

**Access constraints by women farmers to Multiflower
extension services
The case of Mvomero district, Tanzania**

A research project submitted to Van Hall Larenstein University of Applied Sciences
in partial fulfillment of the requirements for the degree
of Master of Management of development

Specialization Social Inclusion Gender and Livelihood (SIGAL)

By **SOLOMON SIMON MHANGO**
September 2008

**Access constraints by women farmers to Multiflower
extension services
The case of Mvomero district, Tanzania**

A research project submitted to Van Hall Larenstein University of applied sciences in
partial fulfillment of the requirements for the degree of Master of Management of
development

Specialization Social Inclusion Gender and Livelihood (SIGAL)

By **SOLOMON SIMON MHANGO**
September 2008

Van Hall Larenstein University of applied science, Wageningen, The Netherlands
©Copyright Solomon Simon Mhango, 2008. All rights reserved.

PERMISSION TO USE

In presenting this research in partial fulfillment of the requirement for a graduate degree, I agree that the library of this University may make it freely available for inspection. I further agree that permission for copying of this research in any manner, in whole or part for scholarly purposes may be granted by Larenstein Director of Research. It is understood that any copying or publication or use of this research project or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition to me and to the University in any scholarly use which may be made any material in my research project.

Request for permission to copy or to make other use of material in this research project in whole or part should be addressed to:

Director of Research

Larenstein University of Applied Sciences
Part of Wageningen UR
Forum-Gebouw 102
Droevendaalsesteeg 2
6708 PB, Wageningen
Postbus 411
Tel: +31317486230
Fax: +31317484884

DEDICATION

I dedicate this thesis to my late parents:

Simon Mhango and Monica Ibrahim. I still remember their love and care to me as their last born.

ACKNOWLEDGEMENTS

No research is ever carried out or written in solitude. I owe my deep gratitude to a great number of people. I would like to begin by saying that without the dedication and commitment of my research supervisor Mr. Bernard Gildemacher, this research would not have been possible.

Exclusively, I would like to thank my course coordinator Ms. Annemarie Westerndorp for her tireless support and guidance for my thesis and the entire period of my study while in Netherlands.

I am gratefully indebted to Van Hall Larenstein University to admit me to pursue my studies in Master of Management of development –SIGAL in this University. I would like to express my uttermost gratefulness to the Netherlands Government for financial support of my studies in Van Hall Larenstein University, Wageningen and during the field work.

I wish to extend my heartfelt gratitude to all the MOD Lecturers and all other staff of Van Hall Larenstein University of applied Sciences.

My great thanks goes to Management of Multiflower Company to permit me to undertake my studies and further more to give me cooperation during field work back home to Tanzania.

My heartfelt special thanks go to my family i.e. brothers and sisters for their continuous prayers upon me for the whole period of my studies.

I wish to express my thanks to all 20 farmers of Mvomero District who took interview with me. I thank you for your patience and kindness to provide your cooperation during field data collection.

TABLE OF CONTENTS

PERMISSION TO USE	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES.....	vii
LIST OF FIGURES.....	vii
LIST OF ABBREVIATIONS.....	viii
CHAPTER ONE: INTRODUCTION	1
1.1 Organization of the report	1
1.2 Description of Multiflower Company.....	2
1.3 Problem statement	2
1.4 Objective	3
1.5 Research questions	3
1.5.1 Main questions	3
1.5.2 Sub questions.....	3
1.6 Definition of concepts	3
1.7 Limitations of the study	4
CHAPTER TWO: BACKGROUND INFORMATION	5
2.1 Background of the study	5
2.2 Description of the study area	7
2.3 Conceptual framework	10
CHAPTER THREE: LITERATURE REVIEW	11
3.1 Extension definition	11
3.2 Extension Strategies (or services)	13
3.3 Private extension service delivery	13
3.4 Knowledge transfer	14
3.5 Access to extension services	14
3.6 Competences of extension worker.....	15
3.7 Livelihood strategies	15
3.7.1 Rural livelihoods of vegetable farmers in Tanzania.....	16
CHAPTER FOUR: METHODOLOGY	17
4.1 Research design	17
4.2 Selection of the study area.....	17
4.3 Selection of the respondents.....	18
4.4 Sampling procedures	18
4.5 Method of Data collection.....	19

4.5.1 Primary data	19
4.5.2 Secondary data	19
4.6 Data processing and analysis	20
CHAPTER FIVE: RESULTS	21
5.1 Multiflower extension service delivery	21
5.1.1 Extension strategies of Multiflower	22
5.1.2 Women farmers' problems expression	22
5.1.3 Multiflower collaboration with other Stakeholders	23
5.1.4 Extension workers' exposure to Agricultural trainings	23
5.1.5 Challenges encountered in including women to extension services	24
5.1.6 Problems that face Women farmers to follow up recommendations	24
5.1.7 Multiflower goals towards women involvement	25
5.1.8 Extension service coverage	26
5.2 Factors limiting women farmers' access to extension services	26
5.2.1 Socio cultural factors	26
5.2.2 Economic/financial factors	29
5.2.3 Farmers' perceptions about extension services of Multiflower	32
CHAPTER SIX: ANALYSIS AND DISCUSSION	36
6.1. Extension service delivery of Multiflower	36
6.2 Factors limiting women farmers' access to extension services	40
6.2.1 Socio cultural factors	40
6.2.2 Economic/Financial factors.	41
6.2.3 Women farmers' perceptions about extension services	43
CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS	44
7.1 Conclusion	44
7.1.1 Extension service delivery of Multiflower	44
7.1.2 Women access to extension services	45
7.2 Recommendations	46
REFERENCES	48
ANNEXES	51
ANNEX 1: CHECKLISTS FOR EXTENSION WORKERS	51
ANNEX 2: CHECKLIST FOR WOMEN FARMERS WITHIN COMPANY'S SERVICES	52
ANNEX 3: CHECKLIST FOR WOMEN FARMERS OUTSIDE COMPANY'S SERVICES	53

LIST OF TABLES

Table 1: Distribution of administrative units in Mvomero district	9
Table 2: Agriculture sector in Mvomero district	9
Table 3: Extension workers' responses	21
Table 4: Strategies used for service provision	22
Table 5: Multiflower goals towards women involvement	25
Table 6: Extension services coverage	26
Table 7: Harvard activity profile.....	26
Table 8: Education level of women farmers	27
Table 9: Household decision making	27
Table 10: Access to information from advertising materials.....	28
Table 11: Reasons that women fail to attend extension trainings/& meetings.....	29
Table 12: Harvard access profile	29
Table 13: Respondents farm size	30
Table 14: Cultivated vegetables.....	32
Table 15: Sources of extension services	35

LIST OF FIGURES

Figure 1: Maps of Tanzania and Morogoro Region showing Mvomero District	8
Figure 2: Conceptual Frame work.....	10

LIST OF ABBREVIATIONS

AIDS	Acquired immune Deficiency Syndrome
BOT	Bank of Tanzania
CBOs	Community Based Organizations
DFID	Department for International Development
DAAS	Danish Agricultural Advisory Service
FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
Ha	Hectares
HIV	Human Immune Virus
IIRR	International Rice Research Institute
KIT	Royal Tropical Institute
Masl	Meters above sea level
MOD	Management of Development
MFIs	Micro Finance Institutions
NEDA	Netherlands Development Assistance
NGOs	Non Governmental Organizations
SACCOs	Saving and Credit Co operatives
S.A	Sulphate of Ammonia
SAP	Structural Adjustment Programme
SIGAL	Socio Inclusion Gender and Rural Livelihood
SUA	Sokoine University of Agriculture
TAHA	Tanzania Horticultural Association
TOSCI	Tanzania Official Seed Institute
Tsh.	Tanzanian Shilling
UMADEP	Uluguru Mountains Agricultural Development Project
UMHODEP	Upper Mgeta Horticultural Development Project
URT	United Republic of Tanzania
USD	United States of America Dollars

SUMMARY

Women play critical roles in agriculture in many parts of the world. Yet, despite their contribution to global food security, women farmers are frequently underestimated and overlooked in development strategies. For this reason, women find it more difficult than men to gain access to valuable resources such as land, credit and agricultural inputs, technology, extension, training and services that would enhance their production activity.

Agricultural extension services provide information training and technology to agricultural producers. Extension services have always been regarded as necessary for agricultural modernization. Given the importance of women's labor to agriculture in rural areas, providing women with access to agricultural extension services is essential for current and future productivity.

The expansion of agricultural services beyond the public sector is a growing phenomenon in developing economies. Multiflower Company is a private commercial organization which was established in Arusha city (Tanzania) in 1995. Its businesses are production of flowers, flower seeds for export market and imports vegetable seeds from Europe for local markets. In addition, the Company conducts Multiplication of basic seeds and then sells to stockiest around the country in whole sale basis. The Company came into existence as a result of economic reform measures carried out by the Government of Tanzania pushed by World Bank and IMF. The Structural Adjustment Programme (SAP) which started in the mid-1980's with its impetus for liberalization and privatization came into effect and launched in Tanzania in 1993. SAP encouraged private sectors in order to improve efficiency and promote new technology. Multiflower conducts vegetable seeds business by delivering extension services to farmers and stockiest through Agricultural training programs and promotion activities.

Despite of the efforts that Multiflower takes to provide its extension services to both men and women farmers in Mvomero district, but women farmers have not been the users of these services. This study sought to identify the factors that led to limited access of women farmers to extension services provided by this company.

Empirical data were collected from extension workers and women farmers through case study strategy. Checklist questions were the tool used in gathering information from four (4) extension workers of Multiflower Company and twenty (20) women farmers. However, desk study and observations were used for triangulation of information.

Findings revealed that women farmers in the study area faced many problems to access extension services of Multiflower Company. These includes inadequacy service delivery by Multiflower company, low levels of education, difficulties in accessing information from extension materials, unequal gender division of labour in vegetable production, limited decision making in households, burden of household chores, lack of ownership of income and tools & implements, lack of access to MFIs and high prices of agricultural inputs.

There is a need for Multiflower to specifically identify women as an integral part of its extension services and develop gender-specific operational guidelines which will direct the extension activities of women farmers. Multiflower extension workers should encourage the formation of groups among women farmers & should target the existing women farmer groups to enhance horizontal knowledge sharing.

CHAPTER ONE: INTRODUCTION

In Tanzania, like in many other parts of the world, women play important roles as producers of food, managers of natural resources, income earners and caretakers of households (Kindeya, et al 2005). Despite the fact that women play a key role in the agricultural sector, they have been neglected in the planning of economic policies. This has exacerbated the subordination of women and diminished the impact of policies designed to raise household output and income. Women farmers play substantial contributions in the economic growth of Tanzania. Their contribution is recognized through being engaged in agricultural production. Therefore, access of women farmers to extension services play great role in their agricultural productivity, and this holds true for women farmers in Mvomero District where this study were conducted. However, women farmers often miss the chance to access extension services. This is a constraint to agricultural productivity. Mvomero district is located in northern part of Morogoro region and Morogoro region is located in the eastern zone of Tanzania (figure 1 below). In this circumstance it is important to find out the constraining factors for women farmers to access extension services delivered by Multiflower Company. The outcome of this study should be considered as the overall contribution in recognizing women farmer's roles, needs & interests and factors that constrain them to get access to extension services. It is important to find out the possibilities that Multiflower Company as private extension provider can appropriately provide its agricultural extension services to rural farmers in Mvomero District. This study was designed and conducted in Mvomero District, Morogoro region, Tanzania

1.1 Organization of the report

This study report is organized into seven chapters: Each chapter contains several themes.

Chapter one is an introductory part of the thesis. It provides brief background of the study, description of Multiflower Company, problem statement, objective of this research, research questions, definition of various concepts used in this research and finally the limitations of the study.

Chapter two covers background information. This chapter provides background of this study, description of the study area and conceptual framework.

Chapter three gives literature review. This chapter presents several aspects including definition of extension, extension strategies (or services), private extension Service delivery, knowledge transfer, aspects for the access to extension services, competences of extension worker, livelihood strategies and rural livelihoods for the case of Tanzania.

Chapter four shows methodology used in carrying out the research. It consists the research design, description of the study area, selection of the study area, selection of the respondents, sampling procedures, methods of data collection and data processing & analysis.

Chapter five displays the findings from the field. Information from the interviews with extension workers, women farmers and observations are presented. The findings are categorized into Multiflower extension service delivery and factors limiting women farmers' access to extension services.

Chapter six presents the research analysis and discussion. In this chapter results are analyzed and discussed with support of literatures.

Chapter seven presents conclusion and recommendations. This chapter sums up the study.

1.2 Description of Multiflower Company

Multiflower Company is a private commercial organization which was established in Arusha city (Tanzania) in 1995. Its businesses are production of flowers, flower seeds for export market and imports vegetable seeds from Europe for local markets. In addition, the Company conducts Multiplication of basic seeds and then sells to stockiest around the country in whole sale basis. Before multiplied seeds being disseminated to farmers they firstly approved by Tanzania Official Seed Institute (TOSCI). TOSCI is the Governmental institute but semi-autonomous agency that oversees the production of quality certified seed. The Company conducts vegetable seeds business by delivering extension services to farmers plus stockiest through Agricultural training programs and promotion activities. The vegetable seeds are imported from Netherlands two seed companies namely Seminis and East- West seeds Companies. These Companies produce vegetable seeds with the brand name "Royal sluis seeds" and "East-West seeds" respectively. Flowers and flower seeds are produced in green houses and from out growers then sold to Europe and USA markets. Most of the flowers are grown in Arusha region and out growers are located in neighboring regions of Kilimanjaro, Morogoro and few in Manyara. Kilimanjaro and Morogoro experiences high altitude climates because are found at the base of Mountain Kilimanjaro and Uluguru respectively. Multiflower Company is a member of Tanzania Horticultural Association (TAHA) among of forty five other members. TAHA mission is to promote the horticulture sector in Tanzania to become more profitable, sustainable, and anticipate more effectively in the development of the country.

The Multiflower Company came into existence as a result of economic reform measures carried out by the Government of Tanzania pushed by World Bank and IMF. The Structural Adjustment Programme (SAP) which started in the mid-1980's with its impetus for liberalization and privatization came into effect and launched in Tanzania in 1993. Among the basic objectives of the envisaged parastatal reform were to expand the role of the private sector in the economy, permitting the government to concentrate public resources on its role as provider of basic services, such as health, education, social and economic infrastructure. Private sectors were encouraged in order to improve efficiency and promote new technology.

1.3 Problem statement

Before new intervention of extension services, the Company was providing services to farmers dwelling near the main roads and the remote ones were invited by their fellows who happen to be involved in services to learn from the established demonstration plots. In previous two years the Company has extended its services by penetrating up to remote areas where majority of poor farmers live including women.

In general, agricultural extension services are supposed to contribute to livelihood improvements for all groups of farmers (better-off, resource-poor, women) as well as to increase the overall agricultural production of a country including the provision of foreign exchange from export of agricultural products (Haug 1999). Despite of the effort that Multiflower Company does to reach different categories of farmers, women

access to extension services has remained low. Lack of access of women farmers to extension services influences the Company's effort of promoting its products to the extent of reaching as many farmers as intended.

1.4 Objective

The aim of proposed study is to identify the factors that contribute to low access of women farmers to extension services. The study will give insight within the scope of the company on how to improve women access to Multiflower extension services which in turn will help to improve sales of vegetable seeds.

