

# **Use of Guidelines and Strategies in Farmer Training Centers**

## **A case study of Shebdino district in Southern Nations Nationalities and Peoples Region (SNNPR), Ethiopia**

**A research report submitted to Van Hall Larenstein University of Applied Sciences (Part of Wageningen University and research Center) In partial fulfillment of the requirements for the Degree of Masters in Management of Development (MoD) Specialization: Training Rural Extension and Transformation**



**By Tsehaynesh Kidane Belay  
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**Wageningen  
The Netherlands**

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I dedicate this thesis to my late parents  
Qes Kidane Belay and Ms. Tsege G/Egziabher and my elder brother teacher Abebe Kidane  
I still remember their love and care for me  
Thank you for all your love and everlasting prayers

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## LIST OF ABBREVIATION

ADLI	Agriculture Development-Led Industrialization
ATVET	Agricultural, Technical, Vocational and Education Training
AED	Agricultural Extension Directorate
ARDO	Agricultural and Rural Development Office
BoARD	Bureau of Agriculture and Rural Development
CSA	Central Statics Agency
DAs	Development Agents
FHH	Female Headed Household
FTCs	Farmer Training Centers
HRD	Human Resource Development
IIRR	International Institution of Rural Reconstruction
KSA	Knowledge, Skill and Attitude
MoARD	Ministry of Agriculture and Rural Development
MHH	Male Headed Household
MW	Married Women
MDGs	Millennium Development Goals
MoFED	Ministry of Finance and Economic Development
PRA	Participatory Rural Appraisal
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
RCBP	Rural Capacity Building Project
SNNPR	Southern Nations Nationalities People Region
SAIEA	Southern Africa Institute for Environmental Assessment
SWOT	Strength, Weakness, Opportunities and Threats

## **ABSTRACT**

Ethiopian agriculture is characterized by conventional and survival farming system and access to modern technology and fundamental education is very limited (MoFED, 2003). One of the strategies to implement an agricultural extension system effectively is capacity building of farmers and pastoralists through training.

Farmers Training Centers (FTCs) are institutions which play a major role in the upgrading of skills, attitudes and knowledge of male and female farmers and pastoralists. The main objective of FTCs is to provide practical training. However, many FTCs focus on theoretical rather than practical training and the problem with that was this type of training has a negative effect on the overall skill and knowledge of trainee farmers. Therefore, there arose a need to conduct a research. The objective of this research is to explore and recommend the possible options to make FTCs trainings more practical. The research was carried out as a case study in two FTCs within two sites (Howolso and Remda) of Shebdino district in SNNPR.

The respondents who have participated in semi-structured interviews were one district extension expert, from two sites 6 Development Agents (DAs) and 40 farmers (16 of them are female farmers 2 of them are untrained). Based on the checklist, PRA tools used to extract data including focus group discussion, observations were also done in addition to the individual interviews.

According to the findings, DAs have difficulties to organize training according to the set standards/guidelines for a variety of reasons. This has led to trainings, which were only moderately appreciated by farmers who had been trained there, and hence, numbers of trainees has been observed decreasing over the course of training. What DAs did instead to make farmers training bit more practical, was to make use of alternative strategies, such as visiting model farmers' farms, district demonstration sites and school farms.

Based on the research findings, the following major recommendations have been made for practicality of farmers training. FTCs training to be more effective and resource-efficient, the number needs to be limited, revision of FTCs guidelines, at each level there is a need of continues follow up and evaluation program, alternative strategies should not be considered 100% as practical training, encourage female farmers to participate in different agricultural training. It was also recommended that additional technical training should be offered to DAs, in order to equip them and improve their level of expertise as effective providers of farmers training.

## CHAPTER ONE: INTRODUCTION AND BACKGROUND

Ethiopian agriculture is characterized by conventional and survival farming system, whose access to modern technology and fundamental education is very limited. Agriculture is the main stay of the country. The low development of investment on agriculture labor force is one of the problems that hamper the alteration of the agricultural sectors. By realizing this problem the government of the country has a big intention to eradicate poverty. That is why in the year 2003 the government developed a national development policy and strategy which is known as Agricultural Development Led Industrialization (ADLI).

ADLI is a policy that uses labor extensively and land intensively. Therefore, in deducing this development alternative to our specific situation through the use of technologies, the government aims to transform Ethiopia's subsistence farms to commercial farms. To achieve these aims, there is a need of personnel trainings in agricultural development at various educational levels (MoFED, 2003). As it is discussed before, the main development objective of Ethiopian government is poverty eradication. Hence, the country's development policies and strategies are geared towards this end. One of the programs which are being practiced in the country is a Plan for Accelerated and Sustainable Development to End Poverty (PASDEP). It is a five year program. The main objective of PASDEP is to lay out the directions for accelerated, sustained, and people-centered economic development as well as to pave the groundwork for the attainment of the Millennium Development Goals (MDGs) by 2015. One of the elements of the PASDEP program in the agricultural sector is capacity building of farmers and pastoralists through training (MoFED, 2006).

