Uganda Journal of Agricultural Sciences, 2004, 9: 785- 790 ISSN 1026-0919

Capacity and organizational deficiencies in the effort of Ugandan farmer groups to supply beans and maize—the perspective of a large buyer

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Abstract

It is generally thought that farmers who supply large trading companies in Uganda often get an unfair price for their produce. The traders, in turn, sell the produce to large buyers, making a descent profit. Through the agriculture and marketing support project at the World Food Programme (WFP)-Uganda, there is an initiative to assist small-scale farmer groups in selling maize and beans (and sometimes sorghum) directly to large buyers such as WFP. WFP procured nearly 3,100 MT directly from small-scale farmers during 2003, about 3% of the total Ugandan procurement (the rest coming from larger suppliers). WFP would like to see at least 10% of its total in-country procurement come from small-scale farmers. However, farmers and farmer groups have difficulty meeting proper quantity and quality standards, making it difficult to sell produce to WFP. Farmers are constrained by improper post-harvest handling methods, poor access to financial capital, minimal organizational capacity, and unfamiliarity with WFP bidding procedures. WFP and key implementing partners address some of these issues by supporting initiatives to train farmer groups in post-harvest handling, storing commodities, understanding market information, and forming farmer groups. Additional market pressures may make it necessary for farmers to improve the overall quality of their produce—requiring farmer groups to be better managed, have easier access to financial capital, and have the ability to add value to their product closer to where harvesting takes place.

Key words: Crop produce, prices, small - scale farmers, traders

Introduction

Uganda's Plan for the Modernization of Agriculture (PMA) has the goal of eradicating poverty through the transformation of the agriculture industry by raising farm productivity, improving food security, increasing the number of marketed agriculture products, and creating on-farm and off-farm employment. (PMA, 2000) The World Food Programme (WFP)-Uganda's Agriculture and Marketing Support project—one of three development projects—aims at contributing to the goals of the PMA. The project is implemented in collaboration with WFP's government counterparts in the Ministry of Agriculture Animal Industry and Fisheries (MAAIF). In pursuit of the goal of raising incomes from agriculture and increasing investment in rural infrastructure, the project has two components—marketing support (the focus of this study) and agricultural development using the food-for-work concept. (WFP, 2002)

The WFP is the largest single purchasing organization in Uganda, injecting a substantial amount of income into the economy, and promoting the production of maize and beans in the country. The majority of the maize and beans procured by WFP in Uganda comes from large scale suppliers, the middlemen between small farmers and WFP. It is generally agreed that the large scale middlemen give a relatively lower price to small scale farmers, and then sell the produce to WFP and other buyers at a much higher price. The marketing support project has the goal of procuring 10% of its total in-country supply of maize, beans (and sorghum if available) from small-scale farmer groups, thus improving the price farmers get for their produce. (WFP-Uganda, 2002)

During 2003, the first operational year of the project, 106,000 MT of maize and beans worth over $24 million were procured by WFP in Uganda. Only 3,100 MT (~3% of the total) came directly from small-scale farmer groups. It is assumed that this underachievement relates largely to the inability of farmer groups to market high quality produce that meets WFP's standards. Additionally, farmer groups struggle with the procurement process of WFP, which is much more difficult than selling to middlemen who go to the farmers with cash, and leave with the produce. WFP has a tendering process in which farmers must bulk their produce and then compete in a bidding procedure for a contract. To address capacity issues, the marketing support project also aims at supporting the training of farmer groups in food storage, drying, cleaning, packaging, improved organization and business practices, and improving their access to market information. (WFP-Uganda, 2002) This training is carried out with WFP's implementing partner organizations such as National Agriculture Advisory Services (NAADS), International Institute of Tropical Agriculture (IITA), Sesakawa Global 2000, Investment in Developing Export

Agriculture (IDEA) Project, Agriculture Productivity Enhancement Project (APEP), ACDI-VOCA, and Uganda National Farmers Federation (UNFFE).