1.5 Research questions

1.5.1 Main questions

- a) What are the factors that have hindered extension workers to effectively involve women farmers in extension services?
- b) What are the limiting factors for women farmers to access extension services?

1.5.2 Sub questions

1. What are the strategies used by extension officers in extension service delivery?
2. How competences are extension workers in incorporating women farmers in extension services?
3. How does the commercial focus of Multiflower Company influence extension workers in incorporating women farmers to extension services?
4. What are socio-cultural factors that hinder women farmers to access extension services?
5. What are economic/financial factors that hinder women farmers to access extension services?
6. What are the perceptions of women farmers about the extension services?

1.6 Definition of concepts

Access

In this study access is generally taken as the opportunity of women farmers to make use of extension services. According to March et al, 1999 access is defined as the opportunity to make use of a resource. It is also defined as women's access to factors of production on equal basis with men. Access to resources and services helps men and women benefit from development programs.

Gender

Is defined as the socially given roles, activities, responsibilities which are attributed to being either male or female and they determine how women and men should behave in society (March et al, 1999).

Gender needs

These are divided into practical gender needs and strategic gender needs: *Practical gender needs* are a response to an immediate perceived necessity which is identified by women within a specific context (Moser 1993). According to March et al 1999, practical gender needs are typically concerned with inadequacies in living conditions and if are met then the lives of women/men will be improved without changing the existing gender division of labour or challenging women's subordinate position in society. *Strategic gender needs* are the needs women identify because of their subordinate position to men in their society (Moser 1993). According to March et al 1999, strategic gender needs relate to gender division of labour, power, and control

and if these are met then the existing relation of unequal power between men and women will be transformed.

Status and role

Gender roles influence the division of labour because labour is valued differently depending on who does it. Different roles, work and valuing of labour create differential access to decision-making, services and benefits. The differential valuing of work and access to decision making, resources and benefits reinforce existing power relations that in turn reinforce existing gender roles. March et al (1999) found that as a result of women low status in the community, the activities they perform tend to be valued less than men's and in turn their low status is perpetuated through the low value placed on their activities.

Control

Denotes the power to decide how a resource is used and who has access to it such that none dominates the other. It denotes women's control over the decision making process, to achieve equality of control over the factors of production and the distribution of benefits. This is the ability of both men and women to make decisions which services they should access, define their needs, mobilize their own resources, and decide how the resources should be used (March et al, 1999).

Position

Position describes the place of women in society relative to that of men. Changing women's position requires addressing their strategic gender interest/needs (that relates to gender divisions of labour, power and control), including equal access to decision-making and resources, getting rid of discrimination in employment and land ownership. If strategic gender interest/needs were met then the unequal power relationship between men and women would be transformed (March et al, 1999).

Livelihood strategies

According to Ellis (2000), livelihood strategies are composed of activities that generate the means of household survival. There are two categories of livelihood strategies which are natural resource and non natural resource based activities. Natural resource based activities includes food production, non food production, livestock keeping and non- farm activities. Non-natural resource based activities include rural trade, other rural services (carpentry), rural manufacture, remittances and other transfers (e.g. pension).

1.7 Limitations of the study

Due to limited time for conducting field work, the researcher of this study was not able to conduct more than 24 interviews that could help in triangulation of information.

No secondary were available from Multiflower Company. Extension workers did not provide quantitative data like number of existing farmer groups, number of women farmers in each group, percentage of women farmers who are active in trainings/ & meetings.

CHAPTER TWO: BACKGROUND INFORMATION

This chapter covers background of this study, description of the study area and conceptual framework.

2.1 Background of the study

Small farmers in developing countries - and women farmers in particular - are increasingly excluded from the emerging globalized food economy. Smallholders are typically among the poorest of the rural population. Constraints historically faced by rural women (usually among marginalized groups in rural areas who lack access to productive resources), hold women back from adopting new technologies, increasing their economies of scale or more fully participating in marketing channels higher upstream (Garcia, 2004). Access to information is a fundamental issue in information for development. Accessibility to agricultural information is a determinant of the success of agricultural development for sustainability of both agriculture and information to farmers. Within the international development community there is recognition of the link between agriculture and women and of the importance of considering gender dynamics in sustainable rural development. It is widely demonstrated that rural women, as well as men, throughout the world are engaged in range of productive activities essential to household welfare, agricultural productivity, and economic growth (Jiggins, et al 1997). Jiggins continue by saying that, yet women's substantial contribution continues to be systematically marginalized and undervalued in conventional agricultural and economic analyses and policies, while men's contribution remains the central, often the sole, focus of attention. Women are typically, and wrongly, still characterized as 'economically inactive' in statistical surveys of agriculture. According to Faida Mali, IIRR and KIT, 2006, although women do the majority of farm work in Africa, they are relatively poor served by development agencies. It is a challenge to overcome the inherent gender biases in society, culture and organizations.

Jiggins, et al 1997 point out that, women like poor low-income male producers have restricted access to production resources and extension services for their agricultural production needs. Further more Jiggins says the problem of women's restricted access to extension knowledge and information services must still be understood as part of larger problem of male dominance and unequal distribution of productive resources and responsibilities between men and women. Perhaps the most fundamental threat to women's roles and rights of self determination is the patriarchal family system which sees women as less valued than men.

Multiflower Company is a private commercial organization that conducts vegetable seeds business and reaches rural farmers through extension services. The extension services which is delivered to rural farmers' by the Company plays major role in boosting up marketing of vegetable seeds. Farmer training programs and promotional materials like brochures, leaflets and flyers helps to create and raise farmers' awareness about how best quality are the seed varieties of Multiflower Company. However, training programs and promotional materials eventually motivate farmers to apply recommended new agricultural technologies. It is through farmers awareness and motivation about vegetable seeds whereby the Company do sale much of its products to farmers. As Multiflower Company is a business oriented organization, it offers free of charge extension services whereby farmers are not asked to pay before or after services. In that case any farmer is allowed to join and benefit extension services delivered by the company. According to the setting of

extension service delivery of the Multiflower Company, both men and women farmers have equal chances to reach and use extension services but in reality women have low access to extension services than men. As a result women farmers fail to benefit valuable resources such as Agricultural technology, inputs, training as well as credits that would enhance their production capacity.

Poor access to agricultural extension services is one of the significant factors which affect the agricultural productivity of women farmers. Agricultural extension makes significant and positive impacts on farmers' knowledge and adoption of new technologies & hence increasing farm productivity and income (Birkhaeuser et al, 1991 cited in Hariharan 2005). A farmer can only compete with his colleagues, if he has access to the most recent information about research findings, farmer's experiences and his environment, e.g. prices and agricultural policies (Van den Ban 1999). In general, the extension service has been directed not towards traditional farmers but to farmers who adopt modern cash crops and export crops in particular (Burger and Gunning 1991). Access problem to services may have emanated from gender relation between men and women in farming societies. March et al, 1999 says that in most societies gender power relations are skewed in favour of men in household as well as in community level (March et al, 1999). Existence of inequalities in relationship between men and women in society lead to gendered allocation of resources and who has access to those resources.

The extension services which is offered by Multiflower Company is normally intended to reach and be taken up by all farmers regardless of their sexes but the issue remains that most who reaches and uses these services are men. In many occasions where when farmers are invited to attend training or farmers' field days the majority who attend these programs successful are men. Experience from researcher of this study is that whenever there were invitations for extension meetings, majority of farmers who attend meeting and willing to undertake demonstration trials are men. High sales performance is achieved when many farmers reach and use extension services. For this case Multiflower Company is aware that women due to their ability in forming units and if effectively involved in extension programs can contribute much in promotion of vegetable seeds, hence improve sales. Since the contribution of women in Agriculture is high, this can also be the case for women in Mvomero district where Multiflower services operate. Although Multiflower Company deals with business of flowers, flower seeds and vegetable seeds, but this study focuses research on vegetable seeds and therefore vegetable farmers in relation to access to extension services.

Agricultural extension services are supposed to fulfill many aims, from reducing rural poverty and improved livelihoods for rural households to increasing the overall production and contributing to foreign exchange earnings from export (Haug 1999). Extension services which is delivered by Multiflower Company is as important as other agricultural extension services in improving livelihoods of rural communities and contribute to economic growth of Tanzania.

2.2 Description of the study area

This study was conducted in Mvomero district located in Morogoro region within Tanzania. Information was collected from women farmers in two villages in Mvomero district who grows vegetables and where Multiflower Company operates. The first village was Mgeta which is located near main road and there is market centre for agricultural produce and the second one was Bunduki village which is found in remote area far from the main roads. The study area is within the mountainous zone of Uluguru that covers the whole eastern part and partly in Southern part of Tanzania. The most important farming system in Mgeta division is production of vegetable especially cabbages. Other common vegetables include carrots, cauliflower & Beatrice, beans & green peas. Temperate fruits such as peaches, plums, pears and apples are also grown in the area. Maize production for food is also an important system in the area. People in the study area also keep animals like pigs, goats, cattle and poultries.



Figure 1: Maps of Tanzania and Morogoro Region showing Mvomero District

Source: <http://www.tanzania.go.tz/census/census/morogoro.htm>

Geographical description of Mvomero District

Mvomero District is among the six councils of Morogoro Region. It is a new District split from the former Morogoro District. Others are the Morogoro, Kilosa, Kilombero, Ulanga, and Morogoro Municipal. The district boundaries are as follows: to the north is Handeni district, to the east is Bagamoyo Dc, to the south by Morogoro Municipal Council and Morogoro District, whereas to the west it is by Kilosa District Council.

Mvomero District is located at North East of Morogoro Region lying between 8° 00" and 10° 00" Latitudes south of equator; and lies between Longitudes 37° 00" and 28° 22" East. The District has a total area of 7,325. km².

Administration

Administratively Mvomero district has is divided into 4 Divisions, 17 Wards, and 101 Villages as shown by the table below.

Table 1: Distribution of administrative units in Mvomero district

No	Division	Wards	Villages	Harmlets
1	Mvomero	4	31	154
2	Turiani	5	27	158
3	Mgeta	4	22	156
4	Mlali	4	21	109
Total		17	101	577

Source: Mvomero District Council (2002)

Sex ratio

Sex ratio is defined as the number of males per 100 females. The overall sex ratio for Mvomero District Council was 101 males for every 100 females. It was above 100 which indicate an excess number of males over females in Mvomero District. Moreover, the sex ratio at birth (0-4) was over 100 which indicate an excess number of males over females.

Working age group (15-64)

According to 2002 census population of working age group were 137,126; of which males were 68,870 and females were 68,256. In 2007 population of working age group projected to be 153,657 for both sexes; of those males were 77,166 and females were 76,491. The ethnic tribe in Mvomero district is Waluguru and forms the majority of the population.

Table 2: Agriculture sector in Mvomero district

Number of Household	58,314 households
Size of grazing land	2,664 km ²
Land area	7,325 km ²
Size of arable land	5493 km ²
Extension officer – farmer ratio	1:1223

Source: Mvomero District Council (2002)

Farmer groups formation in Mvomero district

Farmers in Mvomero district grow cash crops as well as food crops. There are about 105,163 farmers in Mvomero District with 740 number of groups. Number of farmers in groups is estimated to about 1740. The following are the number of farmer groups in each division: In Turiani there are 145 farmer groups, Mvomero division has 165 farmer groups, while Mgeta division exists a number of 80 farmer groups and finally is Mlali division which has 85 farmer groups.

Labour force (strength)

Available but primitive, untrained it needs more facilitation by the trained extension staff

2.3 Conceptual framework

This framework tries to show the contribution of Multiflower extension services to women farmers of Mvomero district in achieving their livelihood objectives of improving income as well as food security.

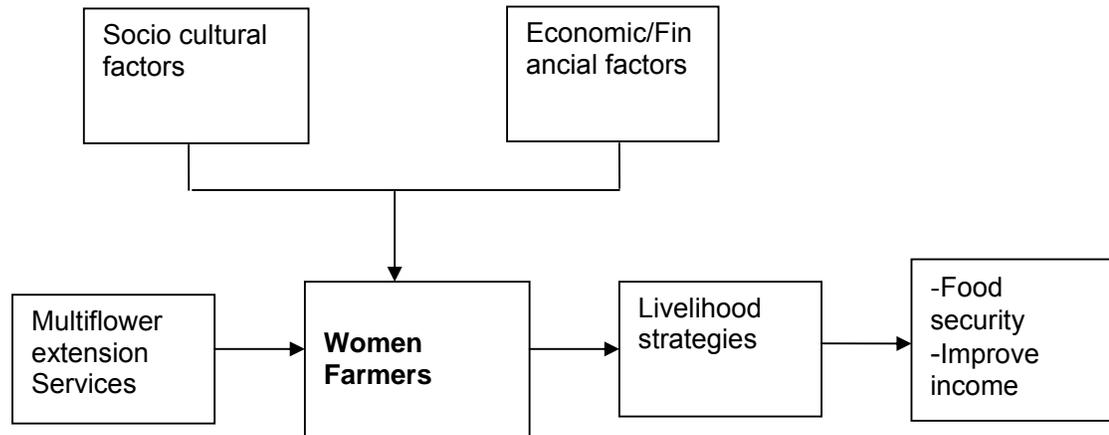


Figure 2: Conceptual Frame work

Livelihood Framework, adapted from: DFID, 1999.

The aim of Multiflower Company to provide extension services is to do business but while doing business the company would like to contribute towards improving livelihood of rural farmers. Women farmers need to access these services but due to inappropriate delivery combined with socio cultural & financial factors they find it difficult to access. Appropriateness of extension service delivery depends on approaches used to deliver messages as well as competencies of respective extension workers to deliver such extension messages. Extension service provision builds up the capacity of women farmers in production skills and knowledge which aims in improving their food security as well as income. The acquired knowledge and skills from extension services enables women farmers to make choices and combine different activities for the achievements of their livelihood objectives.

CHAPTER THREE: LITERATURE REVIEW

This chapter is essentially meant to summarize the literature which relates to private extension service provision such as extension strategies (or services), private extension Service delivery, knowledge transfer, aspects for the access to extension services, competences of extension worker, livelihood strategies and rural livelihoods for the case of Tanzania.

3.1 Extension definition

According to (Chipeta & DAAS 2006), the terms 'advisory services' and 'extension' are used interchangeably. The services may include:

- Dissemination of information
- Training and advice of groups of farmers or individual farmers
- Testing new technologies on-farm
- Development and dissemination of farm management tools

Extension definitions differ according to the way the respective author(s) feels it fit to the perspective he/she is intending to address. In other words, definition for 'extension' express what the concerned authors like extension to look like ideally. According to Leewis 2004, e.g. as a practice that is experienced as 'help' and 'assistance' and leads to 'good decisions' and 'development'.

During the 1980s it was recognized that, extension could not just be regarded as 'help' and 'being in the interest of the recipient'. Extension is in many ways also an intervention that is undertaken and (or paid for by a party who wants to influence people in a particular manner, in line with certain policy objectives. Thus, it was realized that there was often tension between the interest of the extension organization (and/or its funding agency) and the interest of recipients such as farmers.

In this way, there is a need at least to be a partial overlap or link between the interest of clients and extension organizations, otherwise people would obviously not be willing to change (unless they are forced or persuaded to by other means than just extension messages).

From these point of views, the following definitions of extension emerged.

