

**THE ROLE OF CREDIT IN THE ADOPTION OF  
IMPROVED AGRICULTURAL TECHNIQUES BY  
SMALL SCALE FARMERS : A CASE STUDY OF  
MAIZE GROWERS IN THE SOUTHERN HIGHLANDS  
OF TANZANIA.**



**BY**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT  
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**ABSTRACT**

The study sought to determine the role of credit in the adoption of improved agricultural techniques by small farmers. The specific objectives were to: determine the need for credit by the farmers and the extent the need has been fulfilled; find out the sources of credit by the small farmers; distinguish the major factors limiting access to credit by small farmers, and determine how adoption of improved agricultural techniques is related to availability of credit.

A questionnaire was used to collect relevant information from the respondents. Formal interviews and discussions were conducted with key informants in the villages and government offices to supplement the data obtained through interviews. The data were then analyzed statistically and obtain frequency distribution, percentage and cross-tabulations.

The study established that, farmers need credit to purchase inputs and pay for additional labour required as a result of using the recommended farming techniques. Some farmers are informed of the existence of credit-giving institutions, however, few have benefited from institutional credit. Informal sources, mainly friends and relatives, constitute the main source of credit for the majority of the respondents. The complicated lending procedures and demands by the banks from the farmers seeking credit have largely contributed to the limited access to credit to majority of small farmers.

The results of the study also show that credit facilitates the adoption of improved farming techniques.

Recommendations from the study include involvement of village authorities in the appraisal of credit requirement by the farmers and educating farmers on the procedures and conditions to follow to qualify for credit. Other recommendations include the use of simple collateral such as

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assessment of borrower's farming business and possessions, involving the extension services and other related institutions to ensure the use and repayment of the loans, and encouraging the establishment of rural savings and credit schemes.

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**DECLARATION**

I, GABRIEL GODWIN IDIKIAEL SOLOMON LYATUU, do hereby declare to the Senate of Sokoine University of Agriculture that the work presented here is my original work, and that it has not been submitted for a higher degree in any University.

Signature *Gabriel*  
Date 5-10-94

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**DEDICATION**

To my parents IdikiaeI Lyatuu and Dinah Mashoo who laid the  
foundation of my education.

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**CHAPTER I**  
**INTRODUCTION**

**1.1 Background Information**

Agriculture constitutes the largest sector of Tanzania's economy, contributing about 46 percent of the Gross Domestic Product (GDP), and over 80 percent of foreign exchange earnings (United Republic of Tanzania, 1991). More than 85 percent of the population is rural and depends on agriculture for their livelihood. Thus, the strength of the economy is very much dependent on the strength of this sector.

The sector constitutes the major source of staple food grains for both the rural and urban dwellers. These include maize, millet, rice, and wheat.

Despite the government's good intentions as stipulated in the National Agricultural Policy of Tanzania, the sector is yet to sustain itself in terms of producing enough food grains for its population. The performance of the food grain industry has been in a precarious situation. Intermittent food shortages in the past years have been a common phenomenon. As a result, the meagre foreign exchange reserve is used to import food instead of the badly needed intermediate and capital goods for development.

**1.2 Statement of the Problem**

The agricultural sector in Tanzania has been under severe stress in recent years. This has been reflected in wide fluctuations in domestic food production and underutilization of the vast agricultural potential in the country.

As a result, importation of food items has been a common phenomenon in Tanzania. During the year 1991/92 the government realised a deficit of 490 000t of food grains and this had to be imported to offset the shortfall (Daily News of July, 1991).

Bad weather conditions, inadequate transfer of agricultural knowledge and inappropriate innovations reaching the farmers, have greatly contributed to the unsatisfactory performance of the sector.

Benad, (1987) pointed out the reasons frequently stated for the failure of farmers to adopt improved innovations as traditionalism - the "resistant to change" of Tanzanian peasants, and deficiencies of the extension system which, *inter alia*, include inadequate funds and trained staff.

But empirical studies on adoption of innovations by small scale farmers in Tanzania (by Hull, 1971; DeVries, 1976; Keregero *et al.* 1977; DeVries and Mvena, 1979; Kauzeni, 1979; Perez, 1988; Wambura, 1988; and Lupanga *et al.* 1989) reveal more than the above constrains.

It is generally agreed that the agricultural sector has performed poorly due to the failure of farmers to use modern agricultural techniques, for instance, high yielding varieties and inorganic fertilizers. This is because the recommended innovations are often not used because of their unavailability and high cash requirements. Furthermore, recommended innovations imply greater operating expenses for their utilization for maximum production, which in turn puts additional strain on the farmer's financial or labour budget.

A lot of studies have identified economic constraints such as high cash and labour demand of new technologies and inadequate returns to investment as major constraints to quick adoption (Benad, 1987; Ngasa, 1988; Wambura, 1988; and Lupanga *et al.* 1989).

Modernization of the agricultural sector requires the purchase of inputs which are produced off the farm. To buy these additional inputs the farmers must have (accumulated) savings or have ready access to credit. Income in the small farm agricultural sub-sector in Tanzania is very low, hence savings are almost negligible. The farming community is entangled in a vicious cycle of low income, low savings, low capital, low productivity and consequently low income.

Credit is thus a key requirement in the modernization of agriculture. Not only can it break the vicious cycle by removing the financial bottleneck but can also provide an incentive to farmers to adopt new technology packages that would otherwise be more slowly adopted. However, lack of adequate and reliable sources of formal credit especially for the majority of the farmers has hindered agricultural modernization, and general development in Tanzania.

Therefore the study examines the factors which influence farmers accessibility to credit under Tanzanian conditions, and how accessibility in turn is related to farmers' ability to adopt agricultural innovations. The results of the study are expected to be an input in the formulation of sound and realistic credit and extension policies for small farmers under Tanzanian condition.

### **1.3 The Rationale of the Study**

Considering the role of agriculture in the Tanzanian economy, it is evident that any study of its performance will add significantly to the information data bank which policy-makers can utilize in their efforts to find solutions to problems hampering the performance of the sector.

#### **1.4 The Purpose and Objectives of the Study**

The purpose of the study was to examine the role of agricultural credit in the adoption of improved agricultural techniques by small scale farmers.

The specific objectives of the study were to:

1. determine the need for credit by small scale farmers and the extent to which the need has been fulfilled
2. determine how adoption of improved agricultural techniques is related to availability of credit
3. determine the sources of credit for small scale farmers
4. identify the major factors limiting access to credit by small scale farmers and,
5. make recommendations for improving small scale farmers' accessibility to credit

#### **1.5 The Research Questions**

To meet the above objectives the following questions were set to guide the research:

1. To what extent is credit needed by small scale farmers?
2. To what extent do small scale farmers have access to credit?
3. What are the sources of credit for small scale farmers?
4. To what extent has availability of credit influenced the rate at which farmers have adopted improved agricultural techniques?

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CHAPTER II  
LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature on the role of credit in agricultural development in a global perspective. The type of credit available for agricultural development, and sources of credit by small farmers in Low Income Countries (LICs) where agriculture constitutes the mainstay of the economy are also covered. The chapter concludes by examining the history of agricultural credit in Tanzania.

2.2 The Role of Credit in Agriculture

The role of credit as a tool in the transformation of the agricultural sector can not be over-emphasized. World Bank (1975), explicitly indicated that credit was an essential instrument for enabling farmers to acquire improved agricultural techniques and thus speed the adoption of new technologies. This fact is more apparent to small scale farmers whom Schultz (1965), referred to as "poor but efficient". According to Schultz, the low income realised by the small scale farmers is not a result of inefficient use of their resources, but due to the lack of technology and resources they need to realize higher productivity and thus higher income. Padmanabhan (1982), described the small scale farmers as being entangled in poverty because their saving capacity is very limited. He asserted that they are in a vicious cycle of low income, low savings, low capital, low productivity and consequently low income. Depending on their technology and available capital, the small scale

farmers are able to produce enough for their subsistence and a small surplus for sale (Schultz, 1965).

Credit is an important element in modernizing agriculture because it allows the use of other factors of production produced off the farm, for example, fertilizers and land (Freshwater, 1989). Feder *et al.* (1990), regarded credit as an important item in agriculture for it enables the producers to satisfy the cash needs induced by the production cycle involved in agriculture. He contended that production operations such as land preparation, planting, cultivation and harvesting of the crops are done over a period of several months in which very little cash income is earned relative to expenditure on inputs and consumption. In the absence of credit, farmers must have savings so as to be able to synchronize consumption and production costs in the next season. In this context, credit allows greater consumption and greater purchased inputs and thus increases the welfare of farmers. This makes farmers' production decisions to be independent from consumption decisions.

According to Freshwater (1989), the demand for credit exists because farmers do not have access to all inputs required at the beginning of the season and therefore borrow money to acquire them. The demand for credit has increased over time as farmers increased their degree of specialization and reliance on purchased inputs. Accessibility to credit has facilitated two trends, that is, increased specialization and reliance on purchased inputs, and quick adoption of new technologies that improve their productivity. The advent of improved farming technologies in the sixties and their adoption has clearly demonstrated the need for credit, and the demand for credit has increased many times since (Desai, 1988 and Gadgil, 1986). In some parts of the

world, credit is used as a tool for the development of effective extension work (FAO, 1964; 1965).

### **2.3 Types of Credit**

Credit, sometimes referred to as working capital, involves the transfer of capital, in cash or in kind, with obligation to pay (World Bank, 1975).

Two types of credit are discerned (Arnon, 1987):

1. Short term credit: This is available to farmers to enable them to purchase recurrent seasonal inputs, for example, seeds and fertilizers. The credit must be available at times when the inputs are purchased and must be extended until the crop is marketed.
2. Long term credit: This is used to finance capital items eg. a tractor, land, etc. Repayment varies with the nature of the capital item financed but exceeds one year.

### **2.4 Sources of Credit to Small Farmers**

There are numerous sources of credit to small farmers, but all can be grouped into two categories, informal and formal sources.

#### **2.4.1 Informal sources of credit**

Informal sources of credit are the most important in most LICs. Although there has been a rapid expansion of formal credit to the rural sector in LICs, only a small proportion has benefited. The study done by Braverman and Guasch, (1986) in developing countries has shown that only 5 percent in Africa and 15 percent in Asia and Latin America have benefited

from formal sources of credit. This is an obvious indication that a large proportion of the farm population still relies on informal markets as the source of credit.

The informal sector is dominated by money lenders mainly friends, relatives, merchants and landlords. The money lenders are characterized by charging exorbitant interest rates. The interest rates have a medium of around 50 percent and a variance much higher than formal credit rates (Braverman and Guasch, 1986). Higher interest rates are more prominent with landlords and merchants than friends and relatives. Other characteristics indicated by Braverman and Guasch, (1986), and Hoff and Joseph, (1990), include shorter processing time, better screening techniques or enforcement devices, low delinquency rate attributed to better assessment of credit worthiness, ability to exert social pressure for repayment and the frequent practice of tying or linking credit contracts with other input or output contracts, for instance, share-cropping. An important characteristic is that the informal credit operates within defined geographical boundaries and kinship lines.

