

**SALIENT APPROACHES FOR ACCESSING CREDIT TO SMALL SCALE
FARMERS: A CASE OF DIFFUSION OF TC BANANA IN ARUMERU DISTRICT
THROUGH A MICRO-CREDIT SCHEME**

BY

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ABSTRACT

Using survey data as well as secondary information, this study was set out to review the operational mechanism of Diffusion of TC banana in Arumeru District through Micro credit scheme, with the view to assess the approaches, strategies and performance in accessing credit to smallholder farmers. It aimed at providing useful information to aid decision making process and enhancement of access to credit by the majority of small-scale producers. The study also aimed at determining factors that influence accessibility to formal credit by the small scale farmers and micro-enterprises. The study wanted to establish the empirical evidences on the links between credit use and poverty alleviation. It also attempted to make assessment of the impact of the credit on income and improvement of standard of living of the credit users. In collecting the primary data, questionnaires were administered to 45 randomly selected households in four villages namely Mbuguni, Kilanyi, Valeska, and Poli. Collected data was analyzed into mean, frequency distributions and percentages. Gross margin and cost- benefit analysis were used to determine and measure the economic potentiality and impact of the scheme to the beneficiaries. Generally, the performance of the micro- credit programme was encouraging. The empirical evidence of the study indicates that the average gross margin/annum was TSh 532,905. Benefit cost ratio, Net present Value (NPV) and Internal Rate of Return were 2.5, 2633685 and 94% respectively. These calculated indicators postulate a positive investment potential.

The findings revealed that group lending approach is indispensable for lending small holder farmers and credit facilities must be central to any poverty reduction strategies. The approaches used for accessing credit was effective in reduction of lending transaction costs and had immediate impact in improving the standard of living of people in the focal

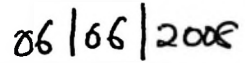
areas. Thus it was recommended to replicate and promote this approach of accessing credit to smallholder farmers to other parts of Tanzania.

DECLARATION

I, STAFORD FRANCIS MWABOLA, do here by declare to the Senate of Sokoine University of Agriculture that this research paper is my original work and that it has never been submitted for a degree award to any other University.



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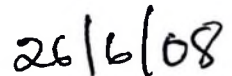


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Date

The above declaration is confirmed by,



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Date

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DEDICATION

This work is dedicated to my beloved family for their prayers, endurances, encouragement and moral support throughout my study period.

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LIST OF ABBREVIATIONS

B/C	-	Benefit Cost Ratio
IRR	-	Internal Rate of Return
ISAAA	-	International Service for the Acquisition of Agri-biotech Applications
KARI	-	Kenya Agricultural Research Institute
MATF	-	Maendeleo Technology Transfer Fund
MBD	-	Microfinance and Business Development Consultants
MFIs	-	Micro-Finance Institutions
MOA	-	Mtibwa Out growers' Association
NGO	-	Non-Governmental Organization
NPV	-	Net Present Value
PRORALG	-	President's Office Regional Administration and local Government.
SACAS	-	Savings and Credit Association
SARI	-	Selian Agriculture and Research Institute
TC	-	Tissue Culture
TOR	-	Terms of Reference
TOTs	-	Training of Trainers

CHAPTER ONE

INTRODUCTION

1.1 Back ground information

According to the World Bank Independent Evaluation Group (IEG) report indicated that 70% of Africa's poor live in rural areas and nearly all of them are involved in agriculture. The recently-released World Bank Development Report of 2007 suggested that for people living on \$1 a day, growth in the agricultural sector is four times more effective in overcoming poverty than growth in other sectors. So investing in agriculture offers an incredible opportunity to strengthen Africa's economies as a whole and address poverty.

For Africa to meet the Millennium Development Goals, it will be necessary to realize the potential of the agricultural sector, to provide the support needed for it to contribute to growth and poverty reduction. Research by Dorosh and Haggblade (2003) and IFPRI (2006a) found that investments in agriculture generally favor Africa's poor more than similar investments in manufacturing.

According to the National Strategy for Growth and Poverty Reduction of Poverty (NSGRP) 2006 status report the growth rate in Agriculture faltered slightly in 2005 due to adverse weather condition. Growth in Agriculture has fluctuated by 5 % in the past few years and is projected to be 3.8% in 2006 ((UTR 2006).

The report postulates that growth rate in Agriculture must be increased if poverty has to be significantly reduced. Poverty disproportionate affect rural areas compared with urban locales, and farmers compared with those employed in other sectors. Consequently if

agricultural growth does not significantly improve, there is a risk that these gaps may widen.

But on the contrary IEG (2007) report narrated that until very recently; agricultural development in Africa was neglected by both governments and donors. During the 1960s, immediately following independence, governments in several African countries considered agriculture primarily as a source of resources for industrialization.

In Tanzania, as in other parts of Africa, lack of credit severely constrains sustainable agricultural development. Deficient or inappropriate collateral, credit rationing, lender preferences for high-income customers borrowing large amounts, and bureaucratic procedures in the formal financial sector are often identified as key factors contributing to low access to credit among most rural dwellers. Without credit, the millions of cash-starved smallholders who dominate the rural landscape are unable to adopt most productivity-enhancing technologies. Low-return, diversified, subsistence-oriented production practices therefore continue to underpin most rural livelihood strategies.

