

World Vision Burundi/International

Karuzi Province Food Security Program

1 March 2001 – 30 September 2003

Final Report

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World Vision, Inc. Point of Contact:

Mark Howard, Senior Corporate Counsel
WVUS Legal, Contract Services, Stop #357
34834 Weyerhaeuser Way South
PO Box 9716
Federal Way, Washington 98063-9716
Tel: + 1 253 815 1000
Fax: + 1 253 815 3444

World Vision Burundi Contact: Maereg Tafere

Country Program Director
World Vision Burundi
111 Boulevard Uprona
B.P. 1606
Bujumbura, Burundi
Tel: (257) 215669
Fax: (257) 218234

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ABBREVIATIONS AND ACRONYMS

DPAE	Direction Provinciale d'Agriculture et d'Elevage
IRAZ	Institut de Recherche Agronomique et Zootechnique
ISABU	Institut des Sciences Agronomiques du Burundi
NGO	Non-Governmental Organization
OFDA	USAID - Office for Foreign Disaster Assistance
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WFP	United Nations World Food Programme
WVB	World Vision International/Burundi

EXECUTIVE SUMMARY

This final report covers the period from March 2001 – September 2003 during which World Vision International/Burundi received two grants from OFDA to implement food security activities in Karuzi province (EB 100142: March 2001 - March 2002 and HAD-G-00-01-00006-00: April 2002 - September 2003). The goal of the program was to improve household food security for 15,000 households in Karuzi Province. The program continued activities funded by OFDA in Karuzi since 1998.

During the reporting period, the program has significantly contributed to the food security status of 15,000 households and also to the general improvement of the food security situation in Karuzi Province. This is demonstrated in figures obtained from Médecins Sans Frontière (Belgium), in Karuzi Province indicating a substantial decrease in the level of malnutrition. In March 2000 Global Malnutrition levels were 11.1% and in July 2003 2.8% for children aged 0 – 5 years. Obviously, this cannot be attributed entirely to the work of the World Vision Food Security Program, as many other actors are involved in development interventions in the province. However, the appreciation demonstrated in discussions with program beneficiaries and local government officials reveal the impact of the project activities at a household level.

Program beneficiaries confirm that their food security situation has significantly improved since the program began. When questioned, people say that they are now able to plant more land and have greater harvests since more seeds were made available through the project. Not only is production increased but farmers can now save seeds for the next growing season. Despite problems in purchasing all the planned inputs and adverse climatic factors, the overall objective of increasing agricultural production has been achieved. Many households now have hoes as a result of distribution and are more aware of best agricultural practices as a result of World Vision trainings. The distribution of goats as part of the goat credit rotation scheme and purchase of goats as part of the credit program has increased production of manure and also increased household income. Such agricultural production activities (Objective 1) have been complemented by the construction of three warehouses in the communes of Buhiga, Gitaramuka and Gihogazi. The warehouses built with funding from World Vision Canada have helped beneficiaries to store seeds for future sale and planting.

The micro-credit component of the project (Objective 2) has continued to provide micro-loans to vulnerable households in Karuzi province with a focus on agricultural and livestock income-generating activities. During the reporting period, 4,140 clients received micro-loans and many of these clients were able to create profitable enterprises. In the second phase the emphasis shifted from funding a wide range of business activities to focusing on providing micro loans for the purchase of goats. This is because giving loans for too diverse a range of activities led to poor repayment rates due to a general lack of business knowledge amongst the population and limited marketing opportunities in Karuzi. Goat raising, on the other hand, has proven to be a profitable activity in terms of manure production and income generation. Loan follow-up by WVB staff was also made easier with fewer types of businesses being financed.

WVB is using the experience of micro-credit gained in Karuzi to develop a new micro finance strategy and approach. Despite the complexity of managing the micro-credit program and lack of sustainability, the impact on individual households who have been able to purchase a goat or finance a profitable business is clear. Profitable businesses have contributed to increasing household income and the addition of goats to the livestock population has contributed to increasing household income and improving soil fertility through increased manure production.

The Karuzi Province Security Program's third Objective focused on increasing the quality and quantity of seeds and other planting materials available through seed multiplication centers and hardening-off nurseries. During the reporting period, Nyamugari seed multiplication center, with 267 groups comprising 2,739 individuals, was supported through the provision of good quality seeds, manure, chemical fertilizer, pesticides and training. This site, along with three other smaller sites, was able to significantly contribute to the overall goal of the project through the provision of good quality seed and planting material. Although the sites were not able to supply all the seed and other planting material needed by the project, they were able to reduced the dependence of

the project on outside suppliers, many of which had limited capacity or were unreliable sources of quality seed.

In order to support the seed multiplication centers and increase their chances of becoming self sustaining, 140 young cattle were purchased in order to produce manure *in situ* and enable beneficiaries to continue to exploit the site as a cooperative after WVB funding ends. Even after the funding has ended, WVB technical staff will continue to provide support to the groups in the form of training on the management of cattle and the land. WVB and other agencies will also provide a ready market for the cooperative to sell their seed production.

In conclusion, even though the 15,000 target households in Karuzi are yet self-sufficient with respect to food production, their overall food security has significantly improved as a result of this project. Target farmers now have more seeds enabling them to plant more land and have more food on their tables. Micro loans, particularly for goats, have raised incomes and improved soil fertility. Seed multiplication centers are also able to provide more farmers with better quality seed, raising production and reducing hunger.

In spite of these gains, even the target households are still unable to grow enough food to meet all their needs, particularly during the hungry period just prior to the harvest. Access to good land is still inadequate and climactic conditions are not always favorable. As can be imagined, the situation for the general population of Karuzi is even much worse. Despite the positive impact of this project in Karuzi, the WFP still needs to distribute food to households in Karuzi. In the most recent distribution in November 2003, the WFP distributed food to over 19,000 of Karuzi's 71,000 households, over 25% of the total population.

PROJECT SUMMARY SHEET

Program Title Karuzi Food Security Program		Grant Number EB 100142 - March 2001 – March 2002 HAD-G-00-01-00006-00 - April 2002 – September 2003	
Country/Region Burundi/Great Lakes Region		Type of Disaster/Hazard Complex emergency resulting from civil war	
Tine Period Covered by Report March 2001 – September 2003			
Project Goal Improved household food security for 15,000 households in Karuzi Province			
Project Objectives			
<ol style="list-style-type: none"> To increase the annual household food production capacity of 15,000 farm households in Karuzi province by at least 500kg/household in three seasons (total of 7,500 tons of food in a year) and each household will save a sufficient quantity of seed from their production for the following season Micro credit <p><i>Phase 1</i></p> To provide access to micro-loans for agricultural and off-farm income generating activities to at least 750 clients by March 31,2002 and continue steps towards establishment of a self-sustaining micro-credit finance institution in Karuzi Province. <p><i>Phase 2</i></p> To provide access to micro-loans to at least 1,500 most vulnerable households for income-generating activities and increase their liquid assets through the purchase of small livestock by the end of April 2003 To increase the quantity and quality of seeds and planting materials available for 15,000 households and to provide 3000 households opportunities for income generation through seed multiplication activities 			
Implementing Agency World Vision International/Burundi			
Number of Beneficiaries			
Objective 1	15,000	through input distributions	
Objective 2	4,140	through disbursement of credit	
Objective 3	3,000	through income generation at seed multiplication centers	
	15,000	through distribution of inputs produced	
Cumulative Total	15,000		
Expenditure	OFDA6	WV-US Match	
Year 1 (2001/02)	\$935,065	\$8,917	
Year 2 (2002/03)	\$910,398	\$135,813	
Total	\$1,845,465	\$144,505	

PROJECT BACKGROUND

Introduction

This final report covers the original OFDA grant (**HAD-G-00-01-00006-00**) and two extensions for a total of 31 months. The original grant covered the period from March 2001 – March 2002, covering three growing seasons (2001C, 2002A and 2002B). The first (cost) extension was for 13 months and covered the period from April 2002 – April 2003. The second (no-cost) extension was for 5 months and covered the period from May, 2003 - September 2003. Both extensions combined covered 3 growing seasons (2002C; 2003A and 2003B).

Description of beneficiaries

The target population of the whole reporting period was 15,000 of the poorest households in Karuzi province. These households were selected on the following criteria.

- Child-headed households
- Elderly individuals supporting young children
- Female headed households with young children
- Households with severely or moderately malnourished child in the recent past
- Foster households for civil war orphans

Given the fact that the project was to focus on agriculture production, all households were required to have access to land and the necessary manpower to work the land. Households without access to land or labor were eligible to receive food from the WFP. WVB managed the WFP distribution in Karuzi province throughout the reporting period.

Over the 31 month period, the total number of beneficiaries remained the same for each commune. However, in the beginning of Phase II (April 2002 – September 2003) WVB readjusted the beneficiary lists to reflect changes in the household food security situation. Ten percent of beneficiaries voluntarily left the WVB program to enable other vulnerable households to benefit from the program. This was done in consultation with the communities. Table 1 shows the breakdown of project beneficiaries by commune.

Table 1: Project beneficiaries in Karuzi Province, by commune

Commune	Total number of households	Total number of project beneficiaries	Coverage
Bugenyuzi	13,436	2,200	16.37%
Buhiga	11,346	2,700	23.80%
Gihogazi	9,788	2,300	23.50%
Gitaramuka	13,941	2,200	15.78%
Mutumba	7,117	1,500	21.08%
Nyabikere	7,875	1,800	22.86%
Shombo	7,474	2,300	30.77%
Total	70,977	15,000	21.13%

It should be noted that that the 10% of people who gave places to others had achieved an improved level of food security. They were also allowed to continue to receive credit from the micro-credit component if they needed it.

Farming Systems in Burundi

Farming systems in Burundi are complex. There are three growing seasons during the calendar year. Crops for Season A are planted in October and harvested in January. Season B begins in late February and crops are harvested in May/June. For those households with access to marshland during the dry season, crops can be planted in May/June and harvested in September. Table 2 below summarizes the cropping seasons, crops grown and contribution to food production.

