

**SUSTAINABILITY OF SMALL FARMER GROUPS IN EXTENSION:  
A CASE OF OXENIZATION PROJECT IN SUMBAWANGA  
DISTRICT, TANZANIA**

**BY**

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**DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
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## **ABSTRACT**

This study examined the sustainability of small farmer groups in extension, in Sumbawanga District, Tanzania. The specific objectives were to examine extension activities done by farmer groups; identifying factors influencing sustainability of SFGs and challenges faced in sustaining those groups. The study involved 80 respondents from two project villages and employed a cross-sectional design. Data were collected using interview schedule, focus group discussion (FGDs) and key informants interviews. The data were analyzed using content analysis and SPSSs computer programme mainly frequencies and percentages to describe the major variables. In the case of extension activities of the groups the study revealed that farmer groups were performing extension activities including demonstration of technologies in ox ripping and weeding integrated with the use of legume cover crops (87.5%) and distribution of improved inputs. Other extension activities that can be done by SFGs includes providing market information; education to livestock keepers on improved practices; and livestock dipping services. Regarding sustainability of the groups, the findings show that low participation of members' in group activities; perceived trend of membership; activeness of members in group activities after donor withdrawal have negatively influenced sustainability of the groups. The groups were still dependent and their sustainability is doubtful. The groups were faced with challenges of availability of donors; committed group leadership; poor performance of the previous cooperatives and unreliable rainfall that made some group projects fail. This study recommended that to increase sustainability of the groups, donors should put emphasis on empowering the groups with skills and knowledge that enable them implement project activities with minimum external dependency, encourage self-reliance and involve village authorities in monitoring group activities after project

termination. Collective efforts among village authorities, councilors and Members of Parliament should be requested to help in soliciting funds for continuing implementing projects activities after donor withdrawal.

## DECLARATION

I, **Simon Stephen Msoka**, do hereby declare to the Senate of Sokoine University of Agriculture that, this dissertation is my own original work, and has not been submitted or concurrently being submitted for a higher degree award in any other University.

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(MSc. Candidate)

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**Date**

The above declaration is confirmed

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**Date**

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## **DEDICATION**

This work is dedicated to my beloved parents for laying down the foundation of my education. Without their endless love, care, encouragement and support throughout my life, I could not have grown up to earn this great achievement. I ask God to shower them with His eternal love and blessing for the rest of their lives on earth and in Heaven.

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## LIST OF ABBREVIATIONS

ACC Network	-	Administrative Committee on Coordination on Rural Development and Food Security
AHI	-	African Highlands Initiatives
AMSDP	-	Agricultural Marketing System Development Programme
ARI	-	Agriculture Research Institute
ASDP	-	Agriculture Sector Development Programme
CATAD	-	Center for Advanced Training in Agriculture Development
DADPs	-	District Agriculture Development Plans
DAP	-	Di-Ammonium Phosphate
DED	-	District Executive Director
DRC	-	Democratic Republic of Congo
FAO	-	Food and Agriculture Organization of the United Nations
FFS	-	Farmer Field School
FGs	-	Farmer Groups
FGD	-	Focus Group Discussion
FYM	-	Farm Yard Manure
GDP	-	Gross Domestic Product
IIRR	-	International Institute for Rural Reconstruction
ILO	-	International Labour Organization
JK	-	Jakaya Kikwete
Kg	-	Kilogram
KII	-	Key Informant Interviews
MAC	-	Ministry of Agriculture and Cooperatives
MAFS	-	Ministry of Agriculture and Food Security
MAFSC	-	Ministry of Agriculture, Food Security and Cooperatives
MATF	-	Maendeleo Agricultural Technology Funds
MVIWATA	-	Mtandao wa Vikundi vya Wakulima Tanzania
NAADS	-	National Agricultural Advisory Services
NBS	-	National Bureau of Statistics
NAEP II	-	National Agriculture Extension Programme Phase II
NGOs	-	Non Governmental Organizations
NSGRP	-	National Strategy for Growth and Reduction of Poverty
RCS	-	Red Cross Society
RFSP	-	Rural Financial Services Support
SACCOS	-	Savings and Credit Cooperative Society
SFGs	-	Small Farmers' Groups
SPSSs	-	Statistical Package for Social Sciences
UMADEP	-	Uluguru Mountain Agricultural Development Project
UNDP	-	United Nations Development Programme
URT	-	United Republic of Tanzania
USAID	-	United States Agency for International Development
VAEO	-	Village Agricultural Extension Officer



## **CHAPTER ONE**

### **1.0 INTRODUCTION**

#### **1.1 Background Information**

Tanzania's economy depends largely on agriculture for its development. Approximately 80% of the poor live in the rural areas where about 70% of the population live (URT, 2006) and depends on agriculture for their livelihoods. It is argued that agriculture is not only the economic base for the majority of the poor but also constitutes a key economic sector in Tanzania. According to the National Strategy for Growth and Reduction of Poverty (NSGRP) document, agriculture sector accounts for 44.7% of the national Gross Domestic Product (GDP) and 60% of the export earnings (URT, 2007).

In order to increase agricultural growth and its contribution in the economy, agricultural extension is essential. Extension involves communication of information to help people form sound opinions and make good decisions (Van den Ban and Hawkins, 1996). In adopting a learning process approach, the function of extension is not only one of technology transfer but also ensuring effective two-way flow of information with the aim of empowering farmers through knowledge rather than issuing technical prescriptions (World Bank, 2005).

In many countries, agricultural extension is being reoriented to provide more demand-based and sustainable services, taking account of the diversity, perceptions, knowledge, and resources of users. The options governments are pursuing include full commercialization, devolving control to local government units, cost sharing between extensionists and farmers, contracting service delivery to private firms, Non Governmental



Organizations (NGOs) and/or technicians from cooperatives and farmers' organizations and supporting farmers' self-help groups (World Bank, 2005).

Government and NGOs use various extension approaches to deliver extension services to farmers. The failure of various extension delivery approaches in developing countries to effectively engineer significant and sustainable agricultural growth has become a major concern to all stakeholders, including the donor community (Madukwe, 2006). Earlier approaches to extension emphasized the use of individual contact farmers. The idea was that new agricultural technologies would flow from innovators to the rest of the farming community through the “trickle down effect”. However, this assumption was found to be inappropriate, particularly in developing countries where the contact farmer approach seems to have failed to improve the majority of peasant farmers (Axinn, 1988).

Smallholder farmers organize themselves to improve their access to technology through representative organizations (farmers' unions), legally registered bodies (such as cooperatives) or special interest farmer groups formed to receive extension advice (MAFS, 2003). Individual extension teaching methods are costly in terms of time and effort and only reach a limited number of people. Because of this, the group approach as one of the tools of agricultural extension, particularly for communicating with rural people has gained popularity. Many of the more successful extension interventions involving group formation have been drawn on traditional farmer groups, which have too often been ignored in donor funded development programmes (Wambura *et al.*, 2007).

In recent years, farmer groups have become very popular in agricultural related activities in both low and high income countries (Stevens and Terblanche, 2004). These have been both

formal (e.g. cooperatives) and informal in nature. Many factors have motivated the formation of groups, including an efficient means for transmitting information, sharing information, identifying and evaluating relevant technologies, improving on-farm/off-farm linkages (e.g. providing credit, purchasing inputs, and marketing of products) and encouraging empowerment of farmers. According to FAO (1986), such groups have grown from a number of sources such as political parties, economic activities, local government organizations and the change from the traditional or family-based relationships to broader groups based on common interest.

The old practice of extension-farmer contact on one-to-one basis, though very effective, is expensive and unsustainable as the sole means of reaching farmers with agricultural technology (Madukwe, 2006). New methods emphasize the passing of agricultural technology to farmers in organized farmer groups. Working with groups of farmers allows staff to interact with larger number of farmers at the same time, thus using the scarce resources efficiently (IIRR, 1998). One major benefit of the group is that farmers support each other to learn and adopt innovations (Madukwe, 2006). The interaction between group members is more than with those outside the group thus farmer-to-farmer extension is amplified. Experienced farmers become the best discussion partners for other farmers.

Many agricultural extension programmes and projects have been recommending on the use of farmer group approach in delivering extension services. The farmer group approach plays a valuable role in policy advocacy and in realizing economies of scale. In order to improve the efficiency of Village Agricultural Extension Officer (VAEO) visits to farmers, the National Agriculture Extension Programme Phase II (NAEP II) emphasized the use of farmers groups to facilitate higher coverage by meeting more farmers and spend more time

for demonstration and discussion (MAC, 1995). According to Rutatora and Mattee (2001), the emerging farmer groups, if well structured and provided with the necessary support, may become potential providers of extension services within their areas of jurisdiction.

One of the extension project implemented using Small Farmers Group (SFGs) approach is the oxenization project in Njombe and Sumbawanga districts. The major objective of the project was to reduce drudgery and increase labour productivity by using Draft Animal Power implements. The project was funded by MATF FARM-Africa and operated for two years from November 2004 to October 2006. In Sumbawanga district, the project operated in Matai and Mbuza Villages. Four small farmer groups were formed in each village in the project area in which each group was composed of 20 farmers' households. The project operated for two years after which the farmer groups were supposed to continue with the project activities in training and disseminating ox-ripping and weeding technologies to other farmers. This study seeks to examine the sustainability of the farmer groups in delivering extension services in the project villages.

## **1.2 Problem Statement**

Sustainability of projects is increasingly becoming an important item of the development agenda. The efforts devoted by development projects to enhance wellbeing of the targeted beneficiaries become meaningless if project benefits are not sustained (Luhasi, 1998). Group approach has been used by various development agencies as a means of delivering extension services and assisting rural people to improve their living standard whereby a member in a group is assisted in terms of grants or loans through his/her group. The basis of the approach is that the majority of people is poor and cannot manage to improve their living standard individually due to their limited resources. The alternative solution to such

problem is to organize themselves in groups to benefit from the extension services that can be offered by a particular agency or project.

Although the SFGs have shown effectiveness in delivering extension services and preferred by many donor agencies, their sustainability is least understood. Experience shows that some of the farmers groups disintegrate at the end of projects while other collapse completely after withdrawal of the donor. FAO (1999) reported that, while we know much about the importance of SFGs and group-run businesses, we appear to know surprisingly little about how to build up effective and sustainable groups. This study therefore intended to examine the factors that influence the sustainability of small farmer groups in extension.

### **1.3 Problem Justification**

According to ACC Network (2000), currently governments, donors, NGOs and development assistance agencies have become increasingly interested in the use of SFG approaches to mobilize the self-help potential of small rural producers and the poor. The Ministry of Agriculture, Food Security and Cooperatives (MAFSC) in Tanzania has adopted the FFS approach which is now being promoted all over the country. Besides, MAFSC through the Agricultural Sector Development Programme (ASDP) and DADPs at District level emphasizes the use of farmer group approach in training farmers (URT, 2006). Thus, results obtained from this study will enable various stakeholders working with SFGs to understand the factors that influence the sustainability of SFGs in delivering extension services, which will in turn contribute to the formation of sustainable groups.

## **1.4 Objectives of the Study**

### **1.4.1 General objective**

The general objective of this study was to examine the sustainability of small farmer groups in delivering extension services in Sumbawanga District.

### **1.4.2 Specific objectives**

1. To examine the extension activities carried out through farmer groups
2. To identify factors influencing sustainability of the small farmer groups
3. To identify challenges faced in sustaining small farmer groups.

### **1.4.3 Research questions**

1. What are the extension activities carried out through the farmer groups?
2. What are the factors influencing sustainability of the small farmer groups?
3. What are the challenges faced in sustaining small farmer groups?