In 1991 the Government initiated the financial sector reforms in order to create an effective and efficient financial system. The lynchpin of those reforms was the Government's "commitment to allow banking institutions to operate on commercial basis, making business and making decisions free from outside interventions within the norms of prudential supervision." (URT, 2000).

These reform were embodied in the banking and financial Institutions Act, 1991 and in the same year the Cooperative Societies Act, 1991 provided basis for the development of

Saving and Credit Co-operative Societies (SACCOS) as equity based institutions. According to the Ministry of Finance (2000) reports that despite these progress in mainstreaming banking system, microfinance services have been slow to develop because of a number of reasons including, interest rate are not set by organizations/schemes/programmes themselves and such, in most cases they are set at levels that are too low to cover operational costs.

Non-Government Organization providing micro finance services have been continuing dependent on donor funds for their operations instead of building their own internal capacities.

There have been no procedures for coordination, tracking and analysis of microfinance operations.

NGOs and other microfinance schemes operate under different approaches and laws which render difficult to monitor them and develop common standards. Further more the impact of some reforms, such as closure of some banks branches during restructuring programs and abandonment of direct credit, have actually reduced the services to low income people.

1.2 Statement of the Problem

Despite the fact that 80 percent of Tanzania population lives in rural areas and that 70 percent are involved in agricultural and fishing activities (PRALG 2003). There is no clear approach to facilitate credit to farmers and other rural entrepreneurs which is crucial in rapid development of this dominant section of the population. There is no bank which

caters for the specific credit and saving needs of small- scale producers. The available piecemeal credit services are operated by small credit schemes, which are limited in scope and have specific target groups. The inadequacy in financing and credit arrangements in the country impede development of agriculture and rural sectors. Given that these sectors are the mainstay of a large segment of the population, their poor performance makes the fight against poverty even more challenging.

For many years banks and Finance Institutions are not willing to lend money to small scale farmers. Reasons given include lack of tangible collaterals, agriculture depends on the rain hence risking money when there is draught.

Land ownership system has a lot of red-tape and bureaucracy, it takes a number of months even years for the ordinary small holder farmer from up country regions to get his/her plots(s) surveyed and obtain certificates. The costs of survey and going through the whole bureaucratic ladder become prohibitive for the ordinary farmer. Average costs for surveying one acre is about Tshs. 400,000/=, government surveyors in the districts are ill-equipped to do surveys quickly and efficiently (Matango 2006).

Mchujuko (1991) reports that in Tanzania, small farmers, though not officially stipulated in various bank lending policies, are discouraged by the institutional framework to individually apply for loans from the banking system. He notes the situation as perpetuated by cumbersome and costly tender formalities and sometimes necessitating client to tip a bank official in order for his loan application to be processed.

Banks also link credit to possession of immovable assets which are taken as loan security. Collateral is considered as an important part in the lending process. Mutua (1996) argues that since lender takes calculated risk, borrowers must demonstrate their good faith by showing that they too have something at stake in the deal.

Farmers and rural entrepreneurs in Tanzania, particularly women, are much at a disadvantage as far as their ability in offering collateral for loans is concerned (Omar and Shaidi, 1992). Poor farmers lack title deeds for the pieces of land they own and as a result they do not qualify for bank loans with which they can expand their businesses and improve their incomes. Tibaijuka *et al.* (1989) concede that insecurity in land tenure in Tanzania reduces the innovativeness and willingness of poor smallholders to invest and as a consequence has limited their chances to receive financial support from formal financial institutions.

Reliance on collateral by banks often, however, excludes many otherwise Credit-worthy small-scale borrowers in many African countries where land titles are not well documented or readily transferable (Steel *et al* 1997).

Formal Financial institutions are more inclined to provide its services to the public sector, upper-income households, large-scale enterprises and non-agricultural activities, while the informal financial institutions tend to match their products (Mohamed 2003). While capital is not the only factor that allows for the growth or creation of the enterprises, it is the most vital as without it, creativity, drive, and innovation cannot be transformed into material actions.

There is a wide consensus among micro-finance practitioners that the main constraint is not capital but rather lack of institutions, human capacity and approaches to deliver services.

It is from this background this study was carried out inclined to analyze and situate Diffusion of Tissue Culture Banana in Arumeru District through Micro credit Scheme as module for accessing credit to scale farmers small in Tanzania.

1.3 Significance of the Study

The study has provided useful information on the approaches of accessing credit to smallholder farmers and traders. Laying down appropriate small scale farmers lending approaches will attract many financial institutions to the majority credit-worthy customers who are currently excluded by the same. When financial institutions start providing credit to small scale farmers, they will not only broaden their customer base but also foster rural investments. Consequently, increased investment will raise income to rural communities and eventually contribute to the National Economic Growth and poverty Reduction strategy.

The findings are vital for policy makers in taking appropriate actions toward facilitating the establishment of comprehensive and sustainable financial institutions for the development of agriculture and rural sectors. The findings also may be beneficial to development partners and civil society organizations involved in provision of credit facilities to small farmers and rural micro- enterprise sector.

Moreover, it is hoped that the study has highlighted the link between credit use and increase in income and more importantly on its contribution to poverty alleviation.

The study findings may also be useful to financial institutions for they might find means to reach and access credit to a large population of rural people as potential customer rather than competing to few already well established entrepreneurs in urban areas.