- Extension is helping behaviour consisting of –or preceding- the transfer of information, usually with the explicit intention of changing mentality and behaviour in a direction that has been formulated in a wider policy context (Van Woerkum, 1982:39 cited in Leewis,2004)
- Extension is a professional communication intervention deployed by an institution to induce change in a voluntary behaviour with presumed public or collective utility (Röling, 1988:49 cited in Lewis, 2004).

The two intervention definitions above seemed to have misleading connotations as they mainly concerned with the public interests or public policy. Due to emergence of private and NGO-based extension and communicative intervention, the two definitions reviewed and revealed to have excluded private extension interests. Therefore have to come up with some changes. The suggestions for the changes in two intervention definitions of extension were put in place by senior authors like Röling & Wagemakers, 1988; Van Woerkum et al., 1999; Ison & Russell, 2000 cited in Leeuwis, 2004 who came up with more descriptive definition of extension as follows:

'Extension is a series of embedded communicative interventions that are meant, among others, to develop and/ or induce innovations which supposedly help to resolve (usually multi-actor) problematic situations'.

This descriptive definition of extension is made up of hereunder components:

- Maintains that extension is a professional activity practiced by people who are somehow paid and/ or rewarded for it.
- Extension is regarded as an intervention, as it is usually subsidized or paid for by external agencies (donor, governments, private companies) whose aspirations for doing so are not the same as those of the supposed beneficiaries.
- Extension draws heavily on communication as a strategy for furthering aspirations. Communication is the process through which people exchange meanings (e.g. through the use of information). Thus extension is an activity that is geared towards bringing about cognitive changes, used as a trigger for other forms of change (e.g. human practices, growth of crops, water availability, and regulations). Communication marks a shift away from a focus on education to a focus on learning.
- Extension is a process involving a series of communicative interventions and interactions.
- Extension takes place among other interactions, which indicates that there are many other interactions going on between people that do not involve extension and/or change agents, but which are still very relevant to the process. Farmers in villages, for example, interact a lot with each other, with other service providers and with community and/or religious leaders, and this is bound to have an impact on innovation processes.
- Although communication workers are usually interested in bringing about change and innovation of some kind but sometimes may have other aspirations which are uninterested that impinge on the way they go about their work, therefore the dynamics of the process should not be explained or considered at such intention.
- The statement that extension aims to 'develop and / or induce' innovation emphasizes that we cannot simply look at extension as 'dissemination of innovations'. Frequently, extension activities are, or need to be, geared towards designing new innovations. And even if extension activities aim at diffusion of existing innovation packages, this can often not be effective without including elements of redesign. The terms induce captures mixtures of dissemination and adaptation.
- The innovations that extension seeks to contribute to are regarded as 'novel patterns of co-ordination and adjustment between people, technical devices and natural phenomena'. This means that it contribute to convey effective innovations especially in the field of Agriculture and resource management including a balance mixture of social, technical and natural elements and processes.
- Extension activities are usually legitimized by referring to the need for solving a problematic situation. Whether or not this problematic situation is resolved, and to what extent, is of course something that remains to be seen as the process unfolds. Hence, the term 'supposedly' in the definition.
- The term 'supposedly' is used to point to different issues as well. Although in an extension process solutions and innovations are often considered as contributing to problem solving, this does not mean that they are promoted by extensionists or others solely or mainly for this purpose. Change agent may have different aspirations from what is interested by farmer e.g. induction of integrated pest management where change agent can aim to improve his/her

experience and job opportunity while farmers can expect to improve their production.

- In the definition, 'multi-actor problematic situations' indicate that the solving of problem situations usually depends on the activities of several interconnected actors who may have different views of what the problem is and what the criteria should be.

3.2 Extension Strategies (or services)

According to Leeuwis (2004), different extension services (communicative intervention) are geared towards supporting individual farm households in identifying, interpreting and solving problems on their specific farms. In other hand communication services are referred to as communication strategies because they refer to the way in which communicative intervention is supposed to contribute to societal problem solving. Services which relate to farm management are listed below.

- **Advisory communication services:** These are the services which happen when farmers ask or take the initiatives to seek the assistance of a communication worker in solving management problems. Problems can be immediate and operational or longer time scale. In helping farmers to deal with such problems, communication workers may not only provide relevant substantive knowledge but also to help farmers become more aware of what their goals and aspirations are in the first place (Zuurbier, 1984 cited in Leeuwis 2004) so that they can define more clearly what is problematic and what is not. For adequate provision of services communication worker have to have access to relevant kinds of expertise as well as they have adequate skills to elicit the needs and expectations of farmers so that they can adjust accordingly. Also communication worker is supposed to realize that there is considerably diversity in different farmers' goals, aspirations, priorities and circumstances so that one can not simply assume or impose standard goals and aspirations (such as profit maximization).
- **Supporting horizontal knowledge exchange:** These are the services in which farm comparison in groups is an important mechanism where farmers become aware of problems and solution through comparison with other farms. It happens through one farmer passing by other farmers' fields, exchange of labour and/or by chatting with farmers in market place. It also facilitated by enrolling farmer-communication worker which can be done by communication worker himself/herself, community members or farmer organization.

3.3 Private extension service delivery

Privatization is an element of the general reform process with the political objective to reform the services and to achieve a pro-poor commercialization in rural areas. Beynon, et al (1998) said that public funding for agricultural research and extension is widely perceived to have suffered badly, particularly in sub Saharan Africa, as Governments in many developing countries including Tanzania have faced growing fiscal constraints, often as part of adjustment programmes. For this case not all extension services can/should be taken by the government. According to Tanzania experiences, before privatization agricultural extension was seen as an exclusive responsibility of the central government, it was a free commodity, supply-driven where technologies were developed at research institutions and chosen for delivery by academics or bureaucrats in the government. Farmers were not consulted about what might work or what is feasible for their farms (ESFU, 1999). Further more

ESFU, 1999 point out that, today other organizations are becoming increasingly important in providing extension services. These actors include private companies, NGOs, CBOs, local governments as well as farmer groups and farmers. This shift from public sector monopoly to pluralism was necessitated by a decline in funding of extension services by the central government over the years and demands voiced by the stakeholders.

In some countries like Tanzania, Governmental bodies still pay for communicative intervention (on issues of public interest), but subcontract the delivery of services to one or more private companies who compete with each other. In this mode of public funding and private delivery (Zijp, 1998 cited in Leeuwis 2004), central and/ or local government act as clients and can hire the private company that provides the best value for money. In order to make privatization operational, Lupatu (1995) came up with the following conditions for successful private extension services.

- Services must be demand driven, that is, farmers must know exactly the kind of information they need and must know the benefits associated with it.
- The services must result in incremental increased production compared to the level the farmer is accustomed to get per unit area.
- Markets must be available. The increased production must find a ready market at attractive prices.
- Inputs must be available and backed by credit support
- Appropriate pricing policies must be in place
- Large number of extension providers to create competition and allow choices for farmers.

3.4 Knowledge transfer

Leeuwis (2004) says, adoption of innovations is not something that happens overnight, but rather that it is the final step in a sequence of stages. Adoption refers to the uptake of innovations by individuals and diffusion relates to the spreading of innovations in a community. People use different sources of information in connection with different stages of adoption. Sources of information are like; conventional mass media (e.g. newspapers, farm journals, leaflets, radio, TV), interpersonal media (face to face) and hybrid media (internet).

The stages of adoption are:

- Knowledge- about the existence of a new innovation or policy measure
- Persuasion- shaping attitudes under the influence of others
- Decision- adoption or rejection of the innovation or policy measure
- Implementation- adapting the innovation and putting it into use
- Confirmation- seeking reinforcement from others for decisions made, leading to continuation or discontinuation.

In countries with a well developed mass media system, farmers usually become aware of innovations through such media. In later stages they tend to prefer interpersonal contact with somebody in whose competence and motivation they have confidence. This person may be a change agent, but for most farmers exchanges of experiences with colleagues are more important.

3.5 Access to extension services

Women face constraints on gain access to trainings. As women balance their productive and reproductive responsibilities, the issue of their domestic commitments, including child-care, continues to work against them (Downes 1999 cited in Sweetman 2001).

According to Leeuwis (2004), interactive communicative intervention between extension worker and farmers is important in order to:

- Gain access to all sorts of relevant knowledge, insights, experiences and/or creativity that stakeholders may have regarding, for example, history, the nature of problems, possible solutions, changing circumstances and capricious local dynamics. It is needed because it gives proper information and feedback on which to base intervention initially and then adapt it continuously. Interaction is needed to build in sufficient learning capacity in intervention processes.
- Gain access to relevant networks, resources and people that may be relevant to building effective links and support networks for innovations to materialize.

3.6 Competences of extension worker

This study supports the idea of Van den Ban (1999) about the competences of extension worker as narrated below:

An extension agent can only be successful if the farmers have confidence in his expertise and his willingness to serve their interests. It is important that he is able to communicate with farmers and to plan his work effectively. It is not only important that he is competent at the moment he is appointed, but also that he continues to be so until he retires.

An extension agent should be well informed about the research on crop production, as far as this is relevant to solve the major production problems of his farmers. However, theoretical knowledge is not enough. He should also be able to recognize production problems in the field, to analyze their causes and to use this knowledge to suggest actions the farmer can take to solve these problems and/or to prevent similar problems in the future. This implies that he should be able to integrate theoretical knowledge from research and practical knowledge from farmer's experience.

In the places where there are large differences in the culture of the farmers and in their farming systems, the extension agent should have information which is location specific. Location specificity of information means both information about farmers and farming system, as well as information about research findings and the experiences of farmers with integrating innovations in their farming system.

A farmer can only compete with his colleagues, if he has access to the most recent information about research findings, farmer's experiences and his environment, e.g. prices and agricultural policies. Therefore he needs an extension agent, who is eager to learn continuously to be able to support his farmers with this information and who works in an organization where this learning is supported and stimulated. The village extension agent should be able to use data banks and other information technologies to obtain easily up to date information.

3.7 Livelihood strategies

Livelihood strategies are the result of the assets and their access. In most cases the environment that a household lives in, the assets it owns and the assets needed to access resources determine livelihood strategies. So this means that livelihood strategies are the set of life sustaining productive activities undertaken by rural households. These sets of activities can be broadly classified into three main categories: agricultural intensification (increasing farm yields) and extensification (increasing farm size), income diversification (through engaging in range of off farm

economic activities), and migration (temporary or permanent, partial or whole household) Devereux et al. 2003.

Even though it is possible to classify household livelihood strategies into above mentioned main groups, it is important to indicate that rural household livelihood strategies are complex, and as a result household members may be engaged in more than one strategy at any one time (Kissawike 2008). Farming system comprise the totality of production and consumption decisions taken by a farm-household, including the choice of crop, livestock and off-farm enterprises, and food consumed by the household (Byerlee et al., 1980 cited in Köbrich et al., 2003). Dixon et al (2001) define farming systems as a population of individual farm systems that have broadly similar resource bases, enterprise patterns, household livelihoods and constraints, and for which similar development strategies and interventions would be appropriate. Byerlee et al (1980) as cited in Köbrich et al (2003) pointed out that, no farm-household has the same resources or problems. This implies that every farming system is different, if not unique, facing distinctive decision-making problems, whose solutions could also be unique. Unfortunately it is not feasible in practice, making it necessary to classify or group farms in some way. Such groups constitute the so-called recommendation domains, "a group of roughly homogenous farmers with similar circumstances for whom we can make more or less the same recommendation". Livelihood diversification in poor countries including Tanzania is not farming combined with occasional short periods of wage work on a neighbour's farm, or in a nearby rural town centre. Nor is it part-time or hobby farming associated with permanent wage or salary earning in full-time, non-farm occupations. Most rural families have truly multiple income sources. This indeed includes off-farm wage work in agriculture (Ellis 2000). Having alternatives for income generation can make the difference between minimally viable livelihoods and destitution. However, the role of diversification in reducing the intensity of poverty at the lower end of the income distribution does not mean that it has an equalizing effect on rural incomes overall.

Gender is an integral and inseparable part of rural livelihoods. Men and women have different assets, access to resources, and opportunities. Women rarely own land, may have lower education due to discriminatory access, and their access to productive sources as well as decision-making tends to occur through the mediation of men (Ellis 2000). Most economists have tended to emphasize the appropriability of benefits as a key determinant of private investment-that is, the extent to which a private firm can exclude those who do not pay from using a technology that it produces (Byerlee & Echeverria 2004).

3.7.1 Rural livelihoods of vegetable farmers in Tanzania

Tanzania is among the world's poorest countries, with a per capita annual income of about US \$ 280, with Agriculture playing a dominant economic role, accounting for nearly three quarter of merchandise, 45-50% of GDP and employing around 70% of the labour force, especially in rural areas (Ashimogo & Greenhalgh 2007). According to Ashimogo and Greenhalgh, Agriculture sector in Tanzania will continue to play a dominant role with the main potential lying in diversification from traditional (cereals) exports to higher value crops, dairy, pig and poultry production.

In all sectors there is a gradually increasing role of the private sector in commercial agribusiness activities. National wide, the commercial poultry sector involves about a dozen hatcheries with the capacity to handle 200,000 chicks per three weeks cycle. Horticulture exports have been expanding from about USD 9 millions in 1999 to USD 14 millions in 2004. Kiosks located in busy places such as petrol stations are upcoming commercial outlets for high-value products (Ashimogo & Greenhalgh 2007).

CHAPTER FOUR: METHODOLOGY

The objective of this chapter is to build up methodological instruments and tools based on the research sub-questions that are appropriate for data collection in the field. Such sub questions which tries to probe about strategies used by extension workers in service delivery, their competences, the influence of commercial focus of Multiflower in women involvement, influence of socio-cultural economic/financial factors on access to services and perceptions of women farmers about the extension services.

This chapter covers research design in section one, selection of the study area in section two, while section three presents selection of the respondents, section four gives the sampling procedures, section five shows source of data collection and finally, section six covers data processing and analysis.

4.1 Research design

In order to probe answers for the research questions stated above, the research were designed into two phases: the first phase involved desk study in which theoretical concepts part dealt and the second phase was collection of qualitative data and partly quantitative data.

The desk study section collected theoretical information which used to understand concepts as the inputs of this study. Information based on the desk study was collected through various literatures by using Library books and digital library of Wageningen University. Reliable internet sources on the topic were used.

The second phase involved gathering of qualitative data and partly quantitative data. In this phase of data collection, a case study method was employed to get empirical data from the field. The checklists with semi structured questions were used to explore information from both extension workers and women farmers (see annex 1, 2 & 3 below). However, in this phase also researcher used observation as a means to get information. Through observation researcher were able to get information like distance from main roads, size of the field, available livelihood assets and scale of production (small/large scale).

4.2 Selection of the study area

Geographically Mvomero district is located in western side of Uluguru Mountains. Due to geographical location of two villages under study there are women farmers who live in/near main road and others far from main road. This area was selected a research study area due to the fact that it is within a new district formed from Morogoro rural few years ago. Because of that many organizations with different interests (Governmental, NGOs, and private companies including Multiflower) are trying to bring interventions to native people but most of them tend to overlook women in development interventions. So this study sought a need to find out the constraining factors for women farmers to access extension services. The selection of this study area was also made to put in consideration the topographical influence to women farmers' access to extension services. Another criterion for selecting this study was working experience of researcher in the study area, so it was easy to reach the area and communication using national language (i.e. Kiswahili).