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Overview of Sustainability

The word sustainable has its roots in Latin word *subtenir*, meaning ‘to hold up’ or ‘to support from below’. The term sustainability is too intangible to be measured directly. The best way is to identify measurable phenomena, that when put together, suggest how sustainable the system might be. Different authors in different contexts have defined the term sustainability. Sustainability refers to an outcome that exists for a prolonged period of time (FAO, 1989). According to Brinkerhoff and Goldsmith (1990), the term sustainability means the continuation of benefits flow to the people with or without the programmes or organizations that stimulated those benefits in the first place. ILO (1990) defined sustainability as the ability of a project or programmes to deliver an appropriate level of benefits for an extended period after major financial, managerial and technical assistance when external support is terminated. According to CATAD (1988) cited by Waritu (2007), the concept of sustainability is reduced to the question of whether the local institutions will be able to continue providing services that have been provided by the donor aided projects.

Furthermore, in order to fulfill their need, farmers form groups as an approach of meeting these needs (Chibehe, 2004). The group must be sustainable in the sense of maintaining their existence and continuing to serve members with respect to the original goals. A project or programme is said to be sustainable if it continues to deliver services or benefits after the donor’s technical, managerial and financial support has ended (USAID, 1987). As adopted by FAO (2002), the meaning of the term sustainability with regard to development programme is the ability of the local community to meet the costs of the programmes. In

the context of this study, sustainable groups are those which maintain their survival and continue performing their activities with respect to their original goals. Other indicators include benefits from the groups, members' level of participation in groups after donor withdrawal, perceived trend of membership, activeness in group activities, continuity of group activities in the future and continuity of the groups in the absence of external support.

## **2.2 Definition of Farmer Group**

Burkey (1993) defined farmer group as a composition of men and/or women who come together to pursue a common interest related to individual or group improvement in the sphere of economic, political and/or social development. According to Madukwe (2006), a farmer group is a collection of farmers interacting with one another towards achieving a common goal. In addition, ACC Network (2000) defined a small farmer group as an informal, voluntary self-help group composed of farmers from the same village or community intent on undertaking mutually beneficial activities related to their economic and their social well being. Spontaneity is an important characteristic of such groups and they are bottom up rather than top down. Voluntary membership is a key principle in group formation and that no one should be forced to join a group against their own wishes. Wambura and Kapinga (2005) in their study of farmer organizations found that unlike existing small farmer groups, the self-managed small farmer groups were not formed under any organization and furthermore, community members themselves initiated them.

## **2.3 Rationale of Farmer Groups**

Farmer groups aims at developing local skills and empowering local people to solve their own problems. The rationale of proposing farmers groups as a method of extension is that

more farmers are reached at less cost; there is more effective learning environment when people with similar interests are involved in a group; there is more acceptance of agricultural technologies by farmers when decisions are taken in a group as well as more commitment to decisions taken jointly (Garforth, 1982 and Kauzeni, 1989). Farmer groups and/or associations can provide a better atmosphere in which new or improved technical information can be introduced and evaluated; have a multiplier effect in cases where farmer motivators or extensionists are used; share of information and experiences, and with group support, help members to make better and more informed decisions (Rutatora and Mattee, 2001). In addition to that, Dollo (2007) in his study of traditional farmers' group supporting sustainable farming found that most farmers recognized that without farmers' groups, agro-ecosystem management will easily weaken, and the technical ecological knowledge which supports it will quickly erode. Working with groups of farmers allows extension staff to interact with large numbers of farmers at a time, thus using scarce resources efficiently.

Successful farmer groups can build mutual empowerment. According to Jost *et al.* (2005), the following are five very important reasons for encouraging the formation of farmer groups:

- a) To provide support for each other. This becomes particularly important when farmers are planning or implementing changes, especially if they are unconventional. Having the support of other farmers who share the same vision or goals is critically important for farmers who are willing to start and continue with any new agricultural innovation;
- b) To obtain, impart, and exchange information. These are particularly important functions of groups for improving the efficiency with which



outsiders can deal with farmers both in giving and collecting information and ensuring greater use by farmers of information possessed by other farmers. The need for sharing information is becoming particularly important because many current agricultural problems are fundamentally human challenges that require more than just technology for their resolution;

- c) To create opportunities that would not be available if farmers operated independently. Obvious examples of these would be collective purchase of inputs to take advantage of price discounts and collective marketing of products to improve efficiency of marketing and service specific outlets;
- d) To influence institutional resources. Farmer groups can encourage collective representation and action, particularly with external agencies/institutions. Such actions, in turn, facilitate farmers believing in them and in their ability to control their own destinies;
- e) To encourage systems thinking and dialogue because of locational specificity of solutions. This reason relates to the need for thinking in a systems perspective and the fact that solutions to problems are likely to be farm specific. Consequently, solutions are not likely to be mechanistic or instructions driven but rather evolve after extensive thinking and consultation through discussion with others, especially farmers.

ACC Network (2000) reported that working with small farmer groups could reduce the cost of accessing inputs, production technologies, information and markets by sharing these costs amongst all members of the group. Similarly, FAO (1999) reported that the use of small informal farmer group approaches to deliver development services to farmers has

proven to be an effective institutional device for lowering the delivery costs of these services, to market and promoting farmer self development.

## **2.4 Factors Influencing Sustainability of Farmer Group**

According to Chibehe (2004), sustainable group must be able to maintain their existence and continuing supporting its members with respect to their original goals. Group characteristics that promote sustainability include unity of purpose, transparency and accountability of leadership (Layne *et al.*, 2006). Similarly, a study of the Uluguru Mountain Agricultural Development Project (UMADEP) by Nombo (1995) also noted that farmers joined groups because of the benefits, which could be obtained from those groups. Meeting the members expected benefits is an important factor for the group sustainability. Sustainability of farmer groups can be influenced by various other factors, which can be grouped into two categories: internal and external factors.

### **2.4.1 Internal factors**

#### **2.4.1.1 Farmers' group empowerment**

Farmer groups aims at developing local skills and empowering local people to solve their own problems. Small farmer groups may suffer from illiteracy, poor leadership, poor managerial skills, and poor access to resources and services (Opondo *et al.*, 2006). The ability of farmers to identify causes of problems facing them in agricultural production and ways in solving them is an important aspect of farmer group empowerment. According to Yusuf and Kees (2007), empowering of small farmer groups is reached by helping and enabling them to analyze their own situation, identify and prioritize the problems and to seek the right solutions by combining their indigenous knowledge with improved knowledge. Furthermore, ACC Network (2000) pointed out that small farmers working through small groups must acquire skills in collective decision-making and problem

solving as well as notions of management and democracy. Rouse (1996) in his study of empowering rural women through small farmer groups found that there was increased confidence and decision making ability of women group members. This empowerment of group members had an effect on the community as a whole, with signs of increased civic involvement of group members and their ability to take on leadership roles in other community work. Empowerment of group members with skills that will enable them identify their problems and make the right decision for the solution will consequently increase group performance and hence ensure continuity and sustainability of the groups.

#### **2.4.1.2 Farmers' participation**

Participation is a social interaction especially in group meetings and collective decision-making. Participation opens up opportunities for group members to share experience and get involved in decision-making. Proactive efforts are needed to ensure that opportunities for participation in new technology are open to all farmers including the poor, indigenous peoples, and other marginalized groups. Through making farmers influential and responsible clients rather than passive beneficiaries of the extension service improves sustainability both of the benefits of investment in new technology and of the service itself (World Bank, 2005).

According to FAO (1999), where participation rate of group members is consistently high, it usually indicates that the group is meeting the members' needs and the farmers are enjoying the benefits of group, which increases the sustainability of the group. Dollo (2007) in working with farmer groups in traditional irrigation system found that the mission of these groups is reflected in the management and sharing of water in the community, which recognizes that water is the common concern which binds the group.

Member solidarity and participation in their common activity is essential for the groups' survival that eventually increases its sustainability.

#### **2.4.1.3 Group cohesiveness**

Cohesiveness is the ability of the group to stick together. Cohesiveness is the degree to which members of the group desire to remain in the group (Ofuoku *et al.*, 2008). That is, how closely the members interact or the resultant of all forces acting on the members to remain in the group. Cohesiveness is considered vital in a group decision-making, goal attainment identity and members' satisfaction. Group cohesiveness refers to the extent to which members of a group are committed to the group. Group might fail because of conflicts among the members (Burkey, 1993 and IIRR, 1998). The members must have similar characteristics as well as common understanding about the group. Groups in which members are strongly attracted to the group are said to be high in cohesiveness, while groups in which there is little attraction on the part of the members are said to be low in cohesiveness (Ofuoku *et al.*, 2008). When the group is more cohesive it implies that individual group members are committed to the group and not likely to violate the norms of a group to which they are strongly attached. This will contribute to the continued survival of the group which is indicative of its sustainability.

#### **2.4.1.4 Members' common interest**

Group members must share common interests. Voluntary membership is a key principle for group formation. Group composed of members with dissimilar occupation will find themselves pulling in different directions (Burkey, 1993). Membership will not be in the interest of either the group or the individual unless there is individual motivation to join the group. This motivation must not be imposed from outside, and if it is, the group will fail.

According to Yusuf and Kees (2007), low mutual trust among members of new small farmer groups and poor leadership may lead to the break up of the group soon after its inception. Jost *et al.* (2005) reported that group members need to have common interests that translate into clearly spelt out objectives; agree on operational rules for the group and assignment of responsibilities within the group; be willing to actively play their part in discussions, be involved in the necessary decision-making activities, help keep the requisite records, and participate actively in the group activities. Individuals must see personal self-interest served within the collective group interest. If these aspects are fulfilled by members in their group, sustainability of the group can be achieved.

#### **2.4.1.5 Social cultural homogeneity**

Social cultural factors also affect group members' solidarity and performance. Group members must have similar characteristics that will make them to have a common bond. A common bond means less disputes and more efficient learning (Madukwe, 2006). When small group membership is homogeneous i.e when member's share some common bond, like locational proximity, a similar income activity, or they come from the same socio economic background then the likelihood of inter-member conflict would be low or would not take place at all and consequently more solidarity and increased sustainability of the group (FAO, 1999). According to Place *et al.* (2004), lack of homogeneity among the group members leads to diverse interests of the group members and therefore lack of cooperation within the group. Similarly, Rouse (1996) reported that farmer groups whose members are having similar backgrounds and similar resource bases tended to have fewer internal conflicts and functioned better than those with a more heterogeneous membership. Higher levels of social cultural homogeneity increase the possibility of minimizing conflicts and disagreements among group members.

#### **2.4.1.6 Group objectives versus individual benefits**

In order for the groups to be sustainable, they should have clear and specific objectives that they are intending to achieve as a group. According to Place *et al.* (2004), the need “to do something” is central to the sustainability of the group. NAADS (2003) reported that in groups with joint activities such as a crop enterprise or savings and credit arrangements, the attendance and participation of members is higher than those without. Similarly, Place *et al.* (2004) reported that the outputs or a direct benefit to the individuals is arguably the most important because these directly influence the welfare of group members and sustainability of the groups. According to Jost *et al.* (2005), farmers are most likely to continue being members of a specific group as long as they perceive that the benefits of belonging to them outweigh the costs associated with them. In this respect, groups with a marketing function requiring collective action are likely to be most sustainable because these influence the prices farmers receive for their products.

#### **2.4.1.7 Group size and manageability**

Membership of a group varies, and it is advantageous to have a small number of people forming it. A group size of between 20 and 30 is ideal and manageable in order to provide face-to-face interaction, better communication and free flow of information to the farmer group members (IIRR, 1998; Madukwe, 2006). This is because the groups are smaller and more manageable, and their members have more in common than larger wide village cooperatives. Large groups will be dominated by those members who already have some degree of self confidence (Burkey, 1993). If the group is large it becomes difficult to manage and there is a risk of being dominated by few members who will be speaking for the whole group and limit participation of other members. NAADS (2003) found that management of large groups become difficult as it take too long to make decisions thus

delaying implementation, as well as requiring a lot of time and resources to mobilize members for action.