1.4 Limitations of the Study

The study was based on the assumption that the sampled farmers in the focal areas provided a fair representation of the rest of farmers because of their homogeneous characteristics in cultural and socio-economic status.

Due to the fact that most households do not keep records, the accuracy of most of the data collected depended on individual's ability to recall. However, every effort was made to ensure that accurate data were collected, thus provide a useful basis of information for making recommendations about appropriate approaches for accessing credits to the majority of rural poor. Provide recommendations for enhancement of the efficiency and effectiveness of the credit delivery and recovery mechanisms of the micro- credit scheme.

1.5 The main goal of the study

The main goal of the study was to assess, draw lessons and situate Diffusion of tissue culture Banana in Arumeru District through Micro credit Scheme as module for accessing credit to small scale farmers in Tanzania.

1.6 Specific objectives

- i. Assessing the operational procedures and performance in availing credit facilities to smallholder farmers.
- ii. Determining factors that influence credit accessibility by smallholder farmers.

- iii. Assessing the impact of credit on income and the livelihood of the credit users;
and
- iv. Suggesting best approach and practices for the promotion of effective and sustainable rural financial services in Tanzania.

1.7 Study Questions

The following research questions guided this study:

- i. How relevant are the operational procedures and conditions of credit arrangements to the needs and aspirations of smallholder farmers and to the sustainability of the credit arrangements?
- ii. What socio-economic factors influence accessibility to credit by small farmers?
- iii. Has credit got any potential impact in increasing incomes and improving livelihood of the credit users?

CHAPTER TWO

LITERATURE REVIEW

2.1 Preamble

2.1.1 Common approaches for accessing credit to smallholder entrepreneurs

Several approaches have been used to access credit to smallholder farmers. These include the Grameen bank (GB) which was initiated by Mohammad Yunus as a project of the University of Chittagong, Bangladesh in 1976. The bank offers its financial services to the “hardcore-poor” and focuses in particular on female entrepreneurs. Despite some criticism concerning the quality and impact of the services offered by the Grameen Bank, majority of experts come to the conclusion that the successes of this semi-formal institution outweigh its negative impacts.

The approach has been replicated in African countries particularly in Kenya. The Kenya Rural Enterprise Programme Holdings Limited (K-REP) is the star in the Kenyan “microfinance sky”. This programme is considered one of the best Grameen Bank replications within Africa (Kern, 2000).

Another approach is ROSCA (Rotating Savings and Credit Association/club) is a modified form of *susu women* group in Ghana. Under ROSCA model, the members decide on the amount to be contributed by each member at regular intervals. The total collected is given to each member in turn.

Both ROSCA and GB have been positively and helped in accessing credit to the poor people in rural areas .However, several limitations have pointed out by many researchers when studying the replications of these models in other countries.

2.1.2 Main Formal Players in Rural Financing

Wangwe and Lwakatere (2004) listed major rural finance under four categories of institutions: as banks (e.g. CRDB, NMB, KCB, Exim Bank), member based organizations and associations such as cooperatives (especially SACCOS and some cooperative unions), NGOs (e.g. PRIDE, MEDA, SEDA and FINCA) and as large companies financing through contract farming, government and public sector institutions (e.g. SIDO, PTF, WDF, YDF, Local councils).

2.1.3 Linkages of credit to poverty

According to Kessy and Urio (2006) micro-finance can be a critical element of an effective poverty reduction strategy. Improved access and efficient provision of savings, credit and insurance can enable the poor to smooth their consumption, manage their risk better, gradually build their asset base, develop their micro-enterprises, enhance their income earning capacity and enjoy improved quality life.

Mohamed (2003) reported that with insufficient funds, farmers and fishers cannot invest in new equipment and machinery, and it becomes difficult to reach out to new markets and products. He further contends that without *Access to Formal and Quasi-Formal Credit* financial assistance, small farmers and fishermen cannot cope with temporary cash flow problems, and are thus slowed down in their desire to innovate and expand.

Hulme and Mosley (1996) noted that credit gives poor people a means of investing and breaking out of the “vicious circle” of poverty. They notes that credit has the potential of improving credit user’s income and savings and as consequence enhances investment and reinforces high incomes. This argument is highly supported by the findings of Kashuliza *et*

al. (1998) who observed that income of the credit users are significantly higher than the income of non-credit users in the Southern highlands areas of Tanzania.

Matango (2006) reported a success story of Mtibwa Out growers' Association (MOA) indicating that MOA secured financial assistance in form of grants and loans which were extended to the members for cane development. According to Matango MOA used their increased income to develop social services in their areas such as school building of Lusanga secondary school.

However, Gulli and Berger (1999) pointed out that access to credit is important for micro-enterprise development but not necessarily the main constraint. This view is shared by Von Pischke (1992), who observed that lack of funds is not the most important problem of small farmers and micro-entrepreneurs noting that product prices, poor education system and training, low output, land tenure, modern input costs and availability and risk turn out to be more important factors limiting small farmers and micro- enterprise development.

Kessy and Urrio (2006) cautioned about linking MFIs interventions with other interventions such as poverty alleviation as poverty alleviation complicate the functions of MFIs by pushing them to areas not considered sustainable. They urge that there is a conflict measuring the financial performance and poverty alleviation

2.2 Review of studies done outside Tanzania

Some of studies which have significant contribution to this include, the study done by Khandker (1998) to three major micro-credit programmes in Bangladesh which revealed 18 percent increase in household consumption from micro-credit borrowing by women,

and 11 percent increase in consumption when men are the borrowers. He suggests that 5 percent of participating families can escape poverty each year because of the increased consumption resulting from micro credit.

