Women Farmers' Participation in Agriculture Training: in Kavre District of Nepal

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ABBREVIATIONS

AEO	: Agriculture Extension Officer
AEP	: Agriculture Extension Project
APP	: Agriculture Perspective Plan
AREP	: Agriculture Research and Extension Project
ASC	: Agriculture Service Center
CARE	: Co-operation of American Everywhere
CATC	: Central Agricultural Training Center
CBO	: Community Based Organization
CBS	: Central Bureau of Statistics
DADO	: District Agriculture Development Office
DAE	: Directorate of Agriculture Extension
DAT	: Directorate of Training
DDC	: District Development Committee
DFID	: Department of Foreign International Development
DOA	: Department of Agriculture
FAO	: Food and Agriculture Organization
FG	: Farmers Group
GDP	: Gross Domestic Product
GEED	: Gender Equity and Environment Division
GO	: Government Organization
GoN	: Government of Nepal
GTZ	: German Technical Cooperation
HFPP	: Hill Food Production Project
IRDP	: Integrated Rural Development Project
JT	: Junior Technician
JTA	: Junior Technical Assistant
NAP	: National Agriculture Policy
NGO	: Non Governmental Organization
NPC	: National Planning Commission
NZIDP	: Narayani zone Irrigation Development Project
PC	: Problem Census
PDDP	: Participatory District Development Program
PS	: Problem Solving
PSO	: Public Service Organization
SADO	: Senior Agriculture Development Officer
T & V	: Training and Visit
TLDP	: Third Livestock Development Project
VDC	: Village Development Committee
WB	: World Bank
WFDD	: Women Farmer Development Division
SSSP	: Seed Sector Support Project

ABSTRACT

Participation issues in agriculture development are the areas of concern at national, regional and district levels of the country. The word participation has been used in highly variable ways. In this study participation is used with the involvement of women farmers in extension services (training) and decision making with the collaboration and interaction with extension workers in group approach. 72.8 % agriculture work in Nepal is done by women farmers.

Considering the important role played by women and inequalities which limit the opportunities of women to participate in agriculture development activities, the Government of Nepal recognized the necessity for full participation of women in agriculture extension program from national 7th five year plan (1985-1990) of the country. The plan has emphasized towards improving women participation in agriculture development programs, access to services and resources. The District Agriculture Development Office started to form women farmers group to make women express themselves, gain confidence, built capacity to solve their own problems and improve their participation through the group activities and training as well. However, though women have been targeted it is not clear to what extent they are participating in extension training of district in group approach. Training is one of the effective extension activities conducted in districts.

The main objective of this study was to identify approaches for improving women farmers' participation in DADOs agriculture training programmes by assessing the reasons / factors why women have low participation in agriculture training programmes. The study found out women participation in training in group approach in terms of quantities, qualities and decision making.

The objective was realized by desk study, field survey and use of questionnaires. Two different questionnaires were used, one for women farmers and the other for the extension workers. The questionnaires were open and close ended. The questionnaires were prepared based on a checklist developed by the researcher as a guideline to ensure the important elements to participation. The survey was carried out in the 3rd week of July 2008.

The finding showed 85.71% of women farmers respondents mentioned groups were formed by the initiation from the both extension worker and farmers. 28.57 % farmers mentioned decision making was undertaken by leading farmers in the groups. Similarly, 40% extension workers also mentioned the decision making was undertaken by the leader farmers. The understanding of participation by farmers and extension workers was diverse. The 35% farmers respondents understand participation as taking part in group activities and 60% extension workers understand participation as presence in group activities and trainings. Educated, leader women farmer, young, rich participate more than those who are illiterate, old and poor.

78.57% women farmers have constraints like house hold activities and livestock, far distance to training centre, economic condition if trainings arranged in far distance, culture and no female extension workers for participation in trainings. The extension workers feel difficult to approach women for the acceptance of innovation and information because they depend on the male and decide themselves. The 70% of the extension workers stated the participation was mostly moderate and presence participation. The views of extension workers were to make more participation of women in trainings.

Like wise, the 71.42% of the women farmer suggested for on the spot training on the farmers area and arranging time with them to improve the participation in trainings.

The 60 % of extension workers also gave priority for on the spot training. Women farmers suggested topics like vegetable farming regular and off season.

The study has made recommendations like conducting on the spot training, use of participatory methods, facilitating training, changing the traditional thinking of their role as extension worker for improvement of women participation in agricultural training. They need to move away from their role as trainer to facilitator.

CHAPTER ONE

1.1 Introduction

This study explores the participation of women farmers in the training program in group approach in the public organisation, District Agriculture Development Office (DADO) in Kavre District of Nepal. The first and introductory chapter provides background to the research as a whole. The chapter explains the context in which the research is situated as well as the underlining problems that evokes the research as a whole. The research explains the intended objective and the key research issues which guides and drives the whole process.

1.2 Background

Agriculture in Nepal is not only the mainstay of its economy but also as a way of life of the rural people. Agriculture accounts for over 36 percent of Gross Domestic Products (GDP), and absorbs livelihood for more than 68 percent of the economically active population (MOAC, 2006). Nepalese agricultural development has largely been influenced by the agricultural extension approaches adopted in the country. In strengthening agricultural extension system in Nepal, Government of Nepal (GoN) introduced and practiced many extension approaches in the last four decades. The approaches like Training and Visit System, Integrated Rural Development Approaches, Conventional Approach, Commodity Group Approach, etc were used for the agriculture development. However, none could produce significant results enough to motivating and effectively mobilizing vast majority of rural poor men and women farmers and to increase agricultural production and productivity. Because, all these approaches have focused their attention on material resources and structural changes to extension services to achieve the stated goal and no extension approaches had given enough attention to human resource development, i.e., to organize farmers themselves (Sen, 1993). The weaknesses of the past extension approaches were manifested by their orientation to physical target lack of total accountability lack of priority and dilution of activities.

The low performance of agriculture sector in the past not only threatened the livelihood but also affected in production capacity of the natural resources base, enhanced environmental degradation and failed to address poverty and malnutrition. Considering these facts, the government of Nepal has brought 20 years long-term (1995-2014) Agricultural Perspective Plan (APP) effective from eighth five year plan (1992-1997). In this plan, agriculture sectors have been considered as leading sectors to alleviate poverty, to generate employment and conserve natural resources and improve the condition of women through accelerating the agricultural growth rate from 3 percent to 5 percent per annum (APP, 1995). The APP appears relatively progressive in terms of including gender issues and enhancing women's role. The APP has three major objectives: poverty alleviation, women development and environmental enhancement. Increase in agricultural production is one of the most important aspects required for poverty alleviation in the developing country like Nepal. Equally important aspect for agricultural production is the working quality of women farmers. By considering this aspect, the APP recommended that research attention would be directed to the role of women in farm modernization and on removing the main constraints in integrating women in agricultural modernization process.

Similarly, several other projects are implemented by International non-government organization (I/NGOs) such as CARE/Nepal, CEAPRED, SAPPROS etc to further reinforced the potential benefits from extension services, particularly by minimizing the gaps between the service providers and the beneficiaries. The role of Public Service Organization (PSOs) and non-government organization (NGOs) has become synergistic to public sector interventions. Through interventions from the recent projects, “Group Approach” has been adopted across the boarder for extension and development projects (K.C., et. al., 2003). Extension system with farmers' group approach is now adopted all over the country (Sharma, 2006). Agricultural training is the one of the major components of agricultural extension service system of Nepal to educate and motive the farmers about application of scientific research and new knowledge to agricultural practices for agricultural development of the country.

In spite of the fact that extension service has a long history in this country, its efficiency and effectiveness are still questionable, and there is considerable dissatisfaction with active participation of beneficiaries in extension activities. Realization of the beneficiaries need and lesson learned from different countries experiences that improving knowledge and capacities of women farmers through participatory approach is almost important to create empowerment which helps them to deal with not only agricultural related problems but also problems in other domains.

Nepalese agriculture employs 72.8% of the women in various agriculture activities (MOAC, 2008). For enhancing the activities related with women Ministry of Agriculture and Cooperatives (MOAC) established Women Farmers Development Division (WFDD) in 1992. WFDD's mandate was to mainstreaming the gender issues in all agricultural policies and program and to increase participation of women farmers in agriculture program and activities. At present the WFDD is known as Gender Equity and Environment Division (GEED). This division is responsible for policies, programs and projects to increase the participation of women in agriculture development.

The agriculture extension program in Nepal has always been male dominated. The agriculture extension programs had never attempted before sixth five year plan (1980-85) to promote the participation of farm women in agriculture development programs. The policy for increasing women's participation in agriculture development was incorporated in the sixth five year plan (1980-1985) of the country. The Seventh five year plan (1985-1990) recognized the necessity for full participation of women in agriculture extension program. The plan directed the appointment of women coordinator in ministry of agriculture and allocated 10 percent women quotas for the farm woman in training, seminars and tour programs organized annually by agriculture extension. Besides, the plan did not commit any other specific programs to increase the participation of farm women in agriculture development (Basnyat, 1990). Women's important role and contribution to agriculture remained nearly invisible to policy and decision makers in Nepal before the restoration of democracy in 1990 (FAO, 1997).The importance of gender mainstreaming in the agricultural development was realized in the Eight five-year plan (1992-1997). The Eighth Plan introduced the first efforts by stating that "The Government is committed to equal and meaningful participation of women in development". In this plan 25 percent women participation in agriculture extension program was mandatory. In the Ninth five year plan (1997-2002) it was increased by 35 percent. The Tenth Plan (2002-2007) intended to have 40 percent women's participation in the agricultural programs. The Ninth Five-year Plan and Tenth five year plan are more explicit than the previous plans in integrating women's issues in the development process (Joshi and Koirala, 2005). Besides, other women specific empowerment programs, these plans talks of

enhancing the accessibility of women farmers to agricultural extension services. The National Agriculture Policy (2004) directed to increase women participation in government agriculture extension programs by 50%.

Contribution of women in Nepalese agriculture development is very important (GEED, 2005). Women farmers contribute about 50-80% of the total farm work that varies across the ecological region they dwell (Pradhan and Bennet, 1991 cited in WFDD, 1993). They play a critical role in food production, post harvest activities, livestock and increasingly in cash cropping. Their daily routine starts with cock-a-doodle-doo of cockerel to mid night (Pant, 2002). They have important role in several farming decisions and implementation. But in most of the cases women farmers receive second hand information from their male members, who generally participate in agriculture trainings and other agriculture capacity building activities. If women receive information through their husband they feel difficulty to understand and irrelevant to their need (Koirala, 2004). It was estimated that women getting second hand information is 69 percent of the cases (GEED, 2000). For providing first hand information about agriculture technologies and management government prioritize women participation in such agricultural activities. But in practice it has not materialized, its outcome is not satisfactory (MOAC, 2006). Because of male dominated society, participation of male is found more in extension services like training. Men as a heads of families, have received the greater part of extension support, while women have benefited less and have been rarely encouraged to play an equal part in extension activities. Many training programs are conducted by several agencies to meet the agriculture development. However, rural women has been neglected to involve in such trainings and are not being conducted in a systematic way and according to the convenience of them and to their genuine requirements. Thus seeing women role in agriculture, women are inseparable but neglected partners in the process of agriculture development. Therefore, it is important for agriculture extension to work with women to bring them the knowledge, skills and support they need to improve their agriculture activities. It is necessary to explore the realities behind policy and the participation of women in training in the group approach.

1.3 Problem definition

The national population census reported about 49.96 percent male and 50.03 percent female (CBS, 2001). It was realised that women had not benefited as much as men from the economic development program. This is because women were found to have limited opportunities to access and control over productive resources. Welfare to female farmers is a must to improve the overall agriculture development of the country. For this, it is necessary to increase women participation in training programs on improved agri-technology friendly to women.

In the process of economic development women's participation is important (NPC, 2007). But, women have less benefited from the agriculture extension activities of the country (GEED, 2005). Women are the main players of Nepalese agriculture development. To visualize women roles, Government of Nepal have initiated to support and improve women's participation in development initiatives. Meanwhile, the successful functioning of these programs depends greatly on the active participation of women who represents half the total population (NPC, 2007). Government of Nepal has been conducting training program in order to improve knowledge, skills and attitude for both men and women farmers. However, the women participation in agriculture training programmes is still low. The real obstacles that women face must

be understood by extension organisation and extension workers. They should seek out ways of channelling extension training which helps women to get involve.

1.4 Justification of the study

Women plays significant role in agriculture all over the World. Report shows that Women contribute 75% in South Asia, 72 % in East Asia and pacific and 75 % in Sub Saharan to the labour force in Agriculture (World Bank, 1998). Women are directly involved in agricultural production activities. However their roles are not well recognized in the world. They received low priority in policy making, decision-making and program planning and implementation. Although, they de-facto head of the family, much of the decision on agricultural production are made by male. They have less access to extension services. The social custom and work burden make them less contact with extension personnel. They usually received second hand information through male members of the family. This has negative effect in agricultural production.

Despite the importance of women in Agriculture , women farmers still have to carry out their agricultural activities without much support from the agricultural support services such as extension (training), input supply, marketing and credit. Needs and priorities of women farmers are not adequately reflected in the extension services. Women, as large agricultural producers, still remain invisible and unsupported. Hence improving and strengthening the participation of women farmers in agriculture training will help to increase the knowledge, skills which enhances vital path to increase the efficiency of the women farmers.

There are limited studies being on women's role in agriculture particularly their participation in training in the group approach in Nepal. Therefore, it is expected that this study help to identify reasons of low participation of women in Agriculture training provided by DADO and to make conclusive remarks to overcome those problems. This study will be a good asset for development practitioners who are involved in policy making and effective programming for women in Nepal.

1.5 Objective of the study

The main objective of this study is to identify approaches for improving women farmers' participation in DADOs Agriculture training programmes by assessing the reasons / factors why women have low participation in agriculture training programmes.

1.6 Research Questions

1.6.1 Main research question

1. What are the reasons for low participation of women farmers in DADOs regular Agriculture Training in the group approach?

2. What are the views of women farmers and extension workers about the participation of women farmers in agriculture training program?

1.6.2 Sub research question

1. How were the farmers group formed?
2. How are women farmers involved in decision making in the group?
3. What do women farmers understand by participation?
4. What kinds of training does DADO conduct for the farmers?
5. What are the constraints faced by women farmers in participation in training?
6. How often is the contact of extension workers with women farmers?
7. What constraints do the extension workers face in bringing women in training?
8. What are the views of extension worker about women's participation?
9. What methods are successful in achieving more participation of women farmers in training?

1.7 Limitations of the study

This study was mostly based on the perception of the agricultural personnel and farmers. Therefore, professional and farmers bias might be there. It was difficult to go to the research site and collect data because of limited time. It was rainy season and the farmers will absolutely busy in rice planting. Arranging time with them was difficult. The study was only confined to four Village Development Committees of Bhakundebashi Agriculture Service Centre of Kavre district. However there are six Agriculture Service Centre (ASC) with 87 Village Development Committees (VDCs) and 3 Municipalities in the district.

CHAPTER TWO

2. Theoretical Concepts

2.1 Participation

The term participation connotes with different meaning at different context. Literally, for someone participate means to take part in or to be involved in. The definition given by different authors and organisation are given below.

Definition

In 1994, the world bank defined "participatory development as: a process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them " (World Bank, 1994, pi cited in Chamber 2005, p. 103).

"Participation is enabling people to realize their rights to participate in, and access information relating to, the decision-making processes which affect their lives" (DFID, 2000 cited Chamber 2005, p. 103).

Participation could be defined as a direct involvement of marginalized groups in a development process, which aims to build people's capabilities to have access to and control of resources, benefits and opportunities towards self-reliance and an improved quality of life (Mellouli, 2003). Participation in extension is the process of communication among men, women farmers and extension workers during which the farmers take the leading role to analyze their situation, to plan, implement and evaluate development activities. It is a way helping the disadvantaged people and women to gain access to and control over resources or services such as training, farmers tour, inputs, information etc needed to sustain and improve their livelihood.

Participation in this study's context deals with the involvement of women farmers in various processes and activities (e.g. training) and in decision making, and with the collaboration and interaction with extension workers. Indicators of participation are: just listening, active discussion (free communication between extension worker and farmer), bringing in new topics in the training, partial discussion (means sometimes talking with extension worker and other group members but hesitant to interact).

Participation in training aims to bring desirable changes in knowledge and skills of farmers. Training is also believed to bring positive change in the farmer's attitudes. Women's participation in training means providing women, equitable access to opportunity, benefits and resources available in the society. It is an essential ingredient of women's empowerment. Ensuring women participation is essential to achieve gender equity in access, control over resources (Zwarteveen and Meinzen-dick 2000 cited in Mellouli 2003).

2.1.1 Why Participation?

According to Naika and Siddaramaiah (2006) participation is:

(i) For management of skills, mobilization of community, conflict resolution and institution building among extension personnel.

(ii) People's participation increases the actual benefit to the beneficiaries.

(iii) It decreases the dependence of people on government to make the public self sustaining.

(iv) It makes possible for the mobilization of local resources.

(v) Implementation of project at micro level becomes easier.

2.1.2 The typology of participation

The typology of participation in development program according to Pretty (1994) are as follows:

S.N	Typology	Components of Each Type
1.	Passive participation	People participate by being told what is going to happen or has already happened. It is a unilateral announcement by an administration or project management, without listening to people's responses. The information being shared belongs only to external professionals.
2.	Participation in information giving	People participate by answering questions posed by extractive researchers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research are neither shared nor checked for accuracy.
3.	Participation by Consultation	People participate by being consulted, and external agents listen to views. These external agents define both problems and situations, and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board people's views.
4.	Participation for material incentives	People participate by providing resources, for example labour, in return for food, cash or other material incentives. Much on-farm research falls into this category, as farmers provide the fields but are not involved in experimentation or the process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end.
5.	Functional participation	People participate by forming groups to meet predetermined objects related to the project, which can involve the development or promotion of externally initiated social organisation. Such involvements usually occur not at early stages of project cycle or planning but after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.
6.	Interactive Participation	People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structured learning processes. These groups take control over local decisions, and so people have a stake in maintaining structures or practices.