In small groups, all members have the opportunity to speak and contribute their energy and ideas to group development (FAO, 1999). Under such circumstances, group members are more likely to trust each other and accept joint responsibility for any actions the group takes. Rouse (1996) reported that developing sustainable small farmer group is a long-term process, requiring a minimum three to four years. He added that the best way to start this process is by creating small informal groups (5 to 15 members), organized around a common need. The small group environment provides optimal conditions for group members' learning of organizational, problem-solving and technical skills which eventually facilitate effective performance and sustainability of the group.

#### **2.4.1.8 Group leadership and decision making**

There is an increasing recognition that leadership is more effective if it is shared among a number of players, who have complementary skills. According to Jost *et al.* (2005), group leaders who earn the respect of members through their character and commitment build trust and create a worthy example for others to emulate. Group leadership must communicate a vision of how their cooperation can move the group from independence to interdependence for the benefit of everyone. ACC Network (2000) reported that at small farmer group level, shared or rotating leadership systems, with leadership changing hands by regular rotation, provide an opportunity for each member to "learn the ropes" and thus be in a better position to exercise control over the group. All members should acquire minimum skills in order to understand how their group works, including making common

decisions for the group by all members. Without this, there will be a risk of domination by one person who is seen capable than other members.

According to Jost *et al.* (2005), attention needs to be paid to the possibility of burnout of the leadership and more active members. To avoid this, it is important to rotate leadership and other responsibilities amongst the farmer group members. The author added that in the end, leadership shows itself in the ability to set priorities, to organize resources around those priorities, and to implement activities in a disciplined manner. Leadership, however, does require support in order to be effective, particularly in situations where something is being advocated that is different from conventional wisdom. According to Kilpatrick *et al.* (2006), the type of leadership that builds effective collaborative activity in groups has been described as enabling leadership. Enabling leadership empowers others to take on a variety of roles, including leadership roles in the groups. Good leadership enables the group to perform effectively its group activities and be able to achieve the groups' objectives, which in turn contributes to continued existence and sustainability of the group.

## **2.4.2 External factors**

### **2.4.2.1 External/donor assistance**

Support from external sources can be useful or harmful to the sustainability of the groups. Layne *et al.* (2006) reported that ability of a group to secure external support from government and NGO partners is regarded as important for sustainability of that group. Lema and Kapanga (2006) noted that farmer groups and organizations establishment has been strong in areas with large concentration of externally funded projects, implying that external initiatives are helpful in initiating the process. According to Jost *et al.* (2005), continued external funding is certainly helpful in keeping the momentum of farmer groups



going. At the very least, this support should be used in organizing new groups and in helping the transfer of information between existing groups.

The African Highlands Initiatives (AHI) experience of working with farmer research groups noted that the number of farmer groups normally goes high when a new development programme is being introduced (Sanginga *et al.*, 2002). This is because of expectations for assistance from the new development programmes, and many such groups collapse once they realize that the new programme is not providing assistance.

Experience shows that some of the farmer groups disintegrate at the end of the projects, while others collapse completely after withdrawal of the donor agencies. IIRR (1998) reported that despite the remarkable benefits that a farmer gained by joining small farmer groups, little is known of their sustainability in extension. According to Sanginga *et al.* (2002), some NGOs tend to work under pressure to show results. They tend to form groups for the purposes of achieving specific institutional objectives and provide material incentives to achieve quick results. On their part, farmers, tend to form groups more for extracting the material benefits that are usually associated with NGOs. Provision of materials resources then tends to create a dependency syndrome that inhibits innovative performance by farmer groups. This paternalism undermines sustainability goals and produces results that do not persist once the NGO ceases to operate and the flow of incentives stops.

#### **2.4.2.2 Government and political influence**

Government and political leaders may influence the sustainability of farmer groups. Although most government officials may recognize that improving the lot of the rural poor

is in the overall national interest and that promoting their collective self-help action makes good economic sense, some may also worry about the potential political consequences of such actions. According to ACC Network (2000), where the rural sector is large and makes up 60% or more of the population, autonomous organized farmer groups could make a strong case for more equitable treatment and begin claiming a larger slice of the national "cake" which they contribute so much. Some political leaders may not want this situation.

Similarly, Rouse (1996) reported that, the failure of cooperatives in developing countries to represent and protect the interests of the general farm population has its roots in the colonial days which were often managed by the government to achieve certain economic and political objectives set by the government. As a consequence, farmers frequently saw themselves as belonging to the government cooperatives and members' participation in running cooperatives was virtually non-existent. These cooperatives were promoted in a top down manner with government often heavily involved in their management. This situation eventually led to failure of these farmer organizations.

This chapter has presented the review of literature relevant to the study. The literature reviewed internal and external factors which influence sustainability of farmer groups. The internal factors discussed include farmer groups' empowerment, farmers' participation, group cohesiveness and members' common interests. Other factors discussed are social cultural homogeneity, groups' objectives versus individual benefits, group leadership and decision making as well as group size and manageability. External factors which influence sustainability of farmer groups have also been discussed. These are donor assistance as well as government and political influence. This study intended to examine sustainability of small farmer groups in delivering extension services.

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Description of the Study Area**

This study was conducted in Sumbawanga district in Rukwa region. The study area was selected for two major reasons. Firstly, there were many projects and programmes which were being implemented using SFGs such as Agricultural Marketing System Development Programme (AMSDP), Agricultural Sector Development Programme (ASDP) or District Agricultural Development Plans (DADPs) at district level, Rural Financial Service Programme (RFSP) and FARM Africa oxenization project. Secondly, there is no similar study that has been conducted to investigate sustainability of those groups.

Sumbawanga district is among the three districts of Rukwa region. Other districts include Mpanda and Nkasi. Sumbawanga district lies between Latitudes 7°08' and 9°00' south of the equator and Longitudes 31° and 32.3° East of Greenwich. The district borders Mpanda district to the North, Mbozi district (Mbeya region) in the South – East, Zambia in the South, Lake Tanganyika in the South – West; and Nkasi district to the North –West. The district has a total area of 13 586 km<sup>2</sup> of which 12 414 km<sup>2</sup> is land and 1172 km<sup>2</sup> is covered by water mostly by Lake Rukwa in the eastern side and Lake Tanganyika in the West of the district (Sumbawanga District Social Economic Profile, 2007).

### **3.2 Economic Activities**

The economic activities in the district are agriculture and livestock production. Rukwa region is among the four famous regions in Tanzania popularly known as the “big four” because they are major producers of maize in the country. The district has three major agro-ecological zones which include Ufipa Plateau, Lake Rukwa Basin and Lake Tanganyika shores. The major crops grown are maize, beans, paddy, sunflower, finger millet, cassava, groundnuts, sorghums and potatoes. Livestock kept are cattle, sheep, goat, pigs, poultry and donkeys. (Sumbawanga District Social Economic Profile, 2007).

### **3.3 Research Design**

This study adopted a cross-sectional design. This design allow for collection of data at one point in time (Bailey, 1994; Rwegoshora, 2006). The cross-sectional design is easier and economical. This design was used in this study because of time limitation in the sense that the research had to be completed in one year and also due to financial limitation. The data collected through cross-sectional design can be for the purpose of description, and for determination of relationship of variables at the time of the study (Babbie, 1990).

### **3.4 Sampling Unit and Sample Size**

The target population of the study included all group members in two villages of Matai and Mbuza in Matai and Mkowe wards in the project area respectively. A purposive sampling procedure was used to obtain these two villages. The sampling unit was the farmer group members. The sampling frame included all the group members. Simple random sampling was used to select respondents from the sampling frame. Ten respondents were sampled from each of the eight groups. In the end, a total of 80 members were sampled. According to Bailey (1994), regardless of the population size, a sample of not less than 30 is the minimum acceptable size for statistical analysis.

### **3.5 Data Collection**

Both primary and secondary data were collected for this study. Primary data were mainly collected through face to face interviews using the interview schedules. The interview schedule was developed in English, and then translated to Kiswahili, which is well understood by many Tanzanians. The interview schedule consisted of both closed and open-ended questions. Open-ended questions were used to obtain comments and opinions of the respondents. The interview schedule was pre-tested before being administered to ensure its validity. A sample of eight group members, one from each farmer group was obtained for pre-testing the interview schedule and these were not included in the sample size of the study. After pre-testing, the interview schedule was revised following minor corrections and then coded before the actual data collection.

Focus Group Discussion (FGD) and Key Informants Interviews (KII) were also used to obtain primary data. In-depth interviews were done with key informants that involved two village leaders and two sub village leaders from each of the two villages and Village Extension Officers (VAEOs), one from each of the project villages. Secondary data were collected from project reports obtained from the District Executive Director's (DED) office and from ARI – Uyole.

### **3.6 Data Processing and Analysis**

The data obtained from the primary sources through interview schedule were entered into a computer then analyzed using the Statistical Package for Social Sciences (SPSS) software computer programme. Descriptive statistics mainly frequency distributions and percentages were calculated and employed to describe the major variables of the study as well as finding the distribution of response among the respondents. Qualitative data

collected through interviews with the key informants and FGDs were analyzed using content analysis particularly narrative analysis. In this way, recorded dialogues with the respondents were broken down into meaningful units of information or themes and used to supplement the findings obtained through interview schedule.

## **CHAPTER FOUR**

### **4.0 RESULTS AND DISCUSSION**

#### **4.1 Overview**

In this Chapter, relevant findings from the study are presented and discussed. More specifically, the presentation and discussion of findings address the following main aspects: socio-economic characteristics of the respondents, extension activities done by the farmers' groups as well as the factors influencing sustainability of the farmer groups. Moreover, the challenges faced in sustaining the farmer groups have also been discussed. The order of presentation is as presented hereunder.

#### **4.2 Profile of the Farmer Groups**

The profile show the membership status in the groups from November 2004 when the project started to December 2008 when the data for this study were collected. Moreover, the profile also indicate the leadership positions by sex, age of the groups, registration status, groups' enterprise as well as the technology used.

**Table 1: Profile of the farmer groups**

Group Name	Matai Groups				Mbuza Groups			
	A	B	C	D	A	B	C	D
<b>Group members (November 2004)</b>								
Men	12	14	10	14	13	12	14	12
Women	8	6	7	4	7	8	5	6
<b>Total</b>	<b>20</b>	<b>20</b>	<b>17</b>	<b>18</b>	<b>20</b>	<b>20</b>	<b>19</b>	<b>18</b>
<b>Group members (December 2008)</b>								
Men	10	10	8	11	11	12	13	14
Women	8	6	6	3	4	3	3	2
<b>Total</b>	<b>18</b>	<b>16</b>	<b>14</b>	<b>14</b>	<b>15</b>	<b>15</b>	<b>16</b>	<b>16</b>
<b>Group Leadership</b>								
Chairperson	M	F	M	M	F	M	M	M
Secretary	F	M	F	M	M	M	F	M
Treasurer	F	F	F	F	M	M	M	M
Age of the group	5 years	5 years	4 years	4 years	5 years	5 years	4 years	4 years
Registration	NR	NR	NR	NR	NR	NR	NR	NR
Groups' Enterprise	MP	MP	MP	MP	MP	MP	MP	MP

M = Male, F = Female, NR = Not Registered and MP = Maize Production

### **4.3 Socio-economic Characteristics of the Respondents**

This section describes the socio-economic characteristics of the respondents (farmer group members). The characteristics that are described include age, sex, marital status, education and source of household income.

