonable quantities of potatoes to Tomchris, one of the biggest processors of crisps, in Kampala city.
- The transparent leadership as well as the active participation of the members.
- The group collects and analyses technical and economic information that is used as a monitoring and evaluation tool.
- The benefits have resulted in a general improvement in the welfare of the majority.

(d) Elements that can be taken from the experience and replicated elsewhere include the following:

- The element of being trustworthy as well as transparent leadership.
- A set of by-laws governing the group
- Gender equity, which promotes participation of both men and women whereby husband and wife work together.
- The common market that all the members supply plays an important role in keeping the group together.
- The involvement of R&D organisations and NGOs, which offer continuous technical advice and sensitisation.
- The introduction of the Savings and Credit Cooperatives Organisations (SACCOS), which assists members with some money to meet household needs as they wait for the payment for their supply at the end of the month.

(e) Working techniques and methodologies that proved to be successful in the case study are the following:

- Collaboration with R&D organisations and NGOs since they do not have commercial interests. Such organisations are in good position to lead the participatory processes required in market chains and bring together actors who mistrust each other but are interested in sharing ideas about business options. Such organisations are better placed to access information and contacts to stimulate innovative processes.
- Trust among the actors involved with the Nyabyumba farmers created an environment that was conducive to the innovation by increasing the quality of information exchange, fostering creativity and learning, reducing the time taken to reach agreements and promoting personal satisfaction.
- The set of by-laws followed by the group. These assist in instilling discipline amongst members, thus keeping the group together.
- Participation of both men and women whereby husband and wife work together. Gender equity is one dimension of empowerment since both men and women are able to participate in decision-making processes. This increases the level of transparency and accountability associated with the use of resources.
- The common market all the members supply helps to generate a joint vision and activities that tend to benefit all, or at least most of the stakeholders involved.
- The group holds regular meetings where the farmers exchange information. This creates an environment that favours an open and positive exchange of ideas, which is fundamental to the development of the group. This is in addition to the transparent leadership.

6 Discussion

The increasing growth of urban towns has resulted in the expansion of markets for agricultural products as the urban population demands more in terms of food requirements. Food habits are changing, thus creating new market options for better-organised farmers such as the Nyabyumba farmers who had to innovate in their production, organisation and marketing.

The case study of Nyabyumba United Farmers Group largely demonstrates innovation ideas resulting from collective action by small-scale producers and continuous collaboration with a number of development agencies including researchers (Kachwekano ZARDI, PRAPACE and CIAT) and NGOs (Africare). With rigorous collaboration and clear policy frameworks, farmers were empowered in capacity and skills, mutual learning and trust building. Farmers' improvement in capacity and skills were reflected in the organizational, production, economic and financial changes both at farm and group levels. Their active and continuous involvement and individual commitment to change their attitudes were paramount for developing and sustaining this market linkage. Furthermore, farmers' participation in research regarding planning and setting goals helped the group to focus towards their priority needs, thus improving the efficiency of the process and adoption of technologies/innovations.

Such changes include the growth in membership from 40 in 1998 to 120 farmers to date, an increase of 200 per cent. Members continued to participate in the group activities by planting the crop and attending training sessions on a regular basis. From the focus group discussions, about 60 per cent of the farmers reported to have planted 1-3 acres, 30 per cent planted < 1 acre, while close to 10 per cent planted 3-5 acres of potato every year. The overall aim is to ensure a constant supply of ware potato to the market and this is very important in sustaining the market. The issue of sound and transparent leadership remains a vital factor to minimize disintegration of the group and ensure that the farmers plant on time, use recommended agronomic practices to attain the required quality specifications, harvest on time and sort, grade and market collectively.

Of course, meeting the required standard and quality was not a short-term arrangement. Though the group started supplying Nandos in 2003, they were only able to reduce their reject percentages to 20 per cent in 2005. The group addressed some of the marketing bottlenecks by purchasing a one-tonne truck worth US\$9 million and a mobile phone to deliver their potato at short notice. Also, through collective effort, Nyabyumba farmers now own a joint account that eases transactions among the actors in the chain. They were able to pool financial

resources and start an internal saving scheme, which provided an opportunity to borrow and re-invest in farming activities.

7 Conclusions and recommendations

Arising from the case study findings, the following conclusions and recommendations can be made:

7.1 Conclusions

The Nyabyumba United Farmers Group experience demonstrates that improved market access is crucial if the competitiveness of rural producers is to be enhanced. Competitiveness is not static, but a dynamic concept: once achieved, continuous adjustments must be made to maintain it. The actors involved must be able to innovate and create value in the changing environment.

New innovations are important drivers that encourage farmers to move on together. Farmers invest in improved agronomic practices which lead to higher yields hence improved household incomes.

Participatory approaches allow farmers to achieve a better understanding of the challenges faced by each actor in the market chain. Nyabyumba United Farmers Group's activities vividly explain how collective action and continuous collaboration with the farmers and research can derive positive results in capacity building of small-scale producers and sustaining their participation in a dynamic supply chain.