The objective of this research was to identify the key constraints in farmer group capacity that prohibited WFP from reaching the project goal of procuring 10% of its local maize and beans directly from small-scale farmer groups in 2003. Discussing those aspects that hindered procurement in 2003 should help WFP and its partner organizations implement the proper strategies to improve farmer group capacity. Improved capacity, particularly at the post harvest level, will contribute to improving the entire Ugandan agriculture industry. This will enable WFP and other buyers that require high standards of quality to further buy from Ugandan farmers. Understanding the capabilities and shortfalls of farmer groups also gives an indication to WFP as to how it might be able to adjust its procurement procedures and support programme so that selling directly to WFP becomes more manageable for farmer groups.

Research Methodology

The data presented comes primarily from an analysis of observations and results of implementing the marketing support project aimed at small-scale farmer groups throughout 2003, and the first quarter of 2004. Most of the data was collected over a nine month period in qualitative form by the WFP Marketing Support unit. This data came from observations while implementing WFP's marketing support project in all maize and bean producing areas of Uganda. Activities of the project include site visits to see maize and bean stocks, inspection of storage facilities, and monitoring handling procedures. See Table 1 for the farmer groups who have successfully supplied WFP to date. Additionally, the Marketing Support unit is familiar with the administrative capacities of farmer groups, which includes bidding for WFP tenders. Data was also collected during internal meetings, interactions with implementing partners, farmers, extension agents, and farmer group leaders (Sept 2003-May 2004).

Table 1. Farmer groups successfully selling produce to WFP in 2003

Farmer Group Name	Location	Commodity	Quantity Bought
Gulu Farmers	Gulu	Maize	403MT
Kinoni	Nakasongola	Maize	1508 MT
Kakundwa	Kasese	Maize	200MT
Zirobwe	Luwero	Maize	29MT
Alito	Lira	Maize, Beans	95MT
Lira Dist Farmers	Lira	Maize, Beans	363MT
Diet Commodities	Mbale	Maize	50MT
North Equator	Ft. Portal	Maize	100MT
Bugiri	Bugiri	Maize	200MT
Bulima	Masindi	Maize	50MT
Bugangaizi	Kibale	Beans	37MT
Nakisenhe	Iganga	Maize	50MT

Total: 3085 MT, Value: $557,876

Scope

The analysis considers the various activities of small-scale farmer groups attempting to supply WFP—post-harvest handling and storage, farmer group formation, registering with WFP as a supplier, and participating in WFP's procurement procedures. Pre-harvest activities, namely planting, crop maintenance, etc. are not the focus of this paper, as the WFP agriculture and marketing support project is not mandated to address these issues. This is not to say that activities further down the value chain do not impact the ability to produce marketable quality grains; however, post-harvest activities provide a useful starting point for making recommendations for improving the capacity of farmer groups to supply WFP. Constraints facing farmer groups arising directly from the agriculture and marketing support project, procurement procedures and logistics of WFP are also recognized. However, these issues are being addressed internally within WFP. The analysis from this study assists that internal process. It is also important to mention that the constraints discussed are issues faced by all farmers and farmer groups throughout all districts of Uganda.

Constraints in farmer group capacity

Problems with quantity

A farmer group interested in supplying WFP with maize or beans is required to have a minimum of 50 MT before it may attempt to bid for a WFP tender. (WFP, 2003) This quantity must be located in a single storage facility, or spread out among several stores easily accessible by WFP transport trucks. The reason for this is that WFP bears the responsibility of transporting supplies from the farmer group locations, as opposed to requiring the farmer group to deliver to one of WFP's stores. This is a cost which traditional WFP suppliers must bear. If the amount being picked up is too little, or is not centrally located, it becomes too costly for WFP to transport the supplies.