7.	Self-mobilisation	People participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Such self-initiated mobilisation and collective action may or may not challenge existing inequitable distributions of wealth and power.

Pretty (1994) has classified participation in seven types as stated above. He starts with "Passive participation", where people who participate are only told about what is going to happen or has already happened, to "Self- mobilization" where people participate by taking initiatives independent of external institutions to change the systems in which they live. Pretty's interactive participation and self–mobilization type evoke some of the professed goals of those who promote and use participatory approaches in community development (Cornwall, 2008).

The word participation has been widely used and promoted in development programs. It is not new and it is defined by different development programs depending on the context it is being applied. In this study the women farmers' participation on agriculture training is explored. The involvement of women farmer in agriculture development according to spelled government policy is concerned in the research. The government has focused the participation of women farmers in agriculture program including training to 50 % (National Agriculture Policy, 2004). In the study area women farmers form groups themselves or associate in mixed groups with the help of extension worker to take benefit from the agriculture extension organisation. The women farmers participate by the influence of external initiators and facilitators like extension workers. So, it can also be in line in functional typology of participation. They depend on extension workers to form the group, and to sustain the group. Functional participation is most frequently found type of participation in development (Rudqvist and Woodford-Berger, 1996 cited in Cornwall, 2008). The level of so called interactive and self mobilization participation can increase the involvement of women farmers in training and other agriculture activities. The involvements of women farmers from women farmer groups and mixed farmers groups are active only when there is understanding, sharing of information and decision making among group members.

Participation and gender both being social issues, gender plays an important role in determining the participation of men and women in extension programs. The differences between men and women and their access to resources are determined by social, cultural, economical, political situation, status as well as changes over time and context specific.

2.1.3 Levels of Participation

According to (Chamber, 2005) participation has four level or degrees:

(i) Information sharing: People are informed in order to facilitate collective individual action.

(ii) Consultation: People are consulted and interact with an agency, which can then take account of their feed back.

(iii) Decision making: People have a decision-making role, which may be theirs exclusively, or joint with others, on specific issues of a policy or project.

(iv) Initiating action: People are proactive and able to take the initiative.

From the above levels or degree of participation I consider most important when both men and women gets involved in collective decision making and work together as equal to achieve common goals. The collective involvement in decision making among stakeholders is important in farmer groups. This can make the equal involvement of farmers in agriculture activities (e.g. training).

2.1.4 Participatory approach

In the 1970s and early 1980s, a desire by decision-makers to more effectively incorporate the perspectives and priorities of the local people in decision-making, policy development and project implementation led to the emergence of a number of "participatory approaches" to development. This re-orientation towards greater participation in development by individuals was motivated by the development communities desire to move from an emphasis on top down, technocratic and economic interventions towards greater attention to bottom-up, community-level interventions (Kanji and Greenwood 2001 as cited in Duraiappah and et al 2005).

The main principle of participative approaches in development is that the community and stakeholders are collaborators in a project at every stage of project development. The need for stakeholder ownership is now well established in the donor community. Ownership of a project by stakeholders involves ensuring the widest possible participation of those who are supposed to be the beneficiaries of the project. The essence of ownership is that the recipients drive the process. That is, they drive the planning, design, implementation, monitoring and the evaluation of the project. Hence participative methods are meant to generate a sense of ownership of decisions and actions.

A participatory approach related to the bottom up approach fits in with the decentralization process. The key elements of decentralization are devaluation of power, services to the local people, enabling local people to participate and take decisions on matters concerning their lives. This way a participatory approach is often taken as a learner-centred approach helping learners to take a greater control over their lives by developing their skills in problem solving (Srinivasan, 1993). The learner taken as the farmer in this case learns from his /her past experience. Therefore the focus by the extension workers on the learners is to help farmers to develop their abilities, skills to diagnose and solve their own problems.

Through participatory methods groups can learn together, can be involved actively in discussion, and visualize the analytical process of identifying cause, effects and their linkages. It helps to mobilize local community for action. Using tools and symbols whether actual objects drawn on the ground or paper helps to visualize the discussion especially when working with illiterate group of people. The indigenous knowledge of farmers and scientific knowledge of scientists or facilitators or extension workers can be gained by interaction with one other (Naika and Siddaramacah, 2006). The effective extension work can be achieved with active participation of the farmers themselves. It also helps the extension organisations to get an insight into the activities, constraints and resources of the local people. The participatory approach enhances direct feed back from the farmers to researcher and extension worker. The feed back of the farmers plays an important role in shaping human practices (Leeuwis, 2004).

2.1.5 General principles for the participatory approach

Although there is no singular and uniform participatory approach, all conform to general principles.
Participatory approaches according to Royal Tropical Institute and World Bank (RTI and WB), 2000 are as follows:

a) Encourage participants to take responsibility:
Participatory approaches encourage the community to take responsibility for its own development agenda. Rather than wait for outside assistance, the community can undertake activities that they themselves regard as the highest priorities.

b) Respect village diversity:
Although the village is a discrete geographic and administrative unit, it is not necessarily homogenous. People or groups sometimes have conflicting interests or perceptions. Development practitioners should be careful to give all socioeconomic groups equal weight in decision-making.

c) Promote participation for all:
For socio-cultural reasons, it may be a challenge for women, youth, the poor and others to speak out in village meetings. Facilitators should make sure that people from disadvantaged groups (for example, women and female headed households, minority ethnic groups, landless people, the handicapped, youth and others) are able to express their opinions and participate actively in decision-making.

d) Reconcile different interests:
Many problems require group decisions. Actions which solve the problems of some groups can harm other groups. Different groups should be encouraged to find solutions which are acceptable to all. The participatory approach recognizes that different groups within villages have different interests, and that the decision-making process must take all into account.

e) Listen to the community:
Service agency staff arrives in villages with expertise but not with ready-made solutions. Rather they listen to the villagers. They also encourage villagers to think through their own problems. Each person has knowledge and ideas which can contribute to finding solutions to village problems.

f) Involve multidisciplinary teams:
There is proverb, “two know better than one.” Involving people from different service agencies, with different training and backgrounds allows the group to benefit from different knowledge and perspectives. Collaboration among service agencies is essential to integrate the activities of all those working in the village.

g) Examine the situation from different points of view:
Approaching a problem with only one point of view, based on one tool or technique can lead to wrong solutions. It is better to use a triangular approach, looking at a problem from at least three different perspectives. When many perspectives are taken into account, information collected will be more thorough and reliable.

h) Adapt to local situations:
It is up to the team of facilitators to decide which tools to use and then adapt them to local conditions. The team should also experiment with new tools. The choice of tools depends on the local situation, and time available to the villagers to experiment with them. The choice of tools of course influences the final results of the exercises.

2.1.6 Critiques of Participation

There are also issues of critiques in participation. According to Chamber, 2005 among many issues, one that stood out as vital from the beginning was who participates, where, when, with whom and with what equality. Who is excluded from participation, or marginalized in it, whether by gender, age, poverty, social group, religion, occupation, disability or other similar dimension, has been a persistent concern. Women were notably neglected in PRA practice (Chamber, 2005). PRA excluded those who were female, weak, poor, power less and busy.

The majority of participatory projects fail in the aim of reversing top-down power hierarchies. While the illusionary character of participation can be smaller or larger, it is asserted that ultimately, power and decision-making remains with the implementing agency (Mosse 2001 cited in Hauschildt and Lybeak 2006). The participatory approaches fail to take account of inequalities within communities, they serve to reinforce or strengthen already exiting relations of power, rather than empowering the poorest and most marginalized. Participatory approaches, it is asserted, tend to work on the basis of a binary perception of power, where the community is seen as a homogeneous unit of ‘lowers’ subordinated the power of macro level ‘uppers’ (Cleaver and Kothari 2001 cited in Hauschildt and Lybeak 2006).

The poor, uneducated, old and powerless women are excluded in agriculture development activity (including training) compared to rich, educated, young and powerful women.

2.1.7 Obstacle to women's participation in agriculture training

Food and Agriculture Organisation (FAO), 1997 states some of the obstacles to women's participation which extremely access low to training, which are as follows:

a) Attitudes and assumptions: Extension personnel generally share the commonly-held attitudes of society that women do not contribute significantly to agriculture, but are mainly concerned with household responsibilities. It is often assumed that men are the heads of the households and that they will pass on agricultural information to their wives and other women in the household. The fact is that a growing number of rural households are headed by women and that even where men are household heads, they may not transfer information to women, sometimes because it is not relevant to the agricultural work that women are doing.

b) Practical constraints: Extension services and personnel may not be aware of the practical constraints facing women farmers, such as lack of time due to their household responsibilities in addition to farming; timing of extension services and demonstrations which conflict with women's tasks; restricted mobility for cultural reasons, lack of money for transport, or inability to leave their children, which may prevent women attending training.

c) Lack of female extensions: In many societies, contact between men and women is restricted and, since the great majority of extension workers are male, women farmers may not have access to them.

d) Lack of appropriate training materials: Extension training courses and curricula seldom deal with the role of women in agriculture or approaches for working with women farmers.

A large part of the rural population women face special obstacles like heavy labour inputs prevent them for taking parts in group meeting / training. Cultural restrictions also prevail against appearing or speaking at open meetings and training. Participation of minorities (distinguished by race, religion or ethnic group) in development activities in some communities may be strong resisted by the dominant groups (Veldhuizen and et al, 1997).

Referring to the literature on obstacles of participation I found out there are different constraints for rural women to participate in training and development activities.

2.1.8 Improving women's participation in extension and training

A number of approaches and interventions have been identified to increase women's participation in both extension and training. While these are being implemented in various places, they need to become more widely accepted and applied if women are to have equal opportunities to access and benefit from agricultural training and extension. According to FAO 1997, these include:

a) Data collection and awareness building on women's contributions to agriculture and food security: The growing collection and dissemination of gender-disaggregated data are contributing to an increasing knowledge and awareness of the important contributions of women to agricultural production and food security. Other measures contributing to this awareness are gender analysis and gender sensitivity training of development policy makers, planners and agents.

b) Reorientation of extension and research policies and priorities: Greater knowledge of women's key roles in agriculture can help persuade agricultural development policy makers and planners of the need to reorient extension policies and priorities to include the needs of women food producers and of landless farmers. Mandates and guidelines are needed to implement this, as well as monitoring and evaluation mechanisms.

c) Improving the linkages between extension and research: Gender-responsive extension services can channel information to research institutes on the needs of women farmers, and gender-responsive research institutes can channel gender appropriate information and technologies to farmers through extension services.

d) Training extensions to involve women in extension services: Both men and women extensionists need training on how to work with women farmers and promote their participation in extension work. Some of the efforts being made are: training extensionists on gender issues and how to carry out gender analysis; the preparation of specific instructional materials on improving extension work with rural women to be used in special training courses and/or inserted into the curriculum of extension courses and training institutes; and developing training materials appropriate for women.

e) Training women as extensionists: Girls and women need to be encouraged to train as extension workers. Some efforts in this direction are the provision of special training courses for women farmers, and the reorientation of home economics curricula to emphasize the needs of women in agricultural production.

f) Improving women's access to higher agricultural education and opportunities to benefit from this education: More women in higher agricultural studies means more potential women extensionists, researchers, and policy makers, and a critical mass of women to help push open the doors of greater opportunity for women.

2.2 Group Approach

Definitions

Mesiti (1993) defines group as the collection of two or more individuals brought together sharing some common goal.

When two or more individuals perceive themselves to be a member of same social category is known as group (Brown, 2000).

The people within the group perform certain roles to satisfy the goals and they develop some sense of the individuals belonging to a group. Groups exist for a variety of reasons and purposes and have different ways of going about satisfying their needs.

Group is an aggregation of two or more persons among whom there is an established pattern of interaction. It is recognized as an entity because of its particular type of collective behavior. The group is a moving unit of interacting personalities and any group is constituted by the fact that there is some interest, which holds its members together. Most of the groups are based on common habits, ideas, attitudes, wishes etc. A group has a life history tradition, symbols and objectives of its own, which stand for all members as distinguished from the individual Central Agriculture Training Centre (CATC), 2002.
Group has following characteristics**:**

- There is involvement of two or more people in social interaction and they must be able to influence each other's beliefs and behaviors.
- The members of the group share common goals on certain goals-agreed goals objectives and targets.
- They have relatively stable group structure such as rules and roles that endure over time and across different social situations.
- They openly perceive and recognize themselves as being a group.

Most of the groups are encouraged to group saving activities as a strong binding force in the group formation. However, there is room about amount and sources of income to pay regularly and group fund mobilization particularly in those areas where banking system is absent. Further more, most of the groups are involved in saving and credit activities just like as financial institutions. If this is the major duty of farmers group then why agricultural extension organization should be involved instead of other financial institutions?

Women are constraint in terms of group management by being less mobile than men, and have less time to interact with the extension workers because of household activities. The greater decision-making power lies with household heads who often tends to be men. The literacy level attainment of many women hinders them in proper record keeping. Besides, involvement of un-married girls in a group is likely to move way when she gets married caused disruption of group activities (Seed Sector Support Program, 2001). Therefore, the critical issue pertaining to formation and mobilization of women farmers' group is whether or not to integrate women in to existing farmers' organization or create new ones exclusively for them?

The Agriculture Research Extension Project (AREP), 1998 assessment of extension programs indicated that the participation of farmers in extension activities is rather not encouraging. There is poor attendance of farmers in groups' meeting particularly

women farmers' group. The formation of group is more targets oriented rather than result oriented and groups are formed under the pressure of extension staff.

2.2.1 Farmers group as institution

The group approach as one of the communicating tools of agriculture extension with rural poor is gaining popularity in recent years (Gartforth 1982, Oakly 1983, Sen 1992). It is well-recognized fact that the farmers group approach to extension has significant advantages over the other extension approach. Though group approach, extension services become cost effective due to large coverage of farmers involved in agriculture. At the same time, group demands make then more responsible, accountable to farmers needs. Group approach promotes local participation in one hand and demand higher quality of extension services on the other hand.

However, simply forming farmers group in to different activities and then using them as convenient collection of farmer for technology does not ensure automatically that all categories of farmers will benefits equally including the poor sector of the community, unless deliberate efforts are made to reach them (Gorthforth, 1982, Sen, 1992). How and in what form of group approach of extension will be effective in serving all categories of the rural farm community is the important aspect of group approach study.

2.2.2 Review of farmers group approach in Nepal

Review of available literature on major extension approaches that has been adopted in Nepal suggest that regardless of strength and weakness of the approaches, none seem to be ideally suited in country's socio-cultural background and geographic situation. Realizing this fact government introduced commodity farmers' group approach beginning 1988/89. Since then several farmers' groups were formed as commodity specific groups. In 1992, MOAC spelt out the policies regarding the agricultural development which emphasis the involvement of farmers group in planning, implementation and evaluation of the program. Since then, several farmers' group are formed either gender wise that is, male farmers' group, female farmers' group, and mixed farmers' group or commodity specific groups such as vegetable grower group, fruit producer group, cereals producer group, fishery group, apiculture group, sericulture group and marketing groups.

Realizing the effectiveness group approach, Ministry of Agriculture and Co-operative also introduced farmer group approach as National Agricultural Extension Strategy (NAES) for its agricultural development with clearly spelt out policy guidelines for effective implementation of farmers' groups. NAES policies have focus agricultural extension service to be made available for the farmers through the medium of groups. The objectives of the farmer groups approaches are: (i) to establish self-reliant groups of rural men and women to articulate their needs, problems and priorities, (ii) to increase the income of farm people by drawing them in to market economy through commercialization of their production system, and (iii) to increase the farmer's involvement in decision making in planning, implementation and evaluation for agricultural development in the country (AREP, 1997).

The agriculture extension programs are implemented by the district agriculture development office in group approach. There is a variation in size, composition and activities of the group. The size of groups varies from group to group, location and group activities. Usually there are 10- 25 farmers in each group. The compositions of the groups are like women farmers group, men farmers group and mixed farmer

group depending up on type of task performed. In this research, women farmers from women farmer groups and mixed groups are taken for the study.

2.3 The importance of training for women farmers

Education and training programs for adults are conducted for five primary purposes: (i) to encourage on-going growth and development for individuals (ii) to assist people in responding to practical problems and issues in adult life (iii) to prepare people for current and future work opportunities (iv) to assist organisation in achieving desired results and adapting to change and (v) to provide opportunities to examine and foster community and societal change (Wilson and Hayes, 2000).

Implicit in each of these five purposes for conducting education and training programs is the expectation of change as an outcome or result (Tennant, 2000). Education and training programs foster three kinds of change: the individual change related to acquisition of new knowledge, building of skills and examination of personal values and beliefs; organisational change resulting in new or revised policies, procedures and ways of working; and community and societal change that allows for differing segments of society to respond to the world around them in alternative ways.

Through training, the potential of women farmers in contributing to development efforts could be developed and harnessed which might also result to an increase in their self-confidence and feeling of self-worth. Building their capacities is also a means of empowering them.

Many problems that appear in training the groups are ultimately related to the personality and skills of the trainer or facilitators (Pretty and et al, 1995). The way in which the trainer communicates with participants' will also depend on whether the trainer are manipulating the group or facilitating the training. There is a big difference between manipulation and facilitation. Manipulation is trainer- centred. Trainer is in charge and everyone knows it. Trainer themselves rarely learn. Facilitation is learning- centred and it helps other to learn. The facilitator will also learn from the trainees. The extension workers are the trainer in the research area.

2.3.1 Participatory training

Training is a planned process designed to expand or refine skills and knowledge, and to examine attitudes, ideas and behavior with a view to modifying them. It covers a wide range of learning, from technical skills to complex sets of ideas which can challenge commonly and strong held and beliefs.