Table 2: Agricultural seasons in Burundi

Month	Season and Main Crops	% of Annual Food Production
October	Season A Maize, Beans, Potato, Sweet Potato, Peanuts Soya bean, Banana, Sorghum	35%
November		
December		
January		
February	Season B Beans, Potato, Sweet Potato, Vegetables	55-60%
March		
April		
May		
June	Season C Maize, Beans, Potato, Rice, Sweet Potato	10%
July		
August		
September		

Season A occurs during the ‘short’ rainy season, and season B during the ‘long’ rainy season. Season C occurs in the dry season when and cultivation is only possible in marshlands in the valleys. It is estimated that approximately 5,000 beneficiary households have access to marshland. Marshlands are not normally planted during seasons A and B due to the possibility of flooding during heavy rain. The photograph below shows marshland in the foreground and hilly land in the background, and is a typical view found in Karuzi province.



NARRATIVE

Goal

Improved household food security for 15,000 households in Karuzi Province.

Indicator

Ninety-five percent (95%) or more of children 0-5 years of age in the province at or above acceptable nutritional status as measured by MSF weight for height nutrition surveys, by April 2003.

Accomplishment of the Goal

The strategy to improve food security is, of necessity, a long-term endeavor and each productive growing season is one step towards reaching that goal. On the other hand, one bad growing season can significantly increase food insecurity. This final report covers six growing seasons in Burundi, 2001C, 2002A, 2002B, 2002C, 2003A and 2003B. Previous OFDA funded projects have supported food security interventions in Karuzi province since 1998 and the present project has built on the achievements of earlier projects. The Karuzi Food Security Program distributed inputs for all growing seasons except for 2003B as this season occurred during the final no-cost extension period and no input distribution was planned.

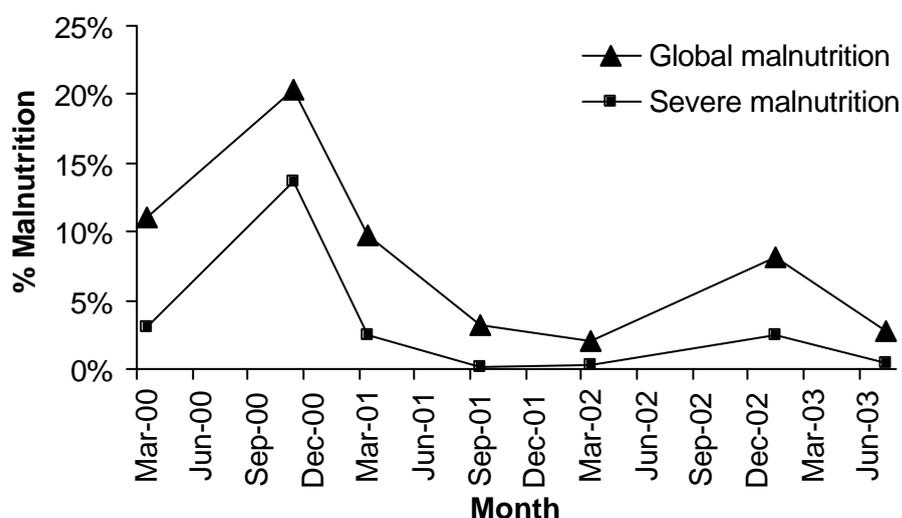
The goal level indicator focused on child malnutrition as a suitable method of assessing overall food security. Médecins Sans Frontières/Belgium, which work in Karuzi province, provided the malnutrition rates shown in and Figure 1.

Table 3: Malnutrition rates in Karuzi Province (children aged 0-5 years)

Survey period	Mar 2000	Nov 2000	Mar 2001	Sep 2001	Mar 2002	Jan 2003	Jul 2003
Severe malnutrition	3.1%	13.7%	2.4%	0.1%	0.3%	2.4%	0.5%
Global malnutrition	11.1%	20.4%	9.8%	3.2%	2.1%	8.1%	2.8%

Figures courtesy of Médecins Sans Frontières – Belgium

Figure 1: Malnutrition rates in Karuzi Province



It is clear that over the project period, malnutrition rates have declined substantially. This decline is due to a number of factors and cannot entirely be attributed to the work of the Karuzi Food Security Program. However, the appreciation expressed by the beneficiaries and local government officials reveals significant impact of project activities at the household level

Despite the best efforts of the government and NGO development agencies, the climate still plays a fundamental role in Burundi's food security situation. This can be clearly seen in Figure 1. In 2000, when global malnutrition rates were highest (11.1%), Karuzi province was suffering from a serious drought. By September 2001, global malnutrition levels had dropped to 3.2%, primarily as a result of WFP food rations distributed by WVB. Project interventions since March 2001 have increased agricultural production and allowed households to become more food self-sufficient. However, the fragility of this situation is demonstrated by the increase in malnutrition rates at the end of 2002. Rains arrived late for season 2003A (November 2002) which had a negative impact on agricultural production. These negative impacts are still being felt as demonstrated by the fact that WFP still provides rations for 19,000 households (26% of total) in Karuzi province as of November 2003.

More anecdotal evidence of project impact comes from informal discussions between WVB staff and project beneficiaries in the course of everyday activities. Project activities are greatly appreciated by the beneficiaries and also, more significantly, by non-beneficiaries. Households were always keen to be added to the beneficiary list and non-beneficiaries also benefited from the project through the transfer of agricultural technology and planting material (see Annex 6: Beneficiary Testimonies). It has also been suggested that the incidence of crop theft from farmer's fields has reduced as a result of the greater availability of food in the province.

The difficult socio-economic situation in the country since 1993 continues to have a negative affect on households. In Karuzi province, there are very few employment opportunities outside of the agriculture sector. Lack of alternative income generating activities forces households to sell their crops to pay for other necessities which further exacerbates the food security situation. Consequently, continued interventions in the food security sector will be necessary in Karuzi province for the foreseeable future.

Objective 1

To increase the annual household food production capacity of 15,000 farm households in Karuzi province by at least 500kg/household in three seasons (total of 7500 tons of food in a year) and each household will save a sufficient quantity of seed from their production for the following season.

Indicators

- 1) 500kg of food produced annually per household from six basic crops through the provision of seeds, tools, soil fertility and technical assistance.
- 2) Production of 300kg of food anticipated from improved banana and cassava during the harvesting period.
- 3) 60 percent of the households growing improved varieties and employing best farming practices.
- 4) 80 percent of the households include vegetable in diet and 20 percent includes fruit in diet.
- 5) The amount of seeds, planting material, goats, soap and tools are distributed.

Assumptions

- Weather is favorable for crop production
- No catastrophic insect infestation or disease epidemics
- Province remains secure and calm

Objective 1 - Accomplishment

Accomplishment of this objective will be measured against the indicators specified in the project proposal.

Indicator 1

500kg of food produced annually per household from six basic crops through the provision of seeds, tools, soil fertility and technical assistance.

When comparing the situation before the start of the project and now, beneficiaries readily acknowledge that they are better off now. For example, farmers that couldn't previously plant all their land because of lack of seeds are now able to do so and even save part of their harvest as seeds for the next planting season.

The accomplishment against this indicator can be measured by combing agricultural production for the three growing seasons in Burundi (Table 2). Compared with the target figure of 500kg, the average annual household food production was:

- 1120kg for the period March 2001 to March 2002 (initial grant)
- 437kg between April 2002 and April 2003 (first extension)

A breakdown of these agricultural production figures can be seen in Table 4 and Table 5.

Table 4: Household food production (March 2001 – March 2002)

Crop	Production (kg)			Total
	2001C	2002A	2002B	
Bean	14.4	50.6	84.8	149.8
Soybean	0	7.1	0	7.1
Maize	0	72.5	0	72.5
Sorghum	0	0	36.7	36.7
Potatoes	0	0	0	0
Sweet potatoes	0	150	130	280
Cooking banana	0	72	72	144
Cassava	0	0	263.8	263.8
Cabbage	0	42	54.7	96.7
Lenga-lenga	44.8	10	10	64.8
Peanuts	0	4.2	0	4.2
Total production	2060.2	2410.4	2654	1119.6
Sample of 1,450 households (10 households/hill)				

Table 5 : Household food production (April 2002 – April 2003)

Crop	Production (kg)			Total for three seasons
	2002C	2003A	2003B	
Bean	24.5	27.5	66.6	118.6
Maize	0.0	48.8	0	48.8
Soybeans	0.0	10	0	10
Peanuts	0.0	3	0	3
Cabbage	103.0	45	80	228
Potatoes	29.0	0	0	29
Total production	2158.5	2137.3	2149.6	437.4
Sample of 1,450 households (10 households/hill)				

The initial grant period (March 2001 - March 2002) coincided with seasons 2001C, 2002A and 2002B and the first extension period (April 2002 - April 2003) coincided with seasons 2002C, 2003A and 2003B. The second (no-cost) extension period covered April – September 2003. No inputs were distributed during this period and activities focused on loan repayments and seed multiplication activities. It is important to note that these results were determined by an estimation of the production for 10 beneficiaries per hill for each of the 145 hills in the province, a sample of approximately 10% of the beneficiary households.

Saving of seeds by beneficiary households

An integral part of the project was to ensure that households were able to save seed from their production to allow them to plant their crops in the following season. This is crucial to reduce dependence on distributions of seed. Government agencies responsible for providing seed are currently unable to supply sufficient quantities of seed to farmers and farmers, in many cases, are unable to purchase seeds even when they are available. Household self sufficiency in seed supply is therefore critical.

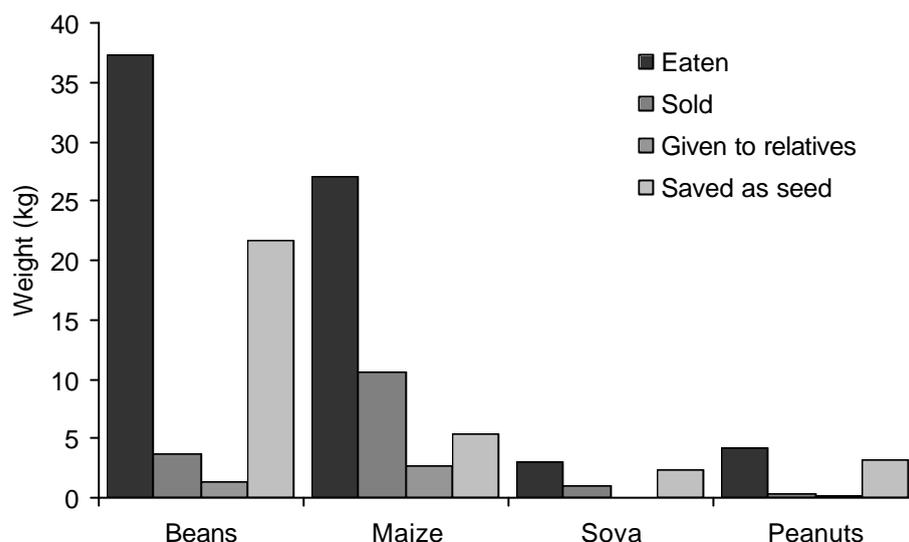
In 2003, WVB carried out a survey to investigate how households used their agricultural production after harvest. A total of 1,450 households were surveyed, 10 in each hill where WVB works. Results for the province as a whole are shown in Table 6 and Figure 2.