The Ministry of Agriculture and Rural Development (MoARD) training program seeks to provide "agricultural sector workers with skills more relevant to the evolving needs of employers and the economy" and "to create business oriented and environmentally conscious farmers who can make use of modern technologies and produce quality farm product." The ongoing agricultural training programs focus on enhancing the productive capacity of smallholder farmers, since smallholder production is the driving force of the sector (MoFED, 2003).

Agricultural development needs the organization and promotion of human resource through by means of education and technical trainings. Agricultural extension trainings which are given for farmers and pastoralists are useful to alter and upgrade their farming systems to suit the application of improved agricultural techniques (Mulanda1 et al 1999).

To realize that, MoARD guides Agricultural, Technical, Vocational and Educational Training (ATVET) program in the year 2001/2 in collaboration with the Regional Agricultural Bureaus, to train Development Agents (DAs). The program is aimed to produce middle level skilled, competent and motivated agricultural practitioners who would in turn be potential teachers and/or trainers at each Farmers Training Center (FTC).

FTCs are institutions which were already established and could be established in the future in every site in order to give extension and advisory services, market information, modular training (the type of training which is given based on curriculum) and short term trainings for farmers to increase production and productivity by developing effective agricultural practices in the rural areas ( MoARD, FTCs guidelines, 2009).

To facilitate farmers' training there is a need of FTCs guidelines. FTCs Amharic version guidelines were prepared in 2005. After some time by considering the current agricultural extension services the guidelines has been revised in 2009 at national level in collaboration with representative of regional experts. The rationale of the guidelines is to show the direction how to implement the farmers training in FTCs. Some of the major points which are dealt with in the

guidelines are; the core function of FTCs, facilities which must be fulfilled in the training centers, duties and responsibilities of different actors who assigned from national up to grass root levels.

Farmers training play major role in the promoting of skills, attitudes and knowledge of male and female farmers and pastoralists and also it contributes to shift from subsistence farming to commercial farming system which is useful to increase the ultimate production of farms in particular and for development of the country in general.

**The major functions of FTCs are:**

- To provide modular training which enables farmers get "Green certificate."
- To carry out different agricultural demonstrations sites.
- To serve as information center (market price of products, input type, demand and etc.)
- To provide agricultural extension services.
- To provide computer and telephone services.
- To provide consultancy service on entrepreneurship.
- To serve as permanent exhibition center (MoARD FTCs guideline, 2009).

According to PASDEP 2006 plan until the end of 2010, the number of established FTCs within the country will be 18,000 (one FTC in each site). These FTCs will be equipped with all the necessary facilities such as training materials, workshop implements, computers connected with district net program etc. In each FTC, a minimum of 3 DAs who are graduates of ATVET College with different disciplines will be posted.

Within the country 25 ATVET colleges have been established. These colleges used to train DAs which are assigned at site levels as trainer of farmers in FTCs. However, only some FTCs are started to train farmers, many of FTCs are still under establishment. According to MoARD, 2010 report, currently 8780 FTCs have been established within the country. This report is collected mainly from 4 regions (Amhara, Tigray, Oromiya and SNNPRs). Out of this 2373 (27%) have started to train farmers and 6408 (73%) have not started to train farmers.

**1.1 The roles and responsibilities of different actors on the functioning of FTCs**

According to FTCs guidelines, different actors have their own roles and responsibilities that can be useful for effective training of farmers. Actors who have being involved on the effective implementation of farmers training are National MoARD, Regional Bureau of Agriculture and Rural Development (BoARD), District office of Agricultural and Rural Development (ARD), DAs and Community administrative extension unit at grassroots levels. Their roles and responsibilities are stated as follows:

**1.1.1 National MoARD**

- Prepares basic standards of training centers infrastructure
- Prepares initial curriculum that can be useful for FTCs programs
- Organizes experience sharing program within the country
- Disseminates appropriate technologies which are generated by researchers and share other countries experiences
- Conducts follow up program and gives technical support based on the identified gaps

**1.1.2 Regional BoARD**

- Based on the plan and strategy of the regions, it prepares the map of the training centers and gives solutions to the identified gaps for improvement
- Adjusts and relates the training need of the region and the curriculum of the training

- Organizes training for DAs to fulfill their skill gaps
- Prepares manual, guideline and disseminate those materials
- Provides FTCs demonstration site materials that could be beyond the capacity of the districts
- Selects model FTCs and carried out experience sharing among training centers within and outside the regions
- Based on the performances of FTCs and DAs, it provides prizes to motivate them
- Follows up and monitor the effectiveness of FTCs programs and take corrective options

### **1.1.3 District Office of ARD**

- Facilitates important situation during the selection of appropriate FTCs sites
- Facilitates appropriate effort to fulfill farmers training centers workshops and demonstration sites
- Identifies the expertise gap of DAs and reports to regional BoARD
- Prepares annual budget which is beyond the capacity of DAs, that are needed for implementation of farmers training
- Follows up and evaluates the appropriate usage of the allocated budget of the FTCs
- Assigns supervisors who follow up and evaluate the effectiveness of FTCs programs
- Follows up and evaluates the training and if there is some gaps, it takes corrective action
- Follow up the activities of FTCs committee which has formed at grassroots levels
- Plans the activities and budget to district council, then based on the confirmation of the council, it facilitate the execution of these activities
- Facilitates to assign one team leader from 3 DAs at site levels.