Despite its exploitative nature, the informal credit sector has a significant role to bridge the gap that exists as a result of the formal sector not being able to cover the entire rural population due to limited resources in terms of cash and manpower. The credit from informal sources assists borrowers to smoothen seasonal cash flows and synchronize income and expenditure to meet social obligation such as school fees, wedding, medical expenses, and to meet farm operational expenses.

The informal credit sector has continued to thrive in most LICs because the formal sector has suffered from insolvency due to higher rates of delinquency and low interest rates charged over loans. The study by Braverman and Guasch, (1986) has indicated default rates ranging from 40

percent to 95 percent for credit programmes in Africa, the Middle East, Latin America, South and South-East Asia. The lengthy application procedures and presentation of documents, and the demand for collateral to support the credit sought, have made many small farmers concentrate on the informal sector, for it uses simple procedures and demands little collateral.

According to the study done by Mlambiti *et al.* (1990), in Tanzania, friends, relatives and neighbours account for 90 percent of the main source of credit for the majority of the rural population. Others include, the shopkeepers and big farmers. They contend that the source is limited to small geographical area where screening of clients and application of pressure to defaulters are easy. The procedures in securing credit are simple and are based on simple collateral, such as pledging of durable assets or written agreement or permanent investment by the borrower. However, sometimes, the credit is sanctioned without any security depending on mutual understanding and credit-worthiness of the borrower.

#### 2.4.2 Formal sources of credit

Formal sources of credit in LICs have been established as an effort to transform the traditional agricultural sector into a modern sector. This was seen as an answer to low productivity and rural poverty (Braverman and Guasch, 1986 and Gadgil, 1986). Desai, (1988), viewed formal credit as a means to liberate the poverty-stricken rural masses from the clutches of exploitative money lenders and traders.

Formal agricultural credit in the LICs especially in Asia, particularly India has been increasing over the years. In India several programmes for amelioration of the rural poverty have been launched with credit being the

main instrument for their implementation. In this case, the role of credit is that of giving a push to the development process, in other words, it is treated as a lubricant that keeps the wheels of development moving.

Prominent rural transformation programmes in India include the Small Farmers Development Agency, and the Integrated Rural Development Programme. These programmes were facilitated by credit from banks responsible for credit to rural poor communities and agricultural development. The banks include Regional Rural Banks (RRBs) and National Bank for Agriculture and Rural Development (NARARD) (Gadgil, 1986).

Disparities in income among the rural farmers as a result of different capacity to acquire capital and adopt the use of improved farming techniques have greatly contributed to the need for the establishment of formal credit sources in most LICs in order to access farmers to credit to enable them acquire the necessary capital items and adopt improved farming techniques.

## **2.5 Historical Perspective of Agricultural Credit in Tanzania**

The history of agricultural credit in Tanzania dates back to 1947 with the establishment of the Land Bank of Tanganyika (LBT). The bank was established by Ordinance No. 47 of 1947 and started operation in 1948 (Binhammer, 1975). The purpose of the bank was to extend loans for agricultural activities. It covered both short and long term loans.

The potential clients of the LBT were foreign immigrant farmers to enable them purchase land, and invest in capital for improvement of the land (Kimei, 1987).

The major problem with the LBT was its focus on large scale farmers because the small scale farmers could not produce collateral (mortgage deeds)

to secure the loans. The situation was enforced by the Credit to Natives Ordinance of 1923 that required the native to produce a written approval from an administrative officer to qualify for credit (Collinson, 1975). Under the law, the native could not be sued if they fail to repay credit extended to them.

While LBT was providing credit to large farmers, two loan funds were established, the Local Development Loan Fund (LDLF) established in 1947, and the African Productivity Loan Fund (APLF) established in 1954 (Binhammer, 1975). These were formed after realizing that the local population was a potential force in enhancing increased agricultural production. The focus of the two funds was on providing credit for agriculture and livestock to small scale farmers. However, the APLF had an additional credit for processing machinery and equipment for cottage industry.

Inadequate performance of the loan funds led to the formation of the Agricultural Credit Agency (ACA). This was formed under act No. 65 of 1961 (Binhammer, 1975). ACA took over assets and liabilities of the LBT, LDLF and APLF. The main purpose of ACA was to provide credit with an objective of improving agricultural productivity and rural development. ACA provided both long and short term loans to individuals, co-operative societies, local authorities, farming companies and associations (Kimei, 1987).

The performance of the ACA was seriously affected by several factors (Collinson, 1975):

1. Bad debts from clients who departed from the country at the initial stages of ACA operations.
2. Bad debts inherited from APLF and LDLF.
3. After independence security offered was rendered inadequate as land had low market value.

4. Shortage of trained staff to appraise, supervise and collect the loans.
5. Increased cost of administering thousands of small individual loans.
6. Credit education was virtually lacking and follow-up of overdue loans was very weak.

The results of the above problems were the increased rate of defaulters and failure to achieve coverage. Only the volume of funds going to the co-operative increased (Binhammer, 1975).

Under the National Co-operative and Development Bank Act No. 38 of 1964, the activities of ACA were redefined and it was renamed the National Development Credit Agency (NDCA). The focus of the institution was lending through the co-operative movement. The National Co-operative Bank (NCB) was also formed during that time. The two banks were all under the umbrella of the National Co-operative and Development Bank (Kimei, 1987).

The NCB was the banker for co-operative unions and provided them with various credit, while the NDCA was responsible for development finance, short term loans for farmers' working capital, medium and long term loans for assets on the farm and for both societies and union (Kimei, 1987).

Failure of the two credit agencies to fulfil the national objectives, ie. socialism and self-reliance and, the failure to confront the problem of increasing differentiation both within and between regions, as well as continued reliance on the primary export crops at the expense of local food stuffs expansion, made it necessary for the Tanzania Rural Development Bank (TRDB) to be formed (Loxley, 1975). In addition to the activities of its predecessors, emphasis was put on the national policy of encouraging ujamaa village development. During its existence, TRDB saw the dissolution of the

co-operative unions in 1976 and their re-establishment by the 1982 Act of Parliament and subsequent amendment of the TRDB Act in 1984 leading to establishment of the Co-operative and Rural Development Bank (CRDB).

Prior to the formation of the Co-operative and Rural Development Bank (CRDB) the bank i.e. TRDB was purely a development bank without commercial banking activities in its operations. Its operations had extended through 20 regions and 31 districts in mainland Tanzania. Unfortunately, like its predecessors, it relied on government and foreign aid for its loanable funds and proved to be biased towards export crops (CRDB, 1991). The CRDB was established with the following objectives:

1. To provide development banking services including provision of short term, medium term and long term credit for production, marketing and other rural oriented development activities.
2. To provide commercial banking services including facilitating payments by cheques, acceptance of various type of deposits, availing short term credit including overdrafts and transacting negotiable instruments.
3. To administer special funds as may be put at the disposal of the bank from time to time.
4. To provide technical services and advice for the purpose of rural development.

The National Bank of Commerce (NBC) as one of the instruments of economic development in the country has evolved its lending policy in keeping with national economic objectives and aspirations and based on sound banking principles and practices.

After its inception in 1967 the NBC was charged with the responsibility of formulating new lending policy compatible with the

aspirations of the country in the immediate post-Arusha Declaration era and which would be free from biases and self-interest exhibited in the pre-nationalization era of the expatriate commercial banks (NBC, 1984).

The lending policy by the NBC was aimed at increasing the flow of credit for development of the domestic economy with special consideration for the public sector, without undermining the normal prudence expected of a commercial bank.

Developmental changes in the country called for structural adaptation in the NBC's overall lending policy so as to cope with the changes. Thus in 1983 after the nation had revisited her emphasis on agriculture as national number one priority the NBC resolved to extend the coverage of its lending portfolio to include primary production, mainly to small scale farmers in the rural sector (NBC, 1984).

Lending to small scale farmers started in July 1984 with emphasis on both cash and food crops as well as promoting the development of livestock industry. To meet its overall objective the NBC is:

1. Providing short, medium and long term finance for the development of the agricultural sector.
2. Providing technical assistance and advice for promotion of agricultural production.
3. Administering special funds placed at the disposal of the bank for financing the agricultural sector.

The amendment of the Bank of Tanzania (BOT) Act in 1977, empowered the Bank to engage in promoting rural development. In so doing, the Bank through Rural Finance Department established Rural Finance Fund (BOT, 1977).

The purpose of the funds was *inter alia* to:

1. finance rural development ventures,
2. convert short-term agricultural production loans into medium-term loans when the borrowers default as a result of unforeseen events such as drought and outbreak of diseases and pests,
3. guarantee loans and advances granted by banks (NBC and CRDB) and financial institution for financing rural development.

However, since 1993 the Fund has been withdrawn and emphasis put on the encouragement of small farmers to establish rural savings and credit schemes. These schemes are believed to be a conduit for deposit mobilization and extension of credit to many farmers. Their establishment is being undertaken by NBC and CRDB under the auspices of the Regional Co-operative Officers. The idea behind this is to involve farmers to participate in agricultural investment using their own savings.

Efforts to transform the traditional into modern agriculture have taken various dimensions in Tanzania. These include emphasis on extension of credit to small farmers who constitute the majority of the farming community.

As reviewed above, the existence of institutional credit has a long history in Tanzania. Institutional arrangements have been made with time to allow more small farmers access to credit. However, the overall effect of all these arrangements has not been quite significant particularly in availing credit to smallholder farmers, many of who still rely on informal sources of credit.

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**CHAPTER III**  
**METHODOLOGY**

**3.1 Introduction**

The chapter details the method used in the selection of studied villages, the sample of respondents and the instrumentation for data collection. Statistical procedures used in the analysis of the data and limitations encountered in data collection are also described.

**3.2 The Location of the Study Area**

The study was carried out in Mbeya Rural District and covered three villages in Utengule-Usongwe Division. The villages are Itimba, Mshewe and Njelenje. The villages are along Mbalizi-Chunya road through Mkwajuni Division. The villages are among the villages ranked high in maize production in the Division (Figs. 1-3).

The major occupation in the villages is farming. The major crops grown in the area with the exception of Njelenje village are maize and coffee as food and cash crop respectively. Besides the fact that maize constitutes the major source of income, it is also used for brewing beer. Other crops grown in the villages include finger millet, beans, groundnuts and banana. Major crops cultivated in Njelenje include maize as food and cash crop, beans, sorghum and finger millet for domestic consumption.