Table 6: Usage of harvested seed in Karuzi Province (2003)

	Beans		Maize		Soya		Peanuts	
	kg	%	kg	%	kg	%	kg	%
Eaten	37.3	58.1	27.0	59.3	3.0	47.0	4.2	52.3
Sold	3.8	5.9	10.6	23.2	1.0	16.0	0.4	4.5
Given to relatives	1.4	2.2	2.6	5.8	0.1	1.0	0.2	2.2
Saved as seed	21.7	33.9	5.3	11.6	2.3	36.1	3.3	41.0
Total	64.2		45.5		6.3		8.0	

For breakdown by commune see Annex 4

Figure 2: Usage of harvested seed in Karuzi Province (2003)



Despite the fact that 2003 was not a productive year for agriculture, it is encouraging to note that households were able to save some seed. This suggests that the food security situation in the province has improved and households are able to put aside some seed rather than eating their entire crop. However, this may also reflect uncertain seed supplies forcing households to save their own seed, as there are no other sources. Two Kirundi proverbs highlight the situation:

Something which comes from outside the household, comes when it has finished raining.

Water that one asks from someone else can't be sufficient to remove all the dirt.

Indicator 1 - Variance

For the first year (2002), the average household production from the three growing seasons was 1120 kg, which exceeds the target of 500kg/household. This represents 224% of the target production. For the second year the average household production was 437kg, which represents 87% of target production. Further crops were added to the list of seeds being distributed in order to improve the nutritional balance of the diet of beneficiaries.

According to research carried out by the Ministry of Agriculture in collaboration with FAO, WFP and UNICEF, the production in 2002 was generally better than the production in 2003. The report stated that for the entire country, the production in 2003A was 6% less than the production in 2002A. The production for season 2003B was 2% less than the production in 2002B in Karuzi province and 1% less than production for the entire country.

The key reason why agricultural production was better in 2002 than in 2003 was better weather. In 2002, the rainfall was sufficient and regular, whereas in 2003 the rains began two months later than normal for season 2003A, and one month later than normal for season 2003B. In addition, in 2003, the rains were interrupted for at least a week and some locations in Karuzi were hit by hailstorms which seriously damaged crops.

Lack of fertilizer was also a considerable constraint to production in 2003. Not only was supply limited, but also the price of DAP (Di-Ammonium Phosphate) increased to FrBu 700/kg, from FrBu 460/kg in 2002. The project was therefore unable to buy a sufficient quantity of fertilizer for beneficiaries. What fertilizer could be purchased was used at the seed multiplication centers (Objective 3) to ensure that good quality seeds could be produced in sufficient quantities. The lack of fertilizer, and even manure, forced households to look for other ways to fertilize their crops. In some cases, households purchase ash to fertilize their fields (*photo right*).



Another reason for the higher production in 2002 is that WVB distributed a wider variety of crops than in 2003. This increased diversity in crops most likely enabled farmers to better cope with the irregular rainfall than in 2003 when they had a more limited range of crops as a result of procurement and distribution problems.



Another factor explaining the higher production in 2002 is the fact that certain crops were planted earlier (cassava, sweet potatoes and cooking bananas) and began producing in 2002. The cassava harvested during 2002B season was a result of inputs distributed nearly 24 months earlier, as cassava takes 24 months to mature. The increased production of sweet potatoes was a direct result of improved varieties distributed to project beneficiaries. The distribution of improved varieties of cooking banana is a success story (*photo left*). On average, project beneficiaries are now able to harvest two bunches of bananas per month and each bunch weighs between 12 and 15 kg (equivalent to 72kg each quarter).

month and each bunch weighs between 12 and 15 kg (equivalent to 72kg each quarter).

Indicator 1 - Impact of Variance

To better understand the impact of variance in indicator 1 of this objective, it is appropriate to discuss the food requirements for each season. Taking beans as an example, WFP recommends that a household of five individuals requires 20 kg of beans per month (or 240 kg per year) for food needs. Since an additional 85 kg per year is needed for seed to plant the next year's crop, the total annual requirement per household is 325 kg. The breakdown is shown in Table 7.

Table 7: Household annual requirement of beans (kg)

	Food*	Seed	Total
Season A (Food for four months)	80	50	130
Season B (Food for eight months)	160	35	195
Annual Total	240	85	325
* According to WFP standards, a household of 5 needs approximately 20kg/month			

Table 8 gives the estimated production of beans for non-beneficiary households in Karuzi province and Table 9 gives the same information for beneficiary households.

Table 8: Estimated non-beneficiary household bean production (kg) in Karuzi

	Average
Season A (Food for four months)	30
Season B (Food for eight months)	60
Annual Total	90

Table 9 Estimated beneficiary household bean production (kg) in Karuzi

	Base	2002		2003	
		Additional	Total	Additional	Total
Season A (Food for four months)	30	50.6	80.6	27.5	57.5
Season B (Food for eight months)	60	84.8	144.8	66.6	126.6
Annual Total	90	135.4	225.4	94.1	184.1

In 2002, beneficiaries produced 225 kg of seed. If they saved 85kg for seed, they still would have had enough beans to meet their food needs for seven months. In 2003, beneficiaries produced 135 kg of seed. If they saved 85kg of seed, they would have had enough beans to meet their food needs for approximately five months.

While there is still a gap between annual needs and annual production of beans, beneficiaries were still much better off than non-beneficiaries. For example, in 2003, non-beneficiaries only produced 90 kg of beans, which would only have fed them for 1 week, assuming they set aside 85 kg of beans for seeds. This clearly shows that the project impact is positive when compared to non-beneficiaries.

Another significant positive impact to note is that the project participants are now in a position to produce increased quantities of cooking bananas, sweet potatoes and vegetables. Due to the availability of these crops, the farmers are able to reduce their bean consumption because they have something else to eat with maize or cassava. Surplus production can also be sold in local markets to generate income to buy other consumables such as salt, soap and oil. Overall, this objective has had a very positive impact on the direct beneficiaries and even improved the lives of many of the non-beneficiaries.

Indicator 2

Production of 300 kg of food anticipated from improved banana and cassava during the harvesting period.

As previously noted, increased production of banana and cassava has resulted from the distribution of improved varieties to beneficiary households. However, it is difficult to measure the production of planting material distributed during the project period, as the time from planting to harvest is considerable. At the end of the project period in September 2003, project beneficiaries have substantial quantities of crops in the ground which will be harvested after the project period, particularly cooking banana and cassava. Cassava is normally harvested 24 months after planting. The majority of cassava harvested in this reporting period was distributed under previous OFDA funded projects. The in-vitro banana plants distributed take approximately 15 months to begin production and longer to reach full productive potential, if well managed. Five banana plants of improved varieties were distributed to each household and, once established, can be harvested regularly. Traditional varieties yield smaller bunches of bananas and there is a longer time interval between harvests from the same plant. In-vitro plants are also more vigorous producing suckers more frequently and therefore providing more opportunity for increasing the number of plants available (Annex 6: Beneficiary Testimonies). On average, in-vitro bananas produce six to eight suckers while traditional varieties produce one or two. WVB technical staff estimate that one banana plant with its suckers can produce 72kg/quarter. This means that a beneficiary who has

received five bananas plants should be able to produce 360kg/year, which exceeds the 300 kg target.

Indicator 2 - Variance

The situation described above is not the case for all 15,000 beneficiaries. Unfortunately, during the project period, the project was not able to distribute the planned number of in-vitro banana plants (24,000). Although the planned number were purchased a significant number died whilst in the hardening off nurseries. Furthermore, many agencies have realized the benefits of distributing banana plants and therefore suppliers cannot keep up with demand. The situation is improving and WVB hopes to continue to distribute in-vitro banana plants in future projects. Unfortunately, some households also lost banana plants when dry weather occurred before the plants were well established. Water supply is limited in some areas of the province limiting the possibility of irrigation.

Indicator 2 - Impact of Variance

Reductions in the number of plants available, and delays in distribution and loss of plants have had a negative impact on the achievement of short-term Objective of this project. However, many of the plants distributed in the project period will not yet have reached full production potential and will reach this stage after the project period, contributing to long-term food security in the province.

Indicator 3

60 percent of the households growing improved varieties and employing best farming practices.

WVB has been distributing high quality agricultural inputs such as beans, maize, banana plants, sweet potatoes, soybeans, peanuts and vegetable since 1998. WVB continues to enjoy the support of many beneficiaries.

To ensure that good quality seeds are available, WVB has been working with ISABU and IRAZ as partners and the results of that collaboration have been largely positive. Today, the project beneficiaries that received sweet potatoes cuttings have continued to use them season after season and the size of the sweet potatoes produced is much bigger than the size from local varieties. Also, as mentioned before, the average weight of banana regimes being harvested is much higher compared to the local varieties. The duration between planting and the harvest period for the improved varieties is also short when compared to the local varieties. In short, the advantages of varieties distributed by WVB are very positive and 100% of the beneficiaries have received these seeds.

WVB has also been promoting improved farming practices, including: planting crops in lines, improved plant spacing, establishing compost pits, anti-erosive hedges, raising goats, harvesting techniques and use of manure. WVB agronomists based in the field are the responsibility of training the beneficiaries and are assisted by the DPAE staff. A survey carried out in November 2001 showed that 22% of beneficiaries used best agronomical practices. A further survey in April 2002 on the impact of project activities compared the adoption of improved agricultural techniques between beneficiaries and non-beneficiaries. Although training and extension activities focus on project beneficiaries, non-beneficiaries are not excluded and many of them have also adopted improved agricultural techniques. The results for compost pits and anti-erosive hedge are shown in Table 10 and Table 11.