Promoting collaboration among the different stakeholders is a promising approach because it increases their marketing efficiency and enhances the value of the products and services generated along the chain.

Creation of a high level trust among the actors involved allows actors to communicate efficiently, develop a shared vision and strategically implement activities that put that vision into practice. The higher the degree of trust, the better the results that can be expected from the collaborative processes.

External R&D organisations can help bring together different actors involved in the market chain. Such organisations can suggest and promote new ways of commercialisation and provide facilitation for participatory processes that enhance collaboration among the chain actors, build human and social capital and foster competitiveness.

New market requirements can be an obstacle although they offer an opportunity for those who seek to enhance both production and product quality. At the same time, the enforcement of quality standards may also improve collaboration among the farmers who need to work closely together in order to comply with the standards.

A common market enables small-scale farmers to successfully link themselves to markets, although the process requires continuous support from R&D partners. Farmers can gain confidence by consolidating relationships with their buyers.

7.2 Recommendations

The group should enhance its partnerships with private sector for developing market-preferred products since it has the potential for product development and diversification. The group can increase their incomes by investing in processing and cost effective storage facilities, since the main driving factors to increased supply/demand are perceived to include expanding utilisation base through value addition to offer better competitive marketing opportunities.

The group still needs financial assistance to improve their irrigation systems, increase acreage, purchase inputs in bulk, build collection stores and offices and buy a truck capacity to carry 120 bags. Once these are implemented, the farmers will be able to improve production and sustain continuity of their supplies.

More technical support should be provided by the private sector in partnership with research to accelerate the process of developing the group by identifying more market outlets beyond the local market.

Government and development partners should take a lead in providing the necessary market information for the group to make informed decisions. Information is also needed on potential markets, their requirements and penetration.

There is a need to develop mechanisms to enhance their capacity for efficient marketing, entrepreneurship development skills and access to micro-finance institutions. Capacity development will strengthen the group to negotiate for lower prices for inputs and higher product prices. Further capacity building could be achieved through training and exchange visits.

Investment in feeder roads is vital for lowering transport costs and ensuring the potatoes, which are highly perishable, get to the consumer in a timely manner.

The group should advocate for policies that increase access to improved technologies by rural communities. Attracting technology both for production and processing is vital to increase utilisation and stimulate demand. Also, improved technology will lower the costs per unit of output and hence increase the level of investments.

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9 Appendix

List of Acronyms

A2N	Africa 2000 Network-Uganda
ARDC	Agricultural Research and Development Centre
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
CBO	Community Based Organisations
CIP	International Potato Center
DANIDA	Danish International Development Assistance
DP	Development Partners
EAC	East African Community
FFS	Farmer Field School
EU	European Union
FFS	Farmer Field Schools
FGD	Focussed Group Discussion
GOU	Government of Uganda
GDP	Gross Domestic Product
IITA	International Institute of Tropical Agriculture
IFAD	International Fund for Agriculture Development
IFPRI	International Food Policy Research Institute
KI	Key Informant
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MFPED	Ministry of Finance Planning and Economic Development
MTCS	Medium Term Competitiveness Strategy
NAADS	National Agricultural Advisory Services
NARO	National Agricultural Research Organisation
NGO	Non-government Organisation
PEAP	Poverty Eradication Action Plan
PMA	Plan for Modernisation of Agriculture
PMCA	Participatory Market Chain Approach
PRAPACE	Eastern and Central African Potato and Sweet potato Network
PS	Private Sector
R&D	Research and Development
SACCOS	Savings and Credit Co-operatives Organisations
SEP	Strategic Exports Programme
UEPB	Uganda Export Promotion Board
UIA	Uganda Investment Authority
UNDP	United Nations Development Programme
UNSPPA	Uganda National Seed Potato Producers Association
USAID	United States Agency for International Development
ZARDI	Zonal Agricultural Research and Development Institute

Regoverning Markets

Regoverning Markets is a multi-partner collaborative research programme analysing the growing concentration in the processing and retail sectors of national and regional agrifood systems and its impacts on rural livelihoods and communities in middle- and low-income countries. The aim of the programme is to provide strategic advice and guidance to the public sector, agrifood chain actors, civil society organizations and development agencies on approaches that can anticipate and manage the impacts of the dynamic changes in local and regional markets. The programme is funded by the UK Department for International Development (DFID), the International Development Research Centre (IDRC), ICCO, Cordaid, the Canadian International Development Agency (CIDA), and the US Agency for International Development (USAID).

Innovative Practice

Innovative Practice is a series of case studies from the Regoverning Markets programme providing examples of specific innovation in connecting small-scale producers with dynamic markets at local or regional level. Based on significant fieldwork activities, the studies focus on four drivers of innovation: public policy principles, private business models, collective action strategies by small-scale farmers, and intervention strategies and methods of development agencies. The studies highlight policy lessons and suggest working methods to guide public and private actors.

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