### **1.1.4 DAs at grassroots level**

- Provides practical and theoretical training for male and female farmers
- Follows up and support trained farmers for practicality of agricultural activities which is developed by training
- Collects, analyzes and uses important data which are useful for effectiveness of farmers training
- Facilitates to establish and organize exhibition at grassroots levels
- Facilitates to produce market oriented agricultural products which can be harvest in that specific areas
- Gathers and provides seasonal data which are useful for rural farm communities
- Adjusts and demonstrates practical exercises that can be useful to increase additional income for trained farmers
- Establishes different demonstration sites, registers important information and carries out the follow up programs
- Prepares and provides reports on farmers training for concerned bodies

### **1.1.5 Community administrative extension unit at grassroots levels**

- Plans and implements activities that can be useful to strengthen FTCs
- Facilitates for effective farmers trainings and establishment of different demonstration sites
- Motivates and initiates the communities about the importance of FTCs
- Participates in the selection of male and female farmers who can be trained in the FTCs
- Follows up the implementation of FTCs
- Facilitates and initiates trained farmers for practical implementation of their training

According to MoARD FTC guidelines 2009, to make farmers training effective, FTCs should be equipped with all the necessary human and physical facilities, these are presented as follow:

- **Human facilities** which must be fulfilled in the FTCs are DAs with different disciplines (Crop science, Animal husbandry and Natural Resource Management) in addition there is a need of assistance cooperative organizer and assistance veterinary technician extension worker.
- **Physical facilities** which must be fulfilled in the FTCs are:
  - Class rooms and workshops with essential implements
  - Exhibition room which is useful to display the agricultural technologies
  - Demonstration sites
  - Residence for DAs
  - Computers connected with district net program and
  - Meteorology center

According to MoARD FTCs guideline 2009 and PASDEP 2006, there are points which should be governed as guidance/rules in the FTCs; those points are presented as follow:

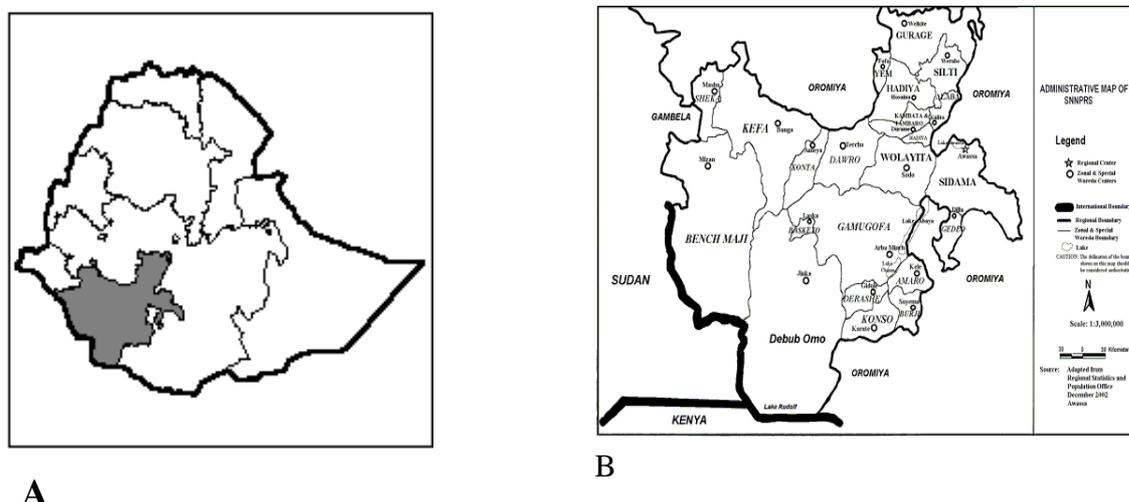
- With regard to the extension service, it is envisaged that all farmers will have access to agricultural extension services during the PASDEP period (the approach will be through organizing farmers into groups and the group leader will serve as a contact farmer). The pastoral mobile extension service will follow the seasonal movement of the pastoral communities based on wet and dry season, grazing areas and base camps.
- All agricultural extension activities will give due emphasis to gender integration. Agricultural training and agricultural extension services will identified to benefit both female and male farmers. Throughout the planning period all of the Female Headed Households (FHH) estimated at 2.69 million will get access to extension services and an estimated 30 % of the female in Male Headed Households will also get access to training and extension services on agricultural extension packages that will benefit them. A farm is not often the personification of a singular individual male farmer. Women are an essential part of the farm, and significant stakeholder for agriculture (Vanclay, 2000). In the rural areas, 50% of the population is female farmers (CSA, 2008). Most of the time women are part of marginalized people; to deal with them it requires special efforts. In addition, it should be known that which type of information is required for whom and when it should be given to enable them more participative (SAIEA, 2005).
- The duration of the training in the FTCs varies depending on the types of the module; the time limit is 6 months in a total of 300 hours. It is structured with 80% practice and 20% theoretical that means more emphasis is given for practical training where trainees would learn by doing rather than classroom learning. Within a week the training is given for two days. In each day the total hours that should be covered are 6, out of this 4 hours for practical and 2 hours for theory. Therefore, within a week 12 hours should be covered. If farmers accomplish the training, they can graduate and can get "Green certificate".
- During the selection of trainee farmers, there shouldn't be a big variation in the composition (with their age and educational levels).
- Trainee farmers who should participate in the training program must be model and motivated farmers.
- Trainee farmers should have the experience of writing and reading.