Wahid (1994) found that members of a Grameen Bank were not only better off in terms of food intake in absolute amounts than a fellow poor person of 1981-82 but also better off than the non-member of 1986. While for an average person in 1981-82, the consumption of cereal constituted 65% of total food intake, it was 60% for non-Grameen Bank members in 1986, while for the Grameen Bank members of 1986, it was 58%. Grameen Bank members are putting emphasis on quality rather than merely on quantity of food.

Despite these remarkable results of GB approach, Wahid (1994) narrated some problematic areas related to the bank, these were Cost Efficiency. He found that Grameen Bank is not yet a viable financial institution, although it claims to be making profits. Its claim is true in the sense that it borrows funds in excess of the financial needs of its clients from both national and international sources at highly concessional rates of interest. Reinvesting and often arbitraging with these funds, the Grameen Bank earns handsome amount of interest income. The interest incomes has enabled the bank to show persistent overall profit while in reality, the bank is losing.

Findings by Kern (2000) postulated that Kenya Rural Enterprise Programme Holdings Limited (K-REP) is the star in the Kenyan "microfinance sky". This programme is considered one of the best Grameen Bank replications within Africa

But according to Kern, the Kenya Rural Enterprise Programme Holdings Limited offers its financial services to both the rural and urban region of Kenya. Most of the K-REP offices however are located in urban areas. There is no direct evidence of the rural poor being given priority. Instead, the focus on promoting the Jua-Kali sector implies that K-REP prefers to lend to urban businesses. The demographic situation in Kenya determines the organization strategy. The population density in rural areas of Kenya is much lower than it is in Bangladesh. Focusing on urban SMEs therefore becomes a way for K-REP to limit its transaction costs, attract a large number of potential customers, thus enabling the organization to offer its services on a long-term, sustainable basis.

2.3 Review of Studies done in Tanzania

This study value the contribution of the work done by Kessy and Urio (2006) about the contribution of Micro credit to poverty alleviation in Tanzania. Their findings showed that that there were 50 registered MFIs but their overall performances were poor. In her study conducted in Dare sa Salaam, Arusha, Mbeya and Zanzibar, Chijoriga (1997) found that the overall performance of MFIs in Tanzania was poor and only few of them had clear objectives, or clear organization structure. It was further revealed that many of MFIs in Tanzania lack participatory ownership and are donor driven.

Rweyemamu *et al* (2003) narrated that despite the fact that rural micro-finance institutions in Tanzania are rather new and operate in a difficult environment, they are playing a very important role in the agriculture sector development. Thus, he urged that designing, experimenting and building micro-finance institutions for smallholders, requires new approaches in order to bring desired impacts.

Recognizing the importance of financial services to SMEs, during 2000 government of Tanzania developed the National Micro-finance policy in line with overall financial reform initiated in 1991. The policy aims at enabling low-income earners to access financial services. Despite recognition of the dynamic role of credit to small enterprises, few business owners and the poor in Tanzania have access, and benefit from, available financial services. (UTR, 2000).

Moreover, according to Kessy and Urio (2006) 98% of MSEs were located in town cities and only 2% were located in rural areas.

Based on the above evidences, the researcher realized that there was a strong need to study and draw lessons from MBD micro-credit scheme. From this study, the recommendations were made to project implementers, beneficiaries, financial institutions, NGOs and policy makers on appropriate approaches for accessing credit to smallholder farmers.

CHAPTER THREE

METHODOLOGY

3.1 Study Area and Project brief

3.1.1 Study Area

Arumeru was one of the five districts in the Arusha Region of Tanzania but currently it is divided into Meru and Arusha districts. It was bordered to the north and west by Monduli District, to the east by Kilimanjaro Region and to the south by Arusha District.

According to the 2002 Tanzania National population Census, the population of Arumeru District was 516,814 and was administratively divided into 37 wards.

Following the split of Arumeru District, Diffusion of tissue Culture bananas project is implemented in two districts as well involving Mbuguni, Poli, Nduruma and Mwandeti wards in the new Meru District while in the New Arusha district the project is implemented in Kiranyi ward.

3.1.2 The Project

Diffusion of Tissue Culture Banana in Arumeru District through Micro-credit scheme was jointly founded by Microfinance and Business Development Consultant whose main role was to systemize and operate the micro-credit scheme. Other partners are Directorate of Research and Development (DRD) of Ministry of Agriculture of Tanzania and International Service for the Acquisition of Agric-biotech Applications (ISAAA) from Kenya. The project is funded by FARM-Africa.

The implementation process started on February 2003, after the Memorandum of Understanding (MoU) was finalized and signed by the three participating institutions.

The purpose of the project is to alleviate rural poverty namely by transferring to smallholder farmers in Arumeru District and its neighborhood TC banana technology through a network of grassroots' based partner organizations.

The aim was to increase rural incomes by developing a sustainable micro-credit scheme under which TC technology can transform the banana industry from merely subsistence to a cash-based enterprise.