Members of farmer groups, the farmers themselves, often only produce a few bags of maize or beans on their own. Therefore, it is rarely possible for an individual farmer to put together the required 50 MT of food, unless the farmer grows on a commercial scale. It is necessary for farmers to work together in groups in order to bulk and supply enough maize or beans to meet the minimum quantity requirements of WFP. This might require a very large number of farmers. To date, the specific details of how many farmers are in a farmer group, and the average amount each produces is unclear. Excluding one farmer group, Kinoni farmers, who supplied nearly half of all sales of farmer group produce to WFP in 2003, the average amount sold to WFP per farmer group was 143 MT. See Table 1. As monitoring and evaluation methods are implemented for the agriculture and marketing support project, such data should be collected.

Instant payment. Many groups find the task of bulking food very difficult. Individual farmers are accustomed to being paid directly for their maize or beans once their bags leave their premises. Many farmers are not willing to store their produce in a centralized location, which is out of their control, as they wait for the group to go through WFP's procurement procedures. They fear not being paid properly once the delivery has been made. Additionally, WFP is not able to pay cash directly on delivery. Several steps must be accomplished after delivery, including verification of delivery notes by the WFP finance unit, before payment can be made. It is likely that between the time of bulking, to the time of pick-up and then payment, farmers will have been without their bags of grain for several months. This is unacceptable to most farmers, who would prefer receiving a lesser amount of cash for their product, as long as it is paid in cash so that the farmer can then pay other bills such as school fees and medical bills.

In some cases, farmer groups or associations are able to come up with the funds required to pay farmers as they bulk their food, prior to collection and payment by WFP. This requires access to financing, or a large amount of capital, something most farmer groups do not have.

At least one successful group has a warehousing system in which farmers are given a receipt when they bring their produce to a centralized location. The receipt is proof that the farmer has indeed delivered stocks to the group's store. In order to deal with farmers who needed to be paid directly on delivery to the store, the group paid two prices. A lower price was given by the farmer group to those farmers needing immediate payment upon delivery, and a higher price was given to those farmers willing to wait to be paid until the group had received payment by WFP (or other buyers). It was said that after the first time this group successfully supplied WFP and paid their farmers, farmers who had requested immediate payment began to trust this bulking system, and in subsequent contracts, were willing to wait to be paid the higher price. Building trust is key.

Poor quality

Another difficulty farmer groups face is meeting the quality standards required to sell to WFP. Table 2 lists the typical quality standards specified in WFP contracts during 2003 and the beginning of 2004. A farmer group cannot compete for a WFP tender if the standards cannot be met. Typically, WFP marketing support staff must make a visual inspection of stocks before a group can be recommended to the procurement unit by the programme office as a supplier. (WFP, 2003) Those registered groups that go on to bid for and receive a WFP contract must have their stocks inspected scientifically by WFP and third party quality inspectors before WFP warehouse staff can receive the supply.

Poor post-harvest handling—drying, shelling, cleaning, storage

In some of the visual inspections made by WFP staff, food has been handled in ways that lead to poor quality performance. Maize still on the cob has been found to be stored in piles inside mud huts prior to it being dry. This tends to leave the maize moist, giving rise to the possibility of mold and other problems developing within the stock. Signs of mold (discoloration, etc.) are sometimes found on shelled maize that is stored in bags. There have been some cases where the discoloration (black kernels) has reached over 70% of the content in bags. (Archambault, 2003)

When being shelled, maize is often put into a bag and beaten with a stick to remove it from the cob, as most farmers do not have access to shelling machines. This can easily cause the maize to crack, and be further susceptible to disease. Cracked or broken grains provide an entry point for infestation by insects and molds during storage. Losses could be minimized by hand shelling. (Mejío, 1999)

Also, food is often found to be dried directly on the ground in the sun, without a tarpaulin or other material laid down to protect the maize from becoming dirty. This can have a negative impact on the quality of grains, especially if the grains are also damaged by livestock or other pests while being dried on the ground.