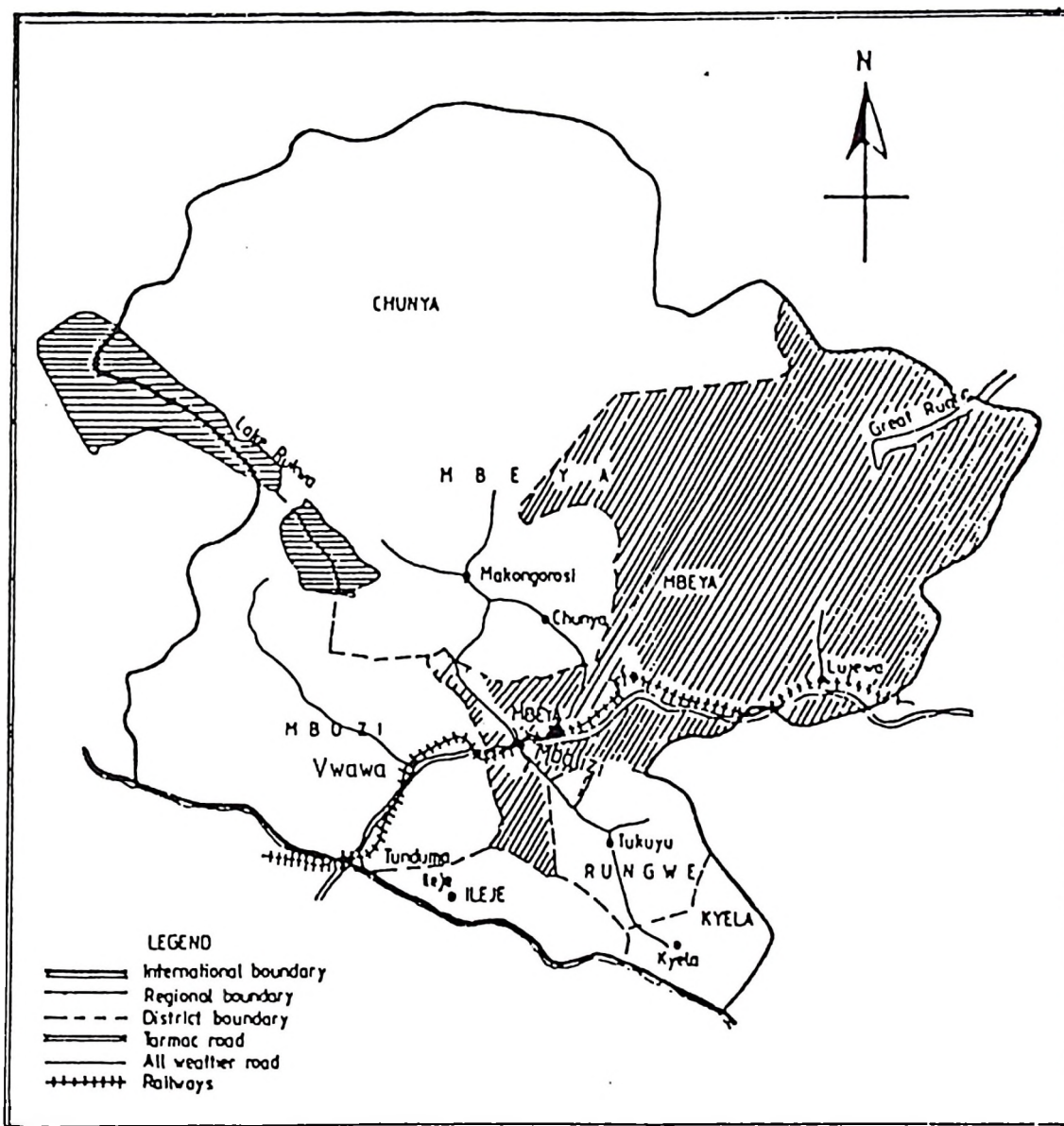


Figure 2. Mbeya Region: Location of Mbeya District

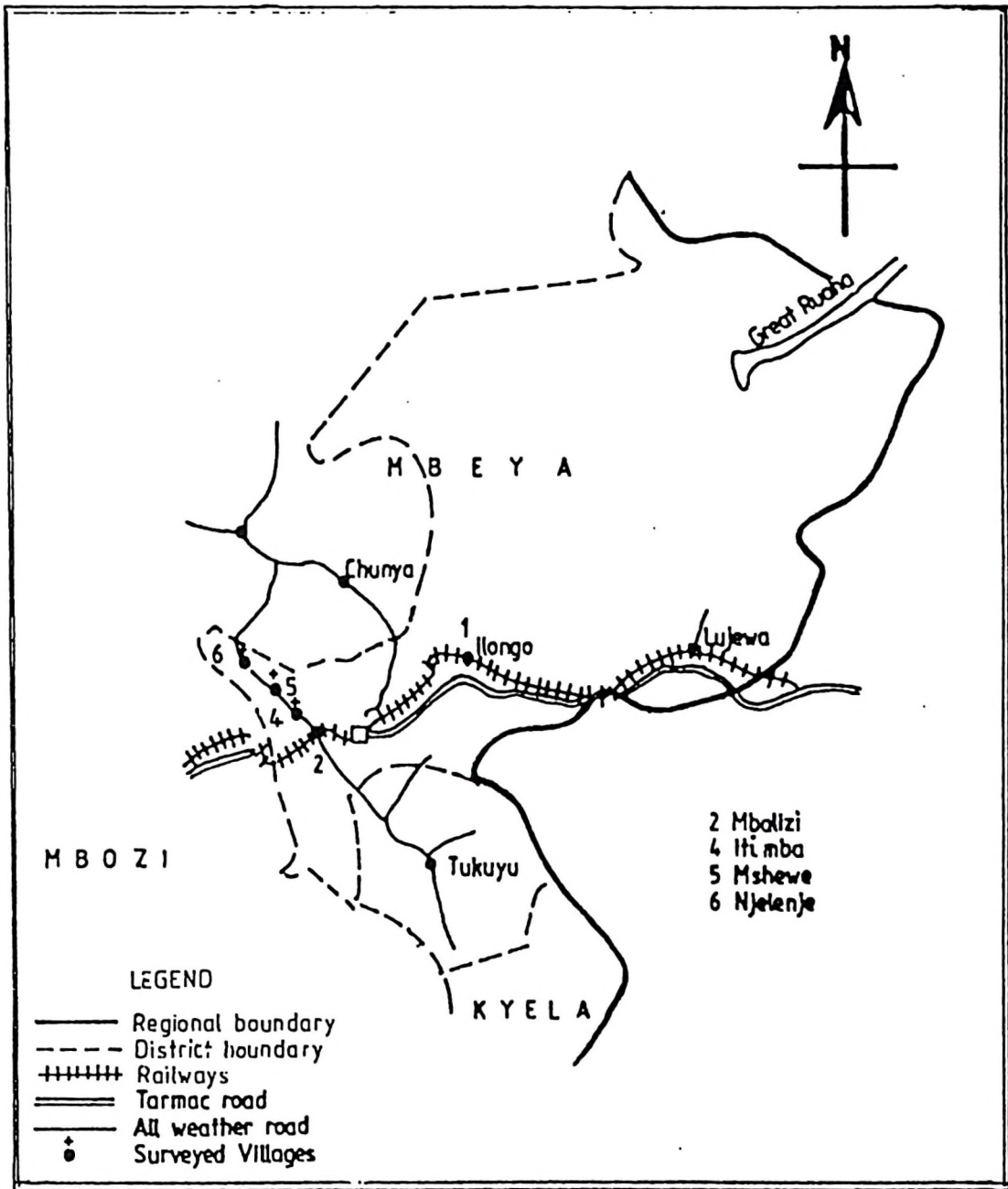


Figure 3. Mbeya District: Location of Surveyed Villages

In the study area few farmers have livestock. The major livestock found in the area include pigs, cattle, goats and sheep. Cattle are mainly kept for traction purpose. Some livestock are for sale and domestic consumption.

The ethnic composition in the study area consists of Wasafwa who are mostly descendants of those who once worked in sisal and sugar plantations in Tanga, Morogoro and Kilimanjaro Regions and later migrated to this area. Other immigrants to these villages are Wanyiha, Wanyakyusa, Wahehe and Wakinga.

The villages were started during the villagization programme which was implemented between 1974 and 1975.

### 3.3 The Selection of the Study Area

The selection of the study area was done by the researcher with the help of the District Agricultural and Livestock Development Officer (DALDO) who provided the list of all Divisions in the District ranked high in maize production. From the list one Division was chosen on the basis of its accessibility throughout the expected study period and reliable transport to the villages since the research was done in December to February during the rainy season.

It is from the same office the three villages studied were selected. Criterion used in selection of the villages was the presence of a Village Extension Worker (VEW) in the village.

Prior to starting the research work, the researcher and the DALDO visited the selected villages to introduce the researcher to the village leaders and VEW of the respective villages.

### 3.4 Sampling Procedure

Heads of household in the selected villages were taken as a sampling unit. The village registers were used as sampling frames. A random selection of the respondents was done by writing the names of the prospective respondents on pieces of paper which were then folded and put in a container. The VEW was then requested to pick one piece at a time without replacement. The names appearing on the picked pieces of paper were then written on a list which formed the forty expected respondents from each village. In total, sixty seven respondents were interviewed; twenty five, twenty three and nineteen from Mshewe, Njelenje and Itimba villages respectively. The researcher could not interview the expected number of respondents, because some respondents could not be found at their homesteads and also some roads were impassable as a result of heavy rains during the survey period.

### 3.5 Instrumentation Used in Data Collection

A structured questionnaire with both open and closed questions was constructed using available literature and experience of the researcher in handling credit applications from both small and large farmers.

Formal interviews and discussions using guiding questions and elaborated by free flowing questions were administered to:

1. Village leaders and opinion leaders.
2. Government officials working in the villages.
3. DALDO and Regional Agricultural and Development Officer (RALDO).
4. Regional and District Extension Officers (REO and DEO).

5. Regional and District Coordinators of Sasakawa Global 2000 (SG 2000) Project.
6. Heads of financial institutions in the Region, NBC and CRDB respectively.
7. Officials with Mbeya Co-operative Union (MBECU) and Tanzania Farmers' Association (TFA), Mbeya Branch.
8. Researchers at Uyole Agricultural Centre (UAC).

Interviewing the individuals and personnel mentioned above was done to seek more information and confirm what the researcher had gathered from the farmers.

### 3.6 Data Collection Procedure

The interview schedule was written in English. The instrument was administered to the respondents in Swahili, the national language and therefore understandable to the respondents. Formal interviews and discussions were also done in Swahili.

The problem of inconsistency in the way the interviews were administered was minimized because the researcher himself interviewed and administered the questionnaire to all the respondents.