The participatory approach to training is based on the belief that people learn more effectively when their own capacity and knowledge is valued, and when they are able to share and analyse their experiences in a safe collective environment. In the preparation of the training throughout its process, the content should match people's needs and be appropriate to their life and work. The role of the trainer is to facilitate the process of learning, rather than to teach (Williams and et al, 2007).

CHAPTER THREE

3. Research Methodology

3.1 Geography and Climate of Nepal

Nepal the Himalayan country is located in South Asia in between 26°, 22' to 30° 27' north latitude and 80° 4" to 88° 12' east latitude with the east west length of 885 km and means width of 193 km north to south. The map of Nepal is presented on (Annex 1). The total area of the country is 1, 47,181 sq. km. and is a landlocked, strategic location between the two most popular countries of the world, China in the north and India in the east west and south Central Bureau of Statistics(CBS), 2006).

Climate varies from tropical to temperate and Altitude ranges from 75 meters to 8848 meter. The world's highest peak Mt. Everest (8848m) is the country. Ecologically, the country is divided into three regions; Terai (Plains) in the south, Hills in the middle and Mountains in the north which comprises 23%, 42% and 35% respectively of Nepal's total surface area and giving habitat to respectively 44.3%, 48.4% and 7.3% of Nepal's population (CBS, 2006).

Administratively, the country is divided into the 5 developmental regions and 75 districts. VDCs and Municipalities are the lower administrative units in each district. Each VDC comprises 9 wards and the wards in Municipality ranges from 9 to 35. Currently, there are 3915 VDC's and 58 Municipalities in the country (CBS, 2006).

The total population of the country is 23.1 million. Altogether 4.25 million households of more than 60 castes\ethnic groups are accommodated in the country. The average annual population growth rate is 2.2% and average land holding size is 0.96 hectares (CBS, 2006).

Nepal is among the poorest and least developed countries in the world with 31% of its population living below the poverty line (CBS, 2006).

3.2 Location of the Study

Kavre district is one of the hill districts of central development region of Nepal. It lies in between 27° 20' to 27° 45' north latitude and 85° 24' to 85° 49' east longitude. The total area of the district is about 1,396 sq km (1, 40,486 hector) and the average elevation ranges from 300 meters to 3018 meters above the mean sea level. It is bordered by Ramachhap and Dolkha district in the east, Kathmandu, Bhaktapur and Lalitpur district in the West, Sindhupalchok in the north and Sindhuli and Makunpur districts in the south. The Bhakundebashi Agriculture Service Centre (ASC) is the location of study in this reaearch.The map of the district with Its ASC are presented in the Annex-2. Tables 3-1 to 3-7 below describe the general situation of the study district.

Table-3.1: Situation of population in Kavre district

S.N.	Description	Numbers
1.	Total population	3,85,672
2.	Total Male population and total%	1,88,947 (%)
3.	Total Female population and total%	1,96,725 (%)
4.	Total Households	70,509
5.	Population density	276 per square kilometer
6.	Annual population growth rate	1.73%
7.	Total population in the VDCs	1,62,956(Male) 1,69,810 (Female)
8.	Total population in the Municipalities	25,991(Male) 26,915(Female)
9.	Total population % in the cities	13.71%
10.	Total population % in the Villages	86.28%

Source: Annual Report, DADO Kavre, 2007.

Table -3.2: Situation of rainfall distribution and number of rainy days in Kavre district, in the year 2007

S.N.	Centre	Height (m.)	Rainfall (mm.)		Total rainy days (Number)	
			Average	Range	Average	Range
1.	Dhulikhel	1552	1581	132-1857	114	97-134
2.	Nagarkot	2150	1862	1045-3743	109	80-142
3.	Khopashi	1517	1422	951-1884	110	93-125
4.	Panchkhal	865	1176	523-1743	92	64-124
5.	Dolalghat	710	1272	927-1700	100	84-121
6.	Pachurareghat	633	985	716-1298	88	58-105
7.	Madan	1365	1091	852-1619	89	73-102
8.	Near Kokha khola Haripur (Sindhuli)	880	2587	1662-3868	105	88-161

Source: Annual Report DADO, Kavre, 2007.

The above table 3.2 indicates rainfall distribution in different centres of Kavre.The rainfall is important for the farmers to take decision about the planning of crop cultivation in the area.

Table -3.3: Situation of land utilization in Kavre district

S.N.	Descriptions	Area in hectares
1.	Total land	1,40,486
2.	Total cultivable land	61,598 (43.45%)
3.	Total forest land	39,565 (28.16%)
4.	Total busy land	34,236 (24.37%)
5.	Total grazing land	3,746 (2.67%)
6.	Other land	1,341 (0.95%)

Source: Annual Report of DADO, 2007.

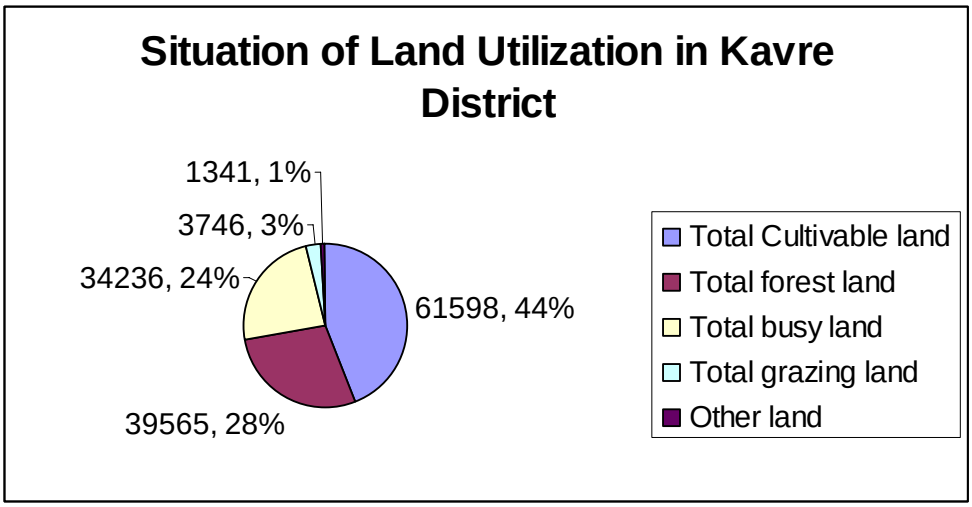

Figure -3.1: Situation of land utilization in Kavre district
Source: *Annual Report of DADO, 2007*

The figure 3.1 indicates 61598 ha (44%) of land are total cultivable land.

Table -3.4: Land size according to the households in Kavre district

S.N.	Description	Household Number
1	Less than 0.1 hectares land holding households	111.3
2	0.1 to below than 0.2 hectares land holding households below	690.6
3	0.2 to below than 0.5 hectares land holding households below	7815.9
4	0.5 to below than 1 hectares land holding households	15882
5	1 to below than2 hectares land holding households	13241
6	2 to below than 3 hectares land holding households	3969.7
7	3 to below than 4 hectares land holding households	1070.4
8	4 to below than 5 hectares land holding households	1186.8
9	5 to below than10 hectares land holding households	250.9
10	More than10 hectares land holding households	9,406
	Total	**44218.6**

Source: Annual Report of District Statistics Office, Kavre 2005.

The table 3.4 shows 0.5 ha to below than 1 ha land holding house holds are large in number.

Table -3.5: VDC wise population distribution and number of households Bhakunde bashi Agriculture Service Centre (ASC) of DADO in Kavre District, Nepal

S.N.	Name of the VDC	Male Population	Female Population	Total	No. of Household
1	Boldefadichae	1235	1339	2574	461
2	Daphchha Chatraebagh	1692	1762	3454	636
3	Daraunaepokhari	1538	1748	3286	620
4	Kanpur Kalapani	2286	2399	4685	846
5	Katanjubashi	1219	1214	2433	447
6	Kavre Nitryachandusari	2376	2529	4905	948
7	Khanal thok	2795	2696	5491	978
8	Mathurapati Fulbari	2202	2363	4565	861
9	Mathinkot	2197	2386	4583	889
10	Patlaykhet	1979	2151	4130	759
11	Pokharinarayansthan	1850	1965	3815	652
12	PuranaGaun dapcha	1049	1098	2147	431
13	Saramthali	611	641	1252	247
14	Sarchukharka	2638	2769	5407	999
15	Shikharaambothay	2149	2129	4278	784
16	Simalchaur Shyampati	2065	2213	4278	797

Source: Annual Report of DADO Kavre, 2007.

The table 3.5 shows VDCs of research area and the population and no. of house hold in the Bhakundebashi ASC. The popupation and no. of house holds of 4 VDCs namely Mithinkot, Mathurapura Fulbari, Khanal thok and Daraunapani which are taken for the study are in the table.

Table -3.6: Irrigation situation in Kavre District

S.N.	Description	Land in Hectors
1	Total surface irrigated land	7,950
2	Year round irrigated land	5,137
3	Irrigated land only in rainy season	9,850
4	Un-irrigated Land	43,798

Source: Annual Report of DADO Kavre, 2007

Table 3.6 shows the situation of irrigation in the district. Irrigation is the back bone of Agrculture. The data shows 43,798 hectors of the land in district is unirrigated.

Table -3.7: Main occupation of the population in Kavre District

S.N.	Descriptions	Percentages
1.	Agriculture	64.45
2.	Non-Agriculture	35.55

Source: DDC Kavre report, 2008

Table 3.7 shows two third population of the district are engaged in Agriculture.

DADO Kavre is public Extension Organization under Department of Agriculture. It is a district level office; with field level Agriculture Service Centre. District Agriculture Development Office (DADO) Kavre is located in Central development region. It asiststs farmers and rural people for increasing production and productivity through improved agricultural technologies obtained from the research institutions.

DADO is fully responsible for overall planning and implementation extension program in the district. In order to carry out program activities at field levels Field level extension workers (JT/JTAs) are deployed at Agriculture Service Center in the district. Different subject matter specialist (SMS) including chief of the DADO is positioned on district head quarter to formulate district level plan and monitoring and evaluation of on-ongoing program. It consists of the 4 Technical sections: Extension, Horticulture, Plant-protection and Planning headed by Gazetted class III officer and the one Administrative section headed by Non-Gazetted class Ist staff. It has 6 Agricultural Service Centers with 34 Technical and 13 support staffs. Cheaf of the DADO (SADO) has overall responsibilities of the programs and office management as well as authorized to expense the annual program\ Administrative budget when he/she gets authority from DG. The JT \ JTA's are working in the village level with directly in close contact with the farming people. They are mostly responsible for completing the assigned tasks from the beginning to the end. They are the field workers but do not have special power of decision making.

The Vision, Mission, Goal and Objectives of DADO Kavre are as follows:

Vision

Broad based effective and sustainable agricultural development

Source: Annual Progress Report of DADO, Kavre, Nepal 2007.

Mission

To promote knowledge based farming by transferring modern agricultural Technologies through group approach, mass-media communication, partnership and contract-out approach and developing effective linkages between research and extension system.

Source: Annual Progress Report of DADO, Kavre, Nepal 2007.

Goal

To transform the subsistence based agriculture into commercialization and its diversification for food security and poverty reduction.

Source: Annual Progress Report of DADO, Kavre, Nepal 2007.

Objectives

- To motivate farmers to adopt improved practices and technologies, and information related to agriculture, agri-marketing, agri- business and co-operatives
- Increasing the production and productivity of the crops through extension of improved technologies and sending the problems identified by the farmers to the concerned office.

- Increasing income of the farmers and generating employment through commercialization and diversification of the crops.
- Increasing production and productivity of raw materials for agro-based industries.

Source: Annual Progress Report of DADO, Kavre, Nepal 2007.

DADO follows the same goals, objectives and strategies of the DOA for extension service delivery. Department of agriculture provides guidelines and DADO prepares program for the district by consultation DDC and local level institution such as farmers groups, Co-operatives, districts regional members of DDC according to the guidelines received from DOA. So, the DADO's extension programs have been adopted bottom up approach. The District Agriculture Development Committee under the chairmanship of DDC chairman has formed under the decentralization act 2004 to look overall agricultural development in the district. This District Agriculture Development Commette Co-ordinates DADO with other line agencies in district. At grass root level ASC disseminates technology and execute the programs. In the ASC, JT and JTAs are assigned to implement the agriculture program at field levels. They contact with individual, group and farming community in order to make program planning and execution of the program. Besides, there are some other organizations also providing extension services to the farmers in the districts.

DADO covers the whole of the Kavre district, where it extends technologies relating to Cereal crops, Vegetables, Fruits, Apiculture, Fisheries and Seri-cultures to the farmers groups rather than to individual farmers. For-example: they may provide a group with demonstration materials and tell them how they should be used. The group with then, decide which of its member should demonstrate the use of the materials. One of DADO's main functions is to maintain linkages with research, input suppliers, NGO's (I) and PO's. The linkages mechanisms, especially with NGO's (I) and PO's were not clear, except when extension personals participated in research outreach sites. DADO has been adapting group approach in delivering its extension support services for 16 years. Currently DADO Kavre has 261 registered farmers groups. Out of these 10 are Male groups, 58 are Female groups and 193 are mixed groups, having an average of 25 members in group (Annual Report of DADO, 2007). DADO has almost 11,042 targeted households of an average household size of 4.8 persons (DADO, 2005/2006).

3.3 Ongoing services

- Developing agricultural technologies to the farmers groups which are certified by the National Agriculture Research Center (NARC) for this domain, relating to Cereal crops, Vegetables Fruits, Apiculture, Sericulture and Fisheries.
- Conducting Training, Tours, Inter-group visit, Farmers-day and Demonstration of different crop varieties.
- Organizing crop exhibitions, once in a year at DADO head-quarter or ASC, including almost all the commodities and also individual crop competition program.
- Organizing the farmers in group (crop-specific) and then, strengthening towards co-operatives.
- Selecting and giving up to €1000 to the targeted number of group from the department to groups per year from the whole district based on their immediate need for constructing or for maintaining 'Small Irrigation Development Program' (SIDP).

- Distributing Minikits (seed- kits) of the different improved crop varieties with free of cost to the groups.
- Distributing agricultural inputs like: Beehive, Sprayers, agricultural dairies to the farmers with 20% subsidies.
- Television and Radio program: The main objective of these programs is to flow seasonal agriculture related messages in mass scale and helping farmer for their immediate decisions about crop cultivation**.** (This is becoming the most popular method of disseminating Innovations for DADO as well as for farmers although this method is more expensive)
- Woman development program for example Training, Tour and Minikits distribution of different improved crop varieties. etc.

Source: Annual Progress Report of DADO, Kavre Nepal 2007.

3.4 Overview of group approach in national scenario

In conventional agricultural development models, farmers were heavily dependent on government decisions and actions, as well as external resources. These resources were quite costly and in most cases subsidized by government. They were not within the reach of poor farmers. In conventional models, participation of farmers at the grass roots, in planning and implementation of agricultural development efforts was less emphasized. Without the active and meaningful participation of the vast majority of the poor farmers in agriculture development programs, the GDP (Gross Domestic Product) cannot be increased as expected and at the same time, benefit of development cannot be equitable (CATC, 2002).

That is why it is crucial that agricultural extension programs need to be developed with the active and meaningful participation of the farmers based on their needs, potential capacity and resources.

Ministry of Agriculture and Co-operative as mentioned above in (chapter two 2.2.2) recognized the group approach in 1988/89. The group approach was followed by the encouraging results of implementation of PC/PS (problem census and problem solving) methodology from the pilot projects. Presently, all the 75 District Agriculture Development Offices (DADO) have adopted the group approach. Agriculture extension has been carried out through Farmers group (CATC, 2002). There are about 14943 numbers of farmers groups and 321 cooperative groups throughout the country. Out of total farmers groups, 3492 (23.37 %) are female farmers groups, 2907 (19.45 %) male farmers groups and 8544 (57.18%) mixed farmers groups (DAE annual report, 2006).The group has 2 or more than 2 members with common interest. It is registered in DADO. The Co-operative has at least 25 members in its group. The co-operative is registered in District Co-operative Office. The co-operative may have different members with different ideas and interest.

From the national policies and experiences of highly successful group activities of different districts, DADO Kavre implemented its extension program through group approach. The system of group implementation procedure is as follows.

3.5 Group formation and activities in Kavre district

In Kavre district, group approach execution was after 1988/89. Farmers are the focal person in group approach. The problems and needs of group members are central theme to be comprehensively considered by the groups in designing and

implementing the programs and activities for their solutions with the locally available, knowledge, skills and resources. It provides information and mechanisms for other related developmental services to meet farmers requirements. The importance of group concept is that the groups must make decisions by consensus to identify their problems and need, plan the programs and implement them to solve the problems.

The formation of farmers group by DADO is based on accessibility, DADO's strength and physical facilities. If the existing groups are unable to cover farmers in particular geographical areas, particular target groups such as women, young people, landless and marginal farmers then new groups may need to be formed (CATC, 2002).

Group formation process is one of the important steps in group extension approach. The existing group formation in DADO can be viewed in two ways in terms of initiation. The first one is the case where extension workers take the initiation where as the initiation comes from the farmers themselves in second case (DADO, 2007).

The DADO proposes target of group formation every year. Types of group viz. Gender based (e.g. mixed group, women groups,), or commodity based (e.g. vegetables, potato, sericulture, fisheries cereal and so on) and the location where the groups to be formed were also found clearly mentioned in the proposed annual program. The commodity based group and location specific group can be mixed and women group too. Accordingly the DADO assigned this task of group formation to the concerned ASC. The JT/JTAs of the ASC organizes a meeting in an area where he/she needs to form farmers' group. Key persons of the area, potential farmers and progressive farmers are invited in this meeting. JT/JTA explains the objectives of the DADO in facilitating the formation of farmers group, purpose and objective of the farmers' group. Once the farmers are motivated to form a group through this initial meeting then farmers themselves begin to form the group. When the farmers express their interest to form a group concerned JT/JTA facilitates group formation process. By nature such types of self-emerged groups are more effective and sustainable in extension delivery. The groups organized to get government subsidies credit and technical services are not sustainable (DADO, 2007). Once groups are formally formed, they are strengthened by providing various extension supportive services e.g. training, workshops, monthly meeting, raising group funds, demonstrations and tour etc.