4.3 Selection of the respondents

The study was designed to probe the research issue from two kinds of respondents as follows hereunder:

- Four Extension workers in total from Multiflower Company were selected to exhaust information related to extension service delivery to women farmers of Mvomero district. These respondents were selected because in delivering extension services to farmers, they are considered the first and closest contact people to farmers. Extension workers were selected to probe information on how services reach women farmers.
- A total of twenty (20) women farmers in the study area were interviewed to probe information about their access to extension services. 10 of them were women farmers who receive extension services of the Multiflower and other 10 who were not getting extension services from the Company. 10 out of 20 respondents live near main road in Mgeta village and another 10 are located far from main road i.e. Bunduki village. Main road for this study means a road from Morogoro town to Kikeo village which passes Mgeta village.

4.4 Sampling procedures

This study involved two categories of samples for data collection: one is women farmers who grow vegetables and the second category is the extension workers of Multiflower Company. In this case study a purposive sampling technique were employed to explore information from respondents. The study involved triangulation of methods by using observations besides interviews. Verschuren and Doorewaard (2005) in their book about designing research project said that triangulation can also be an effective instrument to gain an overall picture of the research object.

Because of limited time and as a case study strategy, twenty women farmers were sampled from two villages in order to get information relating to factors which impede their access to extension services. For twenty women farmers who were interviewed, ten of them get extension services of Multiflower Company and another ten do not get services from the company. The names of ten women farmers who are involved in services of the company were obtained from the registry of extension worker's office who works in Morogoro region. The obtained list of women farmers from the registry were then searched by the researcher in their villages so as to minimize the chances of bias from extension worker to choose for researcher. Interviews were conducted with those who were available and ready for interview. For another next ten farmers who do not take part in Company's extension services, the researcher found them in their fields and asked to conduct interviewed. The interview involved those who were found in the field and ready for interview.

In another category of sample, four extension workers of Multiflower Company were interviewed to get information related to performance of extension services. Four out of five extension workers were interviewed because they work in regions which are close to Morogoro region where this study conducted. Selection of 20 farmers and 4 extension workers was done because of limited amount of time available for data collection.

4.5 Method of Data collection

4.5.1 Primary data

Field data collection started on 17th July-13th August 2008. Data were then collected direct from the women farmers themselves from their fields and others were found at their homes especially those who receive company's services. In another hand interview with extension workers of Multiflower Company were conducted in their work areas in individual manner to avoid chances of getting same answers. The pre-test interview were conducted to check the time duration for each interview and to adjust some questions to be more understood. The interviews were set and conducted in interactive way between the researcher and the respondents so as to help getting as much information as possible. The interviews were conducted in an open manner to give respondents freedom so as to create environment of getting their own experience and exhaust as much information that was considered relevant for this study. Some of women farmers held interviews in presence of their husbands. Each interview was taking about 45-50 minutes including 5 minutes for acquaintance. Information that were collected from women farmers were mostly related to the factors that hampers access to extension services as delivered by Multiflower company and women's perceptions towards extension services. For extension workers, the information collected were based on the ways extension services reaches women farmers, competences of extension workers in incorporating women farmers in extension services as well as the way goals of Multiflower Company influences extension workers in incorporating women farmers to extension services.

Women farmers were categorized into farmers who get services and those who don't get services of Multiflower. This was to find out if extension message delivered by the Multiflower were making differences in farming systems of the women farmers. Further more women farmers were categorized according to the distance from main road (i.e. near and far). This categorization was meant to find out the impacts of location in farming systems of women farmers at the study area. However, the researcher used observations to aid primary data collection. Observations were used to estimate size of the farms as well as to compare the farming systems of women farmers (between those who are served by Multiflower & who are outside Multiflower services also between farmers near main road & far from main road).

The checklists with semi structured interviews were used to capture information from both extension workers and women farmers (see annex 1, 2 & 3). However, observation in the field was also done to aid data collection in connection to checklist.

4.5.2 Secondary data

In the build up of the background plus literature review, the study used journals, scientific books, PhD thesis, reports, popular books, unpublished materials and materials from internet. Socio economic profile of Mvomero district council was collected from the district office. The literature review helped for both theoretical and empirical base for the analysis of the data collected.

4.6 Data processing and analysis

The data collected from the field was summarized and rephrased to make the points clear while maintaining their meaning accurately. Data which was collected in Kiswahili were then translated into English for easy analysis. The edited and translated data analyzed using simple statistical calculation by applying Microsoft excel. Qualitative information were grouped & ranked according to the similar responses from the interviews. Quantitative data were presented in tabular form whereby descriptive statistics of frequencies were used,

Harvard analytical framework (Harvard activity profile & Harvard access profile) were used. According to March et al, (1999) the choice of a suitable framework depends on the task in hand, the context, and the resources available. Harvard analytical tool is designed to demonstrate that there is an economic case for allocating resources to women as well as men. This tool was used to organize information obtained from women interviews. It captured the Socio-cultural and financial factors that women farmers face towards accessing extension services. There are many similarities between the different gender –analysis frameworks. Despite the many similarities, the gender frameworks differ in their scope and emphasis. One does not necessarily need a formal framework in order to work well or innovatively on gender issues, to reduce gender inequality, or to support women’s empowerment. The Harvard Analytical framework can be considered a method of gender-roles analysis. A gender roles analysis therefore sees a community mainly in terms of who does what, who has what etc (March et al, 1999)

However, in presentation of findings/results, analysis and discussion, the sub headings were designed based on the research sub questions.

CHAPTER FIVE: RESULTS

This chapter presents the findings in two sections. Section one covers extension service delivery of Multiflower company including strategies used, stakeholders collaboration, extension worker's exposure to trainings, challenges encountered in including women to extension services, women's problems in following up recommendations, Company's goals towards women involvement and extension coverage. Section two shows constraining socio cultural, economic/financial factors for women to access services and women perceptions about services of Multiflower Company.

5.1 Multiflower extension service delivery

Table below shows summary of the results from interview with 4 extension workers.

Table 3: Extension workers' responses

Aspect	Extension workers			
	1	2	3	4
1. Women problems expression	Women are shy, early adopters ask questions, they show me what they have done in fields, and Late adopters use their husbands to ask questions.	Women ask questions, By recognizing that they are interested, By looking their production whether good or bad.	Women ask questions.	Women take me to see the extent of problems; They uproot and bring affected crops to show me.
2. Any collaboration with stakeholders?	No collaboration, No research-extension linkage	Yes I collaborate with Farm Africa that strengthens marketing to farmers & Chemical dealers for safety handling who offer advices to farmers. No research-extension linkage	No collaboration, No research-extension linkage	Yes I collaborate especially during field days with chemical dealers, environment specialists and Government extension officers. No research-extension linkage
3. Exposure to trainings, Workshops & courses	No training at all. Company think what we are doing is of good skills.	I attend TAHA trainings e.g. pesticides handling. Twice a year.	No training	I don't get training. I used to get four years ago.
4. Challenges for women involvement	No permission from husbands, Always late meetings, Difficult to get their problems unless probing because of shy, Fear to express themselves.	No permission from husbands, busy due to household activities, They feel inferiority complex and so don't want to be in frontline.	Household activities constrain them to follow up recommendations e.g. watering.	No permission from husbands, busy with household chores doesn't spend a lot in farm activities.
5. Women's problems in following up recommendations	Women are financially poor, Women believes in using some inputs won't get good yields, lack of education.	Don't do spraying that its men's duty, women believe that commercial production is done by men.	Burden of household responsibilities	Women fail to afford high prices of modern agric inputs.

Source: Field data

5.1.1 Extension strategies of Multiflower

According to the results from extension workers in the table 4 below, it seems that there are slight differences between the different extension workers. We may distinguish 3 types of answers.

The first kind of answers are related to establishment of demonstration trials with farmers, whereby extension workers provide different trainings related to agricultural production like watering, transplanting & chemical spraying which are done by farmers themselves. In demonstration trials, farmers' (local) method is compared with the new method side by side. Demonstration trials are done in order to test new technologies. Other trainings which are carried out demonstration trials include seedbed preparation, sowing techniques, pests control etc.). The respondents also said that seeds which they use to carry out demonstration trials with farmers are offered free of charge as motivation.

In the second kind of answers, extension workers said that they deliver services through conducting farm visits whereby different advises are provided and try to solve farmers' problems. Also extension workers said that they conduct field tours by taking farmers from their fields to another field for the purpose of learning. The fields where farmers are taken to learn are the ones which have attained success at certain stage of production.

In the third kind of answers, extension workers that they deliver extension services through conducting promotion activities to farmers which involves selling of vegetable seeds and distribution of extension materials, free fertilizers and translation of information from the leaflets to farmers. Promotion activities are done during farm visits.

Table 4: Strategies used for service provision

Aspect	Response per extension worker			
	1	2	3	4
Strategies used For service provision	Farmer to farmer visit, On farm visits, On farm trainings & tours	Conduct demonstration trials, provide free seeds & trainings and train on agronomic practices.	Conduct demonstration trials, provide free fertilizers, distribute advertising materials	Sell seeds during farm visits, train through demonstration plots.

Source: Field data

5.1.2 Women farmers' problems expression

Extension workers are the closest staff to the farmers that the organization has; in fact they are the most important implementers of the Company's extension strategies and policies. Extension workers are the ones who know much about farmers' situation because they work together in field setting as far as their responsibilities are concerned.

According to the results (table 3 number 2 above) from the interview, different responses were observed by the researcher as follows:

One response from extension workers shows that women farmers express their problems by physical appearance. In this way respondents said it is so difficult to get women's problems because they are shy and not open to express their problems by fearing others will laugh at them in case they make mistakes. Also respondents said that only few women ask questions especially early adopters. Also they get women

problems related to farming by observing the performance of women farmers' fields. Bad performance of the field at any stage of production is taken as implication of problem(s) that women encountered. For instance one extension worker gave examples of bad performance like germination failure, dying of seedlings after transplanting, affected crops etc.). This extension worker gave another example of getting women's problems related to crops by saying:

"Women normally uproot the affected crops and bring it to me to show for diagnosis of the problem(s) if their farms are far from where the meeting is conducted"

After seeing the failures/problems, extension workers said they usually start to find out the sources of those problems.

In another response women express their problems indirectly. Extension workers said that they get women's problems through men. Means that women tend to use men so as to ask questions on behalf. Further more extension workers said that some women tend to use other women (especially elites) to ask on behalf. The respondents clarified elites here means women who are more educated than others, close to extension workers, have long time experience in farming activities and high convincing power to others.

5.1.3 Multiflower collaboration with other Stakeholders

For any Community development organization the stakeholder analysis is important so as to effectively reach and serve the target group. Multiflower Company as a commercial private company, the first stakeholder is the farmer especially vegetable growers.

Results from the interview with 4 extension workers (table 3.number 3 above) show that, 2 of them said yes they collaborate with other stakeholders apart from farmers, like Farm Africa project which addresses market aspects to farmers. Other stakeholders are agricultural chemical dealers (for chemical handling), Government agricultural extension workers (village level) and environmental organizations (addresses nature conservation). The other 2 extension workers said that apart from farmers they don't collaborate with any other stakeholders.

From the observation of the researcher it shows that the 2 extension workers who form collaboration with other stakeholders are those who are based in the head offices of Multiflower i.e. Arusha region.

5.1.4 Extension workers' exposure to Agricultural trainings

Out of 4 respondents who were interviewed by the researcher of this study, 3 said that they don't get training related to extension service delivery (table 3 above). However, among of these 3 respondents one said that he used to get trainings four years ago but now he is no longer getting any training. Further more one interviewee said that:

"You know the top management does not give us training because it believes that we are skillful enough to deliver appropriate extension services to farmers".

Another one interviewee said that he attend trainings which are delivered by TAHA the association formed by horticultural business enterprises of Tanzania. Moreover, he mentioned that he attend TAHA trainings such as pesticides handling twice a year. It was clear according to researcher of this study that, extension worker who gets training from TAHA is a senior extension worker of the Multiflower. From the results it implies that Multiflower Company does not have specific programs of

providing trainings to its extension workers. One can conclude that neither gender related trainings nor production practices related trainings were offered by Multiflower Company to its extension workers.

5.1.5 Challenges encountered in including women to extension services

The anticipated results from the interview reflect the problems which extension workers face in the course of involving women in extension services. According to the responses as indicated in table 3 above from the interview, all respondents ranked high the reason that women are constrained by household responsibilities and thus do not get enough time to actively play part in extension services. Women plays triple roles of productive, reproductive and community in the society which keeps them busy than men do and hence tends to be overlooked by development agents including extension providers. In addition to this result respondents also added that when it comes for the issue of attending meetings, women are always late. This problem makes women to fail to catch up teaching from extension workers and hence tend to be left behind in the adoption of innovation process. Following this result one respondent had this to say:

“It is too problematic to work with women because they are always busy with household activities while some farm activities requires close attention for instance watering in nursery management which demands much care but for them they sometimes fail to follow my recommendations because of being busy with household chores all the time”.

From the results in table 3 above, it was revealed that women do not get opportunity to be actively involved in extension services because they don't get permission from their husbands (married ones). Because of this, extension workers become disappointed to involve them anymore fearing that they will abscond before completing training programs and disrupt the whole process.

Further more from the interview, respondents show that during extension service delivering women do not like to be open or to be in frontline to express their problems because they are shy. Respondents said that women normally suffer inferiority complex by fearing if they rise points others will laugh or make jokes at them.

However, informal interview with respondents show that all extension workers who were interviewed are all men. Multiflower has a total of 5 extension workers but all are men no woman who was employed as extension worker.

5.1.6 Problems that face Women farmers to follow up recommendations

According to the table 3 above, the interviews with extension workers reveals that women farmers do not actively follow recommendations due to the following reasons:

Economic/Financial factors: - respondents have ranked high the fact that women farmers face financial constrains. The interviewees said that women are poor so once recommended to apply certain new technological inputs, they can not afford expenses.

Socio- cultural factors: - the interviewees claimed that women farmers lack education which limits them to follow up instructions properly as required to do. Also extension workers said that women farmers tend to neglects information from seed labels leaflets, brochures and flyers due to technical information. Technical information mentioned by respondents are like those which involves weights (kg, gm etc), length/distances (km, m etc). Further more interviewees said that some women

perceive applying certain inputs will lead to poor or no yields. For instance one respondent said that

“Some women farmers don’t like to apply S.A fertilizers because they believe that it decreases crop yields even if I recommend them to apply”

Also respondents said that due to combination of household activities with farming activities, women tend to lose concentration on dealing with production activities. Respondents said that household activities keeps women so busy in such a way that they don’t get enough time to carry out production activities actively as recommended by extension workers.

5.1.7 Multiflower goals towards women involvement

From the results (table 5 below), 3 out of 4 respondents said that Multiflower does not give specific priorities for women involvement. Extension workers provide services to farmers but no specific gender is targeted between men & women. Further more respondents said that the main goal of Multiflower in relation to extension service provision is to make sure that extension workers increase sales of vegetable seeds as much as possible through promotion activities. Such promotion activities are like advertising company’s vegetable seeds through distribution of leaflets, brochures & flyers.

In another hand two interviewees out of four said that in the course of delivering services they use women groups as a strategy to advertise Company’s spirit of selling vegetable seeds to many farmers.