The data collection was done by visiting the respondents individually at their homesteads. This was thought prudent because it caused minimum disturbance to the respondents. It was also believed that the respondents would feel freer to respond to interviews conducted within their homesteads.

### 3.7 Limitation of the Study

The study has the following limitations;

1. Most of the respondents do not keep records of inputs used and the resulting output. Thus, some relevant information on their previous season farming operations and purchases depended on their memory.
2. Since the study was a cross-sectional survey, the actual farming practices of the respondents may vary from season to season depending upon the weather condition, the cash holding within the household, availability of the necessary inputs and labour during that particular season. Thus, with a single season data, it is not possible to infer a true picture of the extent farmers have adhered to the recommended practices.

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CHAPTER IV  
RESULTS AND DISCUSSION

4.1 Introduction

This chapter describes the basic characteristics of the sampled farmers which include, their age, level of education, main crops grown, and the farming system in the study area. The role played by the Sasakawa Global 2000 Project and the importance of maize are also described. The chapter further examines the need and sources of credit by small scale farmers, the factors limiting access to credit by small scale farmers and, finally, how availability of credit influences the adoption of improved agricultural techniques by small scale farmers.

4.2 Basic Characteristics of the Sample

The characteristics considered here include the age, education and the main crops grown by the respondents. Age was taken as criterion to exclude youths and children who are yet to be heads of household, while education is perceived as being among the factors that influence an individual's perception of an innovation before making adoption decision, and also an individual's active behaviour in seeking credit from the existing financial institutions, or any other information regarding the improvement of his/her agricultural operation. The main crops grown by the farmers determine the farming characteristics of individual farmers.

From the sample survey, majority of the farmers were aged between 30 and 50 years, followed by those above 50 years. A few (9 percent) were below 30 years of age (Table 1).

Table 1. Sample farmers: Age distribution

Age group (years)	Number	Percentage
Below 30	6	9.0
30-50	45	67.1
Above 50	16	23.9
Total	67	100.0

Source: Survey data, 1992.

The sample survey indicates that about 82 percent of the farmers have had some formal education (Table 2). This implies that, the majority of the respondents can easily get information on different aspects of agricultural innovations through reading posters, extension leaflets and booklets, local newspapers and magazines.

Table 2. Sample farmers: Level of education

Level of education	Number	Percentage
Illiterate	12	17.9
Primary education	52	77.6
Secondary education	3	4.5
Total	67	100.0

Source: Survey data, 1992.

Main crops grown include maize, beans and coffee. Maize is grown in various combinations with other crops depending on need, availability of land and labour within the household, as can be seen in Table 3. Prior to the

introduction of coffee in Itimba and Mshewe in the 1970s, maize was cultivated for food and cash income. Beans are mainly cultivated for domestic consumption but form a source of income to few who manage to produce a surplus. Very few farmers, those close to water sources have embarked on coffee cultivation in Njelenje village. Average acreage for the three crops are 1.1 ha, 0.3 ha, and 0.3 ha for maize, beans and coffee respectively. Average total farm holding for the sampled farmers is 1.7 hectares. Average production per farmer was 37 bags<sup>1</sup>, 2 bags and 11 bags for maize, beans and coffee respectively.

Besides farming, other sources of income (i.e non-farm income) to some of the respondents include petty businesses such as fish mongering, running a kiosk for selling basic consumable such as paraffin, soap, sugar, salt and the like, roasting meat at pombe shops, selling vegetables and sugar cane for those who live close to water sources, and brewing and selling pombe which is done by the majority of the respondents. Average income to those who are engaged in such activities amount to Tshs 50 000 per year.

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1 bag is equivalent to 90, 100 and 50 kg for maize, beans and coffee respectively

Table 3. Sample farmers: Main crops grown

Crops	Number	Percentage
Maize only	6	9.0
Maize and coffee	7	10.4
Maize and beans	27	40.3
Maize, beans and coffee	27	40.3
Total	67	100.0

Source: Survey data, 1992.

#### 4.3 The Farming System in the Study Area

Mbeya District, which include Mbeya Urban, has six agro-ecological zones. According to the Agricultural Sector Support Programme (ASSP), (1991) the zones are:

1. The Chunya Plain falling between 1000- 1500 metres above sea level,
2. Central Chunya and Msangaji Plateau which lie between 1500- 2000 metres above sea level,
3. North Usangu Plain lying between 1000- 1500 metres above sea level,
4. South Usangu Plain between 1000- 1500 metres above sea level,
5. Central Mbeya Plain and Highlands between 1500- 2000 and above 2500 metres above sea level respectively, and
6. Poroto and Ilembo Highlands mostly above 2500 metres above sea level.

As a result of the diverse agro-ecological zones many crops are grown in the District. These include maize, beans, groundnuts, irish potato, green

vegetables, sunflower, cowpeas, peas, finger millet, pigeon peas, bambaranut, banana and coffee.

Individual small scale farmers account for the majority of the producers of the crops. Average cultivable land differ from one zone to another, however, the study carried by ASSP, Mbeya, the average cultivable land has a median of 3.7 ha (ASSP Food Security, 1991).

In Mbeya District, maize is grown mainly in the Central Mbeya Plain and Highlands. Cultural practices range from intercropping to pure stand. The major crops intercropped with maize are beans, groundnuts, cowpeas and sunflower. The villages where the study was done lie in this zone.

Intercropping of maize with other crops is a common farmer practice in the study area. Pure stand was evident for farmers who are in the Sasakawa Global 2000 Project, those who have once been in the project, and those who have adopted the practice from peers who are in the project.

#### 4.4 The Sasakawa Global 2000 Project

The Sasakawa Global 2000 (SG 2000) Project began its activities in Tanzania in the 1988/89 crop season in Arusha Region with 67 maize Management Training Plots (Quiñones *et al.* (1991). The SG 2000 Project works with small scale farmers to test and demonstrate improved food crop production technologies and seek to be a catalyst in strengthening the linkages between farmers and agricultural research, education, production and credit organization. The co-operating farmer agrees to follow the recommended crop management practices and to involve at least 10 neighbouring farmers in the Management Training Plot (MTP) operations during the growing cycle. The project supplies each MTP operator (on loan) the necessary inputs, mainly

fertilizers, improved seed enough to cover one acre (0.4 ha) which the operator pays back at the end of the season after harvesting.

The credit facility extended to farmers is supervised jointly by the staff of SG 2000 Project and extension staff from the Ministry of Agriculture. For effective supervision of the farmers, the project provides transport to staff in the project. This includes bicycles to Village Extension Workers, a motorcycle to District Coordinators, and motor vehicles to Regional Coordinators.

The SG 2000 Project expanded her programme in 1989/90 season to six Regions in the country and sorghum and wheat were added as MTP crops (Quiñones *et al.* 1991). The Regions covered include Arusha, Mara, Dodoma, Rukwa, Mbeya and Iringa. In 1990/91 season the project had spread its activities to 19 Districts with 283 villages and 10 350 MTPs. The MTPs include 9442, 878 and 20 for maize, sorghum and wheat respectively. In Mbeya Region two Districts were covered in the 1989/90 season, these were Mbeya and <sup>Ileje</sup>Mbezi Districts. The project had 100 maize MTPs in 8 villages, including Iwala, Njelenje, Mshewe, Utengule, Ikumbilo, Mbeye<sup>b</sup>, Itumba and Izumba.

The experience with SG 2000 Project shows that small scale farmers can adopt the recommended production techniques hence increase productivity if provided with credit.

#### 4.5 The Importance of Maize in the Southern Highlands of Tanzania

Maize constitutes the main crop of interest in the study because the research is trying to examine the extent to which credit has influenced the adoption of the recommended maize practices by farmers. The survey area falls within the Southern Highlands of Tanzania, famous in maize production in the country. The Southern Highlands covers four Regions of Iringa, Ruvuma, Mbeya and Rukwa. The Regions are famous in maize production because the area exceeds the minimum requirement for maize growth. Temperatures are near the optimum throughout the growing season and soils have moderate to low fertility (Croon *et al.* 1984). According to Croon *et al.* (1984), the small scale farmers contribute the highest to the total maize output in these Regions and their average output per ha is 1000 kg (equivalent to 11 bags of 90 kg each). This is against a potential average output of 4000-8000 kg (44-88 bags) per hectare (TARO, 1987).

Sample survey data, (Table 4) show that 94 percent of the respondents cultivated less than 2 hectares. However, the majority cultivated less than 1.0 ha and these account for 60 percent of the sample. Average area under maize was 1.1 hectare.

Table 4. Sample farmers: Distribution by area under maize

Area (Ha)	Number	Percentage
Less than 1.0	40	59.7
1.0 - 2.0	23	34.3
Above 2.0	4	6.0
Total	67	100.0

Average: 1.1 ha

Source: Survey data, 1992

On total production, about 59 percent of the respondents harvested a total of between 10 and 30 bags (Table 5). Very few harvested less than 10 bags. Average production was 37 bags. As regards the value of maize produced based on the prevailing producer price of Tshs 30 per kg, 73 percent of the respondents produced maize worth less than Tsh 100 000. Only 27 percent harvested maize worth more than Tshs 100 000. Average value of crop produced was Tshs 111 810 (Table 6), while the average cost of production for an average farm size was Tshs 30 000.

Table 5. Sample farmers: Quantity of maize produced

Quantity (bags)	Number	Percentage
Less than 10	4	6.0
10 - 19	22	32.8
20 - 29	16	23.9
30 - 39	12	17.9
40 and above	13	19.4
Total	67	100.0

Average: 37 bags per farmer.  
Source: Survey data, 1992.

Table 6. Sample farmers: Value of maize produced

Value (TShs)	Number	Percentage
Less than 60 000	24	35.8
60 000 - 100 000	25	37.3
Above 100 000	18	26.9
Total	67	100.0

Source: Survey data, 1992.

## 4.6 The Need for Credit by Farmers

In examining the extent farmers needed credit, the respondents were asked to indicate "Yes" or "No" to a question requesting them to show if they needed credit. The proportion of total respondents that indicated the need for credit was taken as the extent farmers needed credit. Response to this question indicated that all farmers needed credit. Therefore the extent farmers needed credit is 100 percent.

Table 7 shows the main farm operations for which the farmers needed credit. Activities mentioned are, in most cases, the limiting factors to increasing their output. These are farm expansion (57 percent), purchase of inputs (36 percent), and purchase of oxen and implements (5 percent). From this, it is evident that farmers need credit to expand their farms and purchase the necessary inputs including improved seeds, fertilizers and agricultural chemicals.

Table 7. Sample farmers: Opinion on how they would use credit if given

Opinion	Number	Percentage
Farm expansion	38	56.7
Purchase of inputs	24	35.8
Purchase of oxen and implements	3	4.5
For building a house	2	3.0
Total	67	100.0

Source: Survey data, 1992.