3.6 Training and group selection

Training is the one of the main extension activities of DADO. There are two types of training conducted by DADO. They are as ASC training and district level training. DADO also co-ordinates the regional training by sending the participant farmers to the regional training centre. The regional training is conducted in regional training center of the country. The district level training is conducted in the district DADO office. ASC training is conducted on the ASC and on the field by extension workers. The ASC training is the major training of DADO. There are 60 ASC training for farmers in the year 2006/2007(DADO Annual report, 2007). The training are for all 6 Agriculture Service Centre. The ASC training is one day long training. The training topics are on citrus, banana, papaya, vegetable farming, potato cultivation, mushroom cultivation, cereals (rice, wheat cultivation) and bee keeping. The training topics depend on the proposed program by ASC and agriculture pockets where ASC are situated. Generally field level extension workers and some times Subject Matter Specialist (SMS) train the farmers. The training number depends upon the program which ASC has proposed and approved. The lecture method is mostly used in training. Extension workers rarely use interactive lecture.

The ASC training is given to the group members of the same ASC in district. The ASC writes a letter to a group or communicate to group member. The group member communicates to his / her group members. The group calls the meeting and the trainees are selected by discussion with all members of the group.

3.7 Data collection

The research was based on information collected by primary field data. In addition to this, secondary source of data such as books, internets sources, journals, publications of related Ministry and organizations was also consulted. Side by side, field observation, discussions and personnel contact was applied. The detail about the application methodologies are described below.

3.7.1 Primary Sources:

Primary data was collected by survey questionnaires method, group discussion, and key informant interview and group records. Pre-tested of the questionnaires were done in order to access the reality of the research questions. Survey was carried out by the researcher and field level extension workers of DADO.

- **Unit of analysis:** The units of analysis of this study was preformed in two categories; the first category of analysis was women from women farmers groups and women from mixed farmers groups, the second category was extension workers . For additional exploration of information DADO chief, Extension Officer, ASC Chief, male farmers, elite farmers (male and female) were also unit of analysis. The extension workers include the staffs who are directly working with farmers.

- **Sampling design:** Bhakundebeshi Agriculture Service Center (ASC) of Kavre district with 20 agriculture farmers groups (women and mixed farmers groups) was selected purposively. Simple random sampling was conducted; 3 women farmers groups and 3 mixed farmer groups were taken for study. Out of those sampled groups, 7 women were picked randomly from each group. Therefore, a total of 42 women farmers were selected. The selected ASC was based on the discussion with District Agriculture Development Office, Kavre, Nepal. The Chief of DADO, Extension officer, ASC chief, male farmers from mixed groups and leader (male and female) farmers were taken as key informant. Name list from DADO of farmers group and group members was taken as sampling frame.

- **Survey methods:** The survey questionnaires were used in this study. It has both close and open ended questions. Two sets of questionnaires were prepared and used for this study. One set for farmers and another for field level extension workers of DADO. Experienced extension workers were selected for survey. Before filling questionnaires, instructions were made for surveyor about filling questionnaires. All together, 52 questionnaires were used for survey (42 for farmers and 10 for extension workers).

3.7.2 Secondary Sources:

Secondary data sources consulted by researcher were desk research. Annual reports, group profile, extension programs and progress report of DADO Kavre were used. Besides, Ministry and Departmental guidelines were consulted when

necessary. Search of information in the Internet on the relevant subjects, various books, journals, newsletters, articles on participation was studied.

- **Organizational and personal contact:** The extension officer and other officers of the District Agriculture Development Office were contacted for information. Valuable guidelines and suggestions of lecturers of TREAT and other concerned lecturer of Van Hall Larenstein were used.

- **Discussion:** Discussion with my Nepalese colleagues who have experience with the relevant subjects and also international students experience was used to gather information.

- **Personal experience:** My ten years personal experience, in various organisations was included for the analysis and draws the conclusions.

3.7.3 Methods of data processing (Analysis of the data):
The data was analyzed and interpreted by using simple statistical tools such as frequency counts, graphs, pie-charts, and using graphical interpretations by using excel software.

CHAPTER FOUR

This chapter discusses evolution, review and challenges of agriculture extension system in Nepal.

4. Extension system in Nepal

4.1 Evolution of agriculture extension development in Nepal

The agricultural development in Nepal in a formal way began as in 1921 by establishing an agricultural office named as *Krishi Aadda.* After political transformation in 1951, agriculture development was accelerated in planned way by the new government, *Tribhuvan Gram Vikas*, a rural development program was initiated under Tribhuvan Village Development Department in 1952 (CATC, 2002).

During the past fourty years extension services witnessed several shifts in approaches of extension elsewhere. Gandaki Agricultural Development project (HMGN/GTZ), 1968-78 promoted fertilizer-based green revolution type technology-based extension approach. The impact of this project was seen only on resourceful farmers. Integrated Hill development project (IRDP) and subsequent IRDPs during mid seventies continued high input technology based extension benefiting rich farmers. Training & Visit (T&V) approach was introduced in 1975 in the World Bank funded Narayani Zone Irrigation Development Project (NZIDP) in three districts of Nepal terai. This approach was gradually extended to all irrigation projects funded by World Bank (K.C., et. al., 2003).

After 1981/82, this approach was extended to other World Bank funded projects, such as Agricultural Extension and Research Project (AREP), Hill Food Production Project (HFPP) and Agricultural Extension Project (AEP). Between 1980s and 1990s, through these projects and others funded by ADB and DFID such as Third Livestock Development Project (TLDP), HARP etc, agricultural extension in Nepal got modernized, decentralized and pluralistic research. Research extension became more oriented towards farmer's need. Farmers organizations were strengthened and established as potential institutions at grass root for technology verification, transfer, and input-output marketing. Farmers recognized as beneficiaries of the extension and development strategy and were made proactive in participatory planning based on tools such as PC/PS (Problem census problem solving), System Learning Approach, Village Level workshop etc, need and priority identification, project implementation, resource mobilization and evaluation. The terminated projects such as Agriculture Research and Extension Project (AREP) (GoN/WB), HARP (GoN/ADB) etc were very instrumental to introduce and institutionalizes reforms in agricultural extension (K.C., et. al., 2003).

4.2 Review of Agriculture Extension System in Nepal

The Government of Nepal introduced and practiced many extension methods and approaches in the last four decades. Meanwhile, with different agriculture development project different extension approaches were implemented overtime but most of such approaches were imported and designed by foreign experts and continued only up to project period or was not sustainable. The extension approaches were not further modified to improve the extension service delivery, and

to practice in regular system according to the changing need. The extension approaches adopted in the past and present are as follows:

4.2.1 Approaches Adopted in the Past

Many attempts were made in the past to reform and strengthen Agricultural Extension System (Sharma, 2003).
These attempts include:

i. Training and Visit System (T&V): This system was based on the principle of single line of command with continuous training and contacts. Research-extension linkage was strong, though material support for adoption was quite weak.
ii. Integrated Rural Development Approach: This approach was based on the integration and coordinated management of resources for rural development. Technology support was however not adequate.
iii. Tuki (multiple progressive farmers) Approach: This approach had the thrust of utilizing trained local farmers based on the self-motivation. These farmers were also working as principle agri-input dealers, so that the technological message could go along with the inputs required.
iv. Farming System Research and Extension Approach: This approach viewed research and extension in the whole farming system perspective, so that cropping system research could be done. Farmers would know the interdependencies between components and could relate to physical, biological and socio-economic factors.
v. Block Production Program: This program was based on the principle that intensive use of resources consolidated together in an area called "block" could increase productivity. This was not effective for scattered area. These approaches were implemented through the support of donor agencies. This actually resulted in multiple extension approaches at the district at the same time, confusing to the implementer and reducing the clarity of objectives, roles and targets of extension.

These above mentioned approaches were implemented with the support of donor agencies. This actually resulted in the multiple extension approaches at the district at the same time thus leading to confusion of the implementer (DADO) and reduced the clarity of objectives, roles and targets of extension

4.2.2 Approaches Adopted at Present

The following approaches are used to reform and strengthen agriculture extension system at present (Sharma, 2006).

i. Conventional Educational Approach: Agricultural extension system always attempts to educate farmers and other concerned stakeholders by communicating the skills. The skills are imparted by means of different techniques of extension education categorized into individual methods, group methods and mass methods. These methods are being used for changing knowledge, skills and attitudes of farmers in a positive manner, so that the farmers ultimately show their changed behaviour by adopting new innovation. In this approach, the farmer leader in particular is trained and utilized to diffuse the technologies to his neighbours. It is a continuous process to educate and disseminate the message. This approach is in operation even now through government organizations.

ii. Commodity Group Approach: This approach has been widely implemented by both public and private sector organizations.

a) Public Sector: District Agriculture Development Office (DADO) established in all the 75 districts of the country under the Department of Agriculture (DOA) of the Ministry of Agriculture and Cooperatives (MOAC) operates its extension services through Agriculture Service Centres (ASC) at the grass root level.

b) Private Sectors and NGOs: Apart from the public sector organizations mentioned above, there are several agencies and private service providers and several hundreds NGOs supporting agricultural extension activities in the country. These organizations work mostly with commodity groups either individually, through the funding of donor agencies or at partnership basis. These are primarily involved in the production and marketing of seeds, fruit saplings, fingerlings and supplying of sprayers, fertilizers, pesticides, agricultural tools etc.

iii. Farmers Field School: Farmers' field schools were established for developing field-training methods as a part of Integrated Pest Management Program (IPMP)). Field schools have been proved to be an effective means of reaching farmers and helping them to have an access to the knowledge and skills required for crop production and pest management. Furthermore, the farmer's field school is a discovery based on the adult learning approach. A group of farmers attend at regular intervals and learning a participatory manner. This approach is becoming popular because of its democratic and participatory process.

iv. Modernization of Extension System:

a) Extension services: The present extension services are being improved through:
- Projectization;
- Revitalizing the training system;
- Improved M&E system;
- Revitalizing the mass media system; and
- Net working central and regional extension programs to the districts and grass roots.

b) Pluralism in extension: There are a number of stakeholders to be involved and a number of concerns and issues to be addressed through extension. A pluralistic extension approach is therefore needed. This approach is being exercised through:
- Strengthening farmers' organizations;
- Partnership with private service providers; and
- Contracting extension services.

c) Decentralization: In Nepalese administrative set up, District Development Committee (DDC), an autonomous body, is entrusted with the responsibilities of development activities of the district. Accordingly, the devolution of agriculture programs has been done. Decentralization is being improved through:
- Exercising bottom up planning;
- Updating district data base and inventories; and
- Strengthening functional mechanisms with DDC.

d) Human Resource Development and Management Reform: In order to address the growing issues in the extension system, human resources need to be strengthened and management needs to be reformed. With the realization of this, the government is undergoing the followings at regular basis:
- Staff orientation
- Extension staff in-service training
- Human resource management reforms

v. Coordination and Linkages: The earlier model of coordination and linkages, were limited only within government organizations. Now, this has been tremendously reformed, by accommodating all sector stakeholders in linkage mechanism, both public and private and fund providers, Efforts are being made to coordinate the functions of stakeholders concerned through an appropriate technique.

vi. Participatory Process: Surrounded by different constraints and opportunities, farmers form different attitudes thereby arousing different needs towards the programs. In order to reflect their needs, programs are being planned and implemented through the participatory process. Actually the farmers participate in the planning workshop and express their needs towards the programs and then DADOs formulate the programs on the basis of these needs.

4.3 Challenges of Current Agriculture Extension System

Every nation is affected by the trend of development around the world. Some new development concepts and approaches popularly adopted in many countries have directly or indirectly affected our country also. They are:

i. Food production, food security and intensification

Improving food security is a challenge which is not simply about producing more food, as many of causes of food insecurity relates to insufficient access to available food, insufficient economic development outside agriculture, bad governance, detrimental trade relations, debt crisis, inadequate functioning of agriculture institution, etc (Leeuwis, 2004). The population of the country is growing and to feed the growing population the intensification of agriculture is needed.

ii. Globalization and market liberalization

Nepal has become the 147 member of World Trade Organization (WTO) on 23 April, 2004. Since under developing country like Nepal cannot compete with developed countries in the international markets in terms of production, quality and exports. So, people have impression that globalization is going to make rich countries richer and poor countries poorer. However, it is a fact that globalization will expose the farming communities of less developed countries to both risks and opportunities.

Similarly, market liberalization has made an opening of markets all over the world, so that the goods can move freely between countries. Consequently, subsistence farmers are affected due to the less competitiveness.

iii. Poverty reduction

Poverty reduction, which has been targeted with greater ambition (49 to 14 percent within 20 years) by Agriculture Prospective Plan (APP) of the country, is a high challenge for extension sector.

iv. Devolution

Agricultural extension programs in districts have been already devolved to local units under decentralization concept. Devolution sounds very well in principle, but implementation seems difficult because of several gaps in terms of procedures.

v. Cyber Extension

Information technology is a power that could be harnessed by extension organizations, farmer's organizations, cooperatives and other grass root level units. Cyber extension could minimize the problem of face to face contacts and transportation barriers being faced.

4.4 Existing organizational set up of agricultural extension in Nepal

Ministry of Agriculture and Co-operative (MOAC) is a national level organization responsible for the overall development of agricultural sector by making a national plan, policy and strategy for agricultural sector with a board based sustainable agriculture development.

Department of Agriculture is one of the branch of MOAC. The department is responsible for crop and fisheries sectors development through extension services. Under the department there are different Program Directorates like Agricultural Extension; Agriculture Training; Crop development; Fruit development; Vegetable development, Fisheries development; Market development; Economic development and statistics; Plant protection and industrial entomology which are assigned to provide agricultural support service to the concerned disciplines. They give directives to regional and districts offices.

Five regional directorates are established at different regions to facilitate co-ordination, supervision and monitoring and technical support to the district agriculture development offices. In addition of this, regional training centers and laboratories (Soil, seed and pathology) are performing their mandatory work.

The District Agriculture Development Office (DADO) is responsible for the extension services to the farmers in the district level. DADOs are established in 75 district of the country. Agriculture Service Centers (ASC) are the field extension office of the DADO. The DADO gives extension services to the farmers in group approach. The Agriculture farmers groups are formed by ASC in field level. The ASC is in all DADOs are conducting the ASC level training.

CHAPTER FIVE

5. Results

The primary data presented in this chapter is result of the survey conducted at field with field level farmers (individual in group) and extension workers (JT/JTAs). The findings of this study are presented into two sections. The first section is related to the farmers and the second section for JT/JTAs respondents. The numbers of respondents in the survey is given in Table 5.1.

Table: 5.1 Types of respondents and their numbers

Type of respondents	Number
• Farmers	42
• Extension workers (JT/JTAs)	10

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5.1 Farmers respondent

5.1.1 Socio- economic information of the respondent's farmers

- **Sex**

All the respondents (42) were female farmers and was taken from women and mixed agriculture farmers groups.

- **Age**

The age of the respondents ranges from 20 years to 65 years. The average age of the respondents was found as 35 and majorities were from 26 to 30 years. This finding indicated that the farmers groups have young members.

- **Family Size**

The family size of the respondents ranges from 3 to 13. The average family size was 6.04 which is relatively large as compared to the both district average of 4.8 and national average of 5.44 (DADO, 2006 & CBS 2006).

- **Land holding size**

The average land holding of the respondents was found as 0.57 ha. which is less than national average land holding 0.80 ha (MOAC, 2007). The land holding of the respondent farmers is also less than that of average district land holding which is 0.8 ha (DADO, 2007).The land holding size varies from 0.08 ha to 2 ha. 7 (16.66%) had less than 0.16 ha, 18 (42.85%) respondents had 0.16 to 0.33 ha. 10 (23.80%) respondent had 0.36 to 0.5 ha. 6 (14.28%) had 0.53 to 0.66 ha and 1 (2.38%) had more than 0.66 ha. The result indicates that majorities of the farmers were small land holders families. It is difficult for the farmers to go to commercialization and diversification. The distribution of land holding size is presented in figure- 5.1

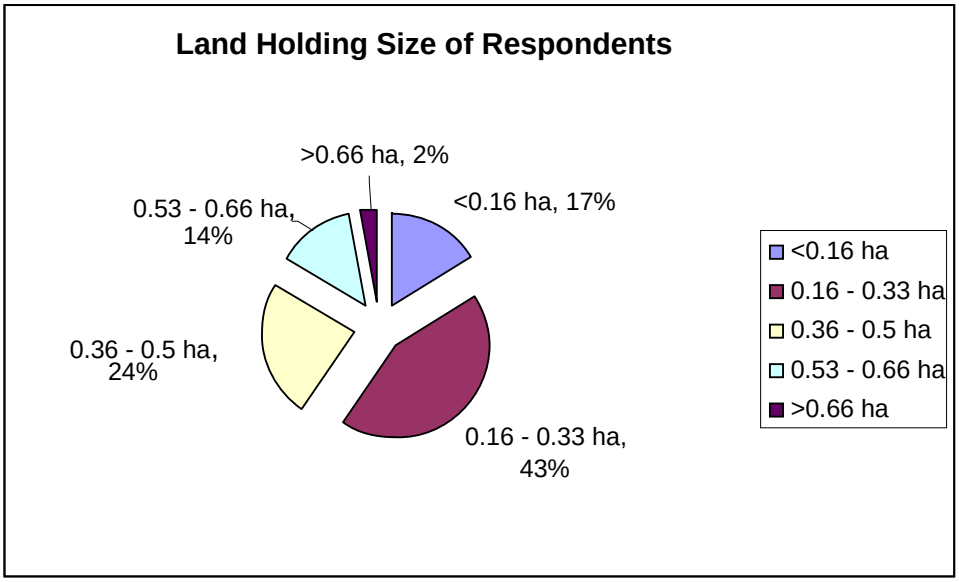

Figure 5.1 Land holding size of respondents

- **Caste and Ethnicity**

Out of total respondents, 33 (78.57%) respondents were *Bramins* and *Chhetri* who are called upper caste, 2(4.76%) were indigenous people known as *Janjatis* and 7(16.66%) were *Dalits* who are called lower caste respectively. *Dalit* and *Jangati* had less membership in groups. It indicates that the *Dalits* and *Janjatis* have comparatively low access of knowledge and information as compared to *Bramin* and *Chhetri.*

- **Education**

Education is the sign of development. The 31(73.80%) of the respondents were illiterate. 9(21.42%) were literate who were below School Living Certificate (SLC) education. 2(4.7%) were SLC and no respondent were found above SLC. In the Kavre district the average literacy rate is 64 % in which female are 52.8 % and male are 75.7 %. In the national level 53.7 % are literate (MOAC, 2007). Among them 65.1% is male and 42.5% is female. The data shows that rate of female in education is low than male. The rate of education influences in accepting the knowledge and information.