The specific outputs were:

- i) Extended benefits of TC banana production within rural communities through acquisition of planting material adequate for establishing viable commercial units of banana orchards.
- ii) Established micro-credit scheme targeting at least 500 farmers in Arumeru District with potential spill-over to other farmers in the country through the Grameen Bank Model of Group loaning system.
- iii) Increased household incomes arising out of the sale of fruits and exploitation of entrepreneurial opportunities created by large-scale adoption such as commercial hardening nurseries and post-harvest processing of the surplus banana fruits from increased production.

3.2 Data Sources

Data collection was largely through interviews, both semi and formal structured questionnaires. The former was conducted through informants in the Micro credit Scheme.

It aimed at catching up their views and experiences and accessing the various unpublished documents. The formal structured interviews involved a total of 35 randomly selected households being members/borrowers of the project and 10 Non-members /non-borrowers. These respondents were randomly selected from 4 focal villages of Kiranyi, Poli ndatu, Mbuguni and Valeska.

The borrowers were those who have accessed credit from the Project and non-borrowers were those who have never accessed credit from these sources. The underlying assumption in the two categories was that the economic statuses of both groups were comparable before receiving loans. The comparison of borrowers and non-borrowers was taken as the basis of evaluating the likely impact of credit intervention.

3.3 Sampling Techniques

Simple random sampling technique was employed to obtain respondents from the groups and a purposeful method was used to sample Group leaders, extension officers, project staff (loan officers, extension officers and project manager). The techniques were employed to avoid biasness and ensure that all relevant persons involved in the project implementation were consulted.

Structured questionnaires were developed and used to collect data from the respondents and/or face to face interview was used. Physical observations were done to gather information about the project impact in the focal areas. Project progress reports were used to complement collected primary data.

3.4 Sample size

A total of 45 Respondents were interviewed being 35 members of the micro credit scheme and 10 non-members.

3.5 Sample Unit

The study sample unit focused on individual household. Group profiling was conducted to determine group management and locality differences as they contribute to success or failure of the project implementation.

3.6 Data Analysis

Collected data was analyzed into mean, frequency distributions, bar charts, percentages and histograms.

Gross margin and cost- benefit analysis was used to determined and measure the economic potentiality and impact of the scheme to the beneficiaries.

Groups profiling was conducted to determine the group management and locality differences as they contribute to success or failure of the project implementation.

3.7 Duration of the study

The study was conducted for five month during the internship at Microfinance and Business Development Consultant. Proposal development started on July 2007. Data collection started immediately from August while data analysis and report compilation took place in January 2008.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Demographic and Socio-economic Characteristics

4.1.1 Age and Gender of group members

About 79 percent of group members were men and 21 percent women (Table 1). All of the top group leaders (Chairperson, secretaries and Treasurers) were men, except Poli where group treasurer was a woman. This gave an implication that gender awareness was not well taken care in the project implementation.

Table 1: Distribution of group members by gender

Age	Mbuguni		Poli		Valeska		Kiranyi	
	Male	Female	Male	Female	Male	Female	Male	Female
<20	0	0	0	0	2	0	0	0
20-29	4	0	0	0	4	1	4	1
30-49	63	18	28	7	18	7	17	9
>49	15	5	3	2	8	0	25	0
Total	82	23	31	9	32	8	46	10

Source: field Data

Majority of group members were between the ages of 30-49. These age category found to be active and participated in various micro-businesses and trainings. This portrays that project sustainability was well focused.

4.1.2 Household income

Table 1 below shows the average household income of group members and non groups in their respective MBOKOs.

In Poli group the Average income of credit members was higher than non members. Also the average incomes of non credit members from Poli were higher than those of credit members from other groups. This high monthly income of Poli group was said to be

attributed by several factors including, good climate, ease access to market and presences of local banana species including “mshale laini” which has great market and highly consumed in Northern highlands.

Table 2: Monthly average household income

Group	Average income per month	
	Members	Non –members
Poli	Above 160,000	Between 128,001 and 160,00
Mbuguni	Between 32,001 and 64,000	Between 16,001 and 32,000
Kiranyi	Between 16,001 and 32,000	Between 16,001 and 32,000
Valeska	Below 8,000	Below 8,000

Source: Field data

The average income of credit members in Mbuguni was twice higher than the non members. But the average income of credit members and non-members in Kiranyi and Valeska showed no differences. This may be due to the fact that respondents from Kiranyi can easily access credit from other institutions like PRIDE, NMB and Akiba commercial bank for they are close to the town city. Credit members from Valeska consume most of their TC products for house hold consumption as they cannot access market due to poor infrastructures. Hence Valeska credit members were better off in terms of food security and nutrition status than non credit members. These findings found to be similar to those reported by Rweyemamu *et al* (2003), Wahid (1994) and Khandker (1998) who found that credit members were better off than non credit members in income, nutrition status and confidences.

4.1.4 Average farm size

The average farm size of group members and non group members (table2) portrays the land scarcity scenario prevailing in Arumeru district. Majority of credit members in Mbuguni said they had enough land devoted for TC banana while Non credit members claimed that their land were not enough for TC orchard establishment.

Although the differences between the lands possessed by credit members and non credit members in Kiranyi was insignificant, most of the non group members' plots were occupied by local banana species. In Valeska access to and control over land between the credit and non credit group had a similar scenario to that of Kiranyi. However, Non members from Valeska said lack of access to water channels hindered them from acquiring credits.