In an attempt to examine the extent to which farmers have had their credit needs fulfilled, the farmers were asked to indicate the type and sources of assistance received in the previous season (assistance here is referred to any form of credit, it be in cash or in kind). Tables 8 and 9 summarise the responses.

Table 8. Sample farmers: Number of farmers receiving various kinds of assistance by activity

Operation or purchase	Type of assistance											
	Financial		Labour		Material		Total		Did not get any		Overall total	
	N	%	N	%	N	%	N	%	N	%	N	%
Land clearing	4	6.0	2	3.0	0	0	6	9.0	61	91.0	67	100
Ploughing	4	6.0	7	10.4	0	0	11	16.6	56	83.6	67	100
Planting	4	6.0	17	25.4	0	0	21	31.3	46	68.7	67	100
Weeding	4	6.0	24	35.8	0	0	28	41.8	39	58.4	67	100
Fert. applic.	4	6.0	1	1.5	0	0	5	7.5	62	92.5	67	100
Insecticide application	4	6.0	0	0	0	0	4	6.0	63	94.0	67	100
Harvesting	4	6.0	14	20.9	0	0	18	26.9	49	73.1	67	100
Storage pest.	4	6.0	0	0	0	0	4	6.0	63	94.0	67	100
Insecticide	4	6.0	0	0	20	29.9	24	35.8	43	64.2	67	100
Maize seed	4	6.0	0	0	20	29.9	24	35.8	43	64.2	67	100
Fertilizer	4	6.0	0	0	20	29.0	24	35.8	43	64.2	67	100

Source: Survey data, 1992.

Table 9. Sample farmers: Distribution of farmers by source of assistance for various activities

Operation or purchase	Source of assistance									
	Bank		Friends and relatives		SG 2000 <sup>1</sup>		Did not get assistance		Total	
	N	%	N	%	N	%	N	%	N	%
Land clearing	4	6.0	2	3.0	0	0	61	91.0	67	100
Ploughing	4	6.0	7	10.0	0	0	56	83.6	67	100
Planting	4	6.0	17	25.4	0	0	46	68.7	67	100
Weeding	4	6.0	24	35.8	0	0	39	58.4	67	100
Fert. applic.	4	6.0	1	1.5	0	0	62	92.5	67	100
Insecticide application	4	6.0	0	0	0	0	63	94.0	67	100
Harvesting	4	6.0	14	20.9	0	0	49	73.1	67	100
Storage pest.	4	6.0	0	0	0	0	63	94.0	67	100
Insecticide	4	6.0	0	0	20	29.9	43	64.2	67	100
Maize seed	4	6.0	0	0	20	29.9	43	64.2	67	100
Fertilizer	4	6.0	0	0	20	29.0	43	64.2	67	100

<sup>1</sup> Sasakawa Global 2000 Special Credit Programme  
Source: Survey data, 1992.

According to Table 8, farmers need of credit has been fulfilled up to a maximum of 42 percent. The highest being assistance for weeding (42 percent) followed by assistance for maize seed, fertilizer and insecticide (all 36 percent) and 31 percent for planting. Others, are 27 percent and 16 percent, for harvesting and ploughing respectively.

According to Table 9, the available type of assistance to the farmers include financial, labour and material. Labour was mostly available to the main farm operations such as ploughing, planting, weeding and harvesting. These farm operations create a pressure on demand for labour because it is during their execution that family labour becomes inadequate and due to lack

of financial resources for hiring labour, the farmers tend to seek assistance from friends and relatives. This source, that is, friends and relatives is offered on a mutual assistance basis, where a particular group provides labour to individual members in turn, until all members' farms are attended to. The member whose farm is attended to, entertains the group with local beer or food. The work group facilitates timely land preparation and planting operations. Only 6 percent of the respondents had received financial assistance from the National Bank of Commerce.

Material assistance in terms of inputs i.e fertilizer, seed and pesticide, was available to some farmers (about 30 percent) under the special credit programme sponsored by Sasakawa Global 2000 (SG 2000). This programme was started in two villages, Mshewe and Njelenje beginning in the 1989/90 season. The material assistance given to the beneficiaries of the programme include, 10 kg of hybrid maize seed, 100 kg of urea, 50 kg of triple superphosphate fertilizer and 1 kg of insecticide. The objectives and *modus operandi* of SG 2000 Project are similar to earlier programmes in the Southern Highlands sponsored by the United States Agency for International Development (USAID) and International Development Agency (IDA). These programmes were started in 1974/75 and included the National Maize Improvement Programme and the National Food and Credit Programme (Rasmussen, 1987).

While the National Maize Improvement Programme (NMIP) was involved in knowledge generation (research) and knowledge dissemination (extension), the National Food and Credit Programme (NFCP) was involved in promoting the use of recommended innovation packages and hence improve rural life. The credit package by the NFCP was extended to the farmers through the Tanzania Rural Development Bank (TRDB) the

predecessor of Co-operative and Rural Development Bank (CRDB). The package included, 50 kg of triple superphosphate fertilizer, 100 kg of ammonium nitrate fertilizer, and 10 kg of hybrid maize seed (Rasmussen, 1987).

#### 4.7 Sources of Credit by Small Farmers

##### 4.7.1 Formal sources

In Tanzania, Rural Financial Markets (RFMs) are not as elaborate as in developed or in some other developing countries, for example, India. RFMs here include all those networks of financial institutions and practices that deal with the mobilization of rural savings, the channelling of credit and other financial transactions for rural people or, rural areas (Okonjo-Iweala, 1982).

Tanzanian RFMs are entrusted to a few financial institutions which include the Co-operative and Rural Development Bank (CRDB) which plays a primary role towards overall development of the rural areas and agriculture in particular in terms of offering credit for production inputs and crop purchase. Others include the Tanzania Investment Bank (TIB), involved in financing medium and long term credit to industrial and large scale agricultural ventures; the National Bank of Commerce (NBC) which, besides its normal commercial banking activities, compliments the work of CRDB by providing credit for crop marketing and, to some extent, for agricultural primary production. Private corporate institutions entrusted to provide credit to the rural sector include Tanganyika Development Finance Limited (TDFL), and Tanzania Farmer's Association (TFA). Some international Non-Governmental

Organizations (NGOs) for example, Oxfam and Sasakawa Global 2000, are also involved in providing credit in the form of inputs to small scale farmers.

Although agriculture has always been the most important sector in the country's economy it has received very little credit from the banks (Appendix 1). The commercial banks being urban-oriented cater mostly for the need of the commercial and industrial sectors. The banks have hitherto played an almost insignificant role in providing credit to small farmers. Those who have managed to secure credit have done so through a third party guarantee or mortgaging properties owned by themselves. In most cases the credit facilities are biased to cash crop growers and large scale farmers whose crop sales can be intercepted during marketing and the credit recovered. The bias toward lending for cash crops is evident when Appendix 2 is examined. The Appendix shows that regions which produce cash crops with heavy inputs requirements, and being the major source of the country's foreign exchange, have been allocated the major share of the total loans sanctioned in that particular year, compared to other regions which do not have important cash crop(s). The regions, enjoying the lion's share of the total loans and the major crops in brackets are, Iringa (tobacco), Mbeya (coffee and tobacco), and Tabora (tobacco). Credit to food crops pose difficulties for the banks to recover because of the many options the farmers have for selling the crops.

In an attempt to examine the level at which the formal sources of credit have spread their services to the rural population, the respondents in the study area were asked to indicate their awareness of the existence of credit-giving institutions in the Region. Table 10 shows that 67 percent of the farmers interviewed were aware of the existence of credit giving institutions in the Region.

Table 10. Sample farmers: Distribution by awareness of credit giving institutions in the Region

Category	Number	Percentage
Aware	45	67.2
Not aware	22	32.8
Total	67	100.0

Source: Survey data, 1992.

The major source of information about the existence of credit giving institutions was the radio for about 34 percent of the respondents, followed by a combination of various other sources (mentioned by different respondents) which include radio, peers, VEWs, government and political leaders. These account for 27 percent of the respondents. Few, 6 percent, mentioned peers only, (Table 11).

Table 11. Sampled farmers: Important sources of information on the existence of credit-giving institutions in the Region

Source	Number	Percentage
Radio only	23	34.3
Combination of various sources (radio, peers, VEWs etc.)	18	26.9
Peers only	4	6.0
Have never heard of	22	32.8
Total	67	100.0

Source: Survey data, 1992.

To confirm their awareness of credit giving institutions in the Region the respondents were also asked to mention the names of the institutions they know. Table 12 summarizes their responses.

Table 12. Sample farmers: Distribution by name of credit-giving institution mentioned

Name of institution	Number
CRDB	39
NBC	32
SG 2000	18
Co-operative Union	8
Not familiar with any	22

Source: Survey data, 1992.

From the Table it is evident that the majority of the farmers are well informed of the services of the CRDB and NBC in providing credit to farmers. The Co-operative Union was also mentioned. This is because farmers remember vividly that the Union used to be their main source of credit in the form of inputs, mainly seeds and fertilizers through their respective Rural Primary Co-operative Societies. However, since 1989/90 farming season the Union has never provided the farmers with any form of assistance due to its failure to secure a loan from the commercial banks. The SG 2000 Project was also mentioned by those respondents who are under the Project.

When the farmers were asked if they had ever secured credit from any of the institutions, only 6 percent responded in the affirmative, and they had all secured credit from the NBC.

#### 4.7.2 Informal sources

To determine the main sources of credit within the villages, the respondents were requested to mention the sources by their names. According to Table 13, friends and relatives were the most important source of credit to the majority of the respondents, forming 82 percent. Other sources mentioned were big farmers and shopkeepers.

Table 13. Sample farmers: Distribution by main sources of credit within the village

Source	Number of farmers mentioning	Percentage
Friends and relatives	55	82.0
Big farmers	4	6.0
Shopkeepers	2	3.0
Never heard of any	6	9.0
Total	67	100.0

Source: Survey data, 1992.

The type and size of credit obtained from the informal sources of credit were relatively small and more important for consumption purposes, for example, for school fees, hospital bills, school uniform, wedding expenses and the like, rather than for agricultural production. The amount of the credit ranged from less than Tshs 100 to Tshs 10 000 depending on the purpose, and the ability of the lender.

For all the credit sources, mutual trust and credit-worthiness, for instance, ability to repay in the agreed period were the most important security to both the borrower and the lender. In the first category, Table 13, in friends and relatives no tangible security items nor interest payments were demanded. Whereas an implicit interest is charged by the shopkeepers and big farmers. Here the borrower is assigned with piece work eg. weeding equivalent to the credit offered.

From the study, the informal credit sector constitutes the major source of credit known to majority of small farmers. Friends and relatives being the main source followed by the big farmers and shopkeepers. However, the informal credit sources have the following limitations:-

1. They can not provide enough credit to fulfil the demands of borrowers for production purpose.

2. They have a short repayment period which gives a lot of inconvenience to borrowers' liquidity.
3. They usually involve people who know each other, or come from within the village.