Table 10: Adoption of Compost Pits (Compostière)

No. pits	% Adoption	
	Beneficiary	Non-beneficiary
0	6.3	31.1
1	43.4	41.6
2	45.4	27.1
3	4.9	0.2

Despite the widespread adoption of compost pits by beneficiaries, it is important to note that even if the beneficiaries have more compost than non-beneficiaries, the quantity of manure produced is not enough. From these tables, one can observe that only 6.3% of project beneficiaries do not have compost when non-beneficiaries without compost are estimated at 31.1%.

Table 11: Adoption of anti-erosive hedges to control erosion

No. hedges	% Adoption	
	Beneficiary	Non-beneficiary
0	70.4	79.9
1	10.3	10.1
2	10.5	1.9
3	7.1	1.3
>3	1.5	6.8

For anti-erosive hedges, 29.6% of project beneficiaries have established them compared to 20.1 % of the non-beneficiaries.

Indicator 3 - Variance

With respect to improved varieties, it is reasonable to state that the majority of beneficiary households are growing improved varieties of crops. The seeds distributed to households were of improved varieties and regular monitoring by WVB staff ensured that the majority of seeds were planted.

The small number of project beneficiaries who have installed anti-erosive hedges can be explained by the vulnerability of many households. Among the beneficiaries there were some who did not have the strength to dig the anti-erosive hedge, which requires a considerable amount of labor (*picture right*). More households have planted *Tripsacum* on the contours, as this does not require as much labor.



Agricultural staff have also trained households in new sowing techniques, primarily to plant in lines/rows as this reduces seed requirements and makes weeding easier. Surveys have shown that the majority of households use both traditional and row methods primarily depending on whether chemical fertilizer is available. If it is available, the plant in rows and the fertilizer is applied along the row. If none is available then traditional sowing methods are used. This demonstrates an important factor in the adoption of agricultural techniques, as there are frequently other issues which encourage or discourage adoption.

Indicator 3 - Impact of Variance

As a result of the distribution of high quality agricultural inputs by the project, the majority of households are now growing improved varieties. This will have a positive impact on the achievement of the objective.

Variable levels of adoption of improved agricultural techniques will not significantly impact on the achievement of the objective. The extension of such techniques is necessarily a long-term process and WVB will continue to support project beneficiaries to increase adoption levels.

Indicator 4

80 percent of the households include vegetables in diet and 20 percent includes fruit in diet

From the surveys carried out by the project staff, almost all the households eat fruits and vegetables, especially during the rainy season when vegetable are more available. The majority of farmers WVB staff talked to agreed that many times when there is a shortage of beans their diet is composed of: bean leaves, cassava leaves or Lenga-lenga with cassava or sweet potatoes.

At least one of these three vegetables is available year round and many households now say that they buy them when they do not have any produce of their own.

Indicator 4 - Variance

WVB has been largely successful in changing people's eating habits. It is important to mention that it is difficult for households to obtain vegetables like cabbage, onion and tomato in March (beginning of B season), but what is interesting is that many people turn to cassava leaves for example.

Indicator 4 - Impact of Variance

With the increasing level of vegetable consumption, the nutritional status of the majority of the project beneficiaries continues to improve. Overall this has had a positive impact on especially children.



A selection of vegetables available in Karuzi Province.



Indicator 5

The amount of seeds, planting material, goats, soap and tools are distributed

The quantities of seeds, planting material, goats and tools distributed during the two funding periods are shown in Table 12 and Table 13.

Table 12: Quantity of inputs distributed (March 2001- March 2002)

Items	Unit	Season 2001C		Season 2002A		Season 2002B	
		Planned	Distributed	Planned	Distributed	Planned	Distributed
Beans	ton	15	15	75	75	225	225
Maize	ton	0	0	37.5	37.5	0	0
Soybeans	ton	0	0	15	15	0	0
Peanuts	ton	0	0	15	15	0	0
Sorghum	ton	0	0	22.5	22.5	0	0
Cabbage	kg	15	15	75	75	75	75
Potatoes	ton	0	0	60	0	0	0
Banana	plant	0	0	18,000	18,000	0	0
Sweet potato	cutting	0	0	600,000	596,000	0	0
Cassava	cutting	0	0	0	0	300,000	218,000
Hoes	tool	0	0	15,000	15,000	0	0
Soap	bar	0	0	15,000	30,000	15,000	15,000
Health cards	card	0	0	15,000	15,000	0	0

Table 13: Quantity of inputs distributed (April 2002 – April 2003)

Items	Unit	Season 2002C		Season 2003A		Season 2003B	
		Planned	Distributed	Planned	Distributed	Planned	Distributed
Beans	ton	25	25	75	75	225	225
Maize	ton	0	0	45	32	0	0
Soybeans	ton	0	0	15	15	0	0
Peanuts	ton	0	0	15	15	0	0
Cabbage	kg	25	25	75	75	75	75
Potatoes	ton	25	10	150	30	0	0
Banana plant	plant	0	0	24,000	14,652	0	0
Agro-forestry tree	plant	0	0	300,000	243,870	0	0
Hoes	tool	0	0	15,000	15,000	0	0
Soap	bar	15,000	0	15,000	15,000	15,000	30,000
Fertilizer	ton	0	0	0	0	75	0

Goat Distribution

During the two funding periods, a total of 8,065 goats have been purchased and distributed. have been distributed during the period. The transfer of goats between beneficiaries has also continued. Recipients of goats are put into groups of three households, normally living close together. The first household receives two female goats. After, at least two kids have been born the adults are passed on to the second household in the group. Again, once at least two kids have been born, the adults are passed on to the third household. This system of is unusual in that it is normally the offspring who are transferred to the next household. However, WVB chose the present system as it enables a faster rotation of goats. As WVB moves towards a more developmental approach the system will be reviewed.



Table 14 summarizes the goat distribution program over the reporting period. In June 2003, a comprehensive survey of the status of the goat rotation program was carried out by WVB veterinary staff. Close to 10,000 goats are currently in the program and 500 groups of households had yet to receive goats (Annex 5). Transfer of goats has continued since June and will continue under a UNDP integrated agriculture project being implemented by WVB in Karuzi province to build on the success of this OFDA funding. The distribution of goats has been very popular among project beneficiaries who mix the increased quantities of manure from goats with compost to improve the fertility of their land.

Table 14: Goat distribution

Goats	March 2001 - March 2002	April 2002 - September 2003	Total
Goats purchased	5,000	3,065	8,065
Goats distributed	4,976*	3,045**	8,021
Goats transferred	765	5,545	6,310
Goats born	774	6,773	7,546
Goats died	188	1,123	1,301
* 24 goats died while being transported to distribution sites			
** 20 goats died while being transported to distribution sites			

Indicator 5 - Variance

WVB has successfully distributed the planned quantities of all inputs with the exception of potatoes. The lack of good quality seed potatoes limited the quantities that could be distributed over the life of the project. As with general seed production, the government agencies responsible for the multiplication of improved varieties are not able to fulfill this role. The planned number of goats was fully distributed.

In Phase I, all variances for distribution of agricultural inputs shown in Table 12 are due to difficulties in obtaining the planned quantity (potato, sweet potato, cassava). The unavailability of good quality seed potatoes limited plans to distribute them during the two years. As with seed production mechanisms, the government agencies responsible for multiplication of improved varieties were also not able to fulfill their role. More soap was distributed than originally planned as the price of soap permitted the purchase of two bars per household.

In Phase II, similar problems were encountered with supplies of seed potatoes. The quantity of maize distributed was also 13 tons less than planned due to poor quality seed from one supplier. Unfortunately, once the problem had been identified it was not possible to procure further quantities.

Indicator 5 - Impact of Variance

The inability to distribute the planned quantity of seed potatoes is disappointing, but has not prevented the project from reaching this objective. This is because beneficiary households have increased the area planted in other crops to compensate.

The increased quantity of soap distributed will have had a positive impact on household hygiene.

The main negative impact is observed for those beneficiaries still waiting their turn to receive goats. However, the management of the goat rotation scheme will continue.

Constraints encountered and lessons learned under Objective 1

1. Favorable climatic conditions were listed as one of the assumptions for reaching Objective 1 in the project proposal. The variation in production observed between the two years clearly demonstrates the impact that unfavorable climatic conditions can have on agricultural production.
2. According to local customs, particularly as they relate to diet, it is clear that, even if households have enough sweet-potatoes and cassava, they will always claim to be food insecure if they do not have enough beans.
3. When the weather is favorable, the primary constraint on agricultural production is low fertility of soils. The project has attempted to address this issue by providing goats and training farmers how to compost and use organic amendments. However, soil infertility continues to be a major problem.
4. The project beneficiaries were very appreciative of the high quality inputs distributed by the project as they enable them to produce higher yields and save seed for subsequent planting seasons.
5. The adoption of improved agricultural techniques by beneficiaries was lower than expected because the most vulnerable people frequently lack the strength and patience to implement the new techniques which tend to be more labor intensive.

Objective 2

As previously mentioned, this final report (March 2001 – September 2003) covers two main phases, the initial grant period and a second phase that was made possible by a cost extension from OFDA. Consequently, the micro-credit objective differs between the first and second phases so accomplishments against the objective will be reported upon separately.

Phase I: March 2001 – March 2002

To provide access to micro-loans for agricultural and off-farm income generating activities to at least 750 clients by March 31, 2002 and continue steps towards establishment of a self-sustaining micro-credit finance institution in Karuzi Province.

Indicators

- 1) An average of FrBu 10,000 (approximately \$12.50) in profits generated by loan recipients as a result of financed micro-projects.
- 2) Percentage of loan clients who are women is at least 50 %
- 3) Households are applying for loans; applications are sound and activities feasible
- 4) At least 1,400 applications have been received and reviewed (200 par commune)
- 5) At least 750 micro loans have been granted by March 31, 2002.
- 6) At least 85% repayment rate
- 7) Others in solidarity group have taken loans
- 8) Training curricula are established for the clients and micro-credit training is taking place

Phase II: April 2002 - September 2003

To provide access to micro-loans to at least 1,500 most vulnerable households for income-generating activities and increase their liquid assets through the purchase of small livestock by the end of April 2003

Indicators

- 1) A minimum of 3,000 new livestock is added to the beneficiary population by the end of April 2003.
- 2) An average of 20 percent in profits generated by loan recipients as a result of financed income-generating activities.
- 3) At least 1,500 micro-loans have been granted by April 2003.
- 4) Percentage of loan clients who are women or child-headed households is at least 75%
- 5) At least 85 percent repayment rate
- 6) 20 percent of the clients trained on micro-enterprise management skills and are saving some income

Micro-credit activities

The majority of activities (80%) supported by the micro-credit component were agricultural in nature including the purchase of goats, seeds, fertilizer and labor to increase production. The remaining 20% were commercial activities including the purchase of grinding mills and small trading.