According to PASDEP 2006 and FTCs 2009 guideline, farmers training should be conducted in each region at site level within the country. SNNPR is the region where the research carried out is rich in abundant water resources which have tremendous irrigation potential. Even though there is high resource potential for crop, livestock and natural resources and different regional

development attempts to increase production and productivity, there still exist natural, social, production and capacity problems. Lack of improved agricultural technologies, unpredictable climate change such as recurrent drought, low animal health coverage and degradation of natural resources are the major ones.

A total of 108 staff including 14 female are involved in the processes and sub processes at the BoARD. At the grass root level at least 3 DAs, assistance cooperative organizer and assistance veterinary technician are assigned to provide technical assistance and support for farmers. A total of 16387 staff including 12332 assigned at site level involved in agricultural development of the districts (RCBP, Mid-term report, 2010).

SNNPR lies in the Southern and Southwestern part of the country. It has common borders with Kenya in the South, Sudan in the South West, Gambella region in the North West and the State of Oromia in the North and East (Fig 1). Until the year 2010, the total number of FTCs which have been established in the SNNPR is 3689 and the numbers of DAs who are assigned in different FTCs are 13080. In the year 2009, at regional level the total numbers of farmers who have got agricultural training are 30336, out of this 93% are Male Headed Households (MHH) and 7% are Female Headed Households (FHH) (SNNPR annual report, 2010).



**Figure 1 Map of research location A) Ethiopia-SNNPR B) SNNPR**

Shebdino is one of the districts within the region, it has 22 km distance from Hawassa. Its office of Agriculture and Rural Development plays major role in managing the overall agricultural extension services. One of the agricultural extension services is providing of farmers training. Most of the farmers training is given in the FTCs. FTCs should be built in each sites within the district. According to the need assessment report of Agricultural Extension Directorate (AED) within MoARD, which has been collected during 2007/08 and also my observation, those FTCs which are found in Shebdino district, as most of other FTCs instead of practical training these are focus on theoretical training.

**1.2 Problem statement**

According to MoARD 2009 FTCs guideline, the duration of the training in the FTCs varies depending on the type of module; the time limit is 6 months in a total of 300 hours. It is structured with 80% practice and 20% theory. More emphasis is given for practical training, where trainees would learn by doing rather than by classroom learning.

This type of training approach provides more chance to farmers to be more creative to relate their experiences with the given training, to exercise practicing and clarify patterns. Practical training

contributes more to remember and improve their performances in their farming activities. However, many FTCs are underperforming according to the FTCs guideline; they mainly focus on theoretical rather than practical training. This has influence on the overall skill and knowledge of trainee farmers and it needs practical response. Therefore, the research has focused on the current function of FTCs at the study areas from practical point of view.

### **1.3 Research objective**

The objective of the research is to explore and suggest the possible options to make FTCs training more practical rather than theoretical by analyzing the current function of FTCs.

### **1.4 Research scope**

The research scope is in two FTCs within two sites (Howolso and Remda). The selection of two sites was made in consultation with the head and senior extension expert who is responsible to follow up FTCs performances within Shebdino district

#### **1.4.1 Research questions (Main and sub research questions)**

This research has the following research questions:

1. What barriers do FTCs staff (DAs) encounter to carry out practical training according to the intended MoARD guideline?
  - 1.1 What is the perception of DAs on the FTCs guideline?
  - 1.2 What facilities are lacking in the FTCs and what are the reasons for these lacks?
  - 1.3 What training guidance/rules are not practically implemented in the FTCs?
  
2. How do the FTC staff (DAs) deal with the barriers for the practicality of farmers trainings?
  - 2.1 What alternative strategies for training are currently being used by DAs?
  - 2.2 What are the positive and negative results of using these options?
  - 2.3 What do DAs do to organize follow up and support after the completion of the training?

## CHAPTER TWO: LITERATURE REVIEW

This chapter elaborates concepts which are related to the research themes. The details presented as follows:

### **2.1 Training**

Human Resource Development (HRD) is one of the many options in achieving the vision for development in any country. Training can be one of the best ways to enrich human resources. It aims to enlighten people's understanding and enable them to use this power towards the success of their vision of self-reliance and self-sufficiency. It covers the development of peoples' KSA (Knowledge, Skill and Attitude) as they deal with their day-to-day life situation (IIRR, 1997).