When the respondents were asked to specify which source of credit they preferred in terms of easiness, most of them indicated the informal source on account of it being within their reach and that they could approach the prospective money lenders as and when the need arose (Table 14). To most farmers, credit from the banks involves a long time lag between applying, sanctioning and actual delivery of the loan. Going to the bank offices in towns is a time-consuming, cumbersome and costly exercise compared to the money lenders at home where the loan is handed over as soon as it is requested. In addition credit from the money lenders, is not tied to particular use, for instance, for productive purposes, rather it increases the farmers' ability to meet the costs of his/her immediate cash needs.

Table 14. Sample farmers: Distribution by their preferred source of borrowing

Preference	Number	Percentage
Informal	51	76.1
Formal	4	6.0
Not informed	12	17.9
Total	67	100.0

Source: Survey data, 1992.

#### 4.8. Factors Limiting Access to Credit by Small Scale Farmers

The Rural Financial Markets in many LICs have been established with the intention of channelling cheap credit to small farmers in order to remove their financial constraints, accelerate the adoption of technologies and remove the monopoly of traditional money lenders charging exorbitant interest rates (World Bank, 1975; FAO, 1988; Hoff and Joseph, 1990).

These institutions differ from other commercial banks in that they only give credit to rural population but do not accept or mobilize deposits, their finance depending on government and international donor agencies.

However, experience shows very little success in reaching the small farmers and the traditional money lenders continue to exploit them. The lack of success of the Rural Financial Markets in many parts has been a result of, *inter alia*, high default and delinquency rates which prevent the institutions from being self-financing thus requiring continuous injection of government funds (Hoff and Joseph, 1990). Many institutions have found it difficult to deal with small farmers because of lack of adequate collateral by the small farmers, and the high incidence of default and administrative costs associated with small loans. Due to these factors the institutions have thus favoured the large borrowers relative to the small farmers.

Many factors have contributed to the limited access small farmers have to formal credit. Sharma (1985), mentions in particular the borrowing costs which include: application fees, service charges, stamp duties, legal fees, cost of preparation of loan application or any presentation made by the borrowers; borrowers' time lost in following up the loan application particularly during critical farming time; and travelling expenses on follow up of the loan application.

To determine the problems experienced by farmers in securing credit, the respondents were requested to give their views on how they would like the credit system by the banks changed in their favour. As can be seen in Table 15, about 42 percent of the respondents proposed that since most of the farmers have no tangible collateral to cover the loans, simple collateral like recommendations from the viable village government or Rural Primary Co-operative Societies, ie.those which can offer collateral and not indebted to the banks or any financial institution be accepted as security. The argument here is that these two authorities in the village are more conversant with the ability and credit-worthiness of the prospective borrower than the bankers. Others (22 percent), proposed that, to ensure repayment of loans, the bankers should give credit to groups of farmers formed on the basis of their mutual understanding so that members of the group exert pressure on one another on repayment. This idea comes from their experience with SG 2000 Project which gives credit to groups of individuals who through mutual supervision, ensure scrupulous utilization of the loan and repayment. Few farmers (19 percent), had the view that farmers who have coffee farms or a decent house in the village and maintain a good reputation should have their credit considered without demanding legal documents such as title deeds for their farms which have lengthy and expensive procedures to secure.

Table 15. Sample farmers: Opinion on how they would like the credit system to be changed in their favour

Opinion	Number	Percentage
Viable village government and Rural Primary Co-operative Society recommendations for prospective borrowers be accepted as a security	28	41.8
Credit to be given to groups to exert group pressure on repayment	15	22.4
Coffee farms and decent houses be accepted as security	13	19.4
Women be given soft loans	3	4.5
No opinion	8	11.9
Total	67	100.0

Source: survey data, 1992.

The opinion of farmers was sought as to who they thought benefited the most from bank credit. Table 16 summarises their responses. About 82 percent mentioned people who are not within their farming environment which include businessmen and women, government and party leaders, and urban people, those who can gratify the bankers, and literate people.

Table 16. Sample farmers: Distribution by their opinion on who has more access to bank credit

Opinion	Number	Percentage
Businessmen and women	20	29.9
Government and party leaders	18	26.9
Urban people	17	25.3
Literate people	9	13.4
Those who can gratify the bankers	1	1.5
No opinion	2	3.0
Total	67	100.0

Source: Survey data, 1992.

#### 4.9. Availability of Institutional Credit and Adoption of Improved Agricultural Techniques

To determine the extent to which the respondents have utilized the recommended practices, the respondents were requested to indicate "Yes" or "No" to a question intending to examine if they were familiar with the recommended improved farming practices in maize production. The responses to this question indicated that about 99 percent of the farmers are familiar with the recommended practices. The results are summarized in Table 17.

Table 17. Sample farmers: Distribution by familiarity with recommended farming techniques for maize

Response	Number	Percentage
Yes	66	98.5
No	1	1.5
Total	67	100.0

Source: Survey data, 1992.

The survey results as shown in Table 18 support the fact that adoption of improved techniques by small farmers, such as fertilizer and improved seed, is most of the time impaired by lack of capital to purchase the recommended inputs and use them at the recommended rates. Byerlee and Hasse-de-Polanco (1986), and Ngasa (1988), obtained similar results.

The rate of adoption was determined by requesting the respondents to indicate their actual practices. In this case the rate at which the recommended practices were utilized was determined by the number of farmers using the recommended practices as a percentage of the total surveyed farmers. The practices examined include the use of improved maize variety, seed rate, type of fertilizer, fertilizer rates, time of planting, spacing and weeding.

The farmers' responses were compared to the recommendations sought from RALDO, DALDO and researchers from Uyole Agricultural Centre (UAC).

The results are summarized in Table 18.

Table 18. Sample farmers: Selected maize production techniques and their adoption

Technique	Respondents who have adopted	
	Number	Percentage
Recommended seed		
Valid sample size	67	100.0
Improved seed only	36	53.7
Combination of improved and local seed	12	17.9
Local seed only	19	28.4
Seed rate		
Valid sample size	67	100.0
Recommended	31	46.3
Less than recommended	36	53.7
Type of fertilizer		
Valid sample	67	100.0
Nitrogenous fertilizers	29	43.3
Nitrogenous and TSP fertilizers	38	56.7
Fertilizer rate		
Valid sample size	67	100.0
Recommended	19	28.4
Less than recommended	48	71.6
Time of planting		
Valid sample size	67	100.0
Recommended	65	97.0
Later than recommended	2	3.0
Spacing		
Valid sample size	67	100.0
Recommended	45	67.2
Farmers practice	22	32.8
Weeding		
Valid sample size	67	100.0
Recommended	63	94.0
Less than recommended	4	6.0

Source : Survey data, 1992.

At least 54 percent of the respondents used improved seed, while 18 percent used combination of improved seed and local seed. About 28 percent used local seed only.

As far as seeding and fertilizer rates were concerned, only 46 percent and 28 percent adhered to the recommended rates for seed and fertilizer respectively. This was due to high costs of seeds and fertilizers, and also due to the fact that it is during the farming season when most farmers have very little surplus produce to sell to get money for buying the inputs. It is at this point when the need for credit by small farmers is greatest in order to maximize their agricultural output.

As regards other recommendations which did not require the spending of money, a good number of the respondents adhered to them. These recommendations include time of planting, spacing and weeding. The results above point to the fact that if economic constraints confronting small farmers are solved, more farmers could adhere to the recommended packages for maize growing in the survey area and hence increase their productivity.

The fact that institutional credit is important in the adoption of improved agricultural techniques is reflected in Tables 19 and 20

Table 19. Sample farmers: Relationship of farmers who obtained credit and use of recommended fertilizer rates

Category	Fertilizer rates used		Total
	Recommended Level	Less than recommended level	
Obtained credit	14 (58.3)	10 (41.7)	24 (35.8)
Did not obtain credit	15 (11.6)	28 (88.4)	43 (64.2)
Total	31 (46.3)	36 (53.7)	67(100.0)

Source: Survey data, 1992.

Table 20. Sample farmers: The relationship of farmers who obtained credit and use of recommended seed rates

Category	Seed rates used		Total
	Recommended rate	Less than recommended rate	
Obtained credit	16 (67.7)	8(33.3)	24 (35.8)
Did not obtain credit	5 (34.9)	28(53.7)	43 (64.2)
Total	31 (46.3)	36 (53.7)	67(100.0)

Source: Survey data, 1992.

According to the results, farmers who received assistance (ie. those who got credit from SG 2000 Project and NBC) were able to adhere to the recommended fertilizer and seed rates. In this case 58 percent and 68 percent of the respondents who received the assistance were able to adhere to the recommended fertilizer and seed rates respectively. Of those who did not get any assistance, about 12 and about 35 percent of the respondents were able to adhere to the recommended fertilizer and seed rates respectively.

## CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Introduction

The chapter covers the conclusions and draws recommendations for policy implementation.

### 5.2 Conclusions

The following conclusions can be drawn from the findings:

1. Small farmers need credit to be able to adhere to the recommended improved techniques. Credit is mostly needed to meet the costs of purchased inputs, for example, improved seeds and fertilizers. Innovations which do not need cash expenditure from the household, for example, planting in recommended spacing, time of planting and weeding are easily adhered to by using the available labour in the household augmented by labour assistance from friends and relatives.
2. The formal credit sources have not fully reached the small scale farmers. Information on the existence of institutions providing credit to farmers has reached the farmers through sources like radio, peers and VEWs and not the institutions involved, an indication that the institutions have not directly gone to educate farmers on their services, procedures and conditions that are necessary to qualify for credit. Formal credit institutions have hesitated to vigorously extend their services to small farmers

due to high rates of default, delinquency and administrative costs.

3. The informal sector has been a prominent source of credit to many farmers. This includes friends and relatives, shopkeepers and big farmers. The small farmers prefer the informal sector to formal sector because of the easiness involved in getting credit. Credit is made available to the borrower as and when requested. It does not involve the lengthy procedures and demands as is the case in formal sector.
4. The demand for collateral, lengthy procedures and costs of borrowing are among the factors that have made small farmers to feel excluded from benefits of the institutional credit. To the small farmers, businessmen and women and other influential people are the commonest beneficiaries of the institutional credit.
5. Institutional credit has greater influence in the adoption of improved techniques especially those that require cash expenditure. The credit facility increases farmers' capability to purchase inputs such as fertilizers and seeds that would otherwise not be affordable.