Table 5: Multiflower goals towards women involvement

Aspect	Response per extension worker			
	1	2	3	4
Priority of company’s goals to women	No specific priorities for women because they want us to sell more products	Women groups are given support	No specific priorities to women farmers	No special priority for women
Multiflower in addressing women involvement	We are insisted to involve farmers in group and normally women are found in groups. Gender issues are in extension curriculum	Women groups are given support like inputs as motivation.	No specific policy that addresses gender issues but extension service is offered to farmers in regardless to whether men or women.	Company has no specific gender policy but there is seed production program whereby women are mostly involved. It is believed that seed production is easily done by women.

Source: Field data

5.1.8 Extension service coverage

The results in table 6 below show that each extension worker covers more than two regions in Tanzania of which they said it's too big for one to effectively reach many farmers. According to this response one can conclude that it is hard for this kind of coverage to access many farmers especially the remote ones where there is a problem of infrastructure. From the experience of the researcher of this study each region in Tanzania composed not less than 5 districts.

Table 6: Extension services coverage

Extension worker	Extension service Coverage (regions)
1	Mwanza city, Mara region & part of Shinyanga
2	Arusha, Kilimanjaro and Manyara
3	Dar es salaam, Pwani and Morogoro
4	Arusha, Tanga and part of Kilimanjaro

Source: Field results

5.2 Factors limiting women farmers' access to extension services

5.2.1 Socio cultural factors

a) Harvard activity profile

This tool was used to organize information from women farmers to find out the relevant productive & reproductive tasks. It answered the question that who does what.

Table 7: Harvard activity profile

Activities	Men	Women	Both Men & Women	Frequency
a) Productive activities				
Vegetable production				
1. Fertilizer application	2	13	5	20
2. Sowing	1	13	6	20
3. Land preparation, digging/hoeing	9	7	4	20
4. Transplanting	0	15	5	20
5. Weeding	0	15	5	20
6. Irrigation	0	12	8	20
7. Chemical spraying	18	0	2	20
8. Harvesting	0	13	7	20
9. Transporting to markets	5	11	4	20
Income generation				
1. Flower production	-	1	-	
2. Poultry keeping	-	6	1	
3. Pigs keeping	-	5	1	
4. Goats keeping	-	5	-	
5. Cattle keeping	1	-	-	
6. Maize production		2	-	
7. Local brewing	-	1	-	
8. Cooking foods for sale	-	1	-	
Employment	3	-	-	
Business	-	1	-	
b) Reproductive activities				
Household activities (i.e. Child care, food preparation, cleanliness etc.)	-	20	-	20

Source: Field results

The results from the interview in table 7 above show that most of vegetable production activities are done by women except land preparation, digging/hoeing and chemical spraying which are mostly done by men. Out of 20 respondents, the following are the respondents who said respective activities are done by women: fertilizer application (13), sowing (13), land preparation & digging/hoeing (7), transplanting (15), weeding (13), irrigation (12), Chemical spraying (0), harvesting (13), transporting produce to market (11). However, vegetable production activities are shared by both men and women as follows fertilizer application (5), sowing (6), land preparation & digging/hoeing (4), transplanting (5), weeding (5), irrigation (8), Chemical spraying (2), harvesting (7), transporting produce to market (4).

According to results (table above) the following are income generating activities done by women: Poultry keeping, Pigs keeping Goats keeping, Pigs keeping, Maize production, local brewing, cooking foods for sale, while men rarely/don't do those activities. Also from table 7 above, it was depicted that household activities are completely done by women. All 20 respondents said that household activities are done by women (i.e. Child care, food preparation, cleanliness etc.), while men engage most in cattle keeping and paid employments.

b) Education level of women farmers

Education level is a socio-cultural factor that influences the access of rural farmers to services. Women with high education status stand better chance to access information as they are more aware to sources of such information.

Findings (table 8 below) show that, 19 out of 20 have education level of standard seven and below including those who never attended school. 1 out of 20 respondents have education level of above standard 7 to form four. Finally, no respondent was above form four in the study area. It can be learnt that majority of women farmers in the study area had low education background.

Table 8: Education level of women farmers

Education level	Frequency
≤ Standard seven	19
> Standard 7- Form four	1
> Form four	0
Total	20

Source: Field data

c) Decision making

The results (table 9 below) show that men are the decision makers in the households. 11 out of 20 respondents stated that men decide about what to do in regard to vegetable production. The results also show that none of the women have power to make decision in the households in the study area. Further more 9 out of 20 women who were interviewed said that both men and women have equal power in making decision in the household. From these results one can conclude that women in the study area have no power in making decision and this influence them in accessing production resources including extension services.

Table 9: Household decision making

Decision maker in the household	Frequency
Men	11
Women	0
Both	9
Total	20

Source: Field results

d) Ways used by women farmers to access information from advertising materials.

Information from the advertising materials such as seed labels, leaflets, flyers and brochures are important for farmers because they contain instructions about the respective agricultural input(s) be it seeds, chemicals, fertilizers or tools.

Interview results (table 10 below) reveal that 13 out of 20 respondents in the study area don't use information from seed labels, leaflets, brochures and flyers. In addition, interviewees said that they don't apply because of the language (English) used, extract seeds locally, buy seeds and cultivate using their own experience so no need to bother reading instructions. Again respondents added by saying that just the picture on the label is enough to convince them.

On the other hand, 6 out of 20 respondents who were interviewed show that they access information through using other people. Interviewees said that they access this information mainly through husbands because are the ones who attend seminars, go to shops and knows how to translate instructions. Also respondents said they attend UMADEP demonstration plots and get full instructions so no need to read instructions from leaflets. Further more respondents said they ask from other farmers who have long time experience, relatives and friends to translate instructions from leaflets. In regards to this category of responses, interviewees said they also ask questions or translation from agricultural input dealers.

The minority of response from the interviewees (i.e. 1 out of 20 respondents) said they accesses information from the seed labels, leaflets, flyers and brochures by using their own ability of reading, understanding and follow up directions regarding farming activities.

Table 10: Access to information from advertising materials

Ways of accessing information	Frequency
own ability	1
Assisted by other people	6
Don't mind about information from seed labels, leaf lets, brochure & flyers	13
Total	20

Source: Field results

e) Reasons that women fail to attend extension trainings/& meetings

From interview results, it was observed that women farmers gave different responses (table 11 below). 17 out of 20 respondents explained that they fail to attend extension trainings/& meetings due to household responsibilities, for instance one woman farmer said:

"I'm not ready to starve my child because of attending extension meeting".

Additionally, these respondents (17 out of 20) said that they don't attend because they know that there is nothing they can learn on attending meetings/ and trainings instead they use own experience. Also respondents stated that they are responsible in taking care of small animals like goats, poultry and pigs which tend to keep them busy.

Another response was related to farming commitments. 17 women farmers out of 20 explained that farming activities like transplanting and irrigation requires much attention than to attend meetings and trainings. Also in relation to farming commitments, women farmers said that most of trainings do not match with women's production activities like weeding and harvesting.

Lastly, respondents gave responses related to permission from husbands. About 13 out of 20 women farmers prioritized the fact that they fail to attend extension gatherings due to lack of permission from their husbands.

Table 11: Reasons that women fail to attend extension trainings/& meetings

Reason for not attending trainings/&meetings	Number of women who prioritize	Number who haven't prioritize
Household chores	17	3
Farming commitments	16	4
Permission from husbands	13	6

Source: Field data

f) Labour supervision

Table 12 below reveals that; 15 out of 20 interviewees explained that its men who are responsible in supervision of farm labour. These interviewees gave reasons that men knows where to get labour, some labour are troublesome when assigned job to do therefore its men who can deal well with those kind of people. Also respondents said that it's men responsibilities because they know much about what is required for the farm activities. 3 of all 20 respondents show that, both men and women are involved in labour supervision because they are equally responsible. And 2 out of 20 respondents explained that women take charge to find and supervise labour only when men have other commitments.

5.2.2 Economic/financial factors

a) Household income owner

Interview results (table 12 below) show that 13 out of 20 respondents said that its men who own income after selling vegetables. Further more respondents said that it is because men are the ones who receive money first after selling products. On another hand 5 respondents said that it's women who own income in the household. Respondents said that women own income only after being handed to them by men for budgets of items concerning home consumption. Also respondents said that women own income in cases where husbands are extravagant in spending money. And 2 out of all 20 respondents said both men and women own income after selling vegetables. This situation occurs in those families where both husbands and wives have equal power in decision making. Generally, results indicate that men in Mvomero district are income owners relatively to women.

Table 12: Harvard access profile

Resource	Frequency			Total frequency
	Men	Women	Both	
Labour supervision	15	2	3	20
Income owner	13	5	2	20
Tools & implements owner	10	2	8	20

Source: Field results

b) Household owner of farm tools and implements

It can be observed (table 12 above) that, 10 out of 20 interviewees shows that, men are the ones who own farm tools and implements. Respondents said that this is because men knows much about tools and implements like information related to what types are appropriate, their durability, where are shops to buy and spare parts. Of all respondents 2 said that, women own farm tools and implements. Likewise, 8 respondents said that both men and women are equally owners of farm tools and implements.

c) Farm size used for Vegetable production

The study findings (table 13 below) show that, 8 out of 20 women farmers cultivate vegetables in land size of less than 0.5 hectare, while 4 out of 20 women farmers use land area of between 0.5 to 1 hectare and 8 women farmers conducts vegetable production in land size of more than 1 hectare. The results imply that in Mvomero district small scale vegetable producers occupy equal proportion to large scale vegetable producers.

Table 13: Respondents farm size

Farm size (ha)	Frequency
< 0.5	8
0.5 - 1	4
> 1	8
Total	20

Source: Field results

d) Women farmers in affording production expenses

Women farmers were interviewed to find out the means they use to meet production expenses and the following results were observed:

The results show that there is existence of various livelihood strategies in the study area. There existence of natural resource based activities as well as non natural resource based activities which are used by farmers to achieve their livelihood outcomes. It was observed that farmers in the study area conduct multiple activities for their survival i.e. non farm & off farm activities apart from farm activities. 15 out of 20 respondents said that they keep animals like goats, poultry, and pigs which assist them to overcome production expenses. The manures from these animals are used in turn to fertilize soil for improving soil fertility and hence increase yields. There is existence of income diversification in the study area as interviewees expressed in the interview with researcher of this study. Farmers earn income through selling live animals/ meat, milk (goats) & eggs (poultry). 10 respondents said that they grow maize for food, while 7 respondents said that they do offer their labour to other farms and 5 respondents conducts vegetables petty trades so as to get money for farm operations, buy food and school fees for their children. One respondent said she deals with local brew business to subsidize income from vegetable production.

In non natural resource based activities 2 respondents said that they deal with rural trades for selling clothes and agro inputs respectively which helps them to meet production expenses. 2 respondents said their husbands are employed and salaries assist in production activities. In the other hand only one respondent said that she get loan from SACCOS around the village which helps her to operate production activities. However, one respondent said:

“Some women farmers in this village don’t access loans by fear that they will be taken to court one day if they fail to repay the loans”.

e) Cropping systems

Results (table 14 below) depict that, 7 out of 10 women farmers who are outside Company services grow maize and vegetable crops, while majority of women farmers who receive services from Multiflower grow vegetables. Only 1 out of 10 women farmers who receive services from Multiflower grow maize and vegetables but the rest specialize on vegetable cultivation.

According to ocular findings, majority of women farmers in the study area had similar cultivation systems. Women farmers showed diversification in vegetable production. Two to three different types of vegetable crops were grown in the same plot (basically one vegetable field had sub-plots of different vegetables species) and vegetables were planted in raised beds.

Another observation of the researcher in the field was that, women farmers who live far from main road were observed applying animal & poultry manure while women farmers who live near main road were observed applying inorganic fertilizers. One woman farmer who lives near main road had the following to say:

"I use more chemical fertilizers than manure as extension workers advice because in our village there are many agricultural inputs shops where i can get for cheaper prices and manure takes longer time to decompose in the soil"

And another farmer who lives far from the main road in her response to why she prefers farm yard manure, she said:

"It's not that I prefer to use farm yard manure, but because of the following reasons: it is available in our village, agricultural inputs shops sell inorganic fertilizers for higher prices and also are far from this village, another reason is that I have never seen any extension officer who could help me though I hear there is Government extension worker in this village".

Table 14: Cultivated vegetables

Farmer	Distance from main road	Outside/within Multiflower service	Vegetable & crops types cultivated
1	F	W	Sweet corns, tomatoes, Cabbages, Cucumber, cauliflower, Kangkong, radish, Chinese cabbage, pumpkin
2	F	W	Tomatoes, Cauliflowers, hot peppers, bitter goards, bottle goards,
3	F	W	Tomatoes, spinach, kangkong, cauliflower, potatoes
4	N	W	Tomatoes, Chinese cabbages, okra, eggplants
5	N	W	Amaranths
6	N	O	Tomatoes, beans, cauliflowers, beetroots, cowpeas, lettuce
7	F	O	Maize, tomatoes, cauliflowers, beans
8	F	O	Maize, tomatoes, cabbages, beans, lettuce, onions, squash, cauliflower,
9	F	W	Tomatoes, cowpeas, beans, cauliflower, lettuce
10	N	O	Tomatoes, cowpeas
11	N	O	Tomatoes, cabbages, beans, Cauliflower, cowpeas, turnips, lettuce
12	N	O	Maize Tomatoes, beans, Cauliflower, cowpeas,
13	N	W	Cabbages, beans, Lettuce, onions, leeks, cowpeas, yams
14	F	O	Maize, tomatoes, beans, sweet peppers, yams, Chinese cabbages
15	F	O	Maize, tomatoes, cabbages, beans, legumes, Chinese cabbage, yams
16	N	O	Maize, cabbage, beans, cowpeas, yams, Chinese cabbages
17	N	W	Tomatoes, cabbages, Chinese yams
18	F	O	Maize, cabbages, yams, pumpkins
19	N	W	Tomato, beans, okra
20	F	W	Maize, cabbages, beans, carrots

Source: Field results

Key

N= near main road

F= Far from main road

W= Within Multiflower extension services

O= Outside Multiflower extension services

5.2.3 Farmers' perceptions about extension services of Multiflower

a) Opinions about prices of vegetable seeds

The information to answer this question obtained from women farmers to find out differences in opinion between them. Farmers who are outside Multiflower services said that they don't know Multiflower Company but when researcher mentioned brand name of the seeds which are sold by Multiflower "Royal sluis seeds", they recognized the seeds though they failed to know the Company. In overall, majority of respondents (women farmers within & outside Company services) said that the prices of Multiflower seeds are higher compared to other Companies for instance one farmer gave example of:

"5gram cauliflower seeds from Multiflower is sold by Tsh. 14,000/= (7.77 €) and with the same amount of money one will get 50grams of cauliflower from other companies".

Another tomato farmer outside company services but lives near main road gave example that:

“50gram of tomato variety called cal J from East African Company is sold by Tsh.3,800/= (2.11 €) while 50gram tomato variety called Moyo from Multiflower costs Tsh.34,400/= (19.11 €) is very expensive for small scale farmer like me to afford even though have high yielding potential”.