Training is important tools for assisting development workers in the transferring of their program objectives and plans. Often we are faced with the need to change something or to implement a new way of doing something. It allows us to identify those who will be engaged in and/or affected by the result. We may also need to assist people with new knowledge and /or with new skills that are necessary to implement development. Training is, therefore, a potential solution (FAO, 2002). Training is more effective in producing the intended outcome, if it is related to one's actual work situation i.e. a felt problem, or a problem that is in some other way is experienced as important or relevant (Surur, 2007).

Training of farmers is useful to progress the income of the farmer families, to preserve sustainability of the environment, and to engage the farmers in the national economies (people to people, 2009). Farmer training is also a very important part of knowledge transfer and without it; change to new practices will be very slow (Mulanda1 et al 1999). Field visits and practical exercises are an effective training and information dissemination tool (Ilahang et al 2006).

Training activities should allow the farmer to obtain directions utilizable skills, and also simultaneously to develop their abilities to analyze, act, initiate and negotiate. The training should allow the farmers to develop their economic and technical results and increase their autonomy vis-à-vis external intervention.

#### **2.1.1 Principles of farmers training**

According to Perret.S and Mercoiret.M eds., 2003, past experience shows that during farmers training, the best results are obtained when the following six principles are respected.

- Training is more effective when it is based on farmers need and interest,
- Training must take into account the farmers' indigenous knowledge,
- When a training session has objectives and content that do not consider much farmers' priorities and needs,
- Training must include both practical and theoretical aspects because, adults learn more when there are practical exercises. Practical training will allow them to undertake concrete actions and quickly improve their production systems and livelihood,
- An effective training activity is directly linked to the establishment of a real dialogue of a mutual learning relationship between trainers and trainees. Training program that aims to increase farmers' responsibility must not be lead only by external experts. There must be the participation of farmers.

- The training must also be subject to monitoring and evaluation. After the training is given, follow up and evaluation step is very important to support and motivate trained farmers. However, most of the time this activity is ignored by most of the trainers.

## **2.2 Training need assessment**

Training need assessment is one of the major tasks for those who are concerned with the planning of education or training programs. According to Caffarella (2002), the training needs are described as difference or gap between what presently is and what should be or expected result. This gap in understanding and ability could be recognized from an individual, organization or community. Participatory needs assessment is important to identify the information and training requirements of the local population or participant. According to World Bank (2001) which is cited in Leeuwis (2004), participation is a process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them. To conduct successful needs assessment, the program planners must take into account the background, characteristics and practices of the particular group of learners who have interest to attend the program.

## **2.3 Farmer to farmer training**

Farmer to farmer training is very effective when the right “farmer trainers” is well trained. These trainers are able to convince their fellow farmers much more easily than extension workers, because they are also farmers themselves. Their trainees become convinced that if they (farmer trainers) can do it then the trainee farmers should be able to do it as well (Mulanda1 et al 1999).

Rolling (1988), cited in the CIAT International Workshop, 1999, indicated that, in many developing countries, extension services lack the human resource capacity, so that, much of the information obtained by farmers is circulated by other farmers, either directly by sharing experiences or indirectly through display of sample field practices and the resulting effects. In addition farmer facilitators must be chosen with care and given supplementary training on facilitation methods that can be useful for farmers’ interaction and horizontal communication.

## **2.4 Extension agents**

Extension agents play major role in the different agricultural activities. Extension agents must help farmers to contribute in extension programs and use of management direction and practices in enhancing their agricultural production (Chizari et al 2008). However, in the rural areas, high input prices, shortage and late delivery of inputs, lack of extension materials, extension agents’ limited practical skills and experience in using extension materials, shortage of working capital, shortage of extension personnel, unsuitability of some technologies to the farmers’ conditions and too much activities of extension agents are some of the barriers to the adoption of modern agricultural technologies/ practices (Belay, 2004). According to Leeuwis (2004), extension organization will have to anticipate diversity among farmers, which means that they have to be able to give different advice to different farmers, and treat diversity as a resource rather than as a burden because each farmer has his/her own ability to adopt various innovations.

Therefore, den Bon (1997) cited by Gemo (2005) notes that an extension agent wishing to give reliable advice for farmers must understand not only the extension process but also must have

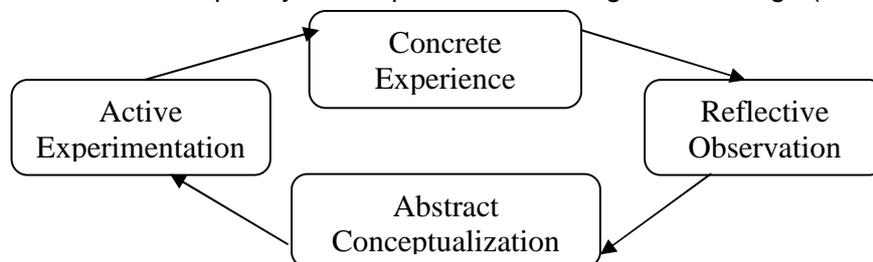
adequate technical knowledge of the discipline in which he/she is trained. Therefore, to facilitate extension services a sound training program in extension organization is most important for individual professional development agents and hence for the importance and effectiveness of the organization.