Table 2 Quality specifications—WFP tender (in May 2004 the shriveled, diseased, and discolored value was changed to 2%). (WFP, 2003)

WFP quality requirements	
• Moisture content	14.0%
• Insect damaged	3.0%
• Broken	2.0%
• Shriveled, diseased and discolored	5.0%
• Foreign matter	0.5%
• Total defective grains	14.0%

When sorting and cleaning maize, farmers sometimes use screens that are unclean, and place the grains into bags that are old and dirty. This can be damaging, as it is easy for grains to become infested with weevils after coming into contact with unclean screens and bags that are infested with weevils. It has been seen that farmers store cleaned and sorted maize near the same location where this cleaning and sorting is taking place. Sometimes the storage building for the food is the same place where the equipment for cleaning, and the rejected food itself, is being kept. If the equipment and rejected food has weevils, or other insects, it can cross infect the cleaned product. (Archambault, 2004 a)

Farmers might not realize that these methods of processing their product can be damaging to the overall quality. It might

also be that farmers do not have access to the proper technologies to make improvements. Quality improvements could come from simple technologies like drying cribs, but it is clear that many of these technologies do not exist at the level of the small farmer.

Another possibility is that the buyers to whom the farmers typically sell have very minimal quality standards. These buyers may be willing to buy food that does not have a very high quality, or they do not pay a different price for food that has been handled with greater care. In this case there is little incentive for farmers to improve. It is possible that middlemen buying damaged food, like maize, will try to hide the damage by milling it, and then selling it off as maize flour. Maize flour that has a portion of mold can taste very bitter, and even be harmful to human health.

Although this is difficult to quantify by WFP observations alone, it is possible that a large amount of poor quality maize is due to problems prior to harvesting, specifically in field drying and delays in harvesting. According to Mejía (1999 a), 12% of a maize crop can be lost post harvest from extended on-field drying and delayed harvesting. Mejía (1999 b) also mentions other causes of post-harvest losses (for maize) on small farms in east and southern Africa—2% loss due to transportation, 6% on farm drying (no cribs), 3% shelling, threshing and cleaning, and 7% from long-term storage. These factors should be considered as likely causes of reduced quality of grains in Uganda, but the exact figures have not been measured in this study.

Infestation

There are also many quality problems in those grains that meet the initial visual inspections by WFP, and are then contracted to be supplied to WFP. The biggest problem at this stage has been with farmer groups that have produce infested with weevils, but damaged and discolored produce has also been an issue.

If farmer groups collect infested food from individual farmers, this can easily be transferred to the rest of the consignment. Farmer groups are required to fumigate their stocks before WFP will send inspectors to check the quality. Often, even after fumigation, the problem of infestation remains. This comes from a few different circumstances. First, farmer groups do not always fumigate properly. They might only fumigate those bags that are on the perimeter of a stack, leaving infested bags in the center. It might also be that weevils have laid eggs in stocks that were fumigated. In this case, parent weevils may have been killed, but the eggs remained and hatched later. Another issue is that maize in stores is not covered properly with fumigation sheets. This allows weevils to re-infest the stock. Many of the storage facilities are nearby places where other individuals are processing grains or other foods that are infested with weevils. It is very easy for these weevils to cross infest the farmer group's supply. This problem is exacerbated in stores that are inadequate—not sealed properly, having open doors where weevils can easily enter, not kept clean by warehouse managers, etc.

All of these problems of infestation can be compounded if for various reasons there is a delay in picking up the product from the stores. Farmer groups are generally not well equipped to store produce for extended periods of time while maintaining high quality. In some cases farmer groups have been instructed by quality control monitors (3rd party monitors contracted by WFP) to fumigate their produce a second or third time before it can be picked up by WFP. In several cases, food was originally cleared for pick-up by the quality control people, but between the time of inspection and loading, the stocks were re-infested. In these cases trucks have had to go away empty, a costly problem for WFP. In some cases, insect damage has been so severe that too high a percentage of the food was broken down into a powdery form, and did not meet the WFP standards, after originally having been cleared by quality control. (Archambault, 2004 a) This can be a very costly problem for farmer groups, as WFP cannot accept produce not meeting the quality standards written in the contract terms.