### 5.3 Recommendations

Based on the conclusions drawn from the findings, the following recommendations are made:-

1. The improvement of the agricultural sector needs among others: reliable sources of credit to small farmers. To reach the objective, the institutions involved should involve the villages and the Rural Primary Co-operative Society leadership to appraise prospective borrowers. The assumption here is that the leaders in the villages are more conversant with the fellow farmers in their thriftiness and seriousness in their farming business and hence their repayment capacity. In so doing, the default rates and costs of administering the loans will be reduced substantially.
2. The banks need to educate the farmers on the procedures and conditions one has to follow to qualify for credit. Besides enlightening the farmers on credit issues will also encourage farmers to bank their money and hence increase their deposits. This is possible through establishing farmers outreach section with competent staff in the field whom besides appraising farmers credit need will also be involved in advising farmers on the importance and use of recommended farming techniques to get maximum production.
3. The *modus operandi* in providing credit to small scale farmers must be related to the special characteristics of small farmers rather than the conventional banking principles as applied to commercial businesses. In this case, simple collateral such as assessing the farmers' farming business and possessions can be regarded as

adequate security to their loan requests provided there is effective and proper supervision and technical advice . This will in a way increase the number of farmers benefiting from institutional credit.

4. Effective credit system should be accompanied with a good link with the extension services so as to ensure the use of the credit and its repayment. In this case, the extension services will ensure that the recommended farming techniques are within farmers reach.
5. To ensure that many small scale farmers have access to institutional credit, the institutions together with the government should mobilize the farmers to establish and make use of the Rural Savings and Credit Schemes in their respective Co-operative Societies. These Schemes will enable the institutions to mobilize enough deposits to further their lending portfolio and farmers participation in agricultural investment. These schemes will very much reduce loan administrative costs to the institutions, as much of the work involved in appraising the potential borrowers will be done by the members of the Scheme themselves.

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**APPENDICES**

## Appendix I. Tanzania: NBC lending to priority sectors (Tsh million)

Sector	Year				
	1986	1987	1988	1989	1990
Agricultural production	591.8	640	1226	3283	5682.8
Marketing of agricultural produce	11241.2	18871	37218	45170.1	56245.7
Building and construction	310.4	291	449	814.2	1168.4
Industries	2134.1	4730	9911	20024.7	26047.7
Transportation	477.9	649	1205	1610.2	2543.1
Import and distribution (Trade)	1155.1	2361	4976	8535.5	10953.0
Hotel and tourism	55.9	89	203	349.6	881.9
Exports	476.6	295	455	699.7	1652.0
Financial institutions	3.5	69	13	89.2	114.0
Others	194.4	305	519	652.8	1215.0
<b>Total</b>	<b>16640.9</b>	<b>20300</b>	<b>56175</b>	<b>836191</b>	<b>106503.6</b>

Source: NBC (1990) Annual Report and Accounts for the Year Ended 30th June 1990. pg.18.

## Appendix II. Tanzania: CRDB loans by regions (Tshs. million)

Region	1985/86	1986/87	1987/88	1988/89	1989/90
Arusha	44.4	96.0	113.5	330.4	425.1
Coast	21.0	66.4	22.3	27.3	146.9
Dar-es-Salaam	25.5	67.6	130.5	93.5	702.2
Dodoma	12.0	39.8	20.7	36.7	82.6
Iringa	187.4	323.7	369.6	402.2	626.2
Kagora	23.5	31.2	8.8	140.4	77.4
Kigoma	34.1	55.6	77.6	75.8	56.2
Kilimanjaro	124.5	184.3	115.7	173.5	242.2
Lindi	12.7	35.7	14.4	21.9	124.0
Mara	62.5	58.1	43.2	67.1	40.4
Mbeya	115.3	296.7	326.5	421.6	507.2
Morogoro	32.0	65.7	64.9	51.8	104.1
Mtwara	5.0	24.3	19.8	39.7	96.8
Mwanza	92.1	93.8	141.1	329.2	183.7
Rukwa	79.0	31.7	63.0	40.8	36.5
Ruvuma	88.1	60.1	173.3	58.5	24.5
Shinyanga	71.0	154.7	140.8	340.9	307.3
Singida	12.1	50.6	46.7	2.0	134.8
Tabora	161.4	221.6	284.5	363.4	415.2
Tanga	27.3	50.4	25.8	-	-
Zanzibar	-	2.6	0.4	0.4	3.4
<b>Total</b>	<b>1235.9</b>	<b>2010.6</b>	<b>2203.1</b>	<b>3046.0</b>	<b>5363.6</b>

Source: United Republic of Tanzania (1990) *Statistical Abstracts*: 1990 Bureau of Statistics, Dar-es-Salaam. pg 59.

## APPENDIX IV: QUESTIONNAIRE

FARMER'S QUESTIONNAIRE FOR A STUDY OF THE ROLE OF CREDIT  
IN THE ADOPTION OF IMPROVED AGRICULTURAL TECHNIQUES BY  
SMALL SCALE FARMERS.

## INTRODUCTION

Dear Farmer,

The objective of this study is to examine the factors which influence small scale farmers access to credit and how access in turn is related to ability to adopt agricultural innovations. It is our hope that the findings of this study will assist the government and the respective financial institutions to formulate a realistic credit policy for small scale farmers in Tanzania.

The success of the study rests on your cooperation in this exercise. We would like to assure you that your responses will be treated in the strictest confidence and thus will not be divulged to anybody.

Date-----Interviewer's Name-----  
District-----Division-----Village-----

A. Basic Information.

1. Farmer's identification No-----Age--- [Nearest years]
2. Gender: Male----- [1]  
          Female----- [2]
3. Head of household  
    Yes----- [1]  
    No----- [2]
4. Marital status  
    Single----- [1]  
    Divorced----- [2]  
    Widow----- [3]  
    Married----- [4]
5. Level of education  
    No education----- [1]  
    Adult education----- [2]  
    Primary education----- [3]  
    Secondary education----- [4]

B. Need of Credit and Fulfilment

What crops did you grow in the 1990/91 season?

- 1.
- 2.
- 3.
- 4.
- 5.

7. What was the size of each plot grown with each of the named crops and production obtained?

Crop	Size of the plot [acres]	Production [kgs]	Selling price/kg	Total value

8. Besides farming what other sources of income do you have [Non-farm income]? How much did get in the 1990 calender year?

	<u>Source of income</u>	<u>Amount of income</u>
1	Liquor brewing-----	
2	Carpentry-----	
3	Masonry-----	
4	Pottery-----	
5	Brick making -----	
6	Foundry-----	
7	Shop-----	
8	Tailoring-----	
9	Remission from children employed in towns -	
10	Others [Specify]-----	

9. Below is the list of important operations, purchased inputs, capital items used and other costs incurred in maize production in the 1990/91 season. Against each enlisted item indicate the cost incurred, source of funds, and type of credit [cash or kind], if any, obtained where family labour or otherwise was used, estimate the number of mandays spent on the farm.

Activity/Purchase

1. Land clearing: (a) Labour.

Source of labour	No. of mandays	Cost/manday	Total cost	Source of funds	Type of credit
------------------	----------------	-------------	------------	-----------------	----------------

Self  
Family  
Hired  
Mutual  
assistance

- (b) Equipment

Type of equip.	No of equip.	Cost/ equip	Total cost	Source of funds	Type of credit
----------------	--------------	-------------	------------	-----------------	----------------

Hand hoe  
Mattock  
Panga  
Axe

2. Ploughing: (a) Labour

Source of labour	No. of mandays	Cost/manday	Total cost	Source of funds	Type of credit
------------------	----------------	-------------	------------	-----------------	----------------

Self  
Family  
Hired  
Mutual  
assistance

(b) Equipment

Type of equip.	No. equip.	Cost/ equip	Total cost	Source of funds	Type of credit
----------------	------------	-------------	------------	-----------------	----------------

Hand hoe  
 Mattock  
 Toothed hoe  
 Ox-plough  
 Panga  
 Axe

(c) Others

	Total cost	Source of funds	Type of credit
--	------------	-----------------	----------------

Hired tractor  
 Transport

3. Planting: (a) Labour

Source of labour	No. of mandays	Cost/ manday	Total cost	Source of funds	Type of credit
------------------	----------------	--------------	------------	-----------------	----------------

Self  
 Family  
 Hired  
 Mutual assistance

(b) Equipment

Type of equip.	No. of equip.	Cost/ equip.	Total cost	Source of funds	Type of credit
----------------	---------------	--------------	------------	-----------------	----------------

(c) Others

	Total cost	Source of funds	Type of credit
--	------------	-----------------	----------------

Hired tractor  
 Transport

(d) Seeds

Variety (Specify)	Quantity in kg.	Price/kg.	Total cost	Source of funds	Type of credit
----------------------	--------------------	-----------	---------------	--------------------	-------------------

4. Weeding: (a) Labour

Source of labour	No. of mandays	Cost/ manday	Total cost	Source of funds	Type of credit
---------------------	-------------------	-----------------	---------------	--------------------	-------------------

Self  
Family  
Hired  
Mutual  
assistance

(b) Equipment

Type of equip.	No. of equip.	Cost/ equip.	Total cost	Source of funds	Type of credit
-------------------	------------------	-----------------	---------------	--------------------	-------------------

Hand hoe  
Others  
(specify)

5. Fertilizer application: (a) Labour

Source of labour	No. of mandays	Cost/ manday	Total cost	Source of funds	Type of credit
---------------------	-------------------	-----------------	---------------	--------------------	-------------------

Self  
Family  
Hired  
Mutual  
assistance

(b) Equipment

Type of equip.	No. of equip.	Cost/ equip.	Total cost	Source of funds	Type of credit
----------------	---------------	--------------	------------	-----------------	----------------

Hand hoe  
Others  
(specify)

(c) Fertilizer.

Type of fert.	Quantity in bags	Cost/ bag	Total cost	Source of funds	Type of credit
---------------	------------------	-----------	------------	-----------------	----------------

TSP  
S/A  
CAN  
UREA  
Others  
(specify)

6. Pesticide application: (a) Labour

Source of labour	No. of mandays	Cost/ manday	Total cost	Source of funds	Type of credit
------------------	----------------	--------------	------------	-----------------	----------------

Self  
Family  
Hired  
Mutual  
assistance

b) Equipment

Type of equip.	No. of equip.	Cost/ equip.	Total cost	Source of funds	Type of credit
----------------	---------------	--------------	------------	-----------------	----------------

(c) Pesticides

Type of pesticide	Quantity in kg.	Price/ kg.	Total cost	Source of funds	Type of credit
-------------------	-----------------	------------	------------	-----------------	----------------

7. Harvesting: (a) Labour

Source of labour	No. of mandays	Cost/ manday	Total cost	Source of funds	Type of credit
------------------	----------------	--------------	------------	-----------------	----------------

Self  
 Family  
 Hired  
 Mutual  
 assistance

(b) Equipment

Type of equip.	No. of equip.	Cost/ equip.	Total cost	Source of funds	Type of credit
----------------	---------------	--------------	------------	-----------------	----------------

Panga  
 Matchet  
 Others  
 Gunny bags

(c) Storage insecticide

Type of insect.	Quantity in kg.	Cost/ kg.	Total cost	Source funds	Type of credit
-----------------	-----------------	-----------	------------	--------------	----------------

(d) Others

	Total cost	Source of funds	Type of credit
--	------------	-----------------	----------------

Transport

10. The following farm operations/ purchases constitute the main components which call for additional expenditure. Indicate the type of assistance, the source and whether the assistance was sufficient or insufficient.