## 2.5 Learning Theories and Model

Learning is the process through which we become the human beings we are, the process by which we internalize the external world and through which we enrich our experiences of that world. Learning is needed at several levels to empower individual, social and cultural capital that include, among other things, improving human skill and capacity, standards and values into development (Hyama and Keen 2004).

**Experiential learning:** The process whereby knowledge is created and enriched through the transformation of experience as explained by Kolb's model of learning, that included concrete experience (visualizing phenomena), observation and reflection (facilitating discussion), acquiring knowledge through experience or idea initiation (clarifying patterns), and active experimentation (action) that function in learning cycle (Kolb, 1984). During experiential learning, put into practice became a more essential situation in teaching and learning (Jarvis, 2003).

The learning procedure often starts by a specific action by a person or group. The learner reflects on the experience by asking question to be aware of the effect of the action. The learner then tries to dig out general principles that explain the experience, and to describe conclusions from these. Finally, the learner tests these conclusions by applying them in a new situation. The cycle continues, with the complexity and depth of the learning at each stage (Leeuwis, 2004).



**Figure 2 Kolb's model of experiential learning cycle**

According to the above model of experiential learning cycle (Kolb as cited in Leeuwis 2004), to be effective in the process of learning there are four different kinds of abilities, these are presented as follow:

They should be able to:

- Engage themselves fully, openly and without bias in new and tangible experiences;
- Reflect on and examine these experiences from many perspectives;
- Produce concepts that put together their observations in to logically sound theories conceptual conceptualization;
- Utilize these theories to make decisions and solve problems active experimentation.

For learning to 'stick', it has to be internalized. Trainees should make it their own. Learning occurs when the learners are wholly and actively involved in their learning all the time, and when they are allowed to work at their own momentum.

## **2.6 Principles of adult learning**

Needs assessment decide what learners want to learn? Learning must entertain their needs and interests. Adults come to learning with personal goals and objectives. In addition, according to Tshiula (2005), adult learning has the following principles:

**Dialogue:** Adult learning is best achieved through conversation. Adults have enough life experience to interact with any teacher about any subject and will learn new attitudes or skills best in relation to that life experience. Dialogue needs to be encouraged and practiced in formal training, informal talks, one-on-one counseling sessions, or any situation where adults learn.

**Safety in environment and process:** Make people feel comfortable when making mistakes. Adults are more interested to learning when they are both physically and psychologically comfortable.

**Sequence and reinforcement:** Start with the easiest ideas or skills and build on them. Introduce the most important ones first. Reinforce key ideas and skills repeatedly. People learn faster when information or skills are presented in a prearranged way.

**Practice:** Practice first in a safe place and then in a real setting. Ideas, feeling, and actions: Learning takes place through thinking, feeling, and doing and is most effective when it occurs across all three.

**20/40/80 rule:** Learners remember more when visuals are used to support the verbal presentation and best when they practice the new skill. We remember 20 percent of what we hear, 40 percent of what we hear and see, and 80 percent of what we hear, see and do.

**Relevance to Immediate relevance and future relevance:** People learn quicker when new information or skills are associated to what they already know or can do.

**Engagement:** Involve learners' emotions and intellect. Adults have a preference to be active participants in learning rather than passive recipients of knowledge. People learn faster when they actively process information, solve problems, or practice skills. In addition Motivation, Respect, Affirmation, clarity of messages and feedback are the part of the principle of adult learning.

## **2.7 The professional characteristics of adult educators**

Many adult education practitioners are not schooled in the theory of adult learning. Consequently, they do not identify themselves with the field of adult teaching. Instead, they view themselves as health educators, nutritionists, home economists or in terms of other job titles that obscure the educational nature of their activities. A critical analysis of the field reveals core areas of study that benefit a professional adult educator are:

- First, such educators need to be recognizable with the philosophical foundations of adult education. This is significant step in the professionalization of the field. For one to identify with a field, one must be schooled in the theory of that field. There is an element of emotional attachment that extends from being associated with a particular field through schooling, which is different from being associated through practice only.
- Secondly, professional adult educators must possess a critical perspective of policies and practices of adult education. Knowledge of policy and policy choices enables adult educators to appreciate the suitability of various adult education programmes to the desires of a continuously changing society. Similarly, knowledge of the general practice

of adult education enables adult educators to appreciate the scope of adult education as well as its limitations.

- Thirdly, professional adult educators require to be schooled in the development of adult education programmes. Given the context-specific nature of adult learning needs, this is an indispensable part of the professional training of adult educators. They need to know the vital steps involved in the development of programmes which will address the learning necessities of their clientele.
- Fourthly, adult educators must be schooled in the organization and managing of adult education programmes. This essentially engages an analysis of the appropriateness of various organizational and management strategies for the administration of adult education programmes. Finally, adult educators must be familiar with methods of investigation in education. Adult educators are often required to carry out research (e.g., needs assessments) as part of the adult education procedure. In addition, adult educators can benefit from the study of others (e.g., study on ways to increase participation in adult education programmes) and use it to progress their practice (Mpofu, 2003).