(Note: 1€=1,800 Tsh. According to BOT exchange rate of 20th July, 2008)

Despite of high prices, farmers said they like seeds of Multiflower Company because of their good quality in terms of high yielding, good fruits which matches the market demands. One farmer who lives near main road said that:

“Using Multiflower seeds it is profitable because the revenue outweighs production costs”.

Another farmer who lives near main road said being near the shops is advantage because there are many shops and some do sell vegetable seeds for lower prices compared to other shops. In another views, respondents show fear of planting seeds of high prices while they are not sure of markets, sometimes produce get rot before sold which is a big loss to them especially those who lives far from main roads whereby transportation is an important factor of production. These results reveal that it is easy for poor farmers to opt for low price seeds because of not being sure of market.

b) Opinions about improving extension services

To find out women's opinions about Multiflower to improve its services means farmers' problems which were not addressed by extension services. Different responses were observed by researcher. One is farming problem solving responses, second is financial assistance responses and last is information sharing responses.

It was found that most respondents expressed their views that extension services of Multiflower Company are lacking some of aspects related to its provision. The interviewees said there are no regular visits made by extension worker, no seminars conducted to farmers and the Company needs to have representative in each village so as to be close to farmers for solving immediate problems. The respondents also said that once certain varieties are accepted by farmers after trials, their seeds should be made readily available and reach farmers as soon as possible. Extension worker have to be more competent to solve every problem for instance one respondent after asked by this researcher to give out her opinions in relation to services. she gave the following explanation:

“Cauliflowers in my field are getting roots disease and I don't know what to do because extension worker tried to identify the problem but gave neither advice for solution nor took sample for further research”.

From the above opinion it implies that the extension worker was not knowledgeable enough to advice farmer on what to do and he himself never contacted research centre for further research as no sample was taken from the field.

On the other hand respondents expressed their views that they need financial support to run production activities like buying chemicals (pesticides and herbicides) etc. It can be noted here that farmers in the study area lack access to credits. It also show that Extension service of Multiflower Company have neither relayed

information related to credits nor played part to link credit providers to farmers in the study area.

According to responses related to information sharing obtained from interviewees, Farmers in the study area said that extension worker of the Multiflower need to conduct as many demonstration trials as possible for other many farmers to learn about agriculture production. Also interviewees said that Multiflower extension worker stresses on production practices but not giving information about markets. Other respondents said that Multiflower should extend its services to many other villages and include many farmers in its services. From this result it shows that Multiflower extension services did not create opportunity in the study area for farmers to share information.

c) Sources of extension services

According to the table 14 below, it can be observed that farmers in the study area get extension services from Multiflower Company, UMADEP, shops (Agricultural inputs dealers), from farmer to farmer and others don't get services except they use their own experiences to conduct production activities. Also in the interview with respondents it was mentioned that there are Government extension workers in their villages but never see them visiting farmers.

Results show that majority of farmers who are outside Multiflower services don't get extension services from specific organization but rather they use their own experience, asking from other farmers and gets instructions from shops where they buy seeds and chemicals (pesticides, herbicides) for their farming activities.

According to table 14 below it can be observed that out of 10 respondents who are located far from the main road, they get services as follows: Multiflower (5), Own experiences (2), shops and from other farmers (2) and UMADEP (1). From the below table it can also be observed that out of 10 respondents who live near the main road they get extension services as follows; Multiflower (5), Own experiences (1), shops and from other farmers (1) and UMADEP (3). From the analysis it shows that all farmers who are located far from the main roads apart from getting extension from Multiflower Company, they rarely get extension services except they use their own experience, get instructions from shops and use farmer to farmer extension. In another way results depict that farmers who live near main road benefit extension services more from UMADEP and Multiflower than those who lives far from main road who only conduct agricultural production by using their own experiences and asking from neighboring farmers.

From the table of results below it also show that out of 10 farmers who are within Company's extension services, 3 use land size greater than 1 ha, 2 use farm size of between 0.5-1ha and 5 farmers use farm size less than 0.5. Again in these results it is clear that among of those 5 farmers who use farm size of less than 0.5 ha majority of them lives near main roads.

Also the table below depict that out of 5 respondents who live far & benefits from extension services of Multiflower, 2 of them use land size of greater than 1ha, 1 respondents use land size of between 0.5-1ha and 2 respondents use farm size of less than 0.5ha. Generally one can conclude that farmers who benefits extension services of Multiflower are those who lives near main road despite of small land size they cultivate and for those who lives far is because they cultivate large farm size.

Table 15: Sources of extension services

Farmer	Distance from main road	Outside/within Multiflower service	Farm size (ha)	Sources of extension services
1	F	W	>1	Multiflower, Neighbor farmers
2	F	W	<0.5	Multiflower
3	F	W	<0.5	Multiflower, Neighbor farmers
4	N	W	<0.5	Multiflower
5	N	W	<0.5	Multiflower
6	N	O	>1	Attending UMADEP demo plot
7	F	O	<0.5	Other farmers, sometimes shops
8	F	O	>1	own experiences
9	F	W	0.5-1	UMADEP, Multiflower
10	N	O	>1	UMADEP
11	N	O	>1	UMADEP, sometimes shops
12	N	O	0.5-1	Neighbor farmers, own experiences
13	N	W	>1	Multiflower
14	F	O	>1	Shops, UMADEP
15	F	O	0.5-1	Own experience, rarely shops
16	N	O	<0.5	Own experiences
17	N	W	<0.5	Multiflower
18	F	O	<0.5	Own experiences
19	N	W	0.5-1	Multiflower
20	F	W	>1	Multiflower, Neighbor farmers

Source: Field results**Key**

N= near main road

F= Far from main road

W= Within Multiflower extension services

O= Outside Multiflower extension services

CHAPTER SIX: ANALYSIS AND DISCUSSION

This chapter analyzes the results from chapter five and discusses against the literature review. It covers the analysis from extension service delivery of Multiflower and factors that limit women farmers' access to extension services.

6.1. Extension service delivery of Multiflower

Findings (section 5.1.1) show that strategies used by extension workers of Multiflower concur with Leeuwis (2004) that, the extension strategies relevant for farm management are advisory services and supporting horizontal knowledge. From the findings it depicts that Multiflower extension services try to support horizontal knowledge exchange between farmers through conducting demonstration trials, field tours and farm visits. Multiflower extension workers focus much on individual farmers to carry out demonstration trials, field tours & farm visits but very rarely done in farmers' groups. In that way those farmers who are not served by Multiflower can only get opportunities to learn if the selected farmers are open and interactive enough to support horizontal knowledge exchange. However, extension workers lack regular visits which could raise few questions and issues for debate.

Also findings show that Multiflower extension workers use advisory extension strategy through farm visits, farmer field days whereby different advices are provided. Through this strategy other activities such as distribution of extension materials and selling of vegetable seeds are done. The structure and contents of extension meetings, trainings and farmer field days as done by Multiflower extension workers does not take into account gender needs & interests. Extension workers use phones to give advices to farmers but for women farmers who don't have phone normally find it difficult to access these services. This is because majority of rural women still lack access to communication services for instance few women farmers possess mobile phones.

According to Multiflower extension service delivery, extension strategies including program planning, implementation, monitoring & evaluation are done by extension workers. From the perspective of farmers there is lack of participation which in turn limits the scope of making use of services.

Results (section 5.1.7) depict that women are not given priorities in extension services of Multiflower. For this case it is possible that women positions are not addressed in extension service provision. From that point of view, it can be noted that because traditionally women possess limited decision making power in the household (table 9), lack of land ownerships and if at all they own land normally small pieces or plots then this may confirm that women have little opportunities of accessing extension services of Multiflower Company. Jiggins (1997) says that problem of women's restricted access to extension knowledge and information services must still be understood as part of larger problem of male dominance and unequal distribution of productive resources and responsibilities between men and women. And may be the cultivation methods recommended by extension workers do not fit the cultivation practice or livelihood strategies of women. From the interview with women farmers it was noted that UMADEP was a popular project which delivers extension services to farmers in various places around Uluguru Mountains including Mvomero district. This project is included in this research because it was noticed that many farmers in the study area were getting extension services from UMADEP.

Approach and Strategies used by UMADEP are as follows:

- Participatory Rural Approach is used as a tool to learn, identify local priorities and seeking community commitment and identify potential groups, further it is employed as any entry approach into new areas and for assessing ongoing project activities.
- Use of farmers groups and networks to facilitate innovation and communication among the farmers, farmers groups and professionals as well as improving their organization skills.
- Merging farmer's indigenous knowledge with new knowledge that takes into account the current challenges presented by socio-economic and ecological changes in the area.
- Seeking collaboration with other institutions, projects and farmers to exchange experiences and to share lessons as a way of increasing impacts.

I think the approaches used by UMADEP are good because they give rural farmers more opportunities to take part in extension programmes through participation.

This study found that extension workers of the Multiflower are pushed by the company spirit of making sure that they sell as much vegetable seeds as possible. This implies that gender incorporation into extension programs is not given much attention except Company focuses in some other ways of making profit. Looking at the point of doing business, extension workers sees advertising seeds during farm visits and during field days as a quick means of selling seeds. The commercial focus of Multiflower services makes extension workers fail to assess gender roles in promotion activities of vegetable seeds. In business it's important to know who plays what between men and women in promotion of products.

Considering results in table 5, the goals of Multiflower company does not favour women involvement in extension services. This was found from the response of extension workers who said that there is no gender policy and hence no any priorities given by the company of making sure that women are involved in extension services. There is no way that extension workers can do themselves from their own initiatives to incorporate women farmers into extension services if at all gender issues are not included in extension curriculum. As it was indicated in table 5, the goals of Multiflower as a business company in case of extension department are to deliver extension services to farmers and maintain continuous supply of vegetable seeds to clients that is stockists and farmers. The goals of Multiflower aim at selling much seeds for the sake of profit making. The goals did not show which farmers are being targeted by services between men and women, for that case the goals does not stress extension workers to put emphasize on women involvement into extension services.

The mode of employment can play a great role in gender incorporation in extension services. According to informal interview with extension workers (during normal stories), it was revealed that Multiflower had no woman extension worker. It might be true that women farmers feel shy in extension gatherings because they are served by men, but women farmers could be more open if they could be served by their fellow women extension workers.

The way in which women farmers express their problems in the field is an important aspect that needs to be paid much attention to by the extension workers for successful service delivery. The findings tells us that extension workers find it difficult to get women's problems because women are shy and not open to express their problems, views and doubts during extension gatherings (table 3) instead they use men to ask on their behalf. Men are less likely to pass information on to their wives when crops and tasks are gender specific but this second-hand information seldom

changes their production patterns (Saito and Spurling 1992 cited in World Bank 1995). Further it was found that because women farmers fail to express their problems in extension trainings/& meetings then extension workers fail to assist them and therefore men take that advantage. This context implies existence of a gap between extension workers and women farmers which if not closed; it limits women to access services. Leeuwis (2004) says there is often tension between the interest of the extension organization and the interest of recipients (farmers). In this way, there is a need at least to be a partial overlap or link between the interest of clients and extension organizations, otherwise people would obviously not be willing to change. Also Millar and Curtis (1997) says that, the roles of a facilitator include letting farmers make their own choices about what they need, build on their own experiences and knowledge, encourage both men and women to talk, express their views and ideas, give all members an opportunity in the group to have a say and to encourage a two way communication between farmers and extension workers. Leeuwis (2004) pointed out that, agricultural communication workers would, for example, have to carefully study farmers' perspectives and modes of thinking in order to get their messages attuned and adapted to them. This would require intensive interaction between farmers and communication workers. From the answers of the extension workers most of them had only one perspective of what is right according to their own recommendations, this means extension workers had one way communication which does not encourage interactive/participatory communication.

However, it was found from the results (table 3. number 1) that, women (especially married) due to their shyness and low levels of education (table 7) tend to use their husbands to ask questions and seek information from extension providers on behalf of their wives. This confirms that women use second hand extension messages through men and even if they are together with men they usually don't feel free to make contributions in the audience. On the other hand extension workers found it difficult to work with women farmers especially at any given time when they need to meet them immediately. 3 out of 4 extension workers stated that women farmers tend to be busy with household activities and lack of permission from their husbands. When it comes to the issue of attending extension gatherings women farmers are always late and thus limits extension workers to actively involve them in extension services. Braidotti (2008) says that women want more opportunities to attend technical training programs and develop strong interaction with local extension or agricultural staff. Again In addition to that it was found that, women fails to catch up and get following up of learning which are provided by extension workers due to being late in extension gatherings. Hence extension workers tend to contact men mostly. Besides, women farmers are not able to grasp the extension message from leaflets & brochure due to technical language used plus their low level of education. Many of them are even unable to read the instructions on chemical bottles or seed sachets. So this way of communication gives an extra barrier to women.

The results reveal that Multiflower services have no collaboration with other stakeholders apart from farmers. Other stakeholders could be HIV/AIDS service promoters, environmentalists, gender issues advocates and Micro finance institutions. 2 respondents out of 4 said they don't collaborate while the other 2 said they collaborate with other stakeholders like Farm Africa project that strengthen marketing to farmers, government extension workers and chemical dealers. In forming collaboration each stakeholder have own interest in the issues with which the collaboration is concerned. Stakeholder analysis is important in the strategic view of the relationships between the different stakeholders and the issues they care about most. Collaboration can play a role in raising awareness of choosing the appropriate strategies and approaches in reaching clientele. However, collaboration

helps one partner to build capacity and enhances responsibilities. Further observations from researcher of this study using experience show that those 2 who collaborate with stakeholders are those who are based in the main offices of the company where there are chances of getting influence from the management because of being close to them.

Extension workers of Multiflower Company were neither exposed to agricultural production trainings nor gender related trainings (table 3). Lack of gender related skills among extension staffs limit women to access extension services. This leads to neglect women's needs while planning extension programs. Gender sensitization trainings can initiate attitude change within male dominated extension. If trainings are complemented by other strategies (though minor but critical adjustments) can increase women's access to extension services significantly even where most extension workers are male. For instance male extension worker can be encouraged to ask their male farmer contacts to include their wives during visits, demonstrations or farmers' meetings.

Research institutions are important for development of new technologies and identification of farmers' problems. Results (table 3 number 2) show that Multiflower doesn't form research-extension linkage. Also there is evidence from sections 5.1.6 and 5.2.3.b) where women farmers claimed to extension worker but no initiatives for solving problems were shown by extension worker. The extension worker failed to identify the problems and did not refer to research centers. Van den Ban (1999) pointed out that a farmer can only compete with his colleagues if he/she has access to the most recent information about research findings. Van den Ban added that an extension agent should be well informed about the research on crop production, as far as this is relevant to solve the major production problems of his farmers. However, theoretical knowledge is not enough. He should also be able to recognize production problems in the field, to analyze their causes and to use this knowledge to suggest actions the farmer can take to solve these problems and/or to prevent similar problems in the future.

Assumptions and attitudes of extension workers about what they perceive to women have great influence on women access to extension services. From the results, it was revealed that extension workers perceived women farmers that are financially poor and always busy with household's chores. These attitudes have led to ignore women farmers and consequently little possibilities for women to get involved effectively into extension programs.