Non credit member from Poli group claimed that land scarcity was a major obstacle. Table 3 below proved their claims for majority of them had below the minimal land required to get the credits.

Table 3: Average farm size

Farm size in Acres	Groups							
	Mbuguni		Kiranyi		Valeska		Poli	
	Members	N/members	members	N/members	Members	N/member	Members	N/member
1-1.5	4%	1%	2%	0	0%	2%	4%	0%
0.5-1	74%	33%	9%	20%	25%	26%	95%	15%
<0.5	22%	66%	89%	80%	75%	72%	1%	85%

Source: Field data

These farm sizes had great influence in farm expansions as well as market outlets for established TC seedlings nurseries products. 60% of the non -credit members claimed that they were not eligible to TC banana credit due to lack of land and water assurance. Access

to and control over land resource was articulated by as one of the major impediment for women to secure credits

Table 4: Average banana plantlets per member

Plantlets	Mbuguni	Kiranyi	Valeska	Poli	Total
51-100	15	36	35	20	106
101-200	80	20	5	19	124
>200	10	0	0	0	10
Total	105	36	40	39	240

Source: Field data.

The minimum numbers of 80 plantlets distributed per farmer. However, some members lost fractions of their plantlets through drought and the uprooted offshoot varieties. Meanwhile some Farmers had expanded their plantlets up to 500 plantlets particularly in Mbuguni. The findings show that About 80 non credit members have established TC banana plots using sackers.

4.2 Appropriateness of loan disbursement approaches

The approach employed in disbursing credit to small scale farmers was focused on three important strategies which included individual lending in a group, linkages of credit with technologies transfer and market access and use of multi- Institutional and Multi-disciplinary approach. Individual from a hamlet level access credit after s/he join in a three to eight members group called Uko. Several small groups of maximum of eight members come together to form a large group called Mboko. Each Uko and Mboko is lead by group chairperson, secretary and treasurer respectively. These three leaders and one member from each Uko form the executive council of each Mboko. The scheme has six Mbokos namely Mbuguni, Kiranyi, Manyire, Poli, Valeska and Rombo.

Through this structure MBD provide loans to individual after s/he has been screened and accepted by other Uko and Mboko members respectively. Hence it is the group which decide who should get credit while the project officer facilitates to construct bylaws to assist the groups in making sound loan approval decisions.

Group pressure facilitate loan repayment and reduces the frequencies of loan follow up by MBD staff to individual client as Uko leaders do loan collection in their respective hamlet and bring the amount collected to the Mboko offices and the Mboko leaders deposit the collected amount to their respective accounts and bring pay in slip to MBD for reconciliation.

Farmers expressed their opinions about the approaches as summarized in the box below.

Farmers' remarks about the approaches

- Group approach is mandatory in Tanzania for Government support.
- The Group approach ensures organized marketing
- Capacity building in TC technology has improved banana orchard management including their old orchards.
- Capacity building in micro-credit, group dynamics, marketing and value addition has opened up the group members for administering a revolving fund.
- Exchange visits helped them gain useful experience. The case of Kiranyi with making products from value addition, using the knowledge gained from visiting exhibitions in Kenya..

Source: The remarks were articulated by during FARM Africa Evaluation in July 2007.

4.2.1 Loan repayment performance

320 farmers organized into six farmer field schools through a microfinance scheme. Farmers were able to access the technology through a basic package of 80 plantlets, sufficient for a quarter acre orchard, at TSh 1,000/plantlet to be repaid over 15 months (after a one month grace period). A flat rate interest of 15 per cent was charged, giving a typical loan size of TSh 92,000.

Table 5: Groups loan repayment status

Group/Mboko	Amount receive	Amount paid	Amount due	Percent paid
Mbuguni	17,551,150	9,177,272	4,260,228	75%
Poli	4,800,000	2,659,000	2,141,000	55%
Kiranyi	10,355,650	3,873,300	6,482,350	37.4%
Valeska	5,849,475,	1,766,000	4,393,675	30.1%

Source: Field data.

The highest loan repayment rate was from Mbuguni and the lowest from Valeska. These repayment rates were far below that reported by FARM Africa (2006) which reported 100% repayment rate using the same approach. The low repayment rate were said to have been attributed by many factors, including prolonged and severe drought in 2005/06. This was also experienced by Matango (2006) who reported failure of the MOA members to repay their loan as planed due to drought which caused drying of sugar can.

Other reasons for poor repayment were said to be due to distribution of off-shoot TC banana variety which failed to adapt in the focal areas. Off shoot variety raised complaints and frustrations among farmers. Few members used this situation to campaign against the project, mobilizing farmers to stop repaying. This was highly evident to the Mboko of Kiranyi whose members were found to have borrowed from other financial institutions such PRIDE and Akiba Commercial hence many defaulted TC loans.

Other reasons were as those mentioned by Mohamed (2003) who stipulated that attitude of people towards loans from donor and government sources hinder their repayment performances. There is still wrong perceptions among farmers, that once loans are

provided by government and its affiliations there is no need to repay them capitalizing from time practices by the government to provide loans without pressing for repayment.

Marketing problems were mentioned as a great problem particularly to Valeska due to its isolation and poor infrastructures. Borrowers face severe marketing problems for their products particularly during peak production seasons. Lack of processing skills and facilities observed to worsen the situation.