- **Location of the respondents**

Each seven respondents were selected from six agriculture groups (3 female farmers groups and 3 mixed farmers groups) from Mithinkot, Mathurapati Fulbari, Daraunapani and Khanalthok VDC of Bhakundebashi Agriculture Service Centre of Kavre District. The map of the Kavre district with the ASC is given in Annex-2.

5.1.2 Farmers group

Extension and training services are carried out in the district through group approach and the farmers participated in groups to take these services through the extension organisation with extension workers. Women members in mixed farmers group were found to be in large number as compared to men in mixed farmers group. The name of the respondents is given in Annex-4. Among the farmers respondents 38 (90.47%) of the respondent stated that the reasons for joining the women and mixed farmers groups was as to working together collectively, to increase family income,

gain access to extension services such as financial services from co-operatives and bank, know and help each other socially and become self reliance. It is indicated in the following table 5.2.

Table 5.2 Reason of joining group by women farmers

Reason of joining group by women farmers	Respondents N= 38 (%)
Working together Collectively	8(21.05)
To increase family income	16(42.10)
Gain access to extension service	6(15.78)
Help each other socially	5(13.15)
Self reliance	3(7.89)

Source: Own study

The table indicates majority16 (42.10%) of women join the group to increase family income.

Majority 35 (83.33%) of the women farmers members were found multiple group membership of other groups (Saving credit, forest users groups, mother group and other NGO based groups). Most of the women participating in group were saving credit groups. The saving credit groups helped the women farmers to save the money and take the loan at low interest rate in their house hold activity and agriculture. The majority 36 (85.71%) of respondents mentioned that agriculture group was formed by initiation of both extension workers and farmers. 32 (76.19%) of the respondents were involved in group formation by the influence of the neighbours. The majority of the group activities are fund collection and mobilization, regular monthly meeting and vegetable farming.

However, study found that the multi-group intervention by same organization or other organizations has created confusion about approaching group approach. Because, most of organizations have formed groups under different name by involving same members who already involved in DADO's group. They were launching same activities but providing more incentives than DADO to gain popularity within short span of time. In some cases, same members were registered by different name to meet the annual program targets even though they are formed by DADO.

In the 3 mixed farmers groups , majority of the members were female farmers but they were depended on male members for group activities such as; loan taking, decision making etc. One mixed group among the three study groups, the Pragatishil mixed group was inactive from 3 years back. In discussion, one member stated that group members don't like to attend regular monthly meetings.

The six groups (three women groups and three mixed groups) had large group members (ranging from 25 to 30 members). The name of groups and its members are presented in Annex-4. The three women groups Srijansil integrated farmers group, Laliguras women farmers group, Adharsha female farmers group were in the process of upgrading into co-operative. The target of DADO is also to boost up small groups into co-operative (DADO, 2008).

Box 5.1 SADO's view about women in Co-operative

"Co-operative are increasing day by day and it is empowering the women members of co-operative" Senior Agriculture Development Officer (SADO) Mr. Ishwor Rijal, DADO, Kavre

The groups also receives regular extension services like demonstrations, minikits, trainings, field trips and tours to other places organized by the DADO.

The benefits of being in group identified by women group members are stated in the following table 5.3.

Table 5.3 Women farmers benefits of being in agriculture group

Benefits of being in Agriculture Group	Respondents N= 42 (%)
Sharing ideas	10(23.80)
Acquiring new knowledge	12(28.57)
Getting to make new friends	5(11.90)
Working collectively and overcoming the labour shortage	5(11.90)
Increasing family income	5(11.90)
Accessing services such as training and demonstration	5 (11.90)

Source: Own study

The table indicates that majority farmers respondents were in the agriculture groups for acquiring new knowledge 12 (28.57%) and sharing ideas 10 (23.80%).

5.1.3 Participation

The respondents were found to have a different understanding with participation. The different understandings of participation are presented in the table 5.4.

Table 5.4 Understanding of participation

Understanding of participation	Respondents N= 42 (%)
Taking part in group activities	15(35)
Just membership of groups	12(28.57)
Group meeting	9(21.42)
Share benefits	6(14.28)

Source: Own study

Table indicates that only 15(35%) understand participation as taking part in group activities. This indicates majority of respondents were unknown of participation.

Box 5.2 Male farmer View about participation of training

"Participation of women in training is essential because most of them are engaged in agriculture. Training helps them to receive new technology." Mr. Udav Humagain Co- operative President, Khanalthok VDC 7

5.1.3.1 Decision making in the group

Decision making process is important variables of group dynamics. Decision making through group consensus help to increase efficiency and effectiveness of the group activities. Regarding the decision undertaken as by the groups mentioned in table 5.5.

Table 5.5 Decision to undertake activities in group

Decision to undertaken in group	Frequency N=42 (%)
President	6(14.28)
All the group members discussion	9(21.42)
Male members (in case of mixed groups)	15(35.71)
Leading members of group	12(28.57)

Source: Own study

The table 5.5 shows that the participation of all group members during the discussion was found quite low 9(21.42%).

In mixed groups women participation was found to be limited in decision making, planning, information sharing and benefit due to domination of men. The women members were found dependent on men for group activities. One of the group member said that they are illiterate and do not know external works and have to depend on men. The education of members was found to have influences in the group.

23 (54.76%) of the group members were involved in meeting only during the period of decision making. They only participate in meeting but they don't have any role in decision making. Each month at least once there is a meeting of group members to discuss about the future strategies to undertake by group members.

Study found that 37(88.09%) of women farmers get involved in group meeting like group activities but the planning of group activities and fund collection were done by president, secretary and treasurer of group only. In the meeting those who are educated, socially and economically in good position in the society had influencing role.

The preferences of women farmer to participate in group are shown in the table. 5.6

Table 5.6 Preference of participation in group

Preference of participation in group	Frequency N=42 (%)
Women group	14(33.33)
Mixed (male and female) group	9 (21.42)
Ethnic group	1 (2.38)
Same age category group	1(2.38)
Group in the same area	12(28.57)
Mixed with other ethnicity	5(11.90)

Source: Own study

Table 5.6 shows that respondents give lower preference for the participation of *dalits* and *janjaties* in the group. More recently however, government has led policy for inclusion of socially disadvantage group in extension service delivery (NAP, 2004). As a consequence the involvement of *dalits* and *janjaties* is increasing (DADO group report, 2007).

5.1.4 Service provider

The extension workers are the field level service providers. They provide technical advice to the farmers groups and receive feedback from in the groups. Generally they contact with members in group meetings and trainings conducted by Agriculture Service Centre (ASC). Due to the low man power in the ASC and large area to cover, it has become difficult for the extension workers to provide their services and monitoring of group activities. Generally they contact leader farmers of groups for the dissemination of agriculture information. Generally they contact groups once in a month in the group meeting and sometime to disseminate technical information.

5.1.5 Training

Among all women farmer respondents 25 (59.52%) of them had known about ASC training. The sources of information of ASC level training to the respondents is given in Table 5.7.

Table 5.7 Known about ASC level agriculture training

Sources of information	Frequency N=25 (%)
Extension workers	11(44)
Medias (Radio, TV, Pamphlets)	1(4)
Farmers group	8(32)
Elite (leader farmer)	5(20)
Other organization	-

Source: Own study

Table indicates that majority of group members 11 (44%) received information on ASC level agriculture training through extension workers. Likewise, about 8 (32%) members received information through groups members.

According to farmers majority 33 (78.57%) of them like training topic about Vegetable farming and 9 (21.42%) like plant protection.

5.1.5.1 Reasons of low participating in training

Among all respondents 18 (42.85%) of the women farmers had participated in ASC level agriculture trainings. 24 (57.14%) had not participated in ASC level Agriculture trainings. The reasons given by the respondents about low participation in Agriculture trainings are shown in the table 5.8.

Table 5.8 Reasons for low participating in ASC level agriculture training

Reasons	Frequency N=24 (%)
House hold activities	12(50)
Livestock rearing	3(12.5)
Distance of training centre	2(8.33)
Clever, educated, leader members of group participate frequently	4(16.66)
Because of no chance to participate(do not fit the criteria, illiteracy, in waiting list)	2(8.33)
No follow up from ASC / DADO	1(4.16)

Source: Own study

The study has found that engagement in household activities was the major reason for lower participation in Agriculture training conducted by ASC. The cleverer, educated and leader farmers who were near to extension workers participate in training repetitively. Most of the cleverer, educated, leader members do not share the training information with all the group members and discuss which also effects in low participation in ASC level training.

Similarly, the persons who had direct contact with ASC staffs have also found more participation in ASC training conducted by ASC. The farmers who do not fit criteria, and were in waiting list found to have low participation. It is also known that there is no follow up program of trainings conducted by ASC.

ASC training attendance record showed participation of women farmers in on the spot trainings in their area was 80-90%.

5.1.5.2 Constraints of participation in training

Majority of the women farmer persons had faced constraints in participating in the ASC level Agriculture training. Out of total farmer respondent 33 (78.57%) reported that they had constraints in participating in training. The constraints of respondent are shown in the following Figure 5.2.

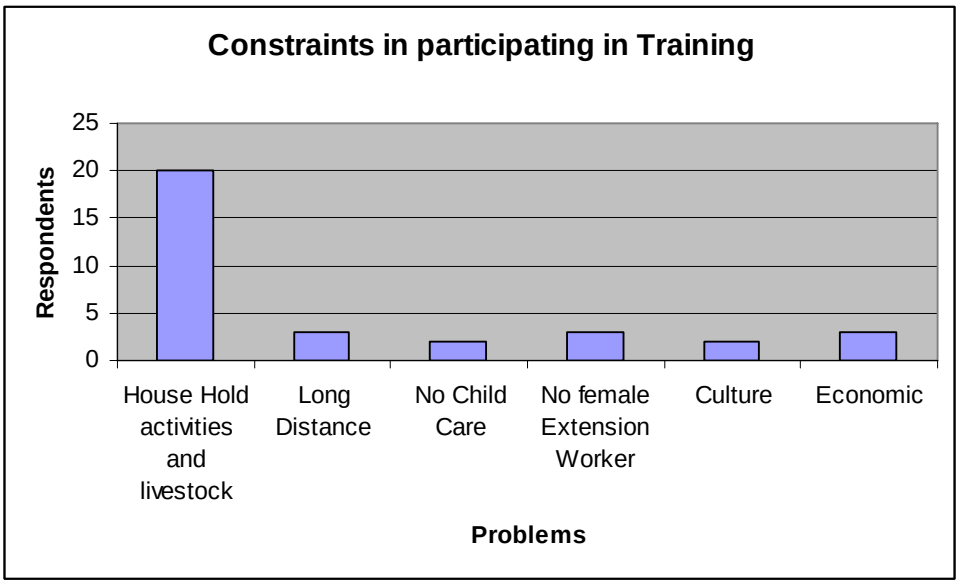

Figure 5.2: Constraints is participating in training

The figure indicates 20 (47.61%) out of 33 respondents have house hold activities and livestock constraints. The house hold activities like cooking, cleaning, washing are the main activities in rural areas. Besides livestock rearing is also the main activities done by rural women. The farming, integration with livestock is common practice in rural Nepal. Women are busy in house hold activities and livestock raring. The culture i.e participation with *dalit* groups in training was also found to be discomfort for *Bramins* and *Chhetries*. The poor economic condition of the farmers made them deficit in financial condition. It was found that due to poor economic condition farmers have no bus fare, and money for fooding and lodging when sometimes ASC training are arranged in the far distance.

5.1.5.3 Preferences in ASC training

Out of total respondents, 34 (80.95%) of the respondent liked the training about Vegetable farming. The research areas have a potential of vegetable farming (DADO, 2007). Vegetable farming is the source of income of research area. The vegetable grown is sold in the local market and Kathmandu. DADO also has focused on vegetable farming by developing vegetable production pocket to raise the income and living standard of farmers. DADO/ASC has also initiated training of off-season vegetable farming.

DADO/ASC organizes training once in six months in the respondents area. The training organized in the respondents area was effective because there is participation of women farmer. For making more participation and effective training DADO plan was to organize more on the spot training in the area.

5.1.5.4 Participation of women farmers in training

The participation of women farmer in training according to the women farmer is defined as in the following table 5.9.

Table 5.9 Participation of women farmers in Training

Activities	Frequency N=42(%)
Just Listening	16 (38.09)
Active discussion	6(14.28)
Bringing new topics	2 (4.76)
Partial discussion	18(42.85)

Source: Own study

The table indicates majority of women farmers take part in partial discussion during the ASC training rather than active discussions and topics relevant to their needs. The partial discussion (means sometimes talking with extension worker and other group members but hesitant to interact).

Box 5.3 AEO's View about participatory approach an facilitation

"We have a plan to train field level extension worker about participatory approach and facilitation, so that they can apply it during training" Agriculture Extension Officer (AEO) Mr. Chetanath Adhikari DADO Kavre.

5.1.5.5 Improvement of women farmers participation in training

The following table 5.10 are the feedback from the respondents for the improvement of women farmer participation in training.

Table 5.10 Improvement of women farmers participation in training

Activities	Frequency (N=42)
Training on the spot on the farmers area and arrange time with women farmers	30 (71.42%)
Communication by ASC and among group members	6 (14.28)
Strong and active groups	2 (4.76)
Taking facilitation role by extension workers	2(4.76)
Allowances	2(4.76)

Source: Own study

Study found that majority of women farmers expressed their desire on arrangement of on the spot training conducted by ASC. The reason for the demand of on the spot

training are engagement in house hold activities, long distance to go to the training place, financial problem, not letting to go to distance training by their house members because of culture, etc.

5.2 Extension Workers Respondents

The (10) extension workers respondent were taken from taken from 5 Agriculture Service Centers, Banepa, Khopashi, Bhakundebashi, Panchkhal and Dolalghat. Among them 9 were male extension workers and 1 was female extension worker.

5.2.1 Background information of the respondents extension workers (JT/JTAs)

The respondents surveyed covers 5(83.33%) of field level office (ASC) and 83.33% of (87) VDCs and (3) Municipalities.

Among respondents, field level extension workers majority 6 (60%) were 21 to 25 years of work experience. The age of respondents 3(30%) were 20-25 years, 5 (50%) were 41-45 years and 2 (20%) were 46-50 years. Among them 9(90%) were male and 1(10%) was female. There is very low number of female extension worker in the district (DADO, 2008).

Agriculture extension service system in Nepal offers both services and inputs as teaching materials (e.g. demonstrations, minikits) to the farmers about new technological messages. Few extension services are targeted to rural women, most of the extension services focuses on commercial rather than subsistence farming. But in reality, subsistence farming is the primary concern of women. Farmer are less aware about extension services provided by the government side and the credit facilities provided by other institutions.

The majority of extension worker performed their role as 4 (40%) resource person and 3(30%) trainer. Only 3 (30%) used facilitation role. Training is one of the major activities taken by government for giving knowledge, technical skills and to empower farmers to solve their own problems by themselves.

5.2.2 Farmers Group

The respondents looked after 227 (86.97%) farmers group of district which represents only 1.76% household of the district (DADO, 2008). However the other groups were also formed by other organisation like saving credit, Participatory District Development Program (PDDP), environment, wild life conservation, etc which are not recorded yet at DADO. The majorities of the poor, ethnic, social excluded people and female-headed households were beyond the involvement of groups. The numbers of farmers group stated by the respondent in there ASC area are shown in the following figure 5.3. It shows that Bhakundebashi, Panchkhal, Khopashi and Banepa have comparatively higher numbers of farmers groups than Dolalghat ASC. The coverage of the households by the farmers group on Dolalghat ASC was limited to bring them into extension services.