The results show that women farmers face fiscal problems. Financial problems constrained women farmers to afford inputs expenses which could enable them to effectively follow recommendations. (Young and Hoppe 2003; Joekes 1999, cited in Garcia, 2004) said that, women usually in the majority among small and subsistence farmers are not able to take advantage of the opening of new market opportunities for agriculture. Women's agricultural activities are limited by a lack of financial capital as well as constrained by inadequate access to productive resources. Women tend to present low levels of mechanization and technological inputs, which translates into low productivity. From the financial point of view, it can not be only because of financially poor that led to lack of access to productive resources. Section 5.2.2.d) provides evidence that there were SACCOS in villages but women farmers did not have access due to beliefs that would be taken to court once they fail to repay the loans. It can be learnt that women farmers had land (table 13) as collateral which can enable them to apply for loans from MFIs but it's only that they lack enough information and procedures to access loans. This were witnessed by one woman

farmer who gets loan from one SACCO around the village but others didn't have access due to fear that would be taken to court once they fail to repay loans.

From the findings (table 6), each extension worker covers more than two regions of Tanzania. One can try to imagine that Netherlands have land area of 41,500km² (Bol, 2006) and one region like Morogoro in Tanzania occupies a total of 72,939 km² (Malocho, 1997). One region like Morogoro being larger than Netherlands but as from the results just one extension worker of Multiflower covers three regions including Morogoro region. This is large enough for one extension worker to effectively & efficiently deliver extension services especially in reaching many women farmers. However, in table 2 it shows that in Mvomero district extension officer – farmer ratio for the government is 1:1223 which is also large in such away that it was difficult for farmers in the study area to get information about other service providers like Multiflower. Also findings in section 5.2.3 c) show that, women farmers in the study area said there were extension workers of government but rarely/never visiting farmers.

6.2 Factors limiting women farmers' access to extension services

6.2.1 Socio cultural factors

Education level is important in decision making and fighting for women rights. Low level of education decreases awareness about new information. The accessibility of information to women farmers is aggravated by low level of education among rural women farmers. It is assumed that women's access to agricultural extension and their ability to comprehend and use technical information are lower when they lack the minimum formal education (primary level). Moreover, because of illiteracy, women farmers are less able to respond to written extension materials. They are also excluded from selection as contact farmers in the extension programme. According to results (table 8), majority of women farmers had education level of standard seven and less, while only one respondent had above standard seven. It was revealed in this study that education level of the women farmers had influence in accessing extension services. The results in table 10 confirms that due to low education level, women farmers find it difficult to access information from seed labels, leaflets & brochures. It is shown in results (table 10) that 13 out of 20 women farmers do not mind to read and apply information from seed labels, leaflets, brochures & flyers. This is because they don't understand (English) language used instead they use their own experiences in conducting production activities. In Tanzania the national language is Kiswahili and from researcher's experience, for standard seven it's hard to get the proper content of messages which normally are technically presented in seed labels, leaflets, brochures & flyers depending on type of input. It can be learnt that majority of women farmers in Mvomero district have low education background and this influenced their access not only to extension services but also to other socio services like Micro credit institutions etc. Jiggins et al (1997) point out that innovative group approaches to overcome women's illiteracy, which is a barrier to effective mass communication through written materials, and a restraint on women's ability to demand appropriate services.

From the results in table 9, it was found that men are the decision makers in the households' communities of study area. 11 out of 20 respondents said that it's men who makes decision, while none who said women are decision makers in the households and 9 respondents said decision making is shared between men and women in the household. Generally, it shows that in the study area there is no equality in decision making between men and women. March et al (1999) says that

being decision makers, it makes men to have control over resources which in turn enables them to decide which services (including extension services) they should access. Because they lack decision making in the household women tend to lose freedom to attend trainings/ & meeting unless permitted by their husbands. Also because of power they have in the household, men tend to take charge on labour supervision due to having high decision making. Due to dominance tendency of men, when extension services are provided men are the first to benefit over women. According to Ellis (2000), men are able to mobilize labour, including the women of the household, and have decision making capabilities over inputs and investments.

As indicated in Harvard activity profile (table 7), the study reveals that division of labour in the households is not strictly gender balanced. Women perform both domestic and production roles which make them have a bigger workload as compared to men. The results tell that most of production activities are done by women compared to men. Women constitutes large part of farm labour than men ranging from fertilizer application, digging/hoeing, sowing, transplanting, weeding, irrigation, harvesting and transporting produce to markets while men do only land preparation and chemical spraying. This study found that digging/hoeing of vegetable fields is mainly done by men different from other literatures like March et al (1999) with a case study carried out in Indonesia which showed that digging/hoeing activities are done by women. It was also observed from the results that extension workers tend to offer trainings which do not focus women's activities instead they deliver trainings which targets men most. While women perform most of farm activities as compared to men. It was also discovered that, reproductive activities in the study area are mainly done by women using Harvard analytical tool of activity profile (table 7). The results show that all (20) interviewees responded that it's women who are responsible for household activities and not men. Women are generally associated with non-economic and unpaid work, most of which takes place within the so-called reproductive economy (Garcia, 2004). This means that women use much of their time for household chores as well as providing labour in vegetable production activities which limits them to get involved in extension services. In rural communities the timing of meetings can radically affect women's attendance, and consequently their capacity to gain access to important information relevant to them in both their productive and reproductive roles. Complaints by rural extension workers that women fail to attend their meetings are widespread (Moser, 1993).

6.2.2 Economic/Financial factors.

The size of land under cultivation can give picture of scale of production that a farmer is conducting. The results from the interviews (table 13) show that out of 20 women farmers, 8 occupies land area of less than 0.5 hectares, 4 of them cultivate in land size of 0.5-1 hectare and 8 occupies land area of greater than 1 hectare. These disparities show that there are many small-scale farmers as well as large-scale women farmers in the study area. Young and Hoppe, 2003; Joeke, 1999 cited in Garcia, 2004 states that, majority of women farmers tend to hold small-scale farms, while medium-scale and large commercial farms are more likely to be owned by men who are thus in a better position to capitalize on the expansion of agricultural tradable goods. A strong gender imbalance is fostered by this process of agricultural transformation and concentration of production and resources, as most women farmers tend to hold small-scale and family farms while men, more likely to own medium-sized or large scale commercial farms, are in a better position to capitalize on the expansion of agricultural tradable goods. This study observed that in the study area women farmers who had vegetable field of more than 1 ha were in equal proportion to those with farm size less than 0.5ha. There were large scale farmers as well as small scale farmers in the study area. According to Harper (2002), poor farmers especially women farmers lack title deeds for the pieces of land they own

and as a result they can't qualify or use these pieces of land as collaterals to apply for micro credits which could enable them to buy improved technological inputs. This in turn hinders them to increase production. In his findings, Harper (2002, p.169) states that 'most micro-finance institutions use a group system to distribute their services to their clients'. This is confirmed in the results from interview that few women farmers had access to MFIs like SACCOs while the rest had no access. To improve their livelihoods poor households need a broader kind of support, this includes but goes beyond agricultural production (Sulaiman, 2003).

It was revealed from the results (table 12) that, men are the income owners as well as owners of farm tools and implements. This gives men more power to have more access to other resources and services hence likely to make positive livelihood choices than women. That is, they can choose from a range of options in order to maximize their achievement of positive livelihood outcomes, rather than being forced into one strategy because it is their only option.

Findings show (table 14) that women who get services from Multiflower are those who adopt pure stands of vegetables. In pure stand production of vegetables women farmers are commercially oriented and practice intensive farming. Because these women farmers get services from Multiflower they therefore use proper crop husbandry practices including available farm inputs. Hence, higher vegetable crop yields which earn them high income and in turn help to buy foods. Women farmers who are outside Company services grow vegetables as well as maize. Vegetable crops serve for commercial purposes while maize are grown for home consumption. Different farming systems require different extension recommendations. It can be noted that, women farmers who grow only vegetables do not require same recommendations as those grow vegetables and food crops. However, Byrlee et al (1980) cited in Köbrich et al (2003) pointed out that no farm-household has the same resources or problems. Every farming system is different, if not unique, facing distinctive decision-making problems, whose solutions could also be unique. Unfortunately it is not feasible in practice, making it necessary to classify or group farms in some way.

According to ocular findings it was observations that, there were no sharp distinction between women farmers who get services and those who don't get services from Multiflower Company in terms of vegetable production. Women farmers (near & far from main road and those within & outside Multiflower services) had similar cultivation systems. From learning point of view it seems extension message which were delivered by the Company were easily shared by other women who were not involved in the services. It could be true that women farmers were exchanging knowledge in their meetings, other social activities and observing outcomes of production from those women farmers who were served by Multiflower. Ormrod (1999) pointed out that, People can learn by observing the behavior of others and the outcomes of those behaviors. Vegetables were mixed in same plots as a strong element of risk avoidance in case there was market failure for one crop. Extension messages delivered by Multiflower might not fit to cultivation systems used by women farmers because the strategy of establishing demonstration trials normally trainings put emphasis on individual crops under demonstration.

Also from the observation findings, being far from main road where agricultural input shops are located it was easy for women farmers in remote village to opt in applying more manure from animals & poultry than to undergo for inorganic fertilizers. Multiflower services advice on application of inorganic fertilizers. Farmers near main road had added advantage of being easily accessed by Multiflower extension worker. Because there are many agricultural input shops near main road compared to

remote village therefore it was easy for women farmers to opt applying inorganic fertilizers.

From the results in table 15 it was found that distance from main road had influence for farmers to access extension information. Majority of those who lives far from main road apart from getting services of Multiflower they were rarely getting services than using their own experience, relatives, neighbours and from shops where they normally buy seeds. According to Sulaiman (2003), it is anticipated that remote areas and poor producers (especially those growing low-value crops with little marketable surplus are poorly served by both the private and public sectors, which rarely meet their needs. However, all women farmers who live far and don't get services from Multiflower they said they don't know Multiflower Company though they are familiar with the brand name of seeds which are sold by Multiflower i.e. "Royal Sluis seeds". Results about the distance from main road reveal that women farmers who live near main road had opportunities to get services from different providers (UMADEP, shops). Could also buy seeds for lower prices compared to village far from main road where there were few shops.

6.2.3 Women farmers' perceptions about extension services

It was observed from the results that those farmers who were outside extension services of Multiflower said that they don't know that company and what it does for farmers. So it is clear that the services did not reach many farmers till now. However, in another observation (table 6) it was observed that extension coverage per extension worker were too large in such away that it was unmanageable. In addition to this, women farmers forwarded their claims that extension worker of Multiflower lack regular visits & trainings to farmers. Other respondents said that the seeds from Multiflower are so expensive and this tends to discourage women farmers from planting them. Other respondents said that they fear to plant very expensive seeds while are not sure of markets. This implies that extension workers had not linked market information to farmers. Lupatu (1995) for successful private extension services markets must be available so as to encourage farmers to continue using such services. The increased production must find a ready market at attractive prices. In another view, women farmers said that even if they get access to extension services they will learn nothing from those services. This is because they use their own local methods using their experiences and believe that this fits them better than the recommended practices from extension workers.

Attitudes of women farmers towards credit providers have a great influence in accessing extension services. It was observed from the interview that some women farmers do neglect to acquire credits by the perception that they will be taken to court once they fail to repay the loans. This in turn limits them to afford buying new technological inputs like hybrid seeds, fertilizers, tools and farm implements which could enhance their productivity.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS

This chapter gives major conclusion and recommendations based on the results from the previous chapter (6). However, main points are picked in response to the research questions.

7.1 Conclusion

7.1.1 Extension service delivery of Multiflower

The study revealed that Multiflower extension services does not address gender issues which could in turn promote women farmers to have opportunity of benefiting services as much as men. The company does not have inclusion programs for women farmers in its services though extension workers claimed that in the field they serve both men and women farmers. The continued absence of gender related policy and programme strategies means that women's contribution to business of the Company remains invisible. Failure to recognize and account for the value of women's roles, needs and interests in agricultural spheres and to integrate the reality of women's situation into extension policies & programmes is the evidence of excluding women from development. In delivering its extension services, extension workers focus more on individual farmers and that can lead to inclusion of some and exclusion of other farmers (especially women) due to differential social status among farmers. This kind of exclusion leads to limited access to extension services for those who are left out. In advisory services, extension workers of Multiflower seems to provide services in one way and too instructional which do not take into account different gender needs & interests of men and women. Hence because of women low status in the community, they experienced low access to extension services.

Extension workers of Multiflower company lack trainings in extension methods and communication skills to work with women farmers. Trainings could equip them with new and relevant knowledge & skills about extension service delivery. Due to lack of trainings extension workers lack knowledge in understanding problems & needs of women farmers thus led to poor involvement of women farmers to extension services. It was explained by extension workers that the company does not offer trainings by assuming that extension workers have enough knowledge & skills and thus what that they are doing is appropriate.

There is evidence that extension service of Multiflower lacks link to research institutes. This is referred to section 5.1.6 that women farmers claimed of not applying S/A fertilizer by fear that would get low yield. It might be true due to tendency of Ammonium fertilizers of increasing acidity in the soil. But extension worker stressed the use of S/A even though farmers claimed about that. Also evidence was noted in section 5.2.3.b) where by a cauliflower farmer claimed for root diseases but extension worker failed to either give solution or refers to research centre.

Perceptions of extension workers towards women farmers had great influence for the access of women farmers to extension services. The failure by extension workers to take into consideration the constraints faced by women such as the time constraints, little self confidence & cultural constraints also influenced the access of women to extension services. Extension workers perceived women as financially poor, low educated and always busy with household chores such that they don't follow trainings and recommendations successfully. Due to that women farmers lacked

access to necessary agricultural information. Extension workers neglected women and focused their attention on men based on the assumption that the benefits men derive would trickle down to women. Perceptions of extension workers did not take into account women's different positions (roles, needs, interest) in extension service programs.

Multiflower extension services covers just a few regions of Tanzania but each extension worker covers more than two regions which is too large to be served perfectly. Large coverage per one extension worker reduces extension effectiveness in reaching women farmers. This confirmed by the results from women farmers especially those who are not served by the company & lives far from main roads who said they don't know Multiflower Company. Majority of those women obtained information from their relatives, friends, neighbors and own experiences because they are rarely/not given trainings.

It was strange that extension worker who was working in Morogoro region didn't mention UMADEP as a stakeholder but the study indicate that project was very active extension provider in the study area. Many farmers especially who live near the main road were getting extension services from UMADEP project.

7.1.2 Women access to extension services

The education level of women farmers was an import factor to influence possibilities of women farmers' access to extension materials (seed labels, leaflets, brochures and flyers). Most of women farmers had low education level. Because of large extension coverage per extension worker therefore it was difficult to reach as many farmers as possible especially to translate extension materials. It can be noted that, low level of education decreased awareness about extension information among women farmers such that they failed to follow recommended technologies.

Gender relation in the farming communities of the study area was found to favour more men over women. The power to make decision was found to be vested in hands of men. Within households, resources allocation such as income, labour supervision, agricultural tools & implements ownership was found to be gender-biased, with women often having less control over those benefits. Gender-based inequalities in control over resources influenced the ability of women farmers to access extension services of Multiflower.

Due to burden of household activities balanced with productive activities, it was found that women farmers of Mvomero district were neglected by extension services. Extension workers of Multiflower neglected women farmers by assumptions that they were always busy and therefore were failing to accomplish extension assignments.

Access to MFIs can enable women farmers to benefit from credit schemes. This increases ability to access new and improved technological inputs. Women farmers in the study area complained that they lack financial support to run their production activities. Lack of access to resources such as finance weakened women farmers to play an active role in extension services. Majority of respondents complained that the prices of seeds from Multiflower are higher compared to other Companies. Lack of access to extension services has eventually limited women farmers to achieve their livelihood outcomes.