## ***2.8 Training methods and materials***

Training methods and materials provide trainees with learning activities and as well help the trainers to successfully present and deal with the training content. Arrangement of methods and materials are preferable since, some methods are most suited for presenting, others for encouraging participant contribution and yet others are best as activities outside the training room. In setting objectives, the emphasis is on the learners, rather than on the instructors. Everybody learns in his or her way thus, successful training requires using a variety of methods, including visual and auditory methods and aids. Effective training involves the learners in the use of several sensory modes or representational system, i.e. provides observation, discussion and practice (Surur, 2007).

## ***2.9 Other countries experiences on farmers training***

Over the recent years, there has been a positive trend that showed remarkable increase in the funding for farmers' training allocated by its country government, for example Malaysia, in the plan of 2006-10 the government of the country allocate budget for agricultural-based training that can benefit farmers (Baharein and Dola 2010).

MoARD 2009 FTCs guideline is adopted from countries experiences for example India and Indonesia. Therefore, according to the information of the guidelines, in India, there is farmers training centers which play major role in the provision of agricultural extension training. These FTCs are established in the rural areas and its recurrent budget is allocated from government fund. In India and China there is the provision of farmers training by focusing on area specific agricultural activities. In these countries there is also training based on farmers need. In Indonesia there is farmers training which is given by well-organized and experienced private farmers.

## CHAPTER THREE: RESEARCH METHODOLOGY

This chapter explains the description of the study area, sample size, methods of data collection and analysis, as well as limitation of the study.

### 3.1 Description of the study area

Shebdino district is one of the districts in the region where the research was conducted. It is bounded by Hawassa town in the North, Dale district in the South, Gorche district in the East and Borchu district in the West. The total area of the district is 26,990 hectare, out of this 23,093 hectare is cultivated land, 2901 hectare is grazing land, 284 hectare is forest, 504 hectare is infrastructure and 208 hectare is covered by others (Churches, Schools, etc.)



Figure 3 Map of Shebdino district

In the district the total number of the rural population is 250,090 (126,737 male and 123,353 female) and the total number of the urban population is 12,520 (6,668 male and 5,252 female). The altitude of the district ranges 1000 - 2950m and annual rainfall of the district varies 900-1500mm. The maximum, minimum and average temperature of the district is 25, 16 and 20.5 degree centigrade, repetitively (Shebdino district ARDO, 2009).

**Table 1 Experts, Administration workers and DAs in Shebdino district**

No.	Respondents	sex		Total	% of female
		Male	Female		
1.	Experts with different disciplines	44	11	55	20.0
2.	Administration workers	14	10	24	41.6
3.	DAs				
	• Crop science	41	5	46	10.8
	• Animal science	39	4	43	9.3
	• Natural Resource Management	48	2	50	4.0
	• Animal Health	8	-	8	-
	• Cooperative	5	-	5	-
	Total	199	32	231	

Source: Shebdino district ARDO, 2009

As shown from table 1, the total number of DAs within the district who assigned at site level is 152. Out of this, 93% is male and 7% female. The number of administrative staffs at district office level is 24. Out of this, 58% is male and 42% female, the rest 55 is extension experts; out of this 80% is male and 20% female.

According to the explanation of the district extension expert, in the district there are 32 sites, among which in the district the research was conducted on two sites (Howolso and Remda).

The total population of Howolso is 6738, out of this, 3346 are male and 3392 female. The total number of HH is 1305, out of this, 1110 are MHH and 195 are FHH. Remda is the other research site, which have 6300 total number of population (3250 are male and 3050 female). The total number of HH in Remda is 1050, among this, 946 are MHH and 104 are FHH ((Shebdino district ARDO, 2009).

In the district 25 FTCs are already established. Out of this, 12 (48%) of the FTCs have already started to give training and the rest are not started. 7 FTCs are being established. These FTCs are established in collaboration with Shebdino ARDO, Plan Ethiopia, regional Rural Capacity Building Project (RCBP) and World Bank. Within the district farmers training in the FTCs have started in 2008. The number of farmers who trained in the FTCs is 330, of which 275 (83%) are male and 55 (17%) are Female farmers.

### ***3.2 Methods of Data Collection and Sample Size***

The research is mainly focused on qualitative data and case study was used as a strategy. One of the characteristics of a case study is that the focus is on depth rather than breadth. Depth is realized by using various labor-intensive methods of generating data (Verschuren and Doorewaard 2005). Literature reviews have been collected and assessed from journals, reports, books and other relevant documents. During collection of data PRA methods are used as a tool.

The respondents who have participated in the research interview were district extension expert, 6 DAs ( one female), 40 ( 24 male and 14 female trained farmers and two untrained female farmers). These farmers have selected randomly from two sites ( 20 from each site ). The reason why I have selected these respondents are: extension expert, he is the responsible person to follow up the performance of FTCs, DAs they are the trainer of farmers and farmers by themselves they are the participant of the training. Therefore, these all have information about the implementation of FTCs. Primary data was gathered through a semi-structured interview based on the prepared checklist. To compliment primary data, secondary data was also gathered from MoARD annual assessment report, Rural Capacity Building Project (RCBP), district basic data and annual report. In addition, to collect primary data and also for triangulation of data, observation and focus group discussion has been carried out by participating 10 male and 10 female farmers in two sites (2 untrained female farmers have involved at Remda site). The lists of respondents are attached in (Annex 4) and checklists which were used during interviews also attached in (Annex 1).