Poor loan follow-up systems were mentioned by farmers another factor which retarded loan repayment. MBD staffs were blamed for inconsistency and irregular loan follow up, inadequate monitoring visits to borrowers to provide advice and support loan collection. Borrowers were left to decide when to visit project offices to make loan repayments. This allows some borrowers to skip repayment schedules and others to completely default. This was reported by all Mbokos where by some farmers reported to stay with money for some days before it was collected by responsible personal.

The project is currently planning to return the amounts repaid to each of the six farmer field school groups so that they can establish self-managed revolving funds and register as savings & credit cooperative societies (SACCOSs). It is anticipated that this decentralization of the loan fund will also create sufficient peer pressure and local follow-up of outstanding loans to stimulate recovery of the remaining 60 per cent of the loan.

In terms of marketing, most farmers are using local markets such as Tengeru which has developed a reputation as a banana market for traders in northern Tanzania and southern

Kenya. Although discussions have taken place between project partners, Banana Investment Limited and Nyirefami Limited Company, which produce banana wine and banana flour respectively. None of the farmers interviewed had developed market links with them. The major issues related to accessing these markets include continuity of supply and pre-delivery processing conditions.

4.3 Appropriateness of the technologies

Farmers were provided with a mixed package of three TC varieties. These included Chinese Cavendish (a sweet banana), Uganda Green (used for matoke), Williams and Grand Naine used for cooking and as a sweet banana. The latter were said to resemble the taste of local bananas. Mshale laini is used for cooking and roasting. Farmers expressed preference for Williams and Grand Naine, despite of reported problems of plant dwarfism in some Grand Naine orchards.

A total of 27,576 banana plantlets were distributed to farmers. SARI and MBD provided Trainings on land and holes preparation, planting, de-suckering, sucker selection, field maintenance and credit management.

Based on the discussions with farmers in their respective locations, it was noted and observed that farmers were keen on TC bananas and they had the following to say about the TC technology.

- i. TC technology has effectively addressed the issue of food security.
- ii. TC technology has increased their income. (Kuranyi, Farmers said TC bananas have surpassed coffee in terms of income generation).

- iii. Suckers are playing an important role in the expansion of orchards and general up scaling.
- iv. TC bananas mature at the same time. This was found to be good for marketing.

4.4 Impact of the credit scheme to the beneficiaries

The average gross margin/annum reported was TSh 532,905. (Appendix2). The Calculated Benefit cost ratio, Net present Value (NPV) and Internal Rate of Return were 2.5, 2633685 and 94% respectively (appendix 1). These calculated indicators postulate a positive investment potential.

Table 6: Properties ownership:

Properties	Groups							
	Mbuguni		Kiranyi		Poli		Valeska	
	members	Non/mem	members	Non/ member	Members	N/member	Members	Non- member
Cars	2	1	6	0	0	0	0	0
Motor bikes	10	4	0	1	1	0	0	0
Television	42	8	3	0	30	2	3	0
Bicycles	56	12	10	0	5	3	10	1
Gas cooker	0	0	0	0	0	0	0	0
Tape water	0	0	3	0	25	1	3	1
Cell phones	88	7	21	5	35	2	21	2
None of the above	5	15	0	4	2	1	0	5

Source: Field data

When comparing between members and non-members/control groups based on properties ownership, in all groups group members appear to own more properties than the non members (Table 4). The trend were almost the same those of average income in section 4.1.2. There was a great prospect that the gap in income and between credit member and non credit will widen drastically at the end of 2007. This was anticipated from the experienced good weather in 2006/07.

Other beneficial impacts observed or /and mentioned by group members were:

- i. Apart from the fact that farmers in the focal areas are no longer food insecure, they have also managed to improve their standard of living. Credit members have built modern houses, paid school fees, provided basic needs including clothes for their family, purchase of livestock (dairy cattle, goats), mobiles phones etc.
- ii. At farm gate TC bananas are sold for up to Tshs. 5,000 per bunch. By maturing at the same time, TC bananas generate good income. Although “Mshale laini” can go as high as Tshs. 10,000 per bunch but they mature late and unevenly.
- iii. One farmer in Mbuguni indicated that he sells 60-100 bunches per month at between Tshs. 2,000 and 3,500. Because of this he has since planted bananas on a two-acre farm.
- iv. Groups like Mbuguni have repaid loans up to 75% with minimal follow-ups efforts.
- v. The Knowledge, skills and experience gained on TC banana production, entrepreneurship, marketing and group dynamics trainings, observed to have brought big impact to the beneficiaries’ altitudes.
- vi. Groups have been registered as SACAs which is an indication of their operation sustainability.

4.5 Challenges to production

Farmers articulated problems they encountered in the establishment of banana plantation. This included inadequate influence of banana farmers over prices. However, at least one group has agreed minimum price of TSh 3,500 per bunch below which no member would sell their output.

Both labour availability and access to manure were not considered serious problems. However, farmers expressed concerns that manure availability could become more limited and its prices increase as the acreages of TC bananas increases. This is due the large amounts of manure needed during planting time.

Other farmers complained about weevil infestation and dwarfism of plantlets received. TC banana markets access for Valeska and some part of Mbuguni were mentioned as challenge which reduced their success story.