Bidding problems

There are many farmer groups that have been able to come up with the proper quality and quantity but are constrained by other factors that do not allow them to supply WFP. One of these problems is bidding. Many farmer groups have improperly totaled their costs, and perhaps have listed an unrealistic profit. See Table 3 for those costs that should be considered when pricing grains. Many groups have inadequate training in costing. Without the proper training and access to information, farmer groups are liable to list a bid that puts them out of competition for a WFP tender. The irony of such a situation is that the food that farmer groups have, will often come to WFP, but through a middleman.

Bulking difficulties and access to storage

In other instances, farmer groups are unable to bulk their food in a centralized location. WFP requires that the supply is centralized so it can be picked up easily. As mentioned earlier, farmers do not always trust leaving their produce in a centralized location without first being paid for it. This might be a result of poor group leadership, or too little involvement of members in the group's decision making. These farmer groups do not have a well-developed administrative structure or warehouse management strategy. (Archambault, 2004 b)

Many farmer groups have voiced the concern that they are unable to bulk their food due to lack of access to storage facilities where farmer group members can bring their food to prepare it for selling to WFP. Farmer groups might have inadequate funds for renting a storage facility, or even transporting food to such a centralized store.

In many cases, those farmer groups that do receive a contract to supply WFP often miss the contractual deadline

for having their produce ready because they have difficulty bulking food, for many of the reasons listed above. However, in some cases farmer groups that already have contracts with WFP have difficulties in putting together the consignment because farmer members have taken their food and sold it elsewhere, for a better price, or to a buyer who was willing to pay cash (even at a lower rate than the WFP price) at a time when that individual farmer needed to pay medical bills or school fees. Once a contract is awarded, WFP programming operates with the understanding that the quantities specified in the contract will be supplied. If the supplier cannot supply, it can be a costly inconvenience for WFP and beneficiaries when there is a break in the food pipeline this way. This is why a performance bond is required of suppliers by WFP. To give WFP some security, performance bonds are required of all WFP suppliers.

Performance bond

During 2003 and early 2004, WFP required farmer groups to submit a performance bond worth 5% of the total consignment. This was to be paid at the time the contract was signed. Farmer groups have discussed this as one of their major constraints. Even though the bond is never cashed if the farmer group follows through with the contract, it can be difficult for the farmer group to come up with the capital to back a performance bond before being paid by WFP. It can also be difficult to find the financing from a bank or other institution to cover the costs.

Throughout 2003 and 2004, it was seen that farmer groups often delayed supplying (beyond dates specified in the contracts) for such a long time that their performance bonds expired. So, this insurance for WFP is not always maintained. WFP typically allows farmer groups to have these delays, as the problems farmer groups face are understood. Many contracts in 2003 and 2004 had to be cancelled by farmer groups simply because they no longer had the stock. After careful analysis, WFP realized it would not be able to cash in the bonds from farmer groups (if they had not already expired). It was thought that the 5% penalty would be too much for farmer groups to handle, and stifle any chance they might have to supply in the future. Recently, WFP has considered reducing the performance bond to 2% or 3% of the value of the contract, perhaps a more realistic bond considering farmer group financial capacity. (Archambault, 2004 c)

Discussion

Generally, farmer groups have trouble maintaining the proper quantity and quality of food to supply WFP, have difficulties organizing into groups capable of pooling together their produce, have inadequate knowledge of bidding for tenders, have minimal access to capital for using storage facilities, and accessing equipment, and are unable to improve local level infrastructure.

Not having access to such improvements in capacity make it difficult for farmers to add value to their crops. Middlemen who buy from farmers have adequate drying and storage facilities in Kampala, making it easy to keep the quality of the produce at a decent level. There is no specific data collected concerning the number of farmer groups who have attempted to sell to WFP and have not succeeded. It would be wise for such information to become part of the monitoring and evaluation system of WFP. It would also be helpful to know the number of farmer groups who received some training from WFP, and what percentage of those trained were successful and what percentage unsuccessful in bidding for a WFP contract.