#### **4.3.1 Age**

With regard to the age, respondents were categorized into groups of 18 – 25 years, 26 – 50 years and above 51 years old. The results indicate that majority (75%) of the members were aged between 26 – 50 years. The other category of members aged 51 years or above and 18 – 25 years accounted for 21.3% and 3.7% of the respondents, respectively (Table 2). Respondents in the category of 18 – 25 years were few (3.7%) probably because some are still in school and others have not assumed household responsibilities and engaged in farming activities. Furthermore, respondents in the category of 51 years and above were also few (21.3%).



**Table 2: Respondents' socio-economic characteristics (N = 80)**

	Frequency	Percent
<b>Age</b>		
26 to 50	60	75.0
51 and above	17	21.3
18 to 25	3	3.7
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Sex</b>		
Male	46	57.5
Female	34	42.5
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Marital status</b>		
Married	68	85.0
Widow	7	8.7
Single	4	5.0
Separated	1	1.3
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Level of education</b>		
Primary education Std VII.	61	76.3
Primary education Std. IV	11	13.7
Non formal education	7	8.7
Secondary education F. IV	1	1.3
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Sources of house hold income</b>		
Crop farming activities	51	63.7
Crop and livestock keeping activities	29	36.3
<b>Total</b>	<b>80</b>	<b>100.0</b>

#### 4.3.2 Sex

Survey results (Table 2) revealed that more than half (57.5%) of the respondents were males and 42.5% were females. These results are in line with those obtained by other researchers like Swai (1998) and Ndiwaita (2001). For example, Swai (1998) did a study of farmer groups in the Uluguru Maintains Agricultural Development Project (UMADEP) and found low female membership (45%). When comparison is made with the 2002 population census of the district, the results are contrary where the census data indicates high females (49.1%) and 46.6% for males (NBS, 2004). Although the Farm Africa Oxenization project was aiming at reducing drudgery in weeding and planting operations which are mostly

done by women, the results show that men are still dominating because traditionally they use this technology for ploughing and transportation.

#### **4.3.3 Marital status**

The results (Table 2) show that most (85%) of the respondents were married, 8.7% were widowed, and 5% were single while 1.3% were separated. These results suggest that the majority of the group members were married. These results indicate that the percentage of married people is much higher compared to that of 2002 population census of the district which shows that the majority (54%) of people in Sumbawanga were married (NBS, 2004). This is a typical characteristic of many areas in Tanzania where 60% of women and 50% of men are married (NBS, 2005).

#### **4.3.4 Educational level**

The educational levels of the respondents are presented in Table 2. The results show that the majority (76.3%) of the farmer group members had attained primary education at the level of standard seven, followed by standard four leavers (13.7%) and those who had no formal education (8.7%). Only one respondent (1.3%) completed secondary education at ordinary level. This means that group members consists of people mostly with primary level of education, which is much lower compared to that of the district population census of 2002, which indicates that about 96% of the population had attained primary level of education (NBS, 2004). These results are similar to the findings by Nombo (1995) who found that most of the group members had primary and adult literacy education. Such level of education enables small scale farmers be able to learn and use newly introduced agricultural technologies through farmers' trainings (NBS, 2003). Moreover, skills and education increase working efficiency and productivity making the household able to use

and adopt new agricultural technologies resulting into more income (Yonghong and Katrina, 2007).

#### **4.3.5 Sources of income**

The results (Table 2) indicate that farmers' group members had two main sources of income. Crop farming activities were the major source of income for 63.7% while 36.3% depended on crops and livestock keeping activities for the same. The results also show that majority of the group members are involved in crop production rather than livestock keeping. From FGDs, it was revealed that the major crops grown in the area were maize, beans and sunflower. Maize is used as the major cash crop as well as food crop. Sometimes the surplus maize produced is exported to the neighbouring countries of Zambia and the Democratic Republic of Congo (DRC).

### **4.4 Extension Activities Carried Out Through Small Farmer Groups**

The first objective of the study intended to examine extension activities carried out through farmers' groups. In order to achieve this objective, respondents were presented with a series of questions on the extension activities performed by the groups; technologies disseminated through the farmers' groups; outside support to enhance extension activities of the groups; other extension activities that can be done by farmers' groups; and constraints facing the groups and how the groups overcome them. Results covering these aspects are presented and discussed below.

#### **4.4.1 Extension activities done by the farmer groups**

Respondents were asked to state the extension activities that were performed by the farmers' groups. According to the results in Table 3, extension activities done by the farmer

groups include carrying out demonstration of technologies (65%), supply of subsidized inputs which includes seeds and fertilizers (21.3%), and conducting farmers' field days (13.7%). Furthermore, the study revealed that farmers' groups use demonstration plots to conduct farmer trainings and demonstrate various technologies. Also farmer training is carried out concurrently with their demonstration in the plots.

The technologies demonstrated in these plots include the use of improved maize seeds, the use of industrial fertilizers, legume cover crops for fertilizing the soil as well as the use of ox ripping and weeding implements. The group members learn and practice these technologies together in the demonstration plots and finally in their individual farms. Farmers' field days were carried out on rotational basis in their individual farms. This is done for the purpose of seeing how the members have been able to implement the technologies learnt from the demonstration plots. In this way, group members as well as other non group members in the community have the opportunity to share experience with these farmers in their fields.

**Table 3: Extension activities done by farmer groups (N = 80)**

<b>Extension activities done</b>	<b>Frequency</b>	<b>Percent</b>
Conducting demonstration plots	52	65.0
Supply subsidized inputs	17	21.3
Conducting farmers' field days	11	13.7
<b>Total</b>	<b>80</b>	<b>100.0</b>

FGDs revealed further that the demonstration plots were organized by few selected representative members who were most competent enough in the use of ox ripping and weeding to train other farmers on behalf of the group. The training in the demonstration plots was carried out during the onset of the season but their preparations were done in late October to early November just before the onset of the rains. The groups in Matai village have established demonstration plots and conduct training in the neighbouring villages of Singiwe and Kisungamile. Similarly, groups in Mbuza have established their demonstration plots and conduct trainings in Mkowe and Mikonko villages.

During discussion with the VAEOs, it was noted that for many years, a large number of farmers in the study area have neither used industrial fertilizers nor Farm Yard Manure (FYM) in crop production. The reason is that farmers believed that the soils in their area were still virgin; so they do not have to apply fertilizer. As a result of continued cropping for quite a long time, the natural fertility of the soils has been depleted. This has led to reduced crop productivity. Therefore, to increase crop productivity in the study area, the use of improved seeds and application of fertilizers to replenish reduced fertility is still important. To this end, farmers have to be trained on the importance of using improved seeds and fertilizers through demonstration in plots where they can directly see the results, hence be motivated to practice in their individual farms.

So far, as an achievement, those groups established by FARM Africa project have managed to establish four other new groups in the mentioned villages. A total of 60 farmers in the new groups have received training on ox ripping, weeding and crop rotation by the use of legume cover crops provided by the group members from the former groups (Table 4).

**Table 4: Number of farmers trained by the farmer groups**

Village	Number of farmers trained		Total
	Males	Females	
Singiwe	12	5	17
Kisungamile	8	3	11
Mkowe	12	4	16
Mikonko	10	6	16
<b>Total</b>	<b>42</b>	<b>18</b>	<b>60</b>

When the respondents were asked to point out extension activities that were carried out more regularly it was revealed that demonstration of technologies ranked highest (77.5%), followed by supplying subsidized inputs (13.75%) and conducting farmers' field days (8.75%). Demonstration is mostly used probably because it is easy for the farmers to see the results, learn by practicing and several technologies can be demonstrated in a single plot at the same time.

Based on FGDs, among the technologies disseminated, the most widely disseminated technology was the use of ox ripping and weeding integrated with the legume cover crops. This technology was integrated with general crop husbandry, crop rotations with legume cover crops such as *Lablab*, *Crotolaria spp*, *Mucuna spp* and manure preparations and application for improving soil fertility. All these technologies from the project were also disseminated to the other members of the community through the groups. Moreover, it was also noted from the report submitted to FARM Africa by ARI – Uyole that one of the

objectives of the oxenization project in Sumbawanga was to ensure dissemination of the draught animal technology by the farmer groups to other members in the community.

#### 4.4.2 Technologies mostly preferred by farmers

Respondents were asked to indicate the technologies that were mostly preferred by the farmers among those disseminated by the farmer groups. The results presented in Table 5 revealed that the majority (75%) of the respondents preferred ox weeding and ripping technology. About 19% of them preferred the use of improved seeds and fertilizers and the rest (6%) reported that they preferred the use of legume cover crops in fertilizing the soil. These results imply that ox ripping and weeding technology is the mostly preferred by the farmers in the study area. When asked to give reasons for their preferences, results in Table 5 indicate that majority of the respondents (75%) said that ox ripping and weeding simplify the planting and weeding operations and few (25%) said the technology increased yield at low cost. This implies that ox planting and weeding technology made the planting and weeding operations simpler compared to the use of hand hoe.

Selection of technology for demonstration in the plots depended on the demand of the beneficiaries. For instance, the neighbouring villagers requested for training on the use of ox weeding implements from their fellow after seeing them weeding using ox with the implements. Their request prompted the farmer groups to disseminate all the technologies they acquired and learnt from the project in an integrated manner to non group members.

**Table 5: Technologies mostly preferred by the farmers (N = 80)**

<b>Technology mostly preferred</b>	<b>Frequency</b>	<b>Percent</b>
Ox weeding and ripping technologies	60	75.0
Use of improved seeds and fertilizers	15	18.7
Use of cover crops in fertilizing the soil	5	6.3
<b>Total</b>	<b>80</b>	<b>100.0</b>

**Reasons for the preferred technology**

The technology simplify the planting &

weeding operations	60	75.0
The technology increases yield at less cost	20	25.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Based on FGDs, it was revealed that hand hoe weeding is a laborious operation to farmers in terms of time and labour. The ox weeding technology reduces this problem and the labour force saved during maize weeding operation through ox weeding technology is being diverted to other farm activities like vegetable growing for sale and domestic use; making local brews and home craft activities. It was also found that as a result of saving labour, some households can now undertake other small business for income generation.

**4.4.3 External support to enhance groups' extension activities**

Information on whether the groups receive external support after FARM Africa to enhance their extension activities is summarized in Table 6. The results indicate that the majority (92.5%) of group members reported that the groups have received external support and few (7.5%) said that they had not received external support. Furthermore, respondents were asked to point out the type and sources of external support received. Their responses are as shown in Table 6. Regarding the type of support, respondents mentioned bicycles and money (41.9%); bicycle alone (36.5%); money (17.6%); and ox implements (4.0%). Pertaining to the sources of external support the results show that most (96%) of the support which includes bicycle and money came from Red Cross Society (RCS) while ox implements were obtained from ARI – Uyole (4%).



Further probing during the FGDs revealed that apart from agricultural activities, the Red Cross Society used the groups as agents to assist in supplying their aid to orphans, disabled and the widowed in the community. The aid provided by the Red Cross Society includes clothing, school uniforms and exercise books for the orphans. The money is mainly used to buy these items depending on the requirements by the vulnerable groups. Also the Red Cross Society provided bicycles to the groups to enable members to distribute their aid to the beneficiaries as well as facilitate the ox ripping and weeding trainings to other farmers in the neighbouring villages.