Operation/ purchase	Type of assistance	Sufficient/ insufficient
Land clearing		
Ploughing		
Planting		
Fertilizer application		
Pesticide application		
Harvesting		
Fertilizer		
Pesticide		
Seeds		
Storage insecticides		

Sources

- |                         |                             |       |
|-------------------------|-----------------------------|-------|
| 1.Friends and relatives | 2.Shopkeepers               | 3.NBC |
| 4.CFDB                  | 5.Primary<br>Co-op. Society |       |
| 6.Cooperative Union     | 7.Marketing Board           | 8.TFA |
| 9.Others<br>(Specify)   |                             |       |

Type of Assistance

- |              |                           |             |
|--------------|---------------------------|-------------|
| 1.Financial  | 2.Labour.                 | 3.Material. |
| 4.Equipment. | 5.Any other<br>(specify). |             |

C. Extent of Adoption of Improved Agricultural Techniques.

11. Are you familiar with the recommended improved/modern farming practices in maize production in this area?

Yes \_\_\_\_\_ (1)  
No \_\_\_\_\_ (2)

12. The following is the list of the recommended practices against each practice indicate your practice in the last season where you differ give reasons.

Practice	Recommended practice	Actual practice	Reason for none-conformity
Maize variety			
Date of planting			
Spacing			
Seed rate/ha.			
Type of fertilizer			
Fertilizer rate/ha.			
Pesticide			
Type			
No. of application			
Weeding			
No. of times			

#### SOURCES OF CREDIT.

##### (a). Formal Credit Sources.

13. Are you aware of credit giving institutions in the Region/District?

Yes \_\_\_\_\_ (1)  
 No \_\_\_\_\_ (2) (If the answer is No. go to question 15).

14. If yes, indicate those you know (Let the farmer mention those known to him/her).

CRDB \_\_\_\_\_ (1)  
 NBC \_\_\_\_\_ (2)  
 Marketing Board \_\_\_\_\_ (3)  
 Cooperative Union----- (4)  
 Cooperative Society \_\_\_\_\_ (5)  
 TFA \_\_\_\_\_ (6)  
 Others (Specify) \_\_\_\_\_ (7)

15. If not, have you ever heard or seen Bank Officials campaigning for deposit mobilization?

##### Heard

Yes \_\_\_\_\_ (1)  
 No \_\_\_\_\_ (2)

##### Seen

Yes \_\_\_\_\_ (1)  
 No \_\_\_\_\_ (2)

16. If yes, which banks did they come from?

Bank(s) \_\_\_\_\_

17. What other messages did they bring besides campaigning for deposits?  
Message.
18. If you did not hear or see Bank Officials, from which other source did you get information or which made you aware of the existence of credit giving institutions.  
Other sources.
- 1.
  - 2.
  - 3.
19. Do you see the need to use credit in farming?  
Yes \_\_\_\_\_ (1)  
No \_\_\_\_\_ (2) (If No skip to question 21)
20. If yes, why do you need credit?
21. If not give reasons.
22. Have you ever sought credit from NBC?  
Yes \_\_\_\_\_ (1)  
No \_\_\_\_\_ (2) (If no, skip to question 34)
23. If yes, how many times have you applied for credit?  
Times applied.  
Once \_\_\_\_\_ (1)  
Twice \_\_\_\_\_ (2)  
Thrice \_\_\_\_\_ (3)  
More than thrice \_\_\_\_\_ (4)  
(specify)  
N/A \_\_\_\_\_ (5)
24. How many times were you successful in securing credit?  
Times successful  
Once \_\_\_\_\_ (1)  
Twice \_\_\_\_\_ (2)  
More than twice \_\_\_\_\_ (3)  
(specify)  
N/A \_\_\_\_\_ (4)
25. For what purpose were you seeking credit?  
1. For buying seasonal inputs and meet operational costs  
Yes \_\_\_\_\_ (1)  
No \_\_\_\_\_ (2)  
N/A \_\_\_\_\_ (3)

2. For capital items (specify)

Yes \_\_\_\_\_ (1)  
 No \_\_\_\_\_ (2)  
 N/A \_\_\_\_\_ (3)

26. If credit was denied, what were the reasons given by the bank?

27. If the credit was obtained indicate the season, amount approved, amount repaid and arrears (if any).

Season	Amount approved (Tshs)	Amount repaid (Tshs)	Arrears (Tshs)

28. If in arrears give reasons

29. Were the loan disbursements made in time i.e before the beginning of the season?

Yes \_\_\_\_\_ (1) (If yes, skip to question 31)  
 No \_\_\_\_\_ (2)  
 N/A \_\_\_\_\_ (3)

30. If not, what were the reasons given by the Bank for delay?

31. Among the following loan disbursements which one is the most valuable to you?

Kind \_\_\_\_\_ (1)  
 Cash \_\_\_\_\_ (2)  
 Both (kind and cash) \_\_\_\_\_ (3)  
 N/A \_\_\_\_\_ (4)

32. What benefits have you obtained from using credit from NBC?

33. What problems have you faced in obtaining credit from the NBC?

34. Have you ever sought credit from CRDB?

Yes \_\_\_\_\_ (1)  
 No \_\_\_\_\_ (2)  
 N/A \_\_\_\_\_ (3)

35. If yes, how many times have you applied for credit?

Times applied.  
 Once \_\_\_\_\_ (1)  
 Twice \_\_\_\_\_ (2)  
 Thrice \_\_\_\_\_ (3)  
 More than thrice (specify) \_\_\_\_\_ (4)  
 N/A \_\_\_\_\_ (5)

36. If the credit sought was obtained indicate the season, amount approved, amount repaid and arrears (if any).

Season	Amount approved (Tshs)	Amount repaid (Tshs)	Arrears (Tshs)

37. If you are in arrears give reasons

38. Were the disbursements made in time i.e. before the beginning of the season?

Yes \_\_\_\_\_ (1) (If yes, skip to question 43)  
 No \_\_\_\_\_ (2)  
 N/A \_\_\_\_\_ (3)

39. If not, what were the reasons given by the bank for delay?

40. Among the following loan disbursements which one is the most valuable to you?

Kind \_\_\_\_\_ (1)  
 Cash \_\_\_\_\_ (2)  
 Both (cash and kind) \_\_\_\_\_ (3)

41. What benefits have you obtained from using credit from CRDB.

42. What problems have you faced in obtaining credit from CRDB?

43. Have you ever sought credit from:

1. Marketing Boards.

Yes \_\_\_\_\_ (1)

No \_\_\_\_\_ (2)

If yes for what purpose?

Indicate the amount granted, repaid and arrears (if any)

Amount granted (Tshs)	Amount repaid (Tshs)	Arrears (Tshs)

2. Cooperative Union

Yes \_\_\_\_\_ (1)

No \_\_\_\_\_ (2)

If yes, for what purpose?

Indicate the amount granted, repaid and arrears (if any)

Amount granted (Tshs)	Amount repaid (Tshs)	Arrears (Tshs)

3. Cooperative Society

Yes \_\_\_\_\_ (1)

No \_\_\_\_\_ (2)

If yes for what purpose?

Indicate the amount granted, repaid and arrears (If any)

Amount granted (Tshs)	Amount repaid (Tshs)	Arrears (Tshs)
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4. Any other (Specify)

Yes \_\_\_\_\_ (1)

No \_\_\_\_\_ (2)

If yes, for what purpose?

Indicate the amount granted, repaid and arrears (if any)

Amount granted (Tshs)	Amount repaid (Tshs)	Arrears (Tshs)
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(D). Informal Sources of Credit.

44. How do people obtain credit from within the village

45. What are the sources of credit in the village?

46. From the said sources above what are the conditions one has to fulfil to get credit. (Also indicate the advantages and disadvantages)

1. Source

Conditions/requirements

Advantages

Disadvantages

2. Source  
Conditions/requirements

Advantages

Disadvantages

3. Source  
Conditions/requirements

Advantages

Disadvantages

47. If you have borrowed in the last season specify the following.

Season	Amount of credit	Form of credit		Used	Arrears
		Cash	Kind		

48. If you are in arrears what are the reasons?

49. If you are in arrears, can you still borrow from the same source?

Yes \_\_\_\_\_ (1)  
No \_\_\_\_\_ (2)  
N/A \_\_\_\_\_ (3)

50. Do you prefer to borrow from the Banks, Cooperative Union, Society, Marketing Board or Local sources you have mentioned above.

Banks, Cooperative etc. \_\_\_\_\_ (1)  
Local sources \_\_\_\_\_ (2)

51. Give reasons, why you prefer the;

1. Banks, Cooperative Union etc.

2. Local sources.

(D). Assets and Loan Security

52. Do you have items as security which you can transform to cash as soon as you want (current assets)

Yes \_\_\_\_\_ (1)  
No \_\_\_\_\_ (2)

53. If yes, what are they

Crop products:

Maize \_\_\_\_\_ (1)

Beans----- (2)

Coffee \_\_\_\_\_ (3)

Others (Specify) \_\_\_\_\_ (4)

Animals

Cows \_\_\_\_\_ (5)

Sheep \_\_\_\_\_ (6)

Goats \_\_\_\_\_ (7)

Others (specify) \_\_\_\_\_ (8)

54. Have you ever used land as a security for credit

Yes----- (1)

No \_\_\_\_\_ (2)

55. If yes, explain when and type of loan

56. Do you have a title deed to your land?

Yes----- (1)

No----- (2)

57. If yes, explain when obtained and lease time

When obtained

Lease time

(E). General Farmers Comments.

58. Do you think that the chance of getting credit depends on whether you are a man or a woman.

Yes----- (1)

No----- (2)

59. Is this true of all banks/institutions

Yes----- (1)

No----- (2)

60. If yes, explain

61.If no, explain

62.How do you compare credit conditions of Banks and Local sources (relatives, friends, shopkeepers etc.)

63.What is your opinion about the efficiency of the Co-operative Union in;

1. Delivery of inputs  
Comment

2. Channelling credit to farmers  
Comment

3. Ensuring credit repayment  
Comment

4. Marketing of crops  
Comment

64.How would you like the credit system to be changed in order for you to benefit more.

65.Whom do you think has more access to bank credit?

65.Any other comment on agricultural credit to small scale farmers?

THANK YOU FOR YOUR PATIENCE AND CO-OPERATION.