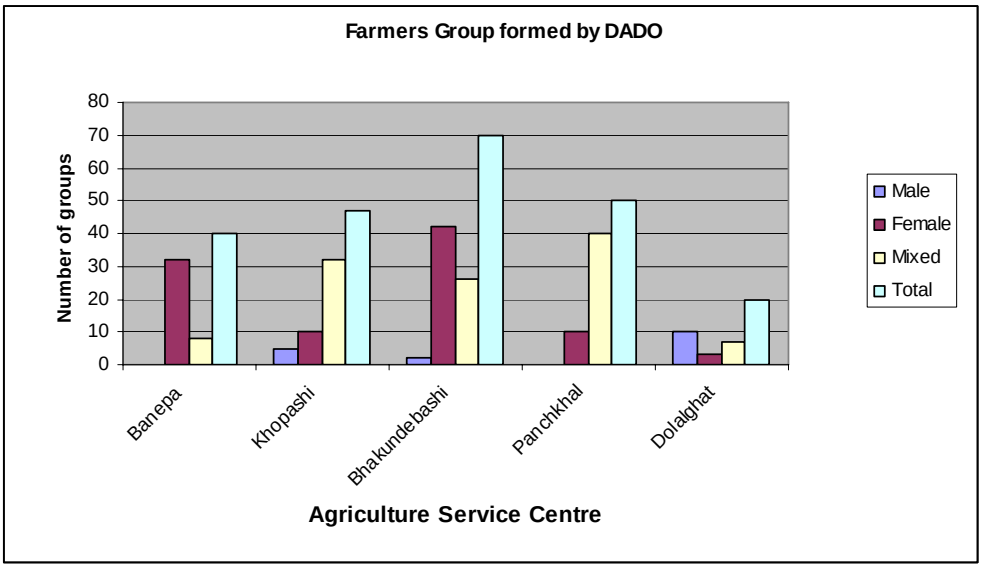

Figure 5.3 Farmers group formed by DADO

The Banepa , Khopashi and Panchkhal ASC are near DADO headquarter. The ASC is based on recomendation made by committee formed by government. It is known from the DADO that division was made on accessibility of road and communication facilities, nature of programs activities and areas coverage. The Bhakunde bashi study area has 16 VDCs. The names of VDCs are mentioned above in table 3.5. The main occupation of farmers of Bhakundebeshi ASC is Vegetable farming. Vegetables like tomato, potato, cabbage, cauliflower are grown in the area. They sell the products to local market, Banepa and Kathmandu. Banepa ASC lies in the city area, it is famous for potato. Pachkhal ASC for tomato and potato and other vegetables like cabbage and cauliflower. Orange is cultivated in Khopasi ASC area. Besides, vegetables are also cultivated in this ASC. Dolalghat ASC lies far away from headquarter. It has remote VDC areas. Being remote and inaccessible extension workers formed less farmers group.

The farmers groups were formed within the districts by different approaches. Larger numbers of farmer's groups were formed by the participation of both extension workers and farmers initiations. The respondent concluded that majority of groups 6 (60%) are formed due to DADOs target program and interest of farmers. 4 (40%) of extension workers respondents mentioned that groups were formed by self initiation and interest of farmers themselves. Sustainability and co-operatiztion of group is high formed from self initiation.

The benefit of group formation to farmers according to the extension workers are mentioned below (Table 5.11).

Table 5.11 Benefit of group formation to farmers

Benefits	Frequency N=10(%)
Better work performance	1(10)
Easy to work, no need of going to meet individually	4(50)
To share ideas and information	5(50)

Source: Own study

Table indicates 5(50%) extension workers mentioned that it becomes easy to share ideas and information among farmers and extension workers. Some of the women farmers were highly interested to participate and join the group to take benefit from the group.

DADO got several benefits by making farmers groups. The benefits stated by respondents extension workers are described in Table 5.12. Once group are formed and mobilized, it facilitates to easier and faster dissemination of technologies. 8(80%) of respondents claimed that by the formation of group, their organization was benefited by the combination of several factors e.g. efficiency on delivery of extension services, required limited resources than individual contact, wider coverage of farming communities and dissemination of technology faster.

Table 5.12 Organization benefited by making farmers group

Organizational benefit	Frequency N=10(%)
Efficiency on delivery of agriculture extension services to the group	2(20)
Require few resources as compare to individual contact	
Coverage of larger farming community	
Dissemination of technology faster	
All of above	8(80)

Source: Own study

The extension workers feel easy to work with married women farmers in groups and other extension training. 7(70%) of the respondents like to work with married women in the group and training. The extension workers feel free to communicate with married women. Married women are not over controlled by their family members. 7(70%) of extension workers contact farmers group once in a meeting, for technology dissemination and sharing information. One of the respondent extension worker stated it becomes easy for them to contact groups which are near to ASC and groups in far distance becomes difficult for them to contact.

7(70%) extension workers contact farmers group once in a month and 3(30%) contact farmers group twice in a month. All extension worker respondents feel easy to contact with women farmers on group meetings. Majority of the field extension workers contact leader farmers in a group. The leader farmers communicate information to other members in group.

5.2.3 Participation

6(60%) of extension workers understand participation as involvement of farmers and 4(40%) understand participation as to share benefit among farmers. Majority 6(60%) of them understand participation as physical involvement of farmers. The role of extension worker in the field is as resource person and trainer. They gave less emphasis on social mobilization and facilitation.

7 (70%) respondents mentioned they are called by groups on group meetings, and rest 3(30%) stated they are called for giving information. The decision making

practices in groups stated by respondent extension workers are mentioned in following (Table 5.13).

Table 5.13 Decision making in group

Decision making	Frequency N=10 (%)
By group members	3(30)
Decision with few members	3(30)
Group members by influence of leaders farmers	4 (40)

Source: Own study

The table 5.13 shows 4(40%) respondents extension workers stated decision making in group is influenced by leader farmers and few members.

5.2.4 Training

Agriculture training program is one of the main program of DADO. DADO provides trainings to group farmers. The training topic depends upon the demand of farmers and also program of ASC/DADO. Most of the training topics depend upon the program conducted in the field. The training topics carried by extension workers are presented in the figure 5.4.

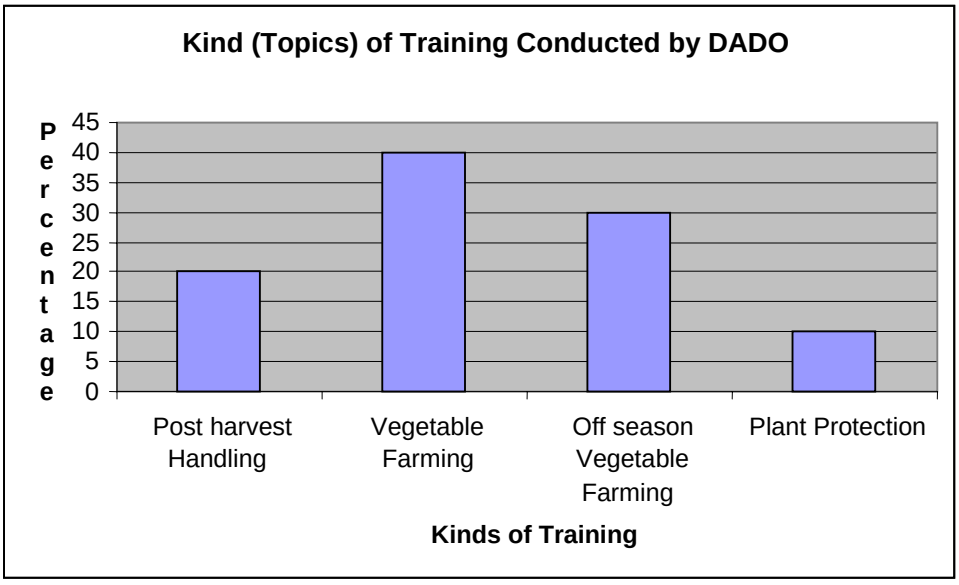

Figure 5.4 Kinds (Topics) of training conducted by DADO/ASC

The table indicates, extension workers DADO/ASC provides majority 4(40%) of vegetable farming topics training and 3(30%) off season vegetable training. The majority respondents extension workers provide vegetable farming and off-season vegetable farming topics for the better income generating and livelihood of rural farmers.

5.2.4.1 Views of extension worker about participation of women farmers in training

All the respondents extension workers stated that there must be involvement of women farmers in trainings. Most of the agriculture activities like planting, weeding, harvesting are performed by women. They spend most of their time in the agriculture field.

The participation of women in training program stated by extension workers are as follows Figure 5.5. The moderate level women participation in training is mostly presence participation (i.e. only involvement, no decision making). They rarely influence the training. They partially discuss in training.

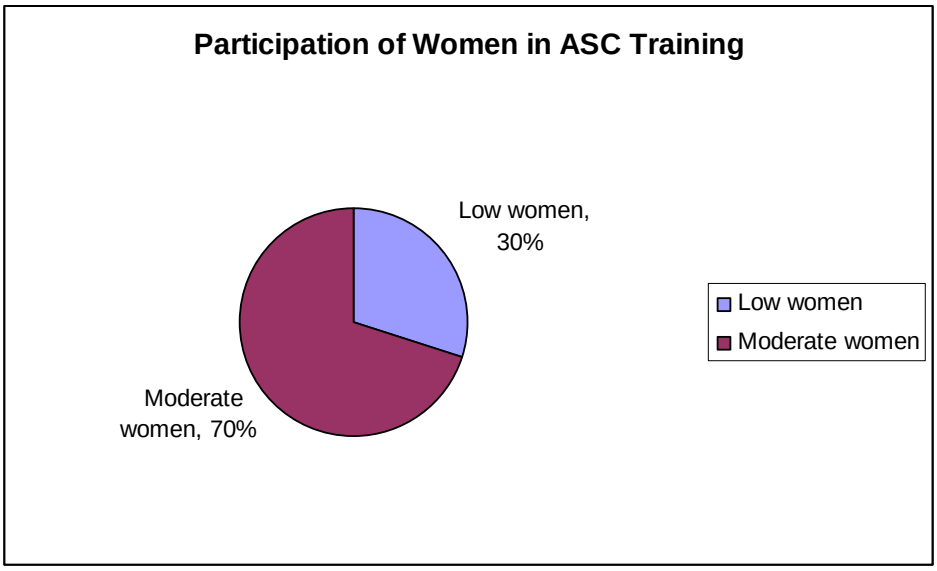

Figure: 5.5 Views of Extension workers about participation of women farmers in ASC training

Figure indicates 7(70%) of extension workers views is moderate and 3(30%) views is low about participation of women in ASC training. The moderate indicates in between high (bringing in new topics and freely expressing and discussing) and low (only presence and answering questions when asked by extension workers).

5.2.4.2 Constraints of women participating in training

Women farmers have constraints in participating in training. The constraints observed by the majority 5(50%) of field extension workers were house hold activities. The livestock, children, distance of training and financial problems were also the constraints of women farmer in the research site. The constraints are indicated in figure 5.6.

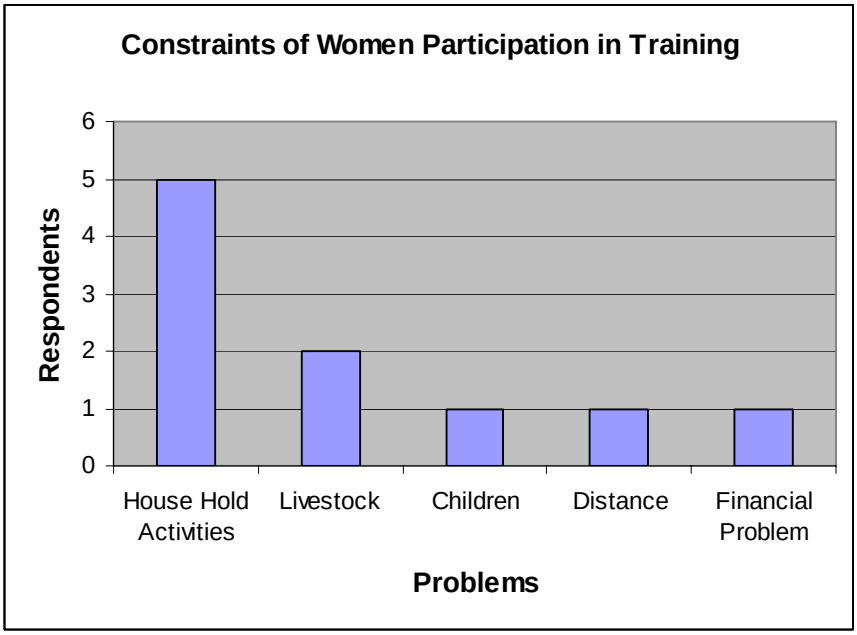

Figure: 5.6 Constraints of Women farmers participation in ASC training

Figure indicates majority 5 (50%) extension workers stated women are busy in house hold activities.

Extension workers feel difficult to contact women farmers other than their meeting day. Normally meeting is organized once in a month.

5.2.4.3 Improving participation of women farmers in training

The participation of women farmers in training as stated by extension workers can be improved by on the spot training, managing allowances and transport fare and giving seed kit after training to the women farmers. The responses of the respondents are stated in the following Table 5.14.

Table 5.14 Improving participation of women farmers in training

Improving participation	Frequency N=10 (%)
On the spot training	6 (60)
Manage allowances and transport fare	2(20)
Give seed kits after training	2(20)

Source: Own study

The table indicates majority 6(60%) of respondents extension workers expressed, on the spot training for improving participation of women farmers.

CHAPTER SIX

6. Analysis and Discussion

In this chapter results from the previous chapter are analysed and discussed with the literature reviewed and the survey conducted.

6.1 Farmers group

The majority 16 (42.10%) out of 38 respondents farmers joined groups to increase income. The reason was poverty of the farmers in the study area. There are 31 % of the people in Nepal who are below poverty line (CBS, 2006). Also, DADO delivers its services in group approach since 1992. Majority 36(87.71%) farmers group in the study area was found to be formed by both extension workers and farmers initiation. When farmers express their interest to form group and extension workers facilitate group formation process, such type of self-emerged groups are more effective and sustainable for service delivery. However, groups were also formed to get access to the extension services from the DADO. (Champala and Shingi 1997 cited in Adhikari 2004) reported that government policies are understood in an oversimplified way by rural communities that unless they are organized into co-operatives or associations or groups, they will not get government subsidies, credit and technical services. As a result groups that are formed with these objectives are not sustainable. It was found that 6 (14.28%) of farmers groups were formed by initiations of extension workers. Formations of such types of groups are highly dependent upon organization, unless there is follow up and material support, the sustainability of group is questionable. Group formed by self initiation of farmers in Kavre district, have comparatively higher savings than others and those groups were moving their activities towards formation of Co-operatives (DADO, 2008). However, 5% groups formed by extension workers initiations to fulfill the organization's annual target were functionless and collapsed within a year. Many such types of farmers who joined group expecting agricultural inputs (e.g. fertilizers, seeds, pesticides and credits) freely or in subsidy later dropped out when they discovered that there are no immediate personal benefits.

Once groups are formally formed, they are strengthened by their own group activities with the facilitation from DADO. An effective group develops linkages with other related service providing government units, NGOs and other organisation (CATC, 2002). The farmer respondents collect fund every month. Fund collection starts with formation of farmers groups. Some farmers groups in the district raise their funds up to Euro 2500 while very few have less than Euro10 and the other have in between (DADO, 2007). Some members participate in group meeting only for depositing money without any agenda. Besides this, the other major activities were regular monthly meeting and initiation for vegetable farming.

The women farmers respondent stated that they get benefit in agriculture group. 12 (28.57%) of them get benefit in acquiring new knowledge and 10(23.80%) of them for sharing of ideas in the group. 9(90%) extension workers also reported that there is a benefit for farmers for group formation. It can be known that women farmers get benefits being in groups. The farmers share ideas and information among themselves in group. The improvements of communication among group members helps to improved and strengthen groups. It also helps to bind the groups members and serves as some sort of incentives to its members for effective participation in group activities. If members don't get benefit from group, group may become inactive. The 8(80%) of the extension worker mentioned there is benefit for the

DADO to form groups. The DADO is benefited by giving extension service to the large farming community, cost effective and efficiency in delivery of agriculture extension services.

DADO Kavre have limited facilitation to form farmers group by their self-initiations of farmers. Formation of farmers group should be given high priority on self-initiation by stimulating farmers and making them to know about importance of group by encouraging farmers. Extension should be focused on empowerment of farmers and making them capable to make their own decision rather than being dependent upon extension worker (Van den Ban and Hawkins, 1996). This could be one of the reasons for disintegration of formed group.

The majority 35(83.33%) of the farmers respondents were member of other groups than agriculture for the benefits like saving and getting loan in low interest for their house hold activity. The interest rates of banks are higher as compared to the group welfare fund and farmers co-operative fund. The group savings serve as an important cohesive factor of group members (CATC, 2002). The proper utilization of group welfare fund for buying, inputs, like seedlings, fertilizers, saplings, pesticides helps the group members to improve the agriculture farming practices. Same agriculture group members are the member of other group also. Due to this, the agriculture group members can't give time in their own agriculture group. However study found 37(88.09%) attained in group meeting, they cannot give time in their group activities of agriculture group when the meeting schedule and group activity are coincide with other group. The working NGOs, CBOs, line agencies and ASC working in the research area have no co-ordination. Most of the time extension workers only attain in meetings organized by the line agencies, NGOs and CBOs. Extension workers do not apply agreed decision in practice. The co-ordination of NGOs, CBO, line agencies and ASC will make to know the program of each other organisation which becomes easy for implementation and prevent for duplication of same nature of program in same place and area. There are about 9 NGOs and CBOs related to agriculture and other line agencies working in the research area (DADO report, 2007). Collaboration of group forming and strengthening activities of DADO with NGOs, CBOs will facilitate farmers to participate on group by their own initiation and will make strong farmers group with sustainability and wider coverage on farming communities.

The monitoring of groups helps to know the status of groups and groups activities. The lack of monitoring from extension workers will have no interaction with the groups members. The lack of interaction does not allow extension workers and extension organisation to know the situation and activities of groups. By this reason there is a chance of groups to remain inactive. The extension workers do not get any incentives for monitoring in there ASC area. So, field level extension workers do not have interest in monitoring the groups.

The sampled groups had 25 to 30 members in group. It can be known that there are large group members in group. The Pragatisil mixed group was inactive from 3 years back. This was due to factors like loss of interest of some group members because of absence of benefit or minimal profits especially in their groups. Other factor are poor commitment of members to the group rules and regulations, poor attendance of meetings, laziness of some members, poor contribution of membership fee, non existence of clear responsibilities of each member and diverse interests. It was found that task and roles among group members, sharing of profit was unclear. There was also no monitoring from the DADO/ ASC and also members were inactive to participate in group and extension services.

In the mixed group although men and women form or join groups for similar economic benefits, women position in society relative to that of men is different, men being traditionally dominant over women. This influences the participation of women in groups. For extension organisation it means being aware of why men and women behave differently and understanding their needs and concern (Bhasin, 2000 cited in Jane). This domination is because women are dependent on men in decision making. This placed women in weaker bargaining position as compared to that of men.