**Table 6: External support to enhance extension activities of the groups (N = 80)**

<b>Response category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Presence of support</b>		
Yes	74	92.5
No	6	7.5
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Type of external support</b>		
Bicycle and money	31	41.9
bicycle	27	36.5
Money	13	17.6
Ox implements	3	4.0
<b>Total</b>	<b>74</b>	<b>100.0</b>
<b>Source of external support</b>		
Red Cross Society	71	96.0
ARI - Uyole	3	4.0
<b>Total</b>	<b>74</b>	<b>100.0</b>

#### **4.4.4 Other extension activities that can be done by farmer groups**

This study revealed that there are varieties of extension activities that can be performed by farmer groups. According to Table 7, groups can be used to provide market information services (53.8%), to educate other farmers on improved livestock keeping practices (27.5%) and to provide livestock dipping services (18.7%). These results imply that farmers' groups can also be used to address other issues of concern to other farmers.

**Table 7: Other extension activities that can be done by farmer groups (N = 80)**

<b>Extension activity</b>	<b>Frequency</b>	<b>Percent</b>
Provide market information services to farmers	43	53.8
Educate livestock keepers on improved livestock keeping	22	27.5
To provide livestock services like dipping	15	18.7
<b>Total</b>	<b>80</b>	<b>100.0</b>

Marketing information was given priority probably because it is easy to access them through various means like telephones, radios, TVs, news papers at farmers' level with minimum costs. Once such information is obtained, it can be posted on news boards in the village where all farmers can access and read them. This will increase farmers' awareness and ability to acquire accurate market information.

#### **4.4.5 Constraints facing farmer groups in delivering extension**

Respondents were asked to indicate constraints facing farmer groups in delivering extension services. Results summarized in Table 8 show that lack transport facilities like bicycles was the main constrain in their operations (50%). Other constraints were group members with many personal commitments (23.7%); lack of motivation of members who participate in delivering extension services (16.3%) and lack of capital for purchasing input for demonstration purposes (10%). After the withdrawal of the donor, there was no longer provision of free inputs. Therefore, farmers had to buy inputs using their own sources. Those who could not afford resorted to use of farm yard manure. The implication here is that farmer groups were faced with many constraints in delivering extension services.

**Table 8: Constraints facing farmer groups in delivering extension services (N = 80)**

<b>Constraint</b>	<b>Frequency</b>	<b>Percent</b>
Lack of transport facilities like bicycles	40	50.0
Farmers personal commitments	19	23.7

Lack of motivation among group members		
who provide extension services	13	16.3
Lack of capital for purchasing inputs for		
demonstration of technologies	8	10.0
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>How to overcome the constraints</b>		
Farmer groups be supported with transport		
facilities like bicycles	45	56.3
Government should motivate farmer groups		
that render extension services	31	38.7
Farmer groups be provided with credit for		
purchasing inputs	4	5.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Respondents were asked to propose solutions which could take care of the constraints faced. These are summarized in Table 8 indicating that majority (56.3%) of the respondents proposed that the farmers' groups involved in delivering extension services should be supported with transport facilities. Other proposed solutions included the government to provide motivation to farmers' groups that are involved in the provision of extension services (38.7%) and provision of credit to farmer groups (5%). Based on the above findings, solutions to the constraints were externalized indicating hopelessness and lack of ability which led many group members fail to solve them.

#### 4.5 Factors Influencing Sustainability of Small Farmer Groups

The second objective of the study intended to identify factors that influence sustainability of small farmer groups. In order to achieve this objective, respondents were presented with a series of questions aiming at determining the factors. The main aspects addressed included members' level of participation in groups after donor withdrawal; trend of memberships; activeness of members in group activities; survival of the groups and

benefits obtained from groups. The other aspects covered were continuity of group activities in the future, continuity of the groups in the absence of a donor, relationship of the groups with village authorities and perceived reasons that made farmers' groups to collapse. Detailed findings on the same are presented below.

#### 4.5.1 Continued survival of the farmer groups

The FGDs and interviews with the VAEOs revealed that the donor provided a set of free ox ripping and ox weeding implements as well as ox carts for the groups to learn using the technology and after the project ended these implements became property of the groups. Most of the group members had not been able to buy their own ox implements, so they depended on the groups' implements. The group members could access these implements free of charge while non group members had to hire and pay some money. Thus, in order for the group members to continue accessing the implements free of charge, they must maintain their membership in the groups. This has contributed to the continued survival of the groups. This is confirmed by survey results presented in Table 9 in which respondents reported 56.3% of the group members depend on the groups' implements for ripping and weeding. Nearly a third (31.3%) said that group membership enables them to be assisted by other development partners while about 12.5% said that they maintain the group in order to get credit which helps them to meet family obligations. These results imply that survival of the groups has mainly been due to availability of the groups' ox implements.

**Table 9: Members' perceived reasons for continued survival of their groups (N = 80)**

<b>Reasons for continued group existence</b>	<b>Frequency</b>	<b>Percent</b>
Dependence on groups' implements	45	56.25
Easy to get support from other development agents	25	31.25
Source of credit for meeting family obligations	10	12.50
<b>Total</b>	<b>80</b>	<b>100.00</b>

Further probing during FGDs also revealed that farmers felt that many agricultural extension projects prefer to work with already existing farmer groups rather than establishing new groups. This made some group members to maintain their membership in the groups hoping to work with any donor who would be interested to work with them after FARM Africa ended its support. This implies that the groups have not built in the element of self-reliance from the support initially obtained from FARM Africa. This is probably because the groups were used to receive implements free of charge as well as inputs on credit basis; something that made them dependent on donors. Other findings by Sanginga *et al.* (2002) show that provision of material resources to the farmers tends to create a dependency syndrome that inhibits self-reliance by farmer groups. This paternalism undermines sustainability goals and produces results that do not persist once the flow of incentives stops.

Currently, one of the dominant views is that credit is an important factor in reducing poverty amongst people in the rural areas in developing countries. This is illustrated by results from FGDs and interviews with the VAEOs which revealed that the project implemented small credit scheme for group members. This arrangement was strictly for inputs and purchasing of the ox ripping and weeding implements. Indeed, after the project termination, the groups continued to run their own small credit scheme for its members for improving their welfare. This was based on collections obtained from the group crop enterprises and savings. This is another factor that attracts some group members to keep their membership because their interest to access credit is fulfilled. Findings from other studies as reported by Jost *et al.* (2005) show that farmers are most likely to continue being members of a group if they perceive that the benefits of belonging to the group outweigh the costs associated with them.

#### **4.5.2 Benefits obtained from the groups**

The findings summarized in Table 10 show that the majority (60%) of respondents had benefited from the ox weeding and ripping technology that enabled them to improve their labour productivity. The other benefits were ability to finish weeding earlier and perform other productive activities (20%), access to credit (16.3%) and assistance by other group members in social affairs (3.7%). The implication is that group members benefited from the groups mainly through the ox weeding technology. These results are in line with those obtained by Chibehe (2004) in his study of Twikinde Malimbichi Cooperative Society in Mgeta in which it was reported that farmers joined groups because they believed that their groups will meet their expected benefits.

**Table 10: Benefits obtained from the farmers' groups (N = 80)**

<b>Benefits obtained</b>	<b>Frequency</b>	<b>Percent</b>
Ox ripping & weeding technology improve farming practices	48	60
Improvement of labour productivity	16	20
Ability to get credit from the group	13	16.3
Assistance by group members in handling social problems	3	3.7
<b>Total</b>	<b>80</b>	<b>100.0</b>

### **4.5.3 Farmer's participation in groups after donor withdrawal**

This part presents findings in terms of participation of members in group activities; participation in group meetings and the perceived trend of membership in the groups. Details of the findings are presented and discussed as follows:

#### **4.5.3.1 Participation in group activities**

For successful implementation of any joint activity, effective participation of the members is very important. Respondents were requested to state the level of members' participation in the implementation of the group activities after donor withdrawal. The survey results in Table 11 indicate that most (91.3%) of the respondents said that there was low participation in group activities in the absence of the donor. Only few (8.7%) respondents said there was high participation in group activities in the absence of the donor. The respondents were asked to state their reasons to explain this kind of participation. The results show that slightly more than half (52.5%) of the group members joined the group for the sake of getting inputs on credit basis from the donor. Slightly more than a fifth (23.75%) of the farmers joined the groups expecting that the donor would continue to support the groups while 15% of the group members joined the groups because they used to see project officers from ARI – Uyole visiting the groups regularly providing them with advice on technical issues pertaining to ox ripping, weeding technology and organizing the availability of ox implements. The results also show that a small proportion (8.75%) felt



that group leaders tended to monopolize the implements and limit their accessibility to the rest of the group members.

**Table 11: Participation in the group activities after the project ended (N = 80)**

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Low participation	73	91.3
High participation	7	8.7
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Reasons for the given level of participation</b>		
Expectation to get inputs (seeds and fertilizer)	42	52.50
Expectation for continued support from the donor	19	23.75
Regular visits by project leaders from ARI-Uyole	12	15.00
Group leaders monopolizes the groups' implements	7	8.75
<b>Total</b>	<b>80</b>	<b>100.00</b>

Result from the FGDs and key informant interviews revealed that during the first year of the project, members in group "A" and "B" received inputs (seeds and fertilizers) on credit which were supposed to be repaid after harvesting their produces. This incentive attracted other farmers to join other groups especially groups "C" and "D" which started in the following year (2005). They too hoped that they will also be able to access the same inputs like their fellows in groups "A" and "B" which started earlier (2004). After the project ended, provision of inputs stopped and that is why participation of group members who had joined groups in order to access inputs declined.

Furthermore, the FGDs also revealed that some group members were member just by name because they did not know their roles in the groups as members. Their poor participation in group activities is partly explained by this reason. Effective participation in group activities would increase groups' income. It was believed that if the groups' income is increased, it would enable each of the group members to own his/her ox weeding implement so that

he/she can increase the area under maize cultivation, increase maize productivity and consequently improve the economic wellbeing of all the group members.

#### **4.5.3.2 Participation in group meetings**

Respondents were also asked to state whether groups conducted regular group meetings to discuss issues pertaining to group activities and group development. The results show that most (93.7%) of the respondents said that groups held regular meetings. Only few (6.3%) of the respondents said there were no regular group meetings. According to the interviews with some group leaders and VAEOs, it was noted that they planned to have a meeting every two weeks. Other meetings were planned to be held in the field during group work. However, from the FGDs it was revealed that although group meetings were scheduled, the schedule was not observed. Instead, they were held randomly because the majority of the members rarely appeared at the meeting as expected.

Poor participation of members in group meetings delayed decision making and consequently delayed the implementation of group activities that required group decision. Chibehe (2004) in his study of Twikinde Malimbichi Cooperative Society in Mgeta Morogoro reported that poor group communication in the form of few group meetings contributed to the failure of members to participate in group activities and this resulted in poor performance of such group activities.

#### **4.5.3.3 Perceived trend of membership in the groups**

On the perceived trend of membership in groups, the results are summarized in Table 12. Table 12 shows that the majority (63.7%) of the respondents said that membership in the groups was decreasing, 17.5% said membership was fluctuating, 12.5% said membership

in the groups remained the same while only 6.3% of the respondents said membership in the groups was increasing. When asked whether there were members leaving the groups, the majority (76.3%) responded in the affirmative while 23.7% reported that no members had left the groups. Respondents were also asked to give reasons to explain why some group members were leaving the groups. The results revealed that the majority (52.5%) said that members left because they expected to get inputs on credit basis continuously, 29.5% said that members were leaving because of poor leadership in the groups while 18% said members were leaving because group leaders were not allowing other members to use the groups' implements (Table 12). This implies that lack of access to free implements to some members and poor leadership contributed to some members leaving the groups.