As far as the women farmers are concerned, looking at the livelihood strategy not all of them can use the service of Multiflower. The logic of the women farmers such as of adopting mixed farming is too far apart from that of the company. The Company with the primary objective to sell vegetable seeds is not interested to cover all

women farmers. Most of women farmers who are targeted by Multiflower services are those who specialize in vegetable production. It can be said that, farming System of women farmers in the study area coincide with a recommendation domain. Extension message/content which is delivered by Multiflower extension workers may fit more to farmers who specialize more on commercial vegetables production than to farmers who grow other crops.

7.2 Recommendations

Since the extension system was more instructive to farmers, a more systematic assessment of clients' needs and participation is needed in programme formulation to keep extension programmes relevant to the needs of women farmers. Multiflower is advised to adopt the extension system used by UMADEP which is typical participatory in approach for easy identification of clients' needs and priorities. There is therefore a need for Multiflower to specifically identify women as an integral part of its extension services and develop gender-specific operational guidelines which will direct the extension activities of women farmers. In steady of focusing more the individual farmers it is advised that Multiflower extension workers should target the existing women farmer groups to enhance horizontal knowledge sharing.

For extension workers, agriculture training curricula should be redesigned to include women's concerns and responsibilities. While designing trainings, duration, course content and facilities required have to borne in mind the women's triple roles (reproduction, production & community). Training facilities should be redesigned to make them more suitable for women especially in view of limited time/ time constraint of women and their low level of education. Extension materials like leaflets, brochures and flyers should be translated into Kiswahili language to be easily understood by women farmers.

Extension workers should not target only men by assuming will trickle down the gained knowledge to women. It is important to ensure that extension services reach women directly, not only to balance out gender inequalities but also to maximize productive efficiency. Extension workers should involve women in trainings effectively since women do most of farm activities compared to men (table 7 above). Activities which are done by women are more sensitive and need high care & attention in management of vegetable production. These sensitive activities are like fertilizers application, sowing, transplanting & weeding compared to men who do land preparation/hoeing which requires muscles. Even though Multiflower seeds have good quality but if not well managed can lead to poor performance/ yield.

Multiflower Company should keep its extension workers up-to-date through trainings to enhance appropriate extension service delivery including gender sensitization programmes/ trainings which will help to promote women's positions in the field. Though the goal of the company is to sell vegetable seeds but having gender related trainings will help to raise gender awareness to extension workers. Trainings will assist in improving women involvements to services which in turn women will contribute to advertise company's products.

Multiflower service should form a research-extension linkage for effective problems solving and updates of new technologies to farmers. For cases where farmers give views on new technology, extension workers have to find out if it fits the context (environment & farmers) before enforcement.

Multiflower Company need to establish and strengthen the existing collaboration with stakeholders. Having access to extension services alone is not enough for the

livelihood improvement of rural women farmers, but rather it needs to go side to side with facilitation of access to other services deemed necessary. Multiflower should have meeting with UMADEP to see how they can collaborate because it uses participatory approach which is effective approach of reaching rural farmers.

As Multiflower is interested to vegetable farmers, it is recommended to target only vegetable growers for effective and efficiency service delivery. Effectiveness and efficiency can be in terms of relevant extension message to respective farmers, regular farm visits and large coverage to farmers who grow vegetables only. Farmers who do not grow vegetables can be served by other organizations (NGOs, CBOs like UMADEP & Companies) that offer extension services apart from vegetables farming.

It is also advised that extension workers of Multiflower should encourage the formation of groups among women farmers in rural communities so that their needs and problems can easily be addressed. Groups' formation enhances women's social networking, build capacity to solve their own problems and support horizontal knowledge exchange. It also creates opportunities for women to express themselves, gain confidence, and improve their access to extension services.

Due to unavailability of documented quantitative data about women involved in extension services of Multiflower for all extension workers (especially number of women and number of groups of women farmers), it is recommended to collect quantitative data in Mvomero community in the process of extension services delivery. The analysis of data is important to reflect effectiveness of extension workers and the roles of women in business of the company.

Research areas

1. What are the different positions (roles, needs & interests) of men and women farmers in the vegetable seed business of the Multiflower Company?
2. What practical implications and guidelines can be derived from this?

REFERENCES

- Adetoun, B., 2003. *Organization and management of extension services for women farmers in south-western Nigeria*. Global Development Network.
- Ashimogo, G & Greenhalgh, P., 2007. *Regoverning Markets: Small scale Producers in Modern agrifood Markets*. UK, IIED [online] Available at: <http://www.regoverningmarkets.org/en/filemanager/active?fid=439> [Accessed 31 August 2008].
- Beynon, J., S. Akroyd., A. Duncan & Jones,S., 1998. *Financing the Future Options for Agricultural Research and Extension in Sub-saharan Africa*. Oxford Policy Management. pp.163.
- Bol, R.P.J., 2007. *Facts and Figures of Dutch Agri-sector 2006/2007*. In the Ministry of Agriculture, Nature and Food Quality Department of Trade and Industry, ed. Agricultural Economics Research Institute (LEI). The Netherlands: The Hague.
- Braidotti, G., 2008. *The power of knowledge lifts women farmers to centre stage*: [internet] Available at: http://www.aciar.gov.au/system/files/node/8925/Women_farmers_konwledge.pdf [Accessed 05 September 2008].
- Burger, K. & Gunning, J.W., 1991. *Research memoranda: Gender issues in Africa Agriculture: Evidence from Kenya, Tanzania and Cote d' Ivory*. Free University, Amsterdam.
- Byerlee, D. & Echeverria, R.G. eds., 2004. *Agricultural Research Policy in an Era of Privatization*. Wallingford UK: CABI publishing.
- Chipeta,S., & DAAS., 2006. *Demand Driven Agricultural Advisory Services, annual report 2005-2006*, Department for International Cooperation: Eschikon, Lindau. Neuchâtel group.
- Devereux, S., Sharp, K. & Amare, Y., 2003. *Destitution in Wollo*, Ethiopia. Brighton: IDS.
- DFID (Department for International Development) and NEDA (Netherlands Development Assistance) (1999), *Agriculture extension: Key sheets for sustainable livelihoods*. London: DFID.
- Ellis, F., 2000. *Rural livelihoods and Diversity in Developing Countries*. United States: Oxford University Press Inc., New York.
- Extension Services Facilitation Unit (ESFU) of the Ministry of Agriculture and Cooperatives., 1999. *Demand Driven and Sustainable Extension Services*. Unpublished, pp.5.
- Faida MaLi, IIRR & KIT., 2006. *Chain empowerment: Supporting African Farmers to Develop Markets*. Royal Tropical Institute, Amsterdam; Faida Market Link, Arusha; and International Institute of Rural Reconstruction, Nairobi.
- FAO report., 2004. *GTZ. Effective Communication between Agricultural Research, Extension and Farmers*. Ora, Italy - October 18 -22.

- Fisher, T., 2002. *Beyond Micro-Credit. Putting Development Back into Micro-Finance*: In M. Harper, M. contributor. Self Help groups and Grameen Bank groups: What are the differences?. UK: Oxfarm, Oxford. Ch.7.
- Garcia, Z., 2004. *Agriculture, Trade negotiations and Gender*. (FAO Publication) [online]. Rome: Italy. (Published 2006) Available at: <ftp://ftp.fao.org/docrep/fao/009/a0493e/a0493e.pdf>. [Accessed 06 September 2008].
- Hariharan, R., 2005. *Improving and strengthening the participation of women farmers in extension services*, In Vavuya district, Sri Lanka. Student report Van Hall Larenstein University of professional Education.
- Haug, R., 1999. *Some leading issues in international agricultural extension. A literature review*, The Journal of Agricultural Education and Extension, 5:4, 263 – 274.
- Jiggins, J., Olawoye, J.E & Samanta, R.K., 1997. *Improving women farmers' access to extension services*. In Bentz, R.P., Sofranko, A.J and Swanson, B.E. (eds). Improving Agricultural extension. Food and Agricultural Organization of the United Nations. Rome.
- Kindeya, G. et al., 2005. *Women in Tigray*. Situation analysis of constraints, opportunities and livelihood conditions, Ethiopia. Mekle.
- Kissawike, K., 2008. *Irrigation-based Livelihood Challenges and Opportunities: A gendered technography of the lower Moshi irrigation Scheme in Tanzania*. Unpublished PhD thesis. The Netherlands. Wageningen University.
- Köbrich, C., Rehman. T & Khan. M., 2003. *Agricultural Systems*. Elsevier Science Ltd. [Online]. Available at: http://www.sciencedirect.com/science?_ob=ArticleURL&_udi. [accessed 03 october 2008].
- Leeuwis, C & Ban, A. van den., 2004. *Communication for Rural Innovation: Rethinking Agricultural Extension*. Oxford OX4 2DQ, UK. Blackwell Science.
- Lupatu, M. A., 1995. Privatization of Agricultural Extension Services. In: *Proceedings of a National Conference on The future of Agricultural Education and Extension in Tanzania*. (S.C. Lugeye and I.L. Ishuza eds). 27-29 November, 1995. Dodoma, Tanzania. Pp.21-28.
- Malocho, N. W., 1997. *Morogoro region socio-economic profile*. The planning commission and morogoro regional commissioner's office. Dar es salaam & morogoro. [online]. Available at: <http://www.tzonline.org/pdf/Morogoro.pdf>. [accessed 28 August 2008].
- March, C; Smyth, I and Mukhopadhyay, M., 1999. *A Guide to Gender-Analysis Frameworks*. UK. Oxfarm GB.
- Millar, J. & Curtis, A., 1997. Moving Farmer Knowledge Beyond the Farm Gate: An Australian study of Farmer Knowledge in Group Learning, European Journal of Agricultural Education and Extension. Vol.4, No 2, 133-142.

Moser, C., 1993. *Gender Planning and Development, Theory, Practice and Training*. London. Routledge.

Mvomero District council., 2008. *Socio economic profile. Morogoro*. Tanzania

Ormrod, J.E., 1999. *Human learning* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall. [Online]. Available at: http://teachnet.edb.utexas.edu/~lynda_abbott/Social.html. [Accessed 27 september 2008].

Sulaiman, V.R. (2003). *Agricultural Extension: Involvement of private sector. Occasional Paper 29*, National Bank for Agricultural and Rural Development (NABARD), Mumbai. [online]. Available at: http://www.ncap.res.in/upload_files/others/oth_1.pdf [Accessed 3 September 2008].

Sweetman, C. ed., 2001. *Gender, Development, and Money*. Oxford OX27DZ, UK: Oxfam GB.

UMADEP, 2001. UMADEP Agricultural report. [Online]. Available at: <http://easternarc.or.tz/downloads/Uluguru/WCST-UMBCP-reports/UMADEP%20Agricultural%20report%202001.pdf>. [Accessed 19 August 2008].

URTPC 2002. *United Republic of Tanzania Population Census report*. [online]. Available at <http://www.tanzania.go.tz/census/morogoro.htm>. [accessed 28 August 2008].

Van den Ban, A.W., 1999. Articles on agricultural extension: Competencies Needed in Extension Organization, Vol.1, p. 2-9.

Verschuren, P., and Doorewaard,H., 2005. *Designing a Research Project*. Utrecht: Lema.

World Bank, 1995. *Development in practice: Toward Gender Equality*. United States of America. Washington. D.C. [internet]. Available at: <http://www.dalnet.lib.mi.us/gsd/cgi-bin/library>. [Accessed 06 September 2008].

ANNEXES

ANNEX 1: CHECKLISTS FOR EXTENSION WORKERS

1. What kind of extension services do you provide to farmers? What strategies do you use to give extension services to farmers? Does Multiflower give you instructions on how to involve women in extension services? What is the most important thing(s) when you make visiting or not to extension gathering? How does women farmers expresses their problems during extension service delivering? How do you involve women farmers in trainings? How do you involve women farmers in time setting of demonstration trial? Apart from extension workers, what other methods are used by the Company to deliver extension information to farmers?
2. Do you get training/ attend courses or workshops related to extension services? If yes, how frequent? If no, why? How often do you get in contact with women farmers during extension service delivery? What are the opportunities for improving women involvement to extension services? What challenges do you face in including women farmers to extension services? Which technologies are mostly preferred by women farmers than men farmers? Which technologies do you think are appropriate for women farmers and why? What are the problems of women farmers in following up recommendation? Do you realize that farmers have indigenous knowledge? How do you incorporate indigenous knowledge in services?
3. To which way does the company extension policy address women involvement to extension services? To which extent is the goals of Multiflower Company priority to women farmers? Do you collaborate with other stakeholders? And who are they? What is the coverage of your extension service which you deliver to farmers?
4. How do you do to make sure farmers buy and keep buying Company's products? What types of crops do you promote to farmers? What promotion materials do you use to advertise company's products? How do you ensure both men and women farmers benefit from promotion materials? Do men and women differ in vegetable types they grow? If yes, why difference? Which vegetable types are mostly grown by women?

ANNEX 2: CHECKLIST FOR WOMEN FARMERS WITHIN COMPANY'S SERVICES

1. How do you get extension information of Multiflower Company? What kind of vegetable seeds from Multiflower Company do you grow? Why do you prefer them? What is your opinion towards prices of vegetable seeds of Multiflower Company?
2. What is the average size of your vegetable farm? Who decides for the production of vegetables in your household? Why? Who has access to vegetable field(s)? Why? Who is responsible for supervision of labour in the vegetable fields? Why? What activities are done by men/women? What activities are shared by both husband and wife? Who owns income from vegetable sales? Why? Who owns agricultural tools and equipments? Why? What other activities apart from vegetable production? Where do you sell your vegetables?
3. What benefits do you get from accessing extension services of Multiflower Company? How does extension worker of Multiflower company contact you? What are the reasons that you can't attend extension meeting and trainings? In your opinion how can Multiflower Company improve extension services? Who plans for trainings? How do you get involved in trainings (i.e. needs assessment, planning, implementation, monitoring and evaluation of training)?

ANNEX 3: CHECKLIST FOR WOMEN FARMERS OUTSIDE COMPANY'S SERVICES

1. What is the average size of your vegetable field? What kinds of vegetables do you grow? Which company are your vegetable seeds from? Have you heard of extension services? If yes, what extension programs do you know? If no, do you accept extension services? If yes, which organization gives you extension services? How did you get extension message for the first time?
2. What are the importances of extension services to your productivity? What are your priorities from extension services? What do you expect to get from extension worker? Do you think your main problems are addressed by extension services? If yes, how are they addressed? If no, why are you not satisfied with extension service? Do you know Multiflower company extension services? If yes, what do you know about extension services of Multiflower? What do you say about prices of Multiflower products? How do you afford vegetable production expenses? Are you satisfied with the price of vegetable seeds which you grow? Why? What are the reasons that you can't attend extension meetings/ & trainings? In your opinion, what should be done to improve your productivity? Where do you sell your vegetables?
3. Who decides for the production of vegetables in your household? Why? Who has access to vegetable field(s)? Why? Who is responsible for supervision of labour in the vegetable fields? Why? What activities are done by men/women? What activities are shared by both husband and wife? Who owns income from vegetable sales? Why? Who owns agricultural tools and equipments? Why? What other activities apart from vegetable production?