6.2 Participation

The majority of women farmers respondents 15 (35%) understand participation as taking part in group activities and 12 (28.57%) understand participation as just membership of groups. The majority 6 (60%) of respondents extension workers understand participation as physical involvement of farmers. The physical involvement means presence in groups and trainings (i.e. only involvement, no decision making). It can be known understanding of participation is not clear. Women farmers who was closer, educated, exposed and who had regular contacts with extension worker were found to have understanding of participation. The understanding of participation is not complete unless all group members does not play role in all stages from identification, planning, implementation and management and decision making. The poverty and poor literacy rate, low exposure of respondents affects the understanding of participation. Participation means that a group of farmers does not only come to work collectively in selected activities such that they achieve the objective they set. It means that they get fully involved in identification of problems in group, designing and planning group activity, implementation and monitoring with facilitation from the extension workers. The members of group should share control over decisions and resources among all group members. There should also be equal access to resources and services. Most of the members in the group were found to participate less in decision making, sharing ideas, interaction among each other and extension workers. The illiterate, old women were dependent on educated and young women members of the groups and men in mixed groups. The decision to undertake activities in group was found more by 12 (28.57%) by leading members and 15 (35.71) by male members (in case of mixed group). 4 (40%) extension workers respondents also stated decision making in group is influenced by leader farmer. The participation of all group members during the group discussion was found quite low 9 (21.42%).

The respondents prefer to participate in women groups, groups in same area and mixed (male and female) groups. The 14(33.33%) of the total farmers respondents prefer to participate in women groups. Women feel free and easy to take part in group activities in women groups. There is no male domination in women groups. Women can participate groups in same area. They can complete house hold activities and participate in groups activities. The groups formed in the short distance makes them easy to go in short period of time. They can save their time for house hold activities. Women also prefer to participate in mixed group. They believe and trust men for doing external works. Women in rural areas prefer to be busy in house hold activities.

Participation is a process through which stakeholders influence and share control over development initiatives and the decision and resources which affect them (World Bank 1994 cited in Chamber 2005). In this study context participation is the involvement of women farmers in various processes and activities in groups and trainings like decision making, sharing ideas among themselves collaboration and

interaction with extension workers. Indicators of participation are: just listening, active discussion (free communication between extension worker and farmer), bringing in new topics in the training, partial discussion (means sometimes talking with extension worker and other group members but hesitant to interact).

There is a gap in understanding about participation as mentioned above by women farmers and extension workers. The gaps between the understanding of participation by women farmers and extension workers can be overcome by training both extension workers and farmers about participation and participatory approach. The extension workers and women farmers have different expectation. The extension workers need to understand what women farmers desires in the groups and trainings. Training the extension workers will help to update their knowledge and skills which is the most for facilitators. The extension workers were found to take trainers and resource persons role. It was found only 3(30%) of the extension worker used facilitation role. 3(30%) extension workers understand facilitation as two way process. Facilitation is the sharing of ideas, two way interactive discussion between trainers and trainees. Unless there is interactive discussion among trainers and trainees training can't be effective. The interaction in training is most important for effectiveness. Facilitator role by extension worker is needed in this change context. There must be two way learning by farmers and extension workers for effective communication (Leeuwis, 2004). Facilitation also helps to enrich the effectiveness of training. Facilitation is learning- centred and it helps other to learn (Pretty and et al, 1995). Extension workers should adopt facilitation role for effective participation. According to Millar and Curtis (1997), critical factors in group learning are effective facilitation, group autonomy, building on going relationships and learning opportunities. The roles of facilitators include letting farmers make their own choices about what they need, build on their own experiences and knowledge, encourage all men and women to talk, express their views and ideas, give all members an opportunity in the group to have a say and encourage a two way communication between farmers and extension workers. The facilitators also need to have skills in applying participatory methods, to enhance the learning process in groups.

Besides, Participation of the women farmers can be increased by a combination of various factors e.g. government policy, DADO's initiation, active group member and by increasing the women farmers interest about ASC level training and making training fit their needs and time available.

6.3 Training

The 11(44%) farmers respondents mentioned extension workers helps to make known about ASC level agriculture trainings to the farmers. Communication is an important factor for improving participation in agriculture extension services and trainings. The communication among farmer group members plays a vital role for giving information and sharing ideas. The study shows 8(32%) of the farmers respondents mentioned low communication among groups members. Sharing of ideas among group members helps to solve the problems of the group and give information among each others.

The agriculture training is one of the main program of (DADO, 2008). Women farmers must be trained for building competencies in knowledge, skill and attitude in better farming and agriculture development. According to Ministry of Agriculture and Co-operative (MOAC), 2008 of Nepal, 72.8 % are engaged in Agriculture. This indicates women farmers have to be trained for receiving knowledge, skill and attitude. Training being important program and needy program for women farmers there is low participation of women farmers in training. The study found the reason of

low participation in training by those who were not participating in training was due to busy in house hold activities. The 12(50%) out of 24 respondents mentioned busy in house hold activities. Also, 4 (16.66%) farmers respondent mentioned the clever, educated, leader members of group participate repetitively in trainings. The repetition of same members to attain in different agricultural trainings should be controlled by group members and extension organisation. The extension workers should not give for the same person to participate in training frequently. The cleverer, educated, leader farmers in group some times do not share the information to there group members. Uneducated, old and women members in groups some times do not fit the criteria to participate in training. This is because DADO calls participants by mentioning the requirements of participants like in education, age and sex. The farmers groups also keep their members in waiting list. The criteria to participate in training should be made by groups themselves and extension workers in the monthly group meeting. The persons who are direct contact with extension workers should not be encouraged for frequently participation in training. This frequently participation makes other group members to get less chance in participating training.

Majority 33 (78.57%) of women farmers respondents have constraints in participation of training. The 20 (47.61%) of women farmers respondents mentioned they were engaged in house hold activities 20 (47.61%). Like wise majority 5(50%) extension worker respondents also stated the constraints of women farmers are busy in house hold activities. Women have almost no time to participate in extension activities because of the variety and numbers of jobs like house hold activities, livestock raring, child caring etc they do in rural area (Kizilaslan 2007). Women farmers are always busy in house hold activities in rural areas of Nepal. The majority of women are engaged in house hold activities. Livestock is integrated with the farming. Livestock rearing is also a burden in rural areas. If the distance of training centre is far they cannot leave their household activities, livestock, children and go to the training. Majority of the rural people are poor. For going to training they need traveling fare and food so they will not go to the training organized in far distance. Besides, women farmers may not like training subject also.

Women have both domestic and a production role which makes them to have a bigger work load as compared to men. Women have constraints to participate in long term training outside their village due to their household obligations and traditions. Women cannot travel long distance for training due to responsibility of household task and social constraints (Adhikari, 2006). Women are usually restricted by their husbands to attain distance training and when together with men they do not feel free to participate. The extension workers also assume that women are always with domestic works, thus they feel training and extension services to be participated by men. The failure by the extension workers to take into consideration the constraints faced by women such as the time constraints, little self confidence, less mobility, cultural constraints (such as caste system, upper caste and lower caste do not like to mix, Hindu and Muslim religion women are expected to be confined at home and not to travel much), neglect of their specific training needs and concerns also influences the participation of women.

For the improvement of women farmers participation in training the 30 (71.42%) respondents farmers gave emphasis for on the spot training on their area and arrange time with them. 6(60%) of the extension worker respondents also mentioned participation can be improved by giving on the spot training in their area. 80 % women gets attend in on the spot training (DADO, 2007). From this we can say on the spot training in the women farmers area can increase involvement of women farmers. The women farmers finishes their house hold activities in short time and involve in training conducted near by. Their house members also let them to go the

training which is conducted in their area. Their time for going in training will also be saved because of short distance. Participants do not have to spent money for bus fare and food and lodging. Women farmers house members will not give enough money to go to the training conducted in the other far places. Hence, on the spot training can overcome some constraints. Besides, giving the seed kits after training to the trainees might also influence rural women to involve in trainings.

The provision of agriculture loan after arranging training can influence the women in training. Bringing experts other than DADO and ASC will also improve the qualities of training and influence the women to participate.

The majority 4(40%) of kinds of training conducted by the DADO/ASC are about seasonal vegetable farming, and 3 (30%) are about off- season vegetable farming. The majority 33 (78.57%) of the kind of training liked by women farmers are about vegetable farming. The study shows the kinds of training liked by farmers and the training provided by DADO/ASC are mostly similar. The vegetable farming occupation is also a way of life for marginal land holder and small farmers because it is an alternative source of income generating activities. Vegetable farming has become the source of income for the farmers in accessible areas in the research area. The areas are linked with feeder roads and market near by so inputs like seed, fertilizers and pesticides are available.

The views of 7(70%) extension workers about participation of women in training are moderate. The moderate indicates in between high (bringing in new topics and freely expressing and discussing) and low (only presence and answering questions when asked by extension workers). They discuss partially in training. The partial discussion (means sometimes talking with extension worker and other group members but hesitant to interact).They are not active in discussion in training. The 18(42.85%) of farmers partially discuss in training. Participation is a two way process. The indigenous knowledge of farmers and scientific knowledge of scientists or facilitators or extension workers can be gained by interaction with one other (Naika and Siddaramacah, 2006). The interactive discussion among farmers and extension workers helps to enrich the participation in trainings.

Majority of women farmers are engaged in agriculture occupation. Although larger number of women farmers have received training in areas relating to group formation, saving mobilization, credit operation, farming vegetable, but there is lack of most demanded skill training other than agriculture, i.e. tailoring, weaving and knitting, making of nodules, pickles, jam, jelly, squash, soap etc. which would encourage women to take up non farm occupation also. The co-ordination of extension organisation with other line agencies and NGOs and CBOs present in the study area will have to arrange on farm training to the women farmers. The non farm training improves income of rural women which enhances women development.

6.4 Service provider

The government decision for the cut down of Agriculture Sub-Service Centre (ASSC) has added burden load to cover more area by Agriculture Service Centre (ASC). The ASSC was cut down few years back. Previously ASSC was divided in *illaka* (Small Territory) and grouped with number of VDCs within the *illaka*. Now the more area with more number of VDCs has to be covered by ASC. The terai, hill and mountain consists of 4, 6, 4 Agriculture Service Centre respectively.

The findings show Dolalghat ASC has comparatively less farmers group than Bhakundebashi, Panchkhal, Khopasi and Banapa. This is because Dolalghat ASC

lies far away from headquarter. It has remote VDC areas. Being remote and inaccessible extension workers formed fewer (20 no.) farmers groups. The extension workers feel difficulty to go to the inaccessible and remote places especially in hill and mountain. They feel uneasy to go in remote and inaccessible places. It was found groups were formed in accessible and place near to their approach. From this we can say the majority of rural farmers are beyond the agriculture information and communication.

The Banapa and Panchkhal ASC had no male farmers group according to the respondents extension workers. There were possibilities within the districts to catch up related stakeholders to participate agriculture extension program for wider coverage of households by the groups. Banepa and Panchkhal ASC lies near the Kathmandu city. Most of the agriculture activities in this area were done by women farmers. Male did not want to get engaged in agriculture. It might be they prefer to get engaged in non farm activities.

There were very few field level female extension workers in the organisation. Even though presence of women extension worker they feel difficulty to go in field level offices and give services to the rural farmers. There are 2 % female extension workers working in the field (Adhikari, 2006). The women farmers had also demand of field level women extension workers. House members feel easy to send women on the training organized by ASC with female extension workers.

The Low literacy rate of women affects extension workers because it make difficult to make understand and communicate to women farmers. It makes them difficult to approach at once women farmers for the acceptance of technology and innovation because they depend on the male and cannot decide themselves.

The monitoring of groups and extension programs by extension worker helps to make the groups active and extension programs effective. There were very few extension workers in ASC and they have large area to cover. This indicates monitoring of groups and extension program is not sufficient. The DADO/ASC have to strengthen monitoring for field inspection and visit in groups. The monitoring after training can be effective to find out transfer of learning by the participants farmers.

Like wise, the improvement and increase in the communication by the field extension workers and among the farmers in their groups can increase in making the farmers know about ASC training. The communication helps to increase participation in groups, agriculture training and other agriculture services.

CHAPTER SEVEN

7. Conclusion and Recommendations

7.1 Conclusion

The study shows that the respondents of the research site have found limited land holding (0.57ha) which has hampered in commercialization and diversification in agriculture. The involvement of indigenous and socially excluded group in agriculture development found limited 9(21.42%). Due to division of caste system other castes don't want to be in group especially with socially excluded groups called as *dalits.*

Group approaches have become major concern in agriculture extension in Nepal. Since the aim of Nepal Agriculture Extension Strategy (NAES) is to develop an extension system which is more responsive to the needs of rural farmers. The group formed by the initiation of extension worker is found less effective and unsustainable. Self initiative group are more sustainable and most of them are upgraded to co-operatives. The 36 (85.71%) of the respondents farmers mentioned their agriculture groups were formed by the initiation of both extension worker and group members. Usually, farmers groups found more in numbers in accessible area where as less in inaccessible area in term of access to road and market. Farmers groups are playing crucial role in supporting the participation of women farmers in extension programs (training) for improving their economic and social condition. The majority of women farmers groups expressed the reason for joining the groups was to gain both economic and social benefit like working together collectively, to increase family income, gain access to extension services and help each other socially and become self reliance. In this study women farmers groups are found leading by few members of group. The few members in the groups includes educated, young, leader farmer, rich and good position in society. In the mixed group, few male members found leading the groups. They are involved in decision making and leadership roles. Though women joined groups in large numbers the decision in the groups mostly found dominate by male as in case of mixed groups.

11(26.19%) farmer respondents were found to be literate. Educated farmers have understood about participation than less educated and illiterate. Group discussion is dominated by educated male farmers in mixed group and women farmers in women groups. Women farmers are engaged in agriculture activities but men are the major participants in extension services and trainings. Men hesitate to share gained knowledge to female farmers. The women farmer respondents were found to have a different understanding with participation. Among women farmers respondents 15(35%) have understand participation as to taking part in group activities. Similarly 6(60%) of the respondents understand participation as presence involvement of farmers in group and training.

The 33 (78.57%) of women farmer respondents had constraints in participating the trainings by household works, livestock, children rearing, long distance, no female extension worker, and economy and socio- culture values. Women participation on the spot training in women farmers area was found high (80-90%) but their participation on the distance training was low (DADO, 2007). 30 (71.42%) of women suggested for the on the spot training in their area and set time with them. Women farmers have no active participation in training, 18(42.85%) discuss partially and 16(38.09%) just listen. Educated, young, leader farmer, and having high social status

of men and women found more participation in planning and resource mobilization than weak, poor, old and uneducated members in groups.

6(60%) of the respondents extension workers understand participation as physical presence of farmers and 4(40%) understand participation as to share benefit among farmers. This indicates extension workers have low understanding of participation. Extension worker has to change their role from resource person and trainer to facilitator. This less participatory method limited their capacity to address specific training needs of women farmers. Training subject should be as per the need base. Demand driven training topics like vegetable farming, off- season vegetable farming, plant protection are requested by farmers. Women also prefer skill development training like tailoring, waving and knitting, food processing (pickle and jam making) etc other than agriculture training.

There are limited extension workers in ASC and they have to cover larger area, which indicated that majority of farmers are beyond the access of information and communication. DADO formed farmers groups in those areas where in easy access to delivery service. Extension workers can't give time to the entire farmers group in their area. Field extension workers have low competencies level for training to rural farmers. In the discussion with DADO's staff, they feel easy to work with married and literate women in group than unmarried, old and illiterate.

However, on the spot training in the women farmers area can increase in number and involvement of women farmers. The provision of agriculture loan after arranging training can influence the women in training. Bringing experts other than DADO and ASC will also improve the qualities of training and influence the women to participate. Besides, Participation of the women farmers can be increased by a combination of various factors e.g. government policy, DADO’s initiation and communication, active group member and by increasing the farmers interest about ASC level training.

7.2 Recommendations

In the recommendation making, the study results, information gathered during the investigation was considered and synthesized as below.

The ultimate objective of extension programs is to satisfy the needs the people and to provide for equitable distribution of benefits amongst members of community.

Farmers groups have advantages to extension organisation while it was found difficulties for women farmers for their full participation. The major difficulties faced by women farmer working in the groups are dominance of a few members (men in mixed groups and educated, rich, young women in women groups), Lack of direct contact with individual women farmers by extension staffs and diverse interests among members which should be taken into consideration by the extension organisation.

In this context, it is important that extension workers and the extension organisation involved in agricultural development should forget of assuming men are more energetic than women farmers. Therefore, program planning should be made to address the different needs of women's and men's involved in particular extension activities.

The extension workers should change their traditional thinking of the role as extension workers and trainer to facilitator. It is also desirable that organisation should considered capacity building of extension workers for groups and trainings facilitation.

It would be important that extension organisation should train extension workers in the use of participatory methods.

When facilitating groups and trainings, extension workers should take special care to address women as well as men covering issues and problems relevant to both. Trainer language should be as the trainee's language for better understanding.

It is recommended that extension organisation should recognize and understand the constraints of women farmers that hinder women participation.

Women are usually not able to participate fully in extension programs activities particularly training because of work loads making them difficult to attend. Therefore, it is recommended that extension workers should recognized the time constraints of women and adjust training schedules to fit women's existing workloads.

It is recommended provision of on the spot training and arranges time schedules consultation with women farmers for their better participation. After the completion of ASC trainings there should be the provision of giving training inputs (seed kit, if possible loan/ fund) for agriculture enterprise.

The training should be focused on income generating activities, like, vegetable farming, off-season vegetable farming, plant protection, nursery establishment, vegetable seedlings & fruit saplings production, food processing, apiculture, sericulture, mushroom cultivation, etc. The provision of skill developing training such tailoring, weaving and knitting, making of nodules, pickles, jam, jelly, squash, soap etc which also help to encourage women to take up non farm occupation should be co-coordinated by DADO with other line agencies, NGOs and CBOs for their better participation.