**Table 12: Trend of membership in the groups (N = 80)**

<b>Membership trend</b>	<b>Frequency</b>	<b>Percent</b>
Decreasing	51	63.7
Fluctuating	14	17.5
Remain the same	10	12.5
Increasing	5	6.3
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Members left the group</b>		
Yes	61	76.3
No	19	23.7
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Reasons for leaving the group (N = 61)</b>		
Expectation to get input on credit basis continuously	32	52.5
Poor leadership of the group	18	29.5
Not allowed to use implements by group leaders	11	18.0
<b>Total</b>	<b>61</b>	<b>100.0</b>

On the other hand, the problem of leadership was apparent in the groups. FGDs revealed that the problem of leadership was most dominant in groups C and D in Matai village. This led to disunity and consequently poor performance of the group activities. For example, during the previous agricultural season (2007/08), these two groups did not cultivate their plots because some of the money obtained from selling crop harvests in the previous season, was shared among the members while the rest was misappropriated by the group leaders. This meant that the group members had to restart contributing money for purchasing inputs for the group projects something which was unacceptable because members knew they had some amount saved for that purpose. As a result, group leaders did not convene group meetings or organize group members for group activities. This made the groups to be inactive in their group activities to the extent that some members decided to leave the groups and request for membership in other groups. For example, two members left group C and requested for membership in group “A” in Matai.

#### **4.5.4 Group activities**

This section presents findings in the following aspects: presence of group enterprise; activeness of the groups in performing the group activities; continuity of the group activities in the future and continuity of the groups themselves in absence of the donor. Details of the findings are presented and discussed below.

##### **4.5.4.1 Presence of groups' enterprise**

The need “to do something” is central to the sustainability of farmer groups. The main enterprise of the groups was crops production particularly maize. Apart from maize, groups A and B in Mbuza and Matai have also started producing sunflower. The activities that were done collectively by group members included land preparation (ploughing), planting, weeding, harvesting, shelling, and storage operations.

In addition to the crop enterprise, the groups provides training services on ox ripping and weeding technology to other members in their villages and the neighbouring villages, supplies subsidized inputs (seeds and fertilizer) and the use of legume cover crops in fertilizing the soil. It was noted from the project report submitted to FARM Africa by ARI – Uyoile that, despite the drought experienced in 2005, the farmers recorded substantial increase in maize in both the farmer learning fields as well as own farms after using the ox ripping and weeding technology and the inputs given on credit. This has a potential for increasing food security at household level.

When asked whether the groups have ever changed their group activities to other activities different from the original one, respondents reported that there was no change in group activities since the inception of the groups. However, in addition to the original enterprise

of maize production, groups A and B in Matai have also started producing sunflower since the season 2008/09. Additionally, all the groups have been sensitized by MVIWATA to start local chicken production, and preparations have been done to start purchasing cocks. According to Stevens and Terblanche (2004), groups' effectiveness in group activities has a strong influence over the characteristics of group life, including the length of time that group members are willing to continue working together.

#### **4.5.4.2 Activeness of the groups in performing group's activities**

Opinions were sought from the respondents on the aspect of activeness of the groups in performing group activities. The responses are presented in Table 13. Overall, slightly more than half (53.7%) of the groups were not active while the rest (46.3%) were active. Asked to account for this situation, slightly more than half (52.5%) of the respondents said there were no regular group meetings, more than a third (38.7%) said only few members attended group meetings and group activities while few (8.8%) said that the majority of members participated in meetings and group activities. This implies that despite the presence of group activity, there was very limited interaction among the group members.

Based on the FGDs and discussion with the VAEOs, it was revealed that group activities such as land preparation, planting and weeding operations were not done timely. This resulted in low yields from the groups' plots which eventually led to low income. The reason given for this situation is that farmers give priority to operations in their individual farms, and only attended to group activities after completing individual activities. This means that the members' commitment to group activities was poor, which affected the performance of group activities.

**Table 13: Activeness of the members in performing group activities (N = 80)**

<b>Response category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Status of the group</b>		
It is not active	43	53.7
It is active	37	46.3
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Reasons</b>		
No regular group meetings	42	52.5
Few attend group meetings and activities	31	38.7
Majority participate in group meetings and activities	7	8.8
<b>Total</b>	<b>80</b>	<b>100.0</b>

#### 4.5.4.3 Continuity of group activities in the future

Results in Table 14 indicate the opinions of the respondents on the continuity of the group activities in the future. The findings show that slightly more than half (53.7%) reported that the activities were likely to cease due to poor participation of members in group activities; more than a third (35%) reported that the group activities will continue if the leadership of the group will change while the remaining 11.3% reported that the activities were likely to cease due to lack of leaders commitment. These results imply that the survival of the groups was subject to the commitment of both group leaders and individual members in the group activities.

**Table 14: Respondents' opinions on future continuity of the group activities (N = 80)**

<b>Response category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Continuity of group activities</b>		
Activities are likely to cease due to poor participation	43	53.7
Activities will continue if the leadership will change	28	35.0
Activities are likely to cease due to lack of leadership		
commitment	9	11.3
<b>Total</b>	<b>80</b>	<b>100.0</b>

#### 4.5.4.4 Continuity of groups in absence of the donor

Views of the respondents on the continued existence of the groups after the donor (FARM Africa) withdrawal from supporting them are presented in Table 15. The results show that majority (62.5%) believed that the continuity of the groups was uncertain. Others believed that the groups will continue to exist if group leadership will be changed regularly (20%), 10% believed that groups were likely to collapse due to unequal sharing of the group implements while few (7.5%) believed that the groups will continue because of the benefits obtained earlier. These results imply that continuity of these groups in the future is doubtful. This is probably due to the dependency behaviour of the groups to donor support, lack of commitment and poor participation of group members in the group activities, and poor group leadership.

**Table 15: Continuity of the groups in absence of the donor (N = 80)**

Response category	Frequency	Percent
<b>Views on continuity of groups</b>		
Continuity is uncertain after donor withdrawal	50	62.5
Groups will continue if leadership will be changed		
regularly	16	20.0
Group will collapse due to unequal sharing of the group's		
implements	8	10.0
The groups will continue because of the benefits obtained		
earlier from the group	6	7.5
<b>Total</b>	<b>80</b>	<b>100.0</b>

Findings from other studies by Sanginga *et al.* (2002) show that continued external funding is certainly helpful in keeping the momentum of the small farmer groups going. The authors added that sustainability of farmer groups remains dependent on leadership development, farmer empowerment, continuing perception of net benefits as far as



members are concerned and local control. Another finding by Rouse (1996) shows that, developing sustainable small farmer groups is a long-term process, requiring a minimum of three to four years. The author has also added that the best way to start this process is by creating small informal groups of 5 to 15 members, organized around a common need or interest. In the studied groups, the group members ranged from 14 in groups C and D to 16 and 18 members in groups B and A respectively in Matai Village, while the group members ranged from 15 in groups A and B to 16 in groups C and D in Mbuza village.

#### 4.5.5 Experience of the farmers from other farmers' groups

The respondents were asked to give their experiences in regard to the reasons that made other farmers' groups to collapse. Their responses are summarized in Table 16. The results show that poor leadership was the major reason that made groups to collapse by 56.3%; followed by unequal sharing of groups' resources by members (27.5%) and poor participation in group meetings and group activities (16.2%). These results imply that group leaders determine the survival or otherwise of farmers' groups.

**Table 16: Reasons behind collapse of farmers' groups (N = 80)**

Response category	Frequency	Percent
<b>Reasons behind collapse of farmers' groups</b>		
Poor leadership in the groups	45	56.3
Sharing of group's resources by members	22	27.5
Poor participation in group meetings and activities	13	16.2
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Suggestions for enhancing the survival of groups</b>		
Involve village leaders in monitoring group activities after		
project phase out	41	51.3
Group leadership should be on rotational basis	22	27.5
Training on leadership skills and group management	17	21.2
<b>Total</b>	<b>80</b>	<b>100.0</b>

When respondents were asked to give their opinion on what should be done to ensure survival of their groups, the majority (51.3%) said that village leaders should be involved

in monitoring group activities after project termination, 27.5% said that group leadership should be on rotational basis while 21.2% said that training on leadership skills and group management should be provided to group leaders as well as group members (Table 16). Based on these findings this implies that when the project phases out, the village government can take over the responsibility to ensure continuity of the groups activities in the absence of project leaders.

#### **4.5.6 Relationship of the farmer groups with the village authorities**

Respondents were requested to state whether village authorities recognized the presence of farmer groups in their villages. Results show that all village authorities were aware of the presence of farmer groups in their villages. When asked how village leaders cooperated with the groups in helping them to achieve their goal, findings indicate that the village authorities authorized farmers' groups to be agents of supplying subsidized inputs in their village (50%). Others said that the village authority advised farmer groups to join TUINUANE SACCOS in nearby Matai Ward so that they can easily get credit for purchasing inputs (31.3%), while 18.7% said that village authorities contributed nothing to the success of the groups (Table 17).

In addition, respondents were asked to state how village leaders contributed to the group failure. Table 17 shows that majority (55%) of the respondents said that village leaders normally visited the groups when these groups were visited by donors or other guests. Respondents also reported that village authorities did not solve conflicts in farmer groups whenever they occurred (22.5%); failure of the groups has nothing to do with village authorities (18.7%); and that the village authorities followed up group activities from the inception stage (12.5%). The implication here is that besides recognition of the presence of

farmer groups by village leaders in their villages they can also contribute to their continued survival or collapse.

**Table 17: Views on cooperation between village authorities and SFGs (N = 80)**

<b>Response category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Ways village leaders contribute to success of FG</b>		
Authorized farmer groups to supply subsidized inputs	40	50.0
Advised groups to join TUINUANE SACCOS	25	31.3
Contribute nothing to the success of the group	15	18.7
<b>Total</b>	<b>80</b>	<b>100.0</b>
<b>Ways village leaders contribute to the failure of FG</b>		
They visit the FGs when the groups are visited by		
donors/guests	44	55.0
They don't solve conflicts in FGs	18	22.5
They only follow up group activities when the project		
starts	10	12.5
Group failure has nothing to do with village authorities	8	10.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Furthermore, during discussion with the village authorities, it was revealed that village authorities were not involved during the inception of the group projects but only got informed later about group activities. In addition, the groups through their group leaders never submitted their groups' progress reports to the village government to show what they were doing, how far they had gone, and what problems they were facing so that they could be advised by the village government on what to do to improve their performance. These results show that members acknowledged the support received from village authorities and hence expected more support than it is being given including solving problems facing the groups such as group conflicts.

#### **4.5.7 Day to day problems facing the farmers' groups**

Table 18 summarizes the responses on the day to day problems facing farmer groups. According to Table 18 the major problem in the order of importance were poor participation of members in the group activities (73%), failure of some members to repay their credit (37.5%), inadequate funds for purchasing inputs (33.8%), members who own oxen discouraged those who did not have oxen (32.5%), groups leaders were not committed to the groups' activities (31.3%) and group members reported late in the group meetings (25%). This means that farmer groups were faced with day to day problems which affected the performance of group activities.

**Table 18: Day to day problems facing the farmer groups (N = 80)**

<b>Day to day problem</b>	<b>Frequency</b>	<b>Percent</b>
Poor participation in group activities	59	73.8
Failure by some members to repay their credit	30	37.5
Inadequate funds for purchasing inputs	27	33.8
Members with oxen discourage those without oxen	26	32.5
Group leaders not committed	25	31.3
Members report late in group meetings	20	25.0
<b>Solution to the problems</b>		
Those who don't attend group work pay a fine of 1000/=	43	53.8
Leaders are lazy in group activities	28	35.0
Members with credit are advised to pay in installment		
basis	25	31.3
Members with oxen are advised to continue volunteering		
their oxen for the group benefits	24	30.0
Farmers are encouraged to use legume cover crops	19	23.8
Late comers pay a fine of 500/=	16	20.0
No action taken towards those who don't attend group		
work	8	10.0

*\* The percentages do not add up to 100 as some of the respondents had more than one response.*

Table 18 also shows how the groups solve these problems. Results in the table shows that majority (53.8%) of the respondents reported that group members who did not attend group work were fined Tsh. 1000; 35% said that group leaders were lazy and hence did not take the initiative to solve problems; 31.3% said that members with credit were advised to repay their credit by installment. Respondents also reported that group members who owned oxen were encouraged to allow other group members who did not own oxen to continue using this facility as a learning exercise (30%); group members who normally came late to the group meeting were charged a fine of Tsh. 500 (20%) but 10% of the respondents reported that no action was taken against those who did not attend group work. These results suggest that there were some efforts taken to solve problems in the groups, but the

commitment of both the members and the group leaders was needed to increase the effectiveness of the groups.