Accomplishment of Objective 2

Phase I, Indicator 1

An average of FrBu 10,000 (approximately \$12.50) in profits generated by loan recipients as a result of financed micro-projects.

In March 2002, a survey of 99 clients was carried out. The results are summarized in Table 15. 79% of clients made a profit and 21% made a loss. The average profit realized was FrBu 17,976. Taking into consideration the average loss of FrBu 8,429, the average profit overall was FrBu 12,375. The indicator has therefore been exceeded.

Table 15: Profit and Loss on micro-loans.

Commune	Profit			Loss		
	No. Clients	Total	Average	No. Clients	Total	Average
Bugenyuzi	6	FrBu 138,958	FrBu 23,160	4	-FrBu 64,000	-FrBu 16,000
Buhiga	3	FrBu 72,000	FrBu 24,000	2	-FrBu 20,500	-FrBu 10,250
Gihogazi	40	FrBu 445,040	FrBu 11,126	10	-FrBu 65,400	-FrBu 6,540
Gitaramuka	15	FrBu 572,900	FrBu 38,193	0	FrBu 0	
Mutumba	11	FrBu 162,800	FrBu 14,800	4	-FrBu 25,500	-FrBu 6,375
Nyabikere	3	FrBu 10,400	FrBu 3,467	1	-FrBu 1,600	-FrBu 1,600
Total	78	FrBu 1,402,098	FrBu 17,976	21	-FrBu 177,000	-FrBu 8,429

Phase 1, Indicator 1 – Variance

The variance on this indicator is positive. Although not all clients made a profit, the overall average profit, taking into account losses, was more than FrBu 10,000 and over 75% of clients made a profit.

Phase 1, Indicator 1 – Impact of Variance

The impact for this variance is positive in that the majority of households who have received credit have been able to make more profit than envisaged which will have contributed positively to the household economy.

Phase II, Indicator 2

An average of 20 percent in profits generated by loan recipients as a result of financed income-generating activities.

During the whole project period, regular surveys were carried out to assess the profit/loss situation for a sample of active clients. The final survey carried out in June 2003 and results are shown in Table 16.

Table 16: Micro-Loans Profit /Loss analysis June 03

No. Clients	Average Loan (FrBu)	Average Profit (FrBu)	% profit/loss
15	27,333	7,960	29%

An average of 29% is profit generated by the financed activities although this covers a range of profit and loss by beneficiaries, some making substantial profits whilst others made a substantial loss.

Phase II, Indicator 2 - Variance

This indicator was exceeded, the average profit recorded being 29% compared to a target of 20%.

Phase II, Indicator 2 - Impact of Variance

Exceeding the target for this indicator is an encouraging sign and means that households have benefited from the credit disbursed. However, the wide variation in profit/loss between different households demonstrates the need for careful assessment and follow-up of loans. Many loans are

for agricultural based activities and variations in production can have a significant effect on profitability.

Phase I, Indicator 2

Percentage of loan clients who are women is at least 50 %

In February 2002, 54% of loan clients were women and 46% were men. This indicator has been attained.

Phase II, Indicator 4

Percentage of loan clients who are women or child-headed households is at least 75%

Table 17 below shows the breakdown of loan clients by commune. 77.3% of loan clients were female or child-headed households.

Table 17: Breakdown of micro-loan clients

Commune	Female/Child		Male		Total
	No.	%	No.	%	
Bugenyuzi	146	77.7%	42	22.3%	188
Buhiga	216	76.1%	68	23.9%	284
Gihogazi	182	79.8%	46	20.2%	228
Gitaramuka	219	76.6%	67	23.4%	286
Mutumba	221	75.4%	72	24.6%	293
Nyabikere	96	78.0%	27	22.0%	123
Shombo	191	78.6%	52	21.4%	243
Total	1271	77.3%	374	22.7%	1645

Phase I, Indicator 2 and Phase II, Indicator 4 - Variance

In both phases, the percentage of female and child-headed households who have received loans was above the targeted percentage. 54% against 50% in Phase 1, and 77.3% against 75% in Phase II.

Phase I, Indicator 2 and Phase II, Indicator 4 - Impact of Variance

The higher than planned percentage of female and child-headed households receiving loans has had a positive impact, as such households are often disadvantaged and have few resources.

Phase I, Indicator 3

Households are applying for loans; applications are sound and activities feasible

Phase I, Indicator 4

At least 1400 applications have been received and reviewed (200 par commune)

During Phase I (March 2001 – March 2002) a total of 926 applications for loans were received and reviewed. These included applications from all sectors of the population including women and child-headed households (see above).

Phase I, Indicators 3 and 4 - Variance

474 applications fewer than planned were received.

Phase I, Indicators 3 and 4 - Impact of Variance

The lower number of applications than planned has not significantly impacted on achievement of the objective as the quality of applications was good and it was therefore possible to approve a higher proportion of loans than had been anticipated and the targeted number of loans was achieved. The high proportion of loans approved confirms that the applications were sound and activities feasible.

Phase I, Indicator 5

At least 750 micro loans have been granted by March 31, 2002.

774 loans were approved in the period concerned.

Phase I, Indicator 5 - Variance

The target of 750 loans was exceeded by 24 loans

Phase I, Indicator 5 - Impact of Variance

The impact of this variance is positive, not only does the low number of loan applications received and high proportion approved indicated that the training and approval process was rigorous, but also a higher number of beneficiaries received loans than planned.

Phase II, Indicator 1

A minimum of 3,000 new livestock is added to the beneficiary population by the end of April 2003.

During Phase II, micro-loans were disbursed for the purchase of 2,802 goats costing a total of FrBu 42,035,000.

This indicator was achieved at 93% and reflects the improved training provided to beneficiaries putting them in a better position to request a value of loan that is within their capacity to repay.

Phase II, Indicator 1 - Variance

198 goats fewer than planned were added to beneficiary households. This was due to the situation on the ground in Karuzi. It had been planned that 1,500 households would receive sufficient credit to purchase two goats. However, during execution of the project it became clear that many households were not prepared to take credit for the purchase of two goats and the accompanying risk and only accepted credit to buy one goat. The project was therefore able to give credit to more than the intended 1,500 households as identified under Indicator 3.

Phase II, Indicator 1 - Impact of Variance

The variance has not impacted achievement of the Objective since over 1,500 households were assisted despite the reduced number of goats distributed. Although fewer goats have been purchased, households have taken credit which they consider appropriate to their situation.

Phase II, Indicator 3

At least 1,500 micro-loans have been granted by April 2003.

This indicator was accomplished early with a total of 1,645 loans being dispersed by September 2002. As discussed under Indicator 1, Phase II, many households requested credit for only one goat. The project was therefore able to extend loans to a greater number of vulnerable households in Karuzi. Increasing the number of loans disbursed in order to attain Indicator 1 (3,000 goats) was not considered appropriate, as this would have increased the workload of loan officers and reduced the level of follow-up to collect repayments. Overall, 11% of the total households supported by the Food Security Program (15,000) received micro-loans to purchase goats.

Phase I, Indicator 6 and Phase II, Indicator 5

At least 85% repayment rate

Both phases of the project targeted and 85% repayment rate and this is therefore reported together.

The micro-credit component of the Food Security Programme has been developed over a number of years during which period a number of categories of loans have been distributed. Unfortunately, the development of the loan tracking system has not kept pace with the developments of the credit component, particularly as the number of loans has increased. There have also been changes in the management of the loans. In July 2002 the tracking system was readjusted to better serve the requirements of the component.

The tables below provide an overview of the reimbursement status, in July 2002 (Table 18) and September 2003 (Table 19), for loans disbursed during the reporting period (March 2001 – September 2003).

Table 18: Status of Micro-credit reimbursements, July 2002

Disbursement date	Expected Payment	Repayments Received		Outstanding Payments	
		FrBu	%	FrBu	%
March-June 2001	5,192,960	3,387,525	65.2	1,805,435	34.8
October 2001	14,351,680	9,294,010	64.8	5,057,670	35.2
February 2002	9,736,480	2,532,615	26.0	7,203,865	74.0
Total	29,281,120	15,214,150	52.0	14,066,970	48.0

Table 19: Status of Micro-credit reimbursements, September 2003

Disbursement date	Expected Payment	Repayments Received		Outstanding Payments	
		FrBu	%	FrBu	%
March-June 2001	5,192,960	3,944,975	76	1,247,985	24
October 2001	14,351,680	11,917,995	83	2,433,685	17
February 2002	9,736,480	7,828,025	80.4	1,908,455	19.6
Phase I total	29,281,120	23,690,995	80.9	5,590,125	19.1
August 2002	20,057,000	10,672,850	53.2	9,384,150	46.8
September 2002	32,066,400	11,692,630	36.5	20,373,770	63.5
Phase II total	52,123,400	22,365,480	42.9	29,757,920	57.1
Global Total	81,404,520	46,056,475	56.6	35,348,045	43.4

At the end of July 2002 a total of FrBu 15,214,15 had been reimbursed or 52.0% of the expected repayment. At the end of September 2003, the repayment rate for loans disbursed under Phase I was 80.9% and for those under Phase II 42.9%. Globally, a total of FrBu 35,348,045 was outstanding on loans disbursed or 43.4% of the expected repayment.

Phase I, Indicator 6 and Phase II, Indicator 5 - Variance

Both in July 2002 and in September 2003, repayment rates were well below target. Collection of repayments is on-going.

Phase I, Indicator 6 and Phase II, Indicator 5 – Impact of Variance

The outstanding portfolio (43.4%) has a serious impact on the potential for future loan disbursement and also means that households are continuing to repay over an extended period, with negative impacts on household income.

The low repayment rate has resulted from three factors, one external and two internal.