4.6 Lessons learnt

- i. Peer pressure from group members fostered individual repayment rate and reduced credit transaction costs to the scheme. Responsibility from identification, selection of individual to receive loans, appraisal, approval and collections of loans were all done by group leaders
- ii. The scheme had proved that small scale farmers can start up their small enterprises and grow rapidly. This is a great opportunity to the microfinance institutions to start and grow with them rather than competing to ready made client.
- iii. Groups formed as a result of project activities lack cohesion among members.
- iv. Joint (multi-institutional and multi-disciplinary) approaches helped to build confidence and trust among community members.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

From the findings of this study, it is highly accepted that despite of some technical and climatic shortfalls such as distribution offshoot variety, poor loan follow up and drought, the approaches, procedures and strategies employed by MBD and her partners in providing credit to farmers were appropriate. It enabled smallholder farmers to not only access credit but also repay it. Linking credit with TC banana technology gave farmers a complete package of interventions.

The findings showed that credit members were better off in terms of income, properties ownership and food security.

Considering the success and failure of the micro-credit scheme, it can safely be concluded that it is an innovative positive step forward toward accessing credit to stallholder farmers in Tanzania. It has achieved a remarkable success in reaching its target group and delivering its credit package to them without any collateral and other security requirements. It has also succeeded in mobilizing the hitherto neglected poor people of the rural area, especially the women who participated in the credit scheme. This has not only improved their economic conditions and living standard but also improved their self-esteem and social status.

Thus there is need to replicate and promote this approach of accessing credit to smallholder farmers in Tanzania.

5.2 Recommendations

It is appreciated that Diffusion of TC banana in Arumeru through micro credit scheme has significantly contributed to poverty alleviation in the focal areas. The micro-credit scheme has proved that collateral and other loan securities are no longer major obstacles to access credit to small scale farmers. The approach may open up doors to both small scale farmers and financial institutions to interact as mutual beneficiaries. However, there are still some challenges that need to be overcome in order to realize greater outcomes of the scheme.

5.1.2 Recommendations based on specific objectives

Specific objectives number 1 focused on Assessing the operational procedures and performance in availing credit facilities to smallholder farmers

- i. MBD should make sure that loan officers complement the group peer pressure in loan recovery by visiting and supporting group leaders' efforts in loan portfolios management.
- ii. MBD and SARI should scale up training beneficiaries in the aspects of credit management, saving mobilization, marketing and agricultural extension. Beneficiaries also need to be well informed on their obligations, particularly in loan repayment needs.
- iii. Gender differences with respect to access to credit facilities have to be critically looked into. 21% of women participating in the credit scheme is very low. It was found that all top group leaders were men. There is a need to strengthen women participation in decision making and improve their chances to access credits. Partner organizations may consider having a gender specialist to mainstream gender in the micro-credit scheme.

Specific objective number 2 geared at determining factors that influence credit accessibility by farmers. It is recommended that:

SARI and MBD should consult relevant authorities to scrutinize and act upon land distribution. Local authorities in respective Mbokos should ensure security of land ownership by the majority of small-scale agricultural producers.

Recommendations based on objective number 3 which focused on Assessing the impact of credit on income and the livelihood of the credit users.

- i. MBD should empower groups marketing committees through training and organization of exchanges visits to share experiences on marketing of agricultural products. Marketing of TC banana was a critical factor to Valeska which led to the low impact in terms of loan repayment and average income per member.
- ii. ISAA and SARI should find means to test TC banana varieties before they reach farmers to avoid distribution of Offshoot varieties.
- iii. Poor road infrastructure was pointed out as the main reason why the credit scheme performed below expectation especially in Valeka and Mbuguni. Improvement of road infrastructure is indispensable for the rural credit schemes to prosper. The beneficiaries and partners organizations need to influence relevant authorities to improve the same.
- iv. MBD and her collaborators should mobilize groups through their respective SACAs to acquire water pumps in credit bases. This will minimize risk of farmer loosing their TC banana during drought as happened in 2005/06.

The last objective attempted at Suggesting best approach and practices for the promotion of effective and sustainable rural financial services in Tanzania.

It is recommended that group lending approach is the best approach for accessing credit to small holder farmers who have no collateral and other loan securities. The approach must be supported with capacity building and gradual handing over the credit management responsibility to the beneficiaries.

5.2.2 General recommendation

Access to financial services has been identified as a major problem experienced by many in attempts to start and do business in Tanzania. Though it is true that credit in formal banking institutions has grown steadily over the years; the same is not available to the people in the rural areas. Most of the financial institutions are set up in urban areas focusing to already well establish large scale entrepreneurs.

Thus it's recommended that financial institutions should collaborate with grassroots based organization like MBD to create a mechanism that will enable them reach the large forgotten credit-worth clients operating in the rural settings.

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Appendix 2: Gross Margin Analysis

(a) Average 238 bunches sold @ 2650		630,700
Less variable costs		
Cost of manure		7,800
Weeding costs		34,507
pesticides		659
irrigation		5,782
De-suckering		27,342
Transportation cost		21,705
(b) Total variable cost		97,795
Gross margin	sales (a) –Variable cost (b)	532,905

Appendix 3: Former finance Minister sharing jokes about TC banana with Dr. Mbwana in Mbuguni Farmer Field School. (February 2005).



Appendix 4: Farmer's banana field visited by the Farm Africa Evaluation Team on July 2007.