Incentive to improve

Due to the lack of quality requirements by many of the traders that farmer groups deal with, there is no real incentive to improve on post-harvest quality. Farmers know that regardless of what type of grains they have, somebody will buy it, albeit at a lower price. This lack of incentive might not be around for long, as there are some forecasts that in the coming year or two, the market for maize in Uganda will be flooded, and the price will drop. This was suggested in a presentation by Uganda Grain Traders during a marketing training session for small scale farmer group leaders. (Magnay, 2004) If this is the case, it is likely that poor quality maize will not be bought when the buyer has the opportunity to choose good quality maize over poor quality, at deflated prices.

Accessing financial services

It is important to focus on the issue of accessing financial services and capital, as it could be one of the biggest constraints farmers have. Farmer groups typically struggle with the terms banks put forth regarding loans to agriculture-based groups. Typically, the loans are of a very high interest, and banks are often reluctant to work with farmer groups, unless they have already received a contract from WFP. Having the contract should reassure the bank that the group will actually be paid, and can pay back their loans. However, even in this case, financing is not guaranteed. Not having financial capital makes it difficult for farmer groups to do such things as pay farmers upfront for their food before it goes into a central store, to access or build storage facilities, and to build group capacity so that value can be added to crops.

To illustrate the difficulty of accessing financial capital, there is an example of a farmer group supplier to WFP, which was told by a bank that in order to receive financial backing the group must be a limited company. So, the group decided to become a limited company, as the bank suggested, with the members buying shares of the company, and they were then given financing by the bank. Commercializing their associations might be a way for some farmer groups to cope with the financing problem. This cannot be done though, without the proper leadership and business knowledge, something only some farmer groups have.

A way forward

Internally within the agriculture and marketing support project, WFP hopes to address many of the challenges being faced in reaching the farmer procurement goals. WFP hopes to continue organizing trainings that aim at improving farmer group post-harvest handling methods, improving their ability to cost and access market information, and building group capacity through better group management, member participation, and investment back into the group. Such trainings cannot be accomplished without the assistance of implementing partners.

Food store

WFP is also implementing a pilot project in which it is helping an already established farmer group by providing storage capacity for them to bulk their food. WFP is building a 150MT capacity storage facility in a sub-county in Kamuli District. The hope is that the group, or several groups coming together to form an association, will be able to market to WFP more easily with access to a centralized storage facility with adequate capacity. The management of the store will be closely monitored by Cashfarm, an organization already training groups in Kamuli to improve their performance. They will be sure there is an adequately trained management committee to run the store properly. Farmer leaders in the area have already been exposed to a warehouse receipt store management system. WFP will monitor the benefits of the store, and see if organizing similar store management systems, for previously existing or new stores, would be useful in other parts of Uganda.

Decentralized value added

It may be important for other organizations and businesses to consider developing decentralized infrastructure throughout Uganda in order to give farmers and groups the opportunity to add value to their crops, even though they are not near Kampala. This is something that has also been mentioned by Uganda Grain Traders Limited. (Magnay, 2004) It might be a good opportunity for people to operate crop processing centers throughout Uganda, so that farmers throughout the country would have a place to bring their produce so its quality might be maintained. The biggest benefit here might not be the improvement in quality, but rather the decrease in post-harvest losses. Many losses happen because there are not proper facilities for drying, cleaning, etc. within the reach of farmers.

Lower interest agriculture loans. Financial institutions should consider freeing up lower interest money for agriculture projects. This could be a lucrative venture, especially if international markets, which typically demand higher quality, remain strong. Financial institutions could invest in the building of capacity for farmer groups who would then have better access to international markets. WFP has hopes of meeting with financial institutions to see how financing could be more accessible.

Acknowledgements

The author of this report is stationed with the WFP-Uganda by way of the Mickey Leland Fellowship, a leadership program through the Congressional Hunger Center (CHC) in Washington, DC. (http://www.hungercenter.org) The two-year program places fellows in various international organizations, such as WFP, dealing with hunger-related issues. The first year of the fellowship is a field year. The second year deals more with policy issues in the organization's headquarters. This paper would not be possible without support from CHC and all staff at the WFP-Uganda country office.

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