The focus on agricultural or livestock loans left the portfolio at risk from climatic variations which not only impacts on the activity supported by the loan, but also the livelihood of the household in general. During Phase II of the reporting period, rainfall in Karuzi was both lower and later than usual, seriously impacting agricultural production and hence client activities.

A more structural factor causing the low repayment rate is the targeting of households to receive credit. The Food Security Program in Karuzi targeted 15,000 vulnerable households with land to assist them to rebuild coping strategies following the civil unrest and periods of drought. Many of those selected were women, child or elderly headed households. It is now recognized that micro-credit activities must focus on the 'productive poor' in-order to ensure positive impacts on the community and sustainability of the credit program and is not appropriate in a relief situation. The households selected for the Food Security Program were not the 'productive poor' and therefore although some impact may have resulted at an individual household level, the wider level impact on food security is not significant.

The second internal factor is the short-time scale of the program phases (one year). To streamline disbursement, loans were given in tranches. Loans disbursed later on in a phase with a repayment

period of 6 months or more, would therefore not have been reimbursed before the end of the phase. This factor should have been recognized in project conception.

In recognition of the limitations of the Karuzi micro-credit program and with support from the experienced World Vision Africa Micro-credit technical adviser, WVB is developing a new strategy and approach to micro-credit in Burundi as a whole. This will build on experiences gained in Karuzi. An explanatory letter and initial activity plan expanding on this issue is being submitted under separate cover.

Phase I, Indicator 7

Others in solidarity group have taken loans

As stated earlier, the loan tracking system used in Karuzi was not sufficiently developed to enable this indicator to be assessed.

Phase I, Indicator 8

Training curricula are established for the clients and micro-credit training is taking place

During Phase I, the Training Curriculum was developed and carried out by Loan Officers, focusing on:-

- The importance of Solidarity Group in marketing different products of the members
- How to set up a solidarity group
- How to manage Micro-loans differently from relief input.
- The elaboration of a Balance Sheet in micro-loans management
- How to use loan in agriculture and livestock income generating activities.
- How to estimate the yield of the production
- How to market the production
- The costs calculation

A total of 99 people were trained (50 women, 49 men). Solidarity Group Leaders and Lead Farmers expressed a particular interest in training relevant to their needs. This appears to have been the case, since as a result of the training, there was an increased interest in taking loans from beneficiary households. Repayments rates also improved during the period.

Phase II, Indicator 6

20 percent of the clients trained on micro-enterprise management skills and are saving some income

This indicator was accomplished by the end of March 2003, 50 clients being trained monthly over a six month period. No training was planned in the no-cost extension phase.

Phase II, Indicator 6 - Variance

There was no variance in this indicator

Phase II, Indicator 6 - Impact of Variance

The training has enable households to submit more appropriate business plans. However, as discussed above, other factors have thwarted many of the plans put forward.

Constraints encountered and lessons learned

- The agriculture sector is a difficult sector in which to conduct micro-credit activities, particularly due to the erratic climate. There is also considerable variation in input prices in Karuzi which makes planning difficult.
- Most of beneficiaries are very poor and do not have enough knowledge to start and manage income generating activities, and despite training are limited in their ability to develop a profitable business. This was a weakness of the client targeting strategy for the project. WVB is currently developing a new strategy for Micro-Enterprise Development and this lesson will be taken into consideration.
- Micro finance can contribute to community development, but requires intensive support and follow-up and appropriate client targeting.
- It's very difficult to develop a sustainable micro-credit institution in the context of a relief oriented program. Indeed while Objective 1 gave free inputs to beneficiaries, Objective 2 has given credit and demanded repayment from many of the same beneficiaries.
- A further problem encountered is that beneficiaries are not convinced that WVB will actually demand repayment and cannot force beneficiaries to pay.

Objective 3

To increase the quantity and quality of seeds and planting materials available for 15,000 households and to provide 3000 households opportunities for income generation through seed multiplication activities.

The activities under this objective were aimed at increasing the availability of good quality planting material for project beneficiaries. The multiplication and distribution of such material is usually the responsibility of a number of government Institutes. However, they are often unable to fill this role due to a lack of resources. As has been the case for many other NGO's working in Burundi, WVB deemed it necessary to carry out their own seed multiplication activities in order to support beneficiaries instead of solely relying on government agencies. This strategy has also enabled WVB to guarantee the quality of planting material supplied to farmers.

Indicators

- 1) The stated quantity of seed is produced and verified to be of good quality by ISABU or other inspection agencies.
- 2) Households have healthy seed potatoes, bean seeds, maize seed, soybean and peanut seeds to plant.
- 3) Healthy foundation seed of bananas, manioc and potato available to multiply and are being multiplied in Karuzi.
- 4) About 3,000 group members earned income from the seed multiplication contracts.

Accomplishment of Objective 3

The biggest WVB seed multiplication center with 50 ha was started in 1998. Since this time, WVB has continued to manage the seed multiplication centers as one objective of the Food Security Program. 20% of the target population (3,000 out of 15,000 households) were implicated in the process of seed multiplication, and were provided with an opportunity to acquire additional food outside of the household's usual production. WVB supports the seed multiplication centers by providing inputs and technical assistance. Accomplishment of this objective will be measured against the indicators specified in the project proposal.

Indicator 1

The stated quantity of seeds is produced and verified to be of good quality by ISABU or other inspection agencies

The tables below (Table 20 and Table 21) show the variance between the planned production and the actual production during the two funding periods for the Food Security Program in Karuzi. During the first period (March 2001 - March 2002) production from maize, beans and soybeans was slightly lower than the planned output. As discussed under Objective 1, the production of potatoes continues to face challenges due to limited supply of good quality seed potatoes to multiply. Out of the anticipated quantity of 82.5 tons, only 34.6 tones were produced. The multiplication of peanut seeds also faced the same challenge.

During the second period (April 2002 - September 2003) actual productions from beans and soybeans were slightly higher that the planned output. For maize, the production was nearly 16 percent less than the planned output of 42 tons. The production of potatoes and peanuts continued to face the same challenges as in the first period. Stocks of seed purchase at the end of the project period have been used for distribution to beneficiaries in WVB's new agriculture program in Karuzi, funded by UNDP.

Table 20: Seed production (March 2001 - March 2002)

Crop planted	Area planted (ha)	Planned production (ton)	Actual production (ton)	Variance (ton)
Maize	24.6	29.5	23.9	-5.6
Beans	5.4	8.0	4.4	-3.6
Soybeans	30	21.0	19.9	-1.1
Potatoes	6.0	82.5	34.6	-47.9
Peanuts	9.1	2.0	2.1	0.1

Table 21: Seed production (April 2002 - September 2003)

Crop planted	Area planted (ha)	Planned production (ton)	Actual production (ton)	Variance (ton)
Maize	35.0	42.0	35.3	-6.7
Beans	68.0	54.4	54.8	0.4
Soybeans	27.0	18.9	20.2	1.3
Potatoes	11.5	172.5	69.7	-102.8
Peanuts	2.0	1.6	0.5	-1.1

Indicator 1 - Variance

Maize seed multiplication

The harvest from maize reached 23.9 tons during the period from March 2001 to March 2003 and 35.3 tons for the second period from April 2002 to September 2003. For this input, the production from the two periods (23.9 tons and 35.3 tons) was less than the planned output (29.5 tons and 42 tons). The lower than anticipated production is directly attributed to the late arrival of rain.

Bean seed multiplication

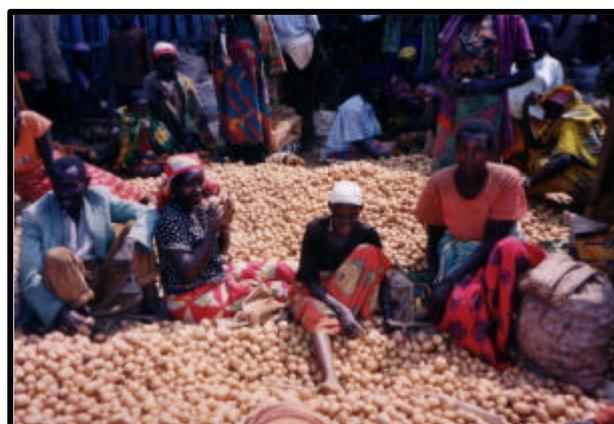
In the first period, the harvest of beans reached 4.4 tons, down from the planned 8 tons. The lower than anticipated production is directly attributed to the reduced planted area due to crop rotation. The plan was to plant 10 ha but only 5.4 hectares were planted during the first period. For the second period, the production of beans average 54.8 tons, slightly higher that the planned output (54.4 tons). The slight positive difference is the result of good seed and good growing conditions despite late rains second season (2003B).

Soybean seed multiplication.

There is no significant variance to report on soybeans. The production of soybeans seed from the seed multiplication field reached 19.9 tons, slightly less than the planned 21 tons during the first period. For the second period from April 2002 to September 2003, the production of soybeans was nearly 7 percent above the planned output. The higher than anticipated production is directly attributable to favorable growing conditions.

Seed potato multiplication

Out of the planned production of 82.5 tons of potatoes, only 34.5 tons were produced during the first period. A similar situation occurred in the second period. Out of the planned production of 172.5 tons of potatoes, only 69.7 tons of potatoes were produced. The lower than planned production of seed potatoes is due to supply problems:



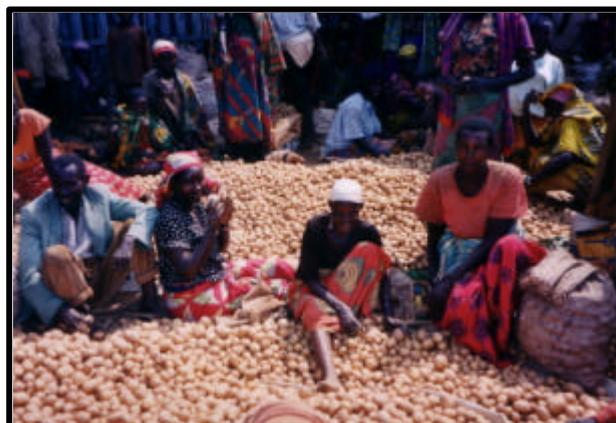
- 1) The late supply of potato vitro-plants from IRAZ led to an extended waiting period to receive the needed vitro plants. By the time the vitro-plants were available, the season had passed.
- 2) WVB attempted to source seed potatoes from government institutes. Unfortunately, the tubers provided were not free of disease which negatively impacted on yield.