#### **4.6 Challenges Faced in Sustaining Small Farmer Groups**

The third objective of this study intended to identify challenges which were faced in sustaining small farmers' groups. In order to achieve this objective, respondent were asked a series of questions on challenges related to the continued survival of the farmers' groups; how those challenges affected performance of the groups; and how to overcome them. The results and discussion on these aspects are presented below.

##### **4.6.1 Challenges for continued survival of the farmer groups**

Despite the efforts shown by the SFGs in delivering extension services to farmers, they were faced with some challenges in ensuring their continued survival. When asked a question that sought to establish the challenges, the results summarized in Table 19 indicate that half (50%) of the respondents pointed out that the availability of donors who can support the farmers' groups for a long time. Respondents also mentioned other challenges which included absence of leaders who were fully committed to group activities (27.5%), poor performance of the previous cooperatives in Tanzania (13.7%) and unreliable rainfall which made some group agricultural projects to fail (8.8%). These results imply that the groups were not adequately empowered by the project for a long period for them to carry out project activities without donor support.

During informal discussion with the VAEOs, it was noted that the issue of dependency on donors was inherited from the previous Sasakawa Global 2000 projects. These projects provided inputs on credit which were to be recovered after harvesting but at the end of the

day there was no serious follow up on repayment which made many farmers in the area not repay their credit. This reinforced the idea that any service provided by a project is a free service, which was translated by the recipients as a service that was free. In addition, results from FGDs revealed that the training provided by the project focused mainly on the technical aspect of the use of the ox implements rather than issues of groups' self-reliance.

**Table 19: Views on challenges for continued survival of SFGs (N = 80)**

<b>Challenges</b>	<b>Frequency</b>	<b>Percent</b>
Availability of donors who will support the groups for long time	40	50.0
Availability of group leaders committed to group activities	22	27.5
Poor performance of previous cooperatives in Tanzania	11	13.7
Unreliable rainfall makes some group projects to fail	7	8.8
<b>Total</b>	<b>80</b>	<b>100.0</b>

Further probing during FGDs and interviews with the key informants (group leaders and VAEOs) revealed that groups A and B in both villages of Matai and Mbuza were supported financially and on technical issues by the project for two years. On the other hand, groups C and D in both villages were supported on the same aspects by the project for one year only. This means that group C and D had little opportunity to share their experience obtained from their first year of implementing the project with the project staff. Implementing project activities for several seasons could have provided the opportunity for beneficiaries to share experience with the project technical staff on issues which were not addressed well in the first year and also to build their confidence in carrying out the project activities with minimum external dependency.

Of the challenges pointed out, availability of donor support for the groups; poor performance of the previous cooperatives in Tanzania and unreliable rainfall for

agricultural projects can be categorized as external challenges. This implies that solutions to these challenges must come from outside the group to facilitate and enable the groups survive and continue with their activities. The issue of the absence of group leaders who were fully committed to group activities can be termed as internal, implying that the challenge is within the capability of the groups and its solution needs to come from within the groups themselves.

#### **4.6.2 Effects of the challenges on the group performance**

The results presented in Table 20 summarize the effects of the challenges on the performance of farmer groups, in which the majority (60%) of the respondents agreed that these challenges had resulted in poor performance of the group activities; 35% reported that the challenges have made some group members to have low commitment to group activities; and few (5%) reported the challenges have discouraged the groups from continuing with agricultural activities. Generally, the results imply that the challenges have had a negative effect on performance of the group activities.

**Table 20: Views on effects of the challenges to the group performance (N = 80)**

<b>Effect of the challenge</b>	<b>Frequency</b>	<b>Percent</b>
Poor performance of the group activities	48	60.0
Lack of enough commitment to group activities	28	35.0
Groups members discourage to continue with agricultural project activities	4	5.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

#### **4.6.3 Overcoming the challenges for continued survival of the farmer groups**

Overcoming the challenges facing the groups for continued survival is important for the continuation of the group activities. Respondents were asked to propose solutions to the challenges mentioned. Results summarized in Table 21, show that the majority (47.5%) of the respondents were of the opinion that the government and political leaders should



seriously support the farmers' groups, slightly more than a third (34%) of the respondents were of the view that the community should be educated to increase their awareness regarding the importance to small farmer groups in their livelihood activities, and 10% recommended that the government should assist farmers' groups facing the problem of unreliable rainfall through the construction of improved irrigation schemes.

These results indicate that the proposed solutions to these challenges are external to the groups although commitment from the members is necessary in light of the dependency syndrome which has been shown to be apparent.

**Table 21: Overcoming the challenges for continued survival of the groups (N = 80)**

<b>Solution to the challenges</b>	<b>Frequency</b>	<b>Percent</b>
Government & political leaders should support farmer groups	38	47.5
Create awareness to the community on the importance of SFGs	34	42.5
Government assistance in construction of improved farmer groups irrigation schemes	8	10.0
<b>Total</b>	<b>80</b>	<b>100.0</b>

Furthermore, results from FDGs revealed that government and political leaders encouraged farmers to form groups so that they could be assisted in terms of loans by the government. However, it was observed that when the groups were formed, the assistance was not forthcoming. One example given was the popularly known JK's (Jakaya Kikwete's) billions (1 billion) allocated to each region. This had not actually reached the smallholder farmers although politicians requested farmers to organize themselves in groups and form SACCOS in order to access JK's billions. Another example given was the government

subsidized inputs particularly fertilizers, which despite the subsidy, was still expensive for a smallholder farmer to afford. For example, it was pointed out that the subsidized prices for two bags of Urea and one bag of DAP (weighing 50kg each) by voucher system was sold at 54 000 and 48 000 Tanzanian shillings, respectively. These prices were still too high for smallholder farmers. In contrast, prices for maize produce especially during harvesting season ranged from 8 000 to 12 000 Tanzanian shillings per bag of 100 kilograms, which is too little compared to the costs of the inputs. The costs of inputs should be at par with or not too divorced from the market price of maize or other farm produces.

## **CHAPTER FIVE**

### **5.0 CONCLUSION AND RECOMMENDATIONS**

This study examined the sustainability of small farmer groups in extension in Sumbawanga district. More specifically, it intended to examine the extension activities carried out through farmer groups; identify factors influencing sustainability of small farmer groups and challenges faced in sustaining these groups. In view of the study findings the following conclusions and recommendations can be drawn.

#### **5.1 Conclusion**

##### **5.1.1 Extension activities**

Farmers' groups can perform some extension activities if they are adequately empowered by projects. Extension activities that can be carried out by the farmer groups include training and carrying out demonstration of technologies; supplying inputs; and farmer field days. The technologies disseminated by the groups included ox ripping and weeding integrated with legume cover crops for fertilizing the soil and use of improved inputs. Notwithstanding the efforts shown by the groups in delivering extension services, farmer groups were constrained with lack of transport facilities; farmers' personal commitments; lack of motivation among group members; and lack of capital for purchasing inputs. These constraints limit the groups' effectiveness in delivering extension services to other farmers.

##### **5.1.2 Group sustainability**

- a) The findings revealed that the groups' survival has been contributed by the availability of groups' ox implements; small credits; and inputs obtained on credit basis from the groups. However, there was low participation and low activeness of

members in the group activities after donor support withdrawal compared to when they were receiving support. This indicates that the groups did not build in self-reliance. Lack of self-reliance of the groups made them dependent on external assistance, which limits their sustainability.

- b) The low level of involvement in group activities after the donor terminated supply of inputs on credit implies that, members were just attracted by the inputs. This further implies that group members were not adequately educated from the beginning on their roles as group members and the importance of farmer groups. This has contributed to lack of commitment for some members and leaders in group activities. As a result the group activities are likely to cease and their future continuity is doubtful, indicating that sustainability of the groups is not guaranteed.

### **5.1.3 Challenges in sustaining the groups**

The findings revealed that farmers' groups are faced with challenges that limit their continued survival. These include withdrawal of the external support when the groups are still in need of it. Others include availability of group leaders committed to group activities, poor performance of previous cooperatives in Tanzania and unreliability of rainfall. Generally, these challenges have contributed to poor performance of the groups. The proposed solutions to these challenges are all externalized and none require commitment from the group members which indicates a dependency syndrome.

## 5.2 Recommendations

Based on the conclusions from this study the following recommendations are made.

- a) In order to improve extension service delivery by the farmer's groups, they should be provided with transport facilities like bicycles to enable them disseminate the technologies learnt from the project to other farmers. This can be implemented through DADPs projects in the district under ASDP programme. In this way, projects benefits can spread to other areas which were not covered by the project through farmer to farmer contacts.
  
- b) Project donors should make it clear from the beginning that, the role of the project is to empower the group members with skills and knowledge that will enable them continue with project activities with minimum external support when the project phase out, thus increasing self-reliance of the groups and consequently group sustainability. However, these groups can be reactivated under DADPs projects through trainings on issues of group dynamics and importance of farmer groups to enhance continuity of group activities as well as their sustainability.
  
- c) In order to make the groups continue with their group activities and increase their effectiveness after the donor withdrawal, groups should be made accountable to the village authority. Group leaders have to submit group's progress reports to the village authority so that they can monitor their progress and provide advice where necessary. Involvement of village authorities in monitoring group activities after donor withdrawal will increase the group leaders' accountability to the group activities and ensure continuity of the group activities, hence groups' sustainability.

- d) Donors when supporting farmer groups should adequately empower them enough for them to be able to continue with project activities with minimum dependency. To overcome challenges that are beyond the groups' control like unreliability of rainfall, it is better to use collective efforts to address them in collaboration with the village governments, councilors and Members of Parliament of the respective project areas, focusing on opportunities for continued funding of group activities through DADPs and from other sources aiming at making the group's self-reliance. Moreover, when the government and political leaders promise to assist farmers through groups, should keep and fulfill their promises, giving priorities to those groups implementing projects like construction of improved irrigation schemes whose benefits cut across the entire community.

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## APPENDICES

### Appendix 1: Interview schedule for group members

**Title:** Sustainability of Small Farmer Groups in Extension: A Case of FARM Africa Oxenization Project in Sumbawanga District.

### INTRODUCTION

The purpose of this questionnaire is to collect your views on the sustainability of small farmer's groups by taking the case of FARM Africa oxenization project. I would like to thank you for agreeing to meet with me today. All the questions that I will be asking are related to my research and the answers or reply made will be kept confidential.

**Village** -----

**Name of group** -----

**Respondent no.** -----

**Instructions:** Tick or fill in the space provided where appropriate.

#### A: Social Economic Characteristics of Respondent

A<sub>1</sub>.Sex: 1. Male [    ]

2. Female [    ]

A<sub>2</sub>. What is your age in years?

i) 18 – 25 [    ]

ii) 26 – 50 [    ]

iii) 51 and above [    ]

A<sub>3</sub>. What is your marital status?

- |              |        |
|--------------|--------|
| 1. Single    | [    ] |
| 2. Married   | [    ] |
| 3. Widowed   | [    ] |
| 4. Separated | [    ] |

A<sub>4</sub>. What is your level of education?