Keeping in mind the current trend in extension in the district which emphasized group approach, equal participation among men and women, planning and management, greater involvement of the disadvantaged groups especially women, it is extremely relevant for the extension organisation to identify gaps and adopt strategies which will not only improve women participation in group and training but also lead to the success of the extension programs.

In this context, more attention should be given to the participatory planning process in the extension programs, allocation of adequate resources, enhancement of group and training facilitation skills among extension workers, having the positive attitude, change of traditional thinking and commitment of the extension organisation will help to achieve a lot of success.

7.2.1 Recommendation for the further study

The most of the women farmers are multiple group members in research area. It is desirable to further in-depth study on consequences of multiple group membership on performance and its impact on groups' productivity.

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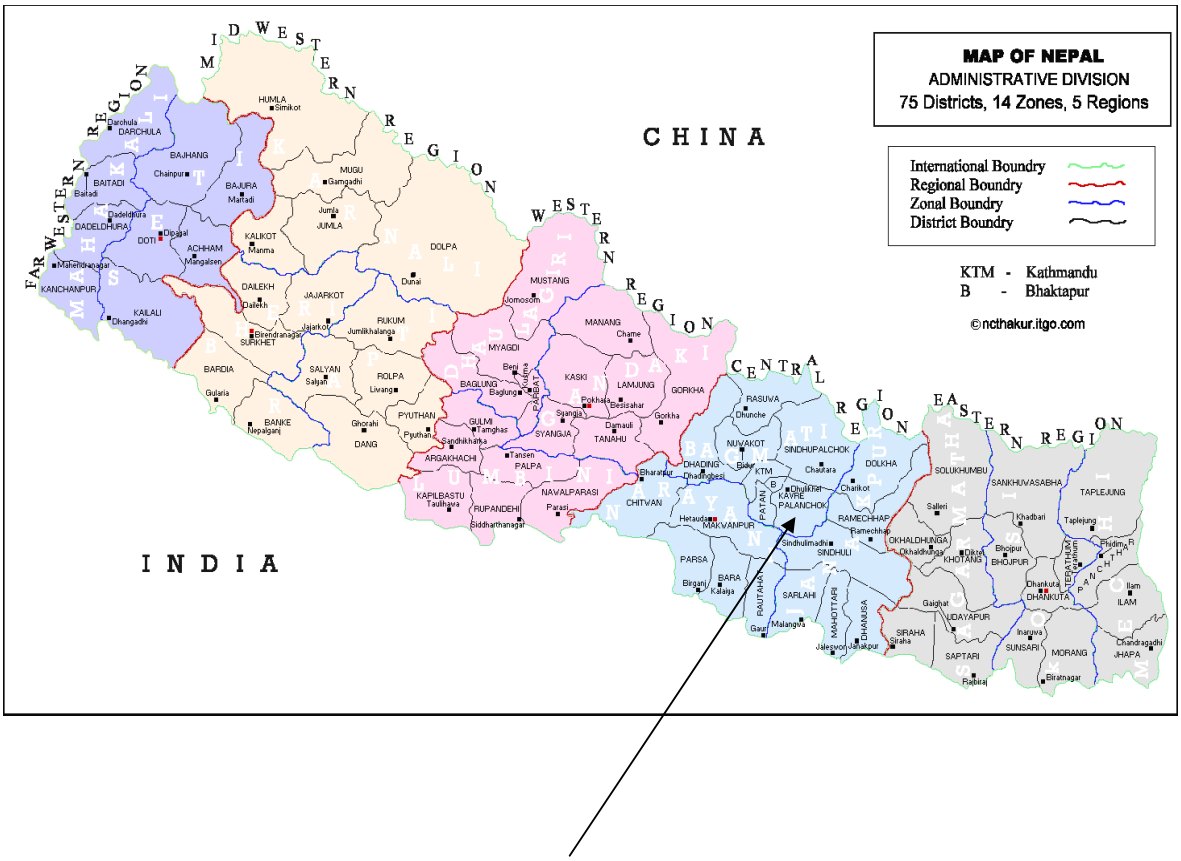
Annex- 1

Map of Nepal showing Kavre District



Kavre District

Figure: Map of Nepal Showing Kavre District

Annex- 2

Map of Kavre district showing Agriculture Service Centre boundary

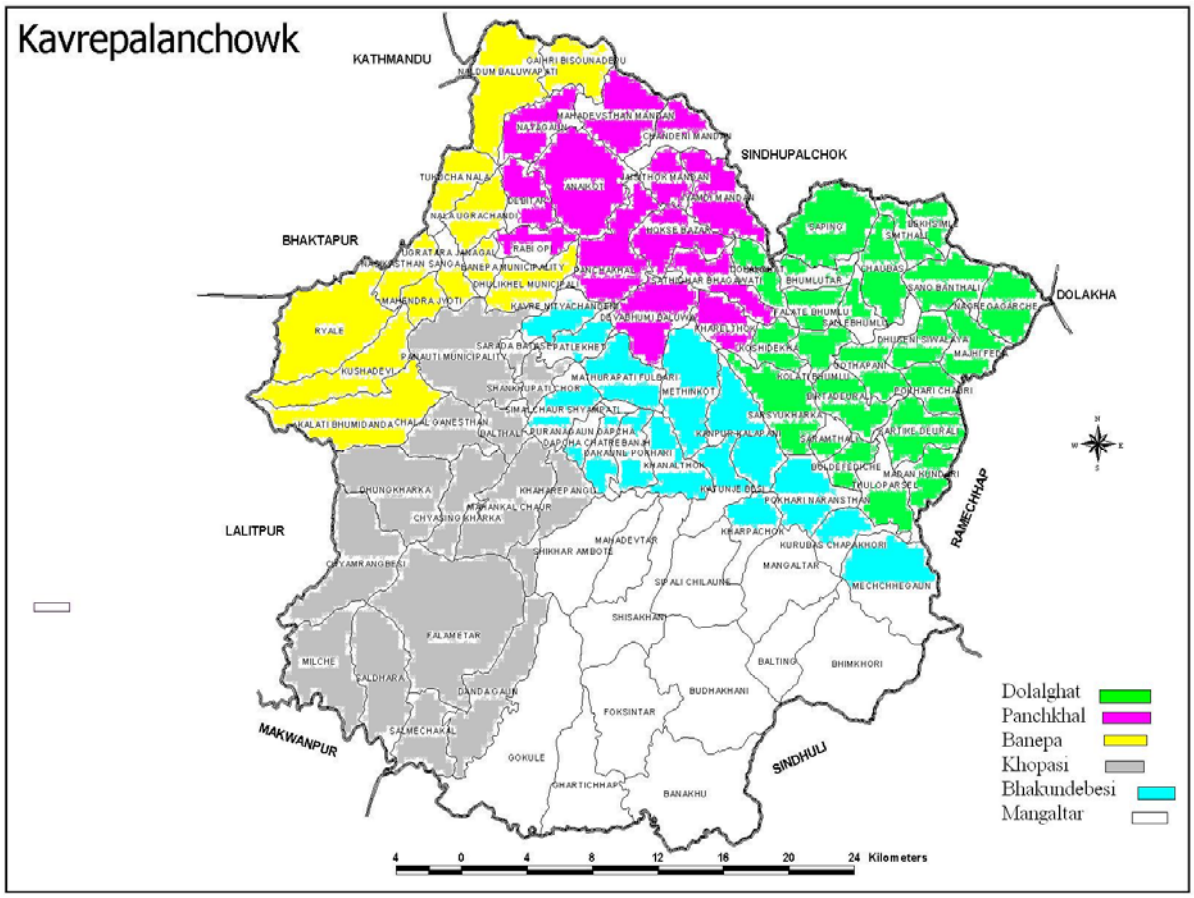


Figure: ASCs' Coverage/Boundary in Kavre district

Annex-3

Questionnaires

I Questionnaire for Farmers

1. Personal profile of respondent:

(i) Name of farmer ……
(ii) Address ……
(iii) Age ……
(iv) Sex ……..
(v) Family size ……..
(vi) Education ……
(vii) Main occupation ……
(viii) Land Holding ……
(ix) Annual income ……
(x) Group Name ……..
(xi) Group formed year ……

2. Are you a member of other group also?

a. Saving credit group b. NGO's group

c. IPM group d. Others, Specify …….

If yes, why ……..

3. How many members are currently in your farmers group?

Total number ……..

Male …… Female ……

4. How was your group formed?

a. Extension Initiation
b. Self initiation
c. Both Extension agent and farmers initiations
d. Motivation by Neighbours (leading farmers)
e. NGOs facilitating
f. Others …….

5. How were you involved in group formation?

……

6. What is the reason of joining the group?

……..

7. What is the benefit of being in group ?

……..

8. What are your major group activities?

a. Fund collection and mobilization, Regular monthly meeting, Vegetable farming
b. Fund collection and mobilization, Regular monthly meeting, Vegetable farming and Community marketing
c. Fund collection and mobilization, Regular monthly meeting, Vegetable farming and orchard establishment
d. Fund collection and mobilization, Regular monthly meeting, Vegetable farming and cereals farming
e. Fund collection and mobilization, Regular monthly meeting, Vegetable farming, seed production
f. Others ……..

9. What do you understand by participation?

.....

10. In which type of group activities do you mostly get involved?

a. Group meeting b. Planning of group activity
c. Resource mobilization d. Fund collection
e. Others ……..

11. Who decides what activities to under take in your group?

a. President b. all group members discussion

c. Male members (in case of mixed group) d. leading members of groups

12. Do you have role in decision making?

a. Yes
b. No

If yes what type of subject matter, specify
……..

If not why not ……

13. In what group do you prefer to participate?

a. Women group b. Mixed(male / female) group

c. Same ethnic group d. Same education level groups

e. Same age category group f. Group in the same area

h. Others ……..

14. How often do extension workers contact you?

a. Once a month b. Twice a month

c. Once at trimester d. Not at all

e. Others…….

If contacts, Why ……..

15. Do you know about ASC level agriculture training conducted by DADO/ ASC?

a. Yes
b. No

16. If yes then, how do you know about Agriculture Training?

a. Extension workers
b. Medias (Radio, TV, pamphlet)
c. Farmers group
d. Elite (progressive farmers)
e. Other organisation (name organisation)
f. If other please specify

17. Have you attended in training program by DADO?

a. Yes
b. No

If yes, how many times……..

If not , why……

18. Do you like ASC level agriculture training program?

a.Yes
b.No

If yes, why do you like ……..

If no, why do you not like …….

19. What training methods were used in agriculture training?

a. One way lecture b. Interactive lecture

c. Interactive lecture with group discussion d. others ……..

20. Do you have any constraints in participating training?

a. Yes
b. No

If yes, then what type of constraints?

Specify…….

21. What kind of training do you like?

a. Plant protection b. Vegetable farming

c. Cereals farming d. Orchard management

e. Others

Why …….

22 How often DADO / ASC organised the agriculture training program in your area?

a. Once in a month b. Once in a 6 months

c. Once in a year d. None of the training in the year

e. Others ……..

23. If no, why the DADO/ASC is not organising training in your areas?

a. DADO has limited budget
b. Limited number of trained manpower
c. Limited accessibility for extension workers
d. All of above
e. If other please specify,

24. If yes, how was the participation of women farmers?

a. Just listerning b. Active discussion

d. Bringing new topics d. Partial discussion

25. In your view, how can participation of women in training be improved?

…….

II Questionnaire for Extension Workers

1. Name of staff:
   Sex:
   Age:
   Work Experience:

2. Position:
   a. Junior Technician (JT)
   b. Junior Technical Assistant (JTA)

3. Name of your Agriculture Service Centre (ASC):

4. How many VDCs covered by your ASC?

   .....

5. How many farmers groups formed by DADOs are on your working area?
   Total ……

   a. Male farmers group ……. b. Mixed farmers group…….

   c. Female farmers group……..

6. How are the groups formed in your working area?

   a. DADOs target program b. Interest of farmers

   c. Both d. Other…….

7. Is there a benefit of group formation to farmers according to you?
   a. Yes
   b. No

   If yes what……..

   If no why ……

8. What benefit did you and your organisation get by making farmers group?

   a. Efficiency on delivery of basic agriculture extension services to the group
   b. Require few resources as compare to individual contact
   c. Coverage of larger farming community
   d. Dissemination of technology faster
   e. All of above
   f. Others please specify ……

9. How often do you contact with farmers group?

   ……

If contacts, Why ……..

10. Do you think it is important to involve women in training?

……..

11. In your view which category of women in group do you fill easy to work with?

a. Educated b. Literate

c. Same ethnic d. Similar age

e. Married f. young

g. others ……

12. What do you understand by participation?

……

13. What extension role do you preformed when working with farmer? Give rank to the following extension role. 1 to 4, 1 least performed 4 most performed

Extension role	Rank
Facilitation of group process	
Trainer	
Social Mobilizer	
Resource person	

14. Please specify at what activities you are being called by farmers groups in your working areas?

……

15. Whom do you contact most during your field visit?

a. Male Farmers b. Female Farmers

b. Leader farmers d. Whole Group

16. How are decision made in groups?

.....

By whom …….

17. What kind (topic) of training do you provide to the women farmers?

.....

18. What kind of trainings are demanded by women farmers?

a. Plant protection b. Vegetable and fruit production

c. Social mobilization d. Don't know

e. Others ……

19. How would you rank women and men participation in training, give a tick in the appropriate box. ?

Participation	Women	Men	Reasons for chosen answer
Very low			
low			
moderate			
high			
Very high			

20. What constraints do women farmer face in participating in training?

.....

21. What affects you as an extension worker in reaching women farmers?

a. Transportation b. Communication

c. Culture (religion, language) d. others ……

22. What constraints do you face in working with women farmers?

.....

23. In your view, how would the participation of women farmers in training can be improved by extension organisation?

.....

Annex- 4

Names of Respondents

I Farmers Respondents

No.	Respondents farmer	Address	Age	Sex	
				Male	Female
1	Radha Devi Ojha	Methinkot VDC- 3	55		Female
2	Susma Ojha	Methinkot VDC- 3	28		Female
3	Januka Adhikari	Methinkot VDC- 3	45		Female
4	Kalpana Adhikari	Methinkot VDC- 3	26		Female
5	Radha Ojha	Methinkot VDC- 3	62		Female
6	Rita Ojha	Methinkot VDC- 3	30		Female
7	Ishawari Adhikari	Methinkot VDC- 3	32		Female
8	Laxmi Bika	Fulbari VDC- 8	28		Female
9	Swarswati Pariyar	Fulbari VDC- 8	30		Female
10	Mina Pariyar	Fulbari VDC- 8	22		Female
11	Fulmaya Tamang	Fulbari VDC- 8	55		Female
12	Jamuna Adhikari	Fulbari VDC- 8	30		Female
13	Subhadra Parujali	Fulbari VDC- 8	35		Female
14	Goma Parajuli	Fulbari VDC- 8	50		Female
15	Sakuntala karki	Methinkot VDC- 8	21		Female
16	Goma Kafle	Methinkot VDC- 8	24		Female
17	Laxmi Kafle	Methinkot VDC- 8	30		Female
18	Parbati Baral Kafle	Methinkot VDC- 8	27		Female

19	Kamala Shrestha	Methinkot VDC - 8	35	Female
20	Chandrawati Karki	Methinkot VDC - 8	32	Female
21	Kausalya Kafle	Methinkot VDC - 8	28	Female
22	Radha Adhakari	Fulbari VDC- 6	45	Female
23	Gayatri Acharya	Fulbari VDC- 6	30	Female
24	Sabitri Dhital	Fulbari VDC- 6	52	Female
25	Parbita sapkota	Fulbari VDC - 6	35	Female
26	Shuva laxmi shrestha	Fulbari VDC - 6	32	Female
27	Bishnu maya shrestha	Fulbari VDC - 6	40	Female
28	Thuga Kumari Dhital	Fulbari VDC - 6	33	Female
29	Parbati Humagain	Daaraune Pokhari VDC -8	37	Female
30	Januka Humagain	Daaraune Pokhari VDC -9	40	Female
31	Susila Humagain	Daaraune Pokhari VDC -10	42	Female
32	Raama Humagain	Daaraune Pokhari VDC -11	35	Female
33	Rita humagain	Daaraune Pokhari VDC -12	38	Female
34	Maili Sarki	Daaraune Pokhari VDC -13	50	Female
35	Subhadra Sarki	Daaraune Pokhari VDC -14	25	Female
36	Sabitra Khanal	Khanal thok VDC - 7	32	Female
37	Gita Khanal	Khanal thok VDC - 7	28	Female
38	Bimala Khanal	Khanal thok VDC - 8	27	Female
39	Pabitra Khanal	Khanal thok VDC - 6	35	Female
40	Radha Khanal	Khanal thok VDC- 6	25	Female
41	Kamala Pariyar	Khanal thok VDC - 5	25	Female
42	Kalika Pariyar	Khanal thok VDC - 6	22	Female

II Extension Workers Respondents

No.	Respondents Extension worker	Address	Age		Sex
1	Badhri prashad Sharma	Bhakundebeshi ASC	47	Male	
2	Krishna prashad Dhital	Bhakundebeshi ASC	25	Male	
3	Mandil Krishna Shrestha	Bhakundebeshi ASC	45	Male	
4	Rameshowar Shrestha	Dolalghat ASC	20	Male	
5	Ram Saran Jangam	Banapa ASC	44	Male	
6	Beldev KC	Banepa ASC	44	Male	
7	Pratima Neupane	Banepa ASC	25		Female
8	Bharat prashad Parajuli	Panchkhal ASC	45	Male	
9	Harihar Adhakari	Panchkhal ASC	45	Male	
10	Govinda bahadur Deuja	Khopasi ASC	48	Male	

Annex-5

Photos

Photo: Women farmers group meeting

Photo: Researcher filling questionnaire with woman farmer

Photo: Researcher filling questionnaire with woman

Photo: Women farmers and extension worker doing group work

Photo: Researcher on the spot filling questionnaire

Photo: Field level extension worker filling Questionnaire

Photo: Discussion with Senior Agriculture Development Officer of Kavre District.