When seed potatoes were available, a good harvest was possible (*photo below*). The no-cost extension (April – September 2003) enabled a further round of multiplication.

Peanut seed multiplication

A total of 2.1 tons was harvested during the first period compared to the planned harvest of 2 tons. For the first phase, there is no significant variation to report on peanuts.

Out of the planned production of 1.6 tons during the second period, only 0.5 tons of peanuts were produced. The lower than anticipated production in the second year is due regular applications of manure in the first and second years. In the first year, the land had recently been cleared, a situation preferred by peanuts. However, in the second year increased manure application reduced yields. If multiplication activities were continuing a new strategy would have been adopted to multiply peanut seeds.



Indicator 1 - Impact of Variance

The reduced production of good quality planting seed at the seed multiplication centers has forced WVB to purchase seed from external suppliers. For some crops (maize, beans, soybeans) this has been possible but, for potatoes and peanuts, supply constraints have been considerable. Good quality seed is hard to locate, and despite on-going negotiations with IRAZ, they lack the capacity to supply the quantities of seed required.

Indicator 2

Households have healthy seed potatoes, bean seeds, maize seed, soybean and peanut seeds to plant

The table below provides detail of seeds produced in the seed multiplication centers and distributed to beneficiaries. The seeds were produced during the reporting period (from March, 2001 to September, 2003) and were distributed at the appropriate planting time. Table 22 details the quantity of seed produced, distributed and retained for further multiplication. Overall, 74% of seed produced was distributed and 26% retained for further multiplication. This was necessary to maintain supplies of good quality seeds.

Table 22 : Seed produced and distributed by the seed multiplication centers

Crop	Quantity produced (ton)			Quantity distributed (ton)			Quantity retained for multiplication (ton)		
	Period 1	Period 2	Total	Period 1	Period 2	Total	Period 1	Period 2	Total
Maize	23.9	35.3	59.2	23.2	33.9	57.0	0.7	1.4	2.1
Beans	4.4	54.8	59.2	0.0	48.0	48.0	4.4	6.8	11.2
Soybeans	19.9	20.2	40.2	19.4	18.6	38.0	0.6	1.6	2.2
Potatoes	34.6	69.7	104.3	20.2	32.0	52.2	4.0	25.0	29.0
Peanuts	0.8	0.5	1.3	0.0	0.0	0.0	0.8	0.5	1.3
Total	83.6	179.3	264.1	62.8	132.5	195.2	9.7	45.0	45.8
Period 1: March 2001 - March, 2002 Period 2: April 2002 - September 2003									

Indicator 2 - Variance

The target to produce sufficient seed for 15,000 households was not achieved. Table 23

Table indicates the rate of beneficiary coverage for maize and beans and demonstrates that the quantities produced was not sufficient to supply all 15,000 households.

Table 23: Recipients of produced seed

Seed		Quantity produced/ distributed (ton)	Household ration (kg)	No. recipient households
Maize	Period 1	23.2	3	7,733
	Period 2	33.9	3	11,300
Beans	Period 1	0	20	0
	Period 2	48	20	2,400
Period 1: March 2001 - March, 2002				
Period 2: April 2002 - September 2003				

In addition to the seed inputs, a total quantity of 48,066 in-vitro banana plants were purchased and distributed to beneficiaries from March 2001 to September 2003. This figure includes 15,414 banana plants distributed to Nyamugari seed multiplication center beneficiaries who returned to their farms at the rate of 5 bananas plants per households (refer pg 28). The number of bananas plants distributed was less that planned due to problems in obtaining sufficient quantities of planting material.

Indicator 2 - Impact of Variance

Due to the delay in receiving the required quantities of vitro-plants from IRAZ, the production of seed from the seed multiplication fields was not enough to distribute to all beneficiaries. However, the seed multiplication centers have been able to produce high quality maize, soybeans, beans, potatoes and peanuts for a significant number of households. The total area cultivated at the seed multiplication centers was not sufficient to multiply all the quantity of seed required. This has not impacted on project beneficiaries, as external suppliers of seed were contracted to provide the remaining quantities of seed.

Unfortunately, this case is different for potatoes. As mentioned above, the objective of providing all the project beneficiaries with improved potato seedlings was dependent to the ability of IRAZ to supply the necessary quantity. Unfortunately, this objective was not reached because of the inability of IRAZ to produce potato in-vitro plants in time.

Indicator 3

Healthy foundation seed available to multiply and are being multiplied in Karuzi.

In an effort to provide healthy foundation seed to the project beneficiaries, WVB multiplied quality seeds from its seed multiplication facility in Karuzi. WVB continued to install in-vitro plants at the nurseries and also managed about 62 hectares of land for seed multiplication activities. The crops harvested from the seed multiplication site were distributed to the beneficiaries as seed for each season. Table 23 above shows in detail the quantities of seeds produced and distributed during this reporting period.

Indicator 3 - Variance

There was no variance experienced for bananas. The greatest variance is experienced in potatoes. Out of 75,000 potato in-vitro plants planned for the reporting period (from March, 2001 to September, 2003), a limited quantity (13,000) of potato in-vitro plants was received.

Table 24: Potatoes and banana (March 2001 - September 2003)

Crop	Planned quantities	Actual received	Variance
Bananas	57,914	57,914*	0
Potatoes	75,000	13,000	62,000
Total	132,912	70,912	62,000

* Including 15,414 bananas purchased Nyamugari exit strategy

Indicator 3 - Impact of Variance

The amount of seed needed for multiplication was calculated based on the demands for distribution to 15,000 households. Not being able to access in-vitro planting materials in sufficient quantities for multiplication had a serious impact on the amount of inputs that are available in the future for the distribution. Potatoes, in particular, have been difficult to access, and therefore the beneficiaries had not received these inputs. In-vitro plants received were multiplied a number of times before being distributed.

Indicator 4

About 3,000 group members earned income from the seed multiplication contracts.

The seed multiplication centers worked with about 270 groups of farmers with an average of 11 members each, for a total of 2970 households. The groups were organized and trained to produce agricultural seeds. At harvest time the groups prepared their harvest and WVB bought all the good quality seeds from the groups. This seed was then distributed to the most vulnerable households. The Table 25 below shows the quantity of seed produced and the unit price paid.

Table 25: Seed produced and income earned by group members

Crop	Year 2002			Year 2003		
	Total production (ton)	Unit cost (FrBu)	Total cost (FrBu)	Total production (ton)	Unit cost (FrBu)	Total cost (FrBu)
Maize	23.9	200	4,780,000	31.5	200	6,290,200
Potatoes	30.0	200	6,000,000	21.0	200	4,192,500
Soybeans	13.4	900	12,096,000	19.3	900	17,348,400
Beans	24.3	250	7,078,000	31.9	250	9,558,150
Peanuts	0.8	700	582,400	0.4	700	283,500
Total	92.4		30,536,400	104.1		37,672,750

The 270 groups who exploited the seed multiplication centers were supported through the provision of good quality seeds, manure, chemical fertilizer, pesticides and training. Labor was provided by the groups who also reimbursed the seeds they were provided with on a credit basis. After each harvest, the program purchased all production of suitable quality for distribution as seed to other beneficiaries.

The direct impact of the seed multiplication activity is increased income levels to those groups involved in the process. The average income per household is shown in Table 26.

Table 26: Beneficiary income from seed multiplication (per year)

Year	2002	2003
Total Seed Cost (FrBu)	30,536,400	37,672,750
No. Individuals	2,970	2,970
Income per household (FrBu)	10,282	12,684

Income per household (\$)	9.61	11.85
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Discussions with beneficiaries at the main seed multiplication center Nyamugari revealed that on an individual basis, beneficiaries did not receive a substantial income from the allotted parcels of land at the site. The fundamental reason for this is that there were too many groups of individuals cultivating the land. Since September 2003 WVB has reduced the number of groups exploiting the site to increase the income received by the remaining groups (see page 28).

Indicator 4 - Variance

The total number of households earning income from the seed multiplication centers was 2,970, which is 30 households less than the target. This reflects changes in the composition of the groups and loss of some group members. As stated above, individuals did not earn a large income from the land as there were a relatively large number of individuals exploiting the land.

Indicator 4 - Impact of Variance

The variance had not significant impact on the attainment of Objective 3.

Nyamugari seed multiplication center exit strategy

In order to develop an appropriate exit strategy for the seed multiplication centers, as funding has ended, the WVB team in Karuzi has discussed the issue extensively and also consulted with beneficiary groups in Nyamugari.

At Nyamugari center, the 267 groups currently exploiting the 50 ha site will receive inputs for the next two seasons (2004A and 2004B). The groups have also received 100 young cows in order to provide them with manure production *in situ* and thus be able to continue to exploit this site. Lack of manure is considered one of the key constraints to agricultural production in Karuzi. The other three multiplication centers in communes also received 40 young bulls between them. The area to be planted in season 2004A is indicated in the table below.

Table 27: Area to be planted in seed multiplication centers

Crop	Area planted (ha)	Estimated yield (kg/ha)	Estimated production (ton)
Maize	12.0	1,000	12
Soybeans	20.0	900	19
Potatoes	17.5	12,000	210

WVB technical staff (veterinaries and agronomists) provided and will continue to provide training to the groups on the management of cattle and the land. The Nyamugari site is in close proximity to the WVB office in Karuzi and on-going support is easy to provide.

As part of a sustainable exit strategy, WVB has reduced the number of beneficiaries exploiting the site to increase the income received by the remaining members. This will increase the incentive to manage the land. Through discussions with the beneficiaries their number will be reduced from 2790 at present to 1800 in season 2004B. The land and cattle distributed will be managed on a cooperative basis and it is intended that they will be able to supply seed to WVB or other NGO's in the future. Some households chose to no longer be involved in exploitation of the site. In some cases this was because they lived a long distance from the site or had sufficient land of their own to cultivate. For those households, WVB distributed 5 in-vitro banana plants (OFDA), 2 fruit trees (WVUS) and two goats (OFDA). These three interventions will support 825 retuning households in their exploitation of their farmsteads

Constraints encountered and lessons learned under Objective 3

The seed multiplication centers managed by WVB in Karuzi have developed over a number of years and have achieved a number of objectives during this period. Initially, the land was cleared as a food-for-work program, enabling households to have access to land, particularly those who had been displaced by the civil unrest. At the largest site, Nyamugari, bringing households together to work the land facilitated agricultural training and also contributed to peace and reconciliation efforts. The centers have also produced a large quantity of seed to distribute to Food Security Program beneficiaries.