- |                             |        |
|-----------------------------|--------|
| 1. No formal education      | [    ] |
| 2. Primary education        |        |
| 1. I – IV                   | [    ] |
| 2. V –VII                   | [    ] |
| 3. Secondary education      |        |
| 1. F. I – IV                | [    ] |
| 2. F. V – VI                | [    ] |
| 4. Post secondary education | [    ] |

A<sub>5</sub>. What are major sources of your household income?

- |   |        |
|---|--------|
| 1. Crop farming activities              | [    ] |
| 2. Livestock keeping activities         | [    ] |
| 3. Crop and livestock faming activities | [    ] |
| 4. Salary/wages                         | [    ] |

## **B: Information about the Farmer Groups**

B<sub>1</sub>. In which year did you join the group?

-----

-----

B<sub>2</sub>. What are the reasons that made you to join the group?

-----

-----

B<sub>3</sub>. What makes you continue to be in the group until today?

-----

-----

B<sub>4</sub>. What are the conditions that one has to fulfill in order to become a group member?

-----

-----

B<sub>5</sub>. Who set those conditions?

-----

-----

B<sub>6</sub>. What is the trend of membership in your group?

1. Increasing [    ]
2. Remain the same [    ]
3. Decreasing [    ]
4. Fluctuating [    ]

B<sub>7</sub>. Are there members who have left the group?

1. Yes [    ]
2. No [    ] (go to Qn B<sub>9</sub>)

B<sub>8</sub>. If yes in Qn B<sub>7</sub> above what are the reasons that made them to leave?

-----

-----



B<sub>9</sub>. Does your group intend to recruit more members?

1. Yes [    ]

2. No [    ]

B<sub>10</sub>. What are your plans for increasing group members in your group?

-----

-----

B<sub>11</sub>. What should be done to ensure that group members remain in the groups?

-----

-----

B<sub>12</sub>. What benefits do you get from the group?

-----

-----

B<sub>13</sub>. Do you derive satisfaction from those benefits you get?

1. Yes [    ] (go to Qn B<sub>15</sub>)

2. No [    ]

B<sub>14</sub>. If no in Qn B<sub>13</sub> above what are the reasons?

-----

-----

B<sub>15</sub>. Does the group hold meetings regularly?

1. Yes [    ]

2. No [    ] (go to Qn B<sub>19</sub>)

B<sub>16</sub>. If yes in Qn B<sub>17</sub> above how frequently, do you meet?

-----

-----

B<sub>17</sub>. Do group members participate actively in the group meetings?

1. Yes
2. No

B<sub>18</sub>. How do you rate the member's participation in implementation of group activities after FARM - Africa Project ended?

1. High participation [    ]
2. Low participation [    ]
3. No participation at all [    ]

B<sub>19</sub>. What are the reasons for your answer in Qn B<sub>18</sub> above?

-----  
-----

B<sub>20</sub>. Does the Village authority recognize the presence of farmer groups in your village?

1. Yes [    ]
2. No [    ]

B<sub>21</sub>. Are the political leaders aware of the existence of farmer groups in your village?

1. Yes [    ]
2. No [    ]

B<sub>22</sub>. In what ways do the political leaders contribute to the successes or failure of farmer groups?

Success -----

Failure -----

**C: Extension Activities Done by Farmer Groups**

C<sub>1</sub>. What are the extension activities performed by your group?

-----

-----

C<sub>2</sub>. Among the extension activities mentioned above which ones are carried out more regularly?

-----

-----

C<sub>3</sub>. What are the technologies disseminated by the groups?

-----

-----

C<sub>4</sub>. Of the technologies disseminated by your groups, which ones are mostly preferred by the farmers?

-----

-----

C<sub>5</sub>. Explain your answer in C<sub>5</sub> above

-----

-----

C<sub>6</sub>. Do you get any assistance/support from outside your group to enhance your extension activities?

1. Yes [     ]
2. No [     ] (go to Qn C<sub>9</sub>)

C<sub>7</sub>. If yes, mention the type and source of support

Type of support	Source of support

C<sub>8</sub>. Does the resident extension officer play any role related to extension activities performed by your group?

1. Yes [     ]

2. No [     ]

C<sub>9</sub>. If yes, what roles does the extension officer perform in relation to extension activities done by the groups?

-----

-----

C<sub>10</sub>. What other extension activities do you think could be done by farmer groups like yours?

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-----

C<sub>11</sub>. In your opinion, what do you think are the constraints facing farmer groups in delivering extension services?

-----

-----

C<sub>12</sub>. What should be done to overcome those constraints?

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-----

#### **D: Factors Influencing Group Sustainability**

D<sub>1</sub>. What makes your group continue to survive until today?

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---

D<sub>2</sub>. What is your views regarding the continuity of the farmer groups after the withdrawal of FARM Africa?

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---

D<sub>4</sub>. From your experience, what causes other farmer's groups to collapse?

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---

D<sub>5</sub>. In your opinion, what should be done to ensure farmer's groups live long after they are established?

---



---

D<sub>6</sub>. What are the main activities of your group?

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D<sub>7</sub>. Has there been any change in group activities from the original ones?

1. Yes [    ]

2. No [    ]

D<sub>8</sub>. If yes in Qn D<sub>7</sub> above, what are they?

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---

D<sub>9</sub>. If yes in Qn D<sub>7</sub> above what were the reasons for the change?

---

-----

D<sub>10</sub>. What can you say about the activeness of the group in performing group activities?

1. It is active
2. It is not active

D<sub>11</sub>. Explain your answer in D<sub>10</sub> above

-----

-----

D<sub>12</sub>. What are the day-to-day problems that you encounter in your group activities?

-----

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D<sub>13</sub>. How does your group solve those problems mentioned in Qn D<sub>12</sub>?

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-----

D<sub>14</sub>. What can you say about the continuity of the group activities in the future?

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D<sub>15</sub>. In your opinion, what should be done to ensure farmer's groups continue doing their group activities?

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## **E: Challenges in Sustaining Farmer Groups**

E<sub>1</sub>. What are the challenges related to the ability of farmer groups to survive for a long time after its establishment?

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E<sub>2</sub>. How do those challenges mentioned in E<sub>1</sub> affect group's performance?

---

---

E<sub>3</sub>. What should be done to overcome those challenges?

---

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**THANK YOU FOR YOUR COOPERATION**

## **Appendix 2: Checklist for key informant interviews**

### **(i) Checklist for focus group discussion**

#### **A: Extension activities carried out through farmer groups**

1. What are the technologies disseminated by your groups?
2. Which of those technologies do farmers mostly prefer? Give reasons.
3. What other extension activities that you think could be done by farmer groups like yours?
4. Do you receive external support to enhance your extension activities? Explain.
5. What are the constraints of farmer groups in delivering extension services?
6. What should be done to improve extension service delivery through farmer groups?

#### **B: Factors influencing sustainability of farmer groups**

7. How many farmer groups are there in your village
8. In which year did your groups started in this village?
9. How many members started the groups?
10. What are the conditions for joining the group?
11. What were the objectives of the farmer groups?
12. What are the activities done by your groups?
13. What benefits have you achieved in your group so far?
14. Among the farmers' groups in your village, which groups do you think are active and continuing with their group activities?
15. What are the reasons that make those groups survive until today?
16. Among the farmer's groups in your village, which groups do you think are not active and continuing well with their activities?



17. What are the reasons that make those groups not active?
18. What are your views regarding continued survival of the farmer groups after FARM Africa project ended?
19. How do village leaders contribute to the success or failure of farmer groups in your village?

**C: Challenges in Sustaining Farmer Groups**

20. What are the important challenges related to the ability of the farmer groups to continue for a long time after being established?
21. How do those challenges affect the group performance?
22. What should be done to overcome those challenges?
23. What are the important challenges related to the ability of the group to be able to continue with its activities?
24. What should be done to overcome those challenges

**THANK YOU FOR YOUR COOPERATION**

**(ii) Checklist for the Village Agricultural Extension Officers**

**A: Extension activities carried out through farmer groups**

1. What is the extension activities carried out by farmer groups in this village?
2. What are the technologies disseminated through the farmer groups?
3. Do the farmer groups receive any assistance from outside in carrying out the extension activities?
4. Do you visit the farmer groups to provide them with advice?
5. What roles do you perform in relation to extension activities done by the groups?
6. What are the constraints of farmer groups in delivering extension services?
7. How can those constraints be overcome?

**B: Factors influencing sustainability of farmer groups**

8. For how long have you been in this village?
9. How many farmer groups are there in your village
10. Among the farmer's groups in your village, which groups do you think are active and continuing with their group activities? Mention them
11. What make those groups active and continue with their group activities?
12. What are the types of assistance do the groups received from the donor?
13. Among the farmer's groups in your village, which groups do you think are not active? Mention them
14. What are the reasons that make them not active in their group activities?
15. From your experience, what causes other farmer groups to collapse?
16. What are your views regarding the sustainability of farmer groups after FARM Africa project ended?
17. How does the village authority cooperate with the farmer groups in this village?

18. In your opinion, what should be done to ensure that farmer groups are sustainable in extension?

**C: Challenges in Sustaining Farmer Groups**

19. What are the challenges related to continued survival of the farmer groups?
20. How do those challenges affect the group performance?
21. What should be done to overcome those challenges?
22. Are you involved in conflict management of the farmer groups?
23. How do you manage those conflicts as an outsider?

**THANK YOU FOR YOUR COOPERATION**

**(iii) Checklist for the group leaders**

**A: Extension activities carried out through farmer groups**

1. What are the technologies disseminated by your groups?
2. Which of those technologies do farmers mostly prefer? Explain
3. What other extension activities do you think could be done by farmer groups like yours?
4. What are the constraints of farmer groups in delivering extension services?
5. What should be done to improve extension service delivery through farmer groups?

**B: Factors influencing sustainability of Small Farmer Groups**

6. When did the farmer groups started?
7. How many members started the groups?
8. What is the trend of membership now? Give reasons
9. What were the objectives of the farmer groups?
10. What are the benefits achieved by the groups so far?
11. Do you conduct group meetings? What is the response of members' in participating in the group meeting?
12. Have you received any training on group leadership and management to enable you in managing the groups?
13. From your experience, what makes other farmer groups collapse?
14. What are your views regarding the continued survival of the farmer groups after FARM Africa project ended?
15. How do village leaders contribute to the success or failure of farmer groups in your village?

**C: Challenges in Sustaining Farmer Groups**

16. What are the important challenges related to continued survival of the farmer groups for a long time?
17. How do those challenges affect the group performance?
18. What should be done to overcome those challenges?

**THANK YOU FOR YOUR COOPERATION**

**(iv) Checklist for the village leaders**

**A: Extension activities carried out through farmer groups**

1. What are the technologies disseminated by the farmer groups?
2. What can you say about the response of farmers in receiving the technologies disseminated by farmers' groups?
3. What other extension activities that you think could be done by farmer groups?
4. What are the constraints of farmer groups in delivering extension services?

**B: Factors influencing sustainability of farmer groups**

5. Are you aware of the existence of farmer groups in your village?
6. How did you come to know the groups in your village?
7. What are the activities done by those groups in your village?
8. What do you comment on the performance of the groups in their activities?
9. What are your views regarding the survival and continuity of the farmer groups after FARM Africa project ended?
10. How does your village government cooperate with the farmer groups?
11. In your opinion, what should be done to ensure that farmer groups are sustainable?

**C: Challenges in Sustaining Farmer Groups**

12. What important challenges do you think are facing the farmer groups in continuing with their activities?
13. What should be done to overcome those challenges?
14. Are you involved in conflict management of the farmer groups?
15. How do you manage those conflicts as an outsider?

**THANK YOU FOR YOUR COOPERATION**