The centers have been successful in achieving these objectives, but a number of constraints have been encountered.

- Despite improvements in the seed supply networks within Burundi, it has remained difficult to source good quality base seed for multiplication. This is a national problem experienced by all agencies involved in seed production and is a main reason why the centers were established in the first place.
- Production/multiplication of seed requires intensive inputs and monitoring to ensure a good quality product. This increases the cost of production, making the improved seed more expensive than the majority of the population can afford. Again, this is a national problem, and WVB has participated in a number of meetings with Government agencies and the FAO to consider lessons learned and look for a way forward in the seed sector.
- As for agricultural production in general, climatic conditions are the key constraint to good quality seed production. Even with good quality seeds and fertile soil, if the rains come late or are too heavy or too light, production will be adversely affected.

ANNEX 4: HARVEST USE SURVEY RESULTS

Commune		Beans	Maize	Soya	Peanuts
Buhiga	Eaten	30.9	12.1	1.9	3.0
	Sold	3.8	4.1	0.3	0.3
	Given to relatives	2.0	1.6	0.2	0.1
	Saved as seed	15.8	1.6	2.3	2.8
	Total	52.5	24.4	4.7	6.3
Bugenyuzi	Eaten	15.2	18.5	1.6	3.6
	Sold	1.1	0.8	0.0	0.5
	Given to relatives	0.6	3.0	0.0	0.2
	Saved as seed	31.2	7.2	0.9	1.6
	Total	48.8	29.4	2.5	5.9
Gihogazi	Eaten	29.4	18.8	0.1	2.1
	Sold	9.0	36.8	0.2	0.3
	Given to relatives	4.3	1.1		0.0
	Saved as seed	43.6	9.5	5.6	10.6
	Total	101.1	66.1	5.9	13.2
Gitaramuka	Eaten	28.8	16.2	1.8	2.2
	Sold	6.4	2.7	0.0	0.0
	Given to relatives	0.6	3.4	0.0	0.1
	Saved as seed	15.7	5.2	1.9	2.8
	Total	51.6	27.6	3.7	5.0
Mutumba	Eaten	10.1	19.2	1.7	3.7
	Sold	1.1	4.6	0.2	0.7
	Given to relatives	0.9	6.7	0.1	0.8
	Saved as seed	21.2	8.3	2.7	3.2
	Total	33.3	38.3	4.9	8.4
Nyabikere	Eaten	75.4	63.2	9.1	7.9
	Sold	2.9	0.1	0.1	0.0
	Given to relatives	0.0	0.1	0.0	0.0
	Saved as seed	9.3	2.9	0.9	0.5
	Total	87.5	66.4	10.0	8.4
Shombo	Eaten	71.7	41.1	4.4	6.6
	Sold	2.1	24.8	6.3	0.8
	Given to relatives	1.4	2.7	0.1	0.1
	Saved as seed	15.4	2.4	1.5	1.3
	Total	91.1	64.2	12.1	8.8

ANNEX 2: AGRICULTURAL PRACTICES SURVEY - APRIL 2002

B= Beneficiaries; NB= non-beneficiaries.

In Nyabikere and Shombo communes non-beneficiaries were not present at survey locations despite being invited.

Table 28: Adoption of Compost Pits (Compostière)

No. pits	Bugenyuzi		Buhiga		Gihogazi		Gitaramuka		Mutumba		Nyabikere	Shombo
	B	NB	B	NB	B	NB	B	NB	B	NB	B + NB	B + NB
0	0.4	58.8	0.0	85.6	0.0	14.9	0.0	9.5	15.0	20.6	8.1	20.5
1	50.4	39.2	55.6	11.9	8.4	57.6	22.2	60.1	68.4	23.5	75.7	23.3
2	49.1	2.0	28.9	2.5	75.5	27.5	75.2	29.4	16.6	55.9	16.2	56.2
3	0.0	0.0	15.6	0.0	16.1	0.0	2.6	1.4	0.0	0.0	0.0	0.0

Table 29: Adoption of anti-erosive hedge to control erosion

No. hedges	Bugenyuzi		Buhiga		Gihogazi		Gitaramuka		Mutumba		Nyabikere	Shombo
	B	NB	B	NB	B	NB	B	NB	B	NB	B + NB	B + NB
0	72.6	90.5	56.7	87.5	67.7	66.2	81.9	96.6	50.4	58.8	85.1	80.2
1	5.3	4.0	21.0	4.7	4.4	29.7	7.8	3.4	25.7	8.8	5.4	1.6
2	6.2	0.7	11.2	1.6	14.8	4.1	3.8	0.0	15.2	2.9	6.8	15.4
3	16.0	0.7	9.8	3.1	11.7	0.0	5.5	0.0	3.6	2.9	1.4	2.7
>3	0.0	4.2	1.4	3.1	1.5	0.0	1.1	0.0	5.2	26.5	1.4	0.0

ANNEX 5: GOAT ROTATION STATUS

June 2003

Commune	No. beneficiaries	No. groups of 3 beneficiaries	No. groups already served	No. groups with goats at the first level	No. groups with goats at the second level	No. groups with goats at the third level	No. groups not yet served	No. groups who have been reimbursed	No. beneficiaries served.
	1	2	3	4	5	6	7	8	9
Buhiga	2,700	900	847	347	299	155	53	46	1548
Bugenyuzi	2,200	733	687	85	394	116	46	92	1497
Gihogazi	2,300	767	749	66	270	314	18	99	1845
Gitaramuka	2,200	733	699	62	369	188	34	80	1604
Mutumba	1,500	500	439	174	168	48	61	49	801
Nyabikere	1,800	600	465	137	189	110	135	29	932
Shombo	2,300	767	603	225	271	74	164	33	1088
Total	15,000	5,000	4,489	1,096	1,960	1,005	511	428	9315

September 2003

Commune	No. beneficiaries	No. groups of 3 beneficiaries	No. groups already served	No. groups with goats at the first level	No. groups with goats at the second level	No. groups with goats at the third level	No. groups not yet served	No. groups who have been reimbursed	No. beneficiaries served.
	1	2	3	4	5	6	7	8	9
Buhiga	2,700	900	900	271	326	235	0	68	1832
Bugenyuzi	2,200	733	733	131	359	145	0	98	1578
Gihogazi	2,300	767	767	84	252	321	0	110	1881
Gitaramuka	2,200	733	733	96	338	179	0	120	1669
Mutumba	1,500	500	500	160	185	102	0	53	995
Nyabikere	1,800	600	600	157	189	176	0	78	1297
Shombo	2,300	767	767	284	222	178	0	83	1511
Total	15,000	5,000	5,000	1,183	1,871	1,336	0	610	10763

ANNEX 6: BENEFICIARY TESTIMONIES

During field visits between August and November 2003, World Vision staff recorded the following testimonies from Food Security Programme Beneficiaries.



My name is Bankuwunguka Spès (left) from Gihogazi commune, Mugogo hill. I am a widow with six children and have been a World Vision beneficiary since 1998. I was identified as beneficiary when I returned at home come from a regroupment camp. At that time I had neither seeds nor hoes because every thing had been destroyed during the civil unrest. My land had not been cultivated for two years. After being registered as a WVB Food Security Programme beneficiary, I started to receive a range of seeds, fertilizer, hoes and goats. WVB agronomists also gave me technical assistance by training me on how to produce compost and manure, how to use manure efficiently when

supplies are limited, how to plant in rows in order to reduce the quantity of seed needed and increase yield. For the moment, I am able to feed my household members and keep a part as seeds. I am really happy with WVB's interventions.

My name is Monique Ngezahayo from Shombo commune, Shombo hill. I have been a WVB Food Security Programme beneficiary since 2000. Being added to the WVB beneficiary list was for me like the coming of Messiah. My house had been burnt and everything destroyed when my children and I were forced to flee the civil unrest. After I was added ton the beneficiary list, I started to get many type of seeds such as beans, maize, sweet potatoes, soybeans, peanuts and vegetable seeds as well as a hoe. I was obliged to start my agricultural production from nothing because all my production was burnt in my house. Now, I feel comfortable because I have no problem of seeds especially climbing bean seeds, maize seeds, sweet potatoes and peanuts. I estimate that the number of hungry months in my household has reduced from seven to three. Among my children, none of them suffer from malnutrition as was the situation before.

My name is Spès Nzokirantevye from Shombo commune, Kiryama hill. I have been a WVB Food Security Programme beneficiary since 2001. Before being added to the list, I saw that WVB beneficiaries were able to cover all their land when I could not because of lack of seeds. Then with WVB Food Security Programme seeds, the situation changed. Before, I cultivated maize but on a small plot because of the small quantity of seeds available. I did not plant beans in the first season (season A), and even in the second season (season B) I only planted a small plot. I was also not able to plant soybean, peanut or carrot. For the moment, I cultivate a diversity of crops. I have also received goats from WVB which provide me with organic manure and my household is food secure.

My name is Gaudence Nzeyimana from Gasekanya hill in Gitaramuka commune. I have been a WVB Food Security Programme beneficiary since 2000. Before that, I used to work for others and I was only paid FrBu 150/day. However, because I had no hoe, I was obliged to pay FrBu 50 to hire a hoe and I kept only FrBu 100 to feed my 5 children and myself. I received hoes, goats, seeds from WVB and I am now able to stay at my home and work on my land. In place of going around looking for some-one who can lend me a hoe, its others who come to ask me if I can lend them hoes.

My name is Jérémie Sibomana from Gihogazi Commune Kizingoma Hill. I was not a WVB Food Security Program beneficiary but I have still appreciated what WVB gave to the beneficiaries especially banana plant with high productivity. One day I decide to ask to my friend who was a beneficiary to give me a banana plant and he gave me two suckers. Now I have good banana plant with many suckers and I am now able to give suckers to others.

Mr Sibomana and Agricultural Production Coordinator, Leonidas Ndikuriyo holding bunches of bananas produced from improved variety plants distributed by World Vision.