### ***3.3 Methods of data analysis***

Qualitative data was collected and analyzed through field study and explanation. Before data analyzing, there were clustering of data based on the types of questions, answers and respondents (experts, DAs and farmers). Then the data was examined based on related

literature review obtained from different sources. Finally, conclusions and recommendations were made based on the findings of the research.

### ***3.4 Limitation of the study***

The major limitation of the research as I observed was time constraint for both farmers and DAs because the period of the research conducted was:

- pick season of agricultural activities,
- time of dissemination of agricultural inputs and
- time for preparation of annual plan in collaboration with district extension experts.

## **CHAPTER FOUR: FINDINGS**

This chapter demonstrates the findings of the research work at Howolso and Remda sites in Shebdino district. The major findings of this research are presented based on the research questions as following:

- Description of the respondents (experts, DAs, male and female farmers);
- Perception of experts and DAs on FTCs guideline;
- Facilities (human and physical) and training rules of FTCs guideline, which are not fulfilled and governed in the FTCs;
- Alternative strategies which are being used by DAs for practicality of farmers' trainings;
- The positive and negative results of these alternative strategies and
- Follow up and support program of District office and DAs

### ***4.1 Description of the respondents***

Concerning the overall objective of the research, discussion was conducted with the Head of Extension Department and Senior Extension Expert at the regional level and with Head and vice head of the Agricultural and Rural Development Office at District level. The District Extension Expert was assigned as a responsible person to facilitate and provide important documents.

As it is discussed before, the research was conducted in two sites. The detail information of respondents who were participated in two sites are clarified as follows;

At Howolso site, the total numbers of DAs who have participated during the interview were 2 and both of them are male and their age is within the range of 24-34. One has BA degree in Plant science and the other has a Diploma in Plant science. Both of them have 1 to 10 years work experience. At Remda site the total numbers of DAs who have participated during the interview were 4 (1 female). 3 of them are at the age range of 24-34, and the other one is within the range of 35-45. All of them have Diploma (2 DAs in plant science, 1 in Natural resource management and the other in Animal science).

During the research interview in each site, 10 male and female farmers have participated. At Howolso, from 10 farmers, 3 of them are female farmers and the rest are male farmers. 7 of them were between the age of 20-40 years, 2 of them within the age of 41-60 and 1 farmer was between the range of 61-80. As to their level of education, 6 of them were 7-12 grade, 3 of them 1-6 and 1 farmer was illiterate.

At Remda site, from 10 farmers 3 are female farmers and the rest are male farmers. 10 of them were in the age range between 20-40. Concerning their educational level, 4 of them are 7-12 grade and 6 are 1-6 grade.

**Table 2 Detail information of interviewed farmers at Howolso and Remda sites**

No.	Variables		Research site and no. of respondents		Total no. of respondents	Percent (%)
			Howolso	Remda		
1.	Sex					
		Male	7	7	14	70
		Female	3	3	6	30
		Total	10	10	20	100
2.	Age					
		20-40	7	10	17	85
		41-60	2	-	2	10
		61-80	1	-	1	5
		Total	10	10	20	100
3.	Educational level					
		illiterate	1	-	1	5
		1-6	3	6	9	45
		7-12	6	4	10	50
		Total	10	10	20	100

In general, during the research, as it is shown on Table 2, 14 male and 6 female farmers were interviewed and all of them were trained on the first training round in 2008. Among the interviewed farmers, 70% are male and the rest are female farmers. As well as 85% of the interviewed farmers were between the age of 20 - 40 years, 10% of them within 41 - 60 years old and the rest 5% were 61 - 80 years of age. As to their level of education, about 50% 7-12 grades, 45% were 1 - 6 grades and 5% of the participants were illiterate.

#### **4.2 Perception on FTCs guidelines**

The researcher discussed the FTCs guidelines with a total of 9 persons (district head, vice head, extension senior expert and 6 DAs). 9 of them do not know the presence of FTCs guidelines in the district. However, before the start of the FTCs training most of the DAs have received orientation training on how to train farmers. From the total of 6 DAs, 4 (1 of them female) have participated in the orientation training.

#### **4.3 Training need assessment**

The researcher had a discussion with the district extension expert on the training need assessment processes of the district. The district extension expert indicated that there is no special schedule for training need assessment of DAs in the district, because, their training need can be identified during the follow up program of district extension experts. However, sometimes unplanned training programs are provided by NGOs, even if the training is not based on the need assessment, some experts participate in the given training to use such chances. There was also discussion with 6 DAs concerning farmers' participation on their training need assessment. On the process of need assessment, there is no difference between the two sites. Therefore, from 6 DAs 5 of them stated that, farmers have not participated in the process of the assessment of their training needs. One of the DAs, for example, stated, "It is not important to

ask farmers, because we DAs have much information about them.” District extension expert, DAs and farmers themselves stated that, farmers only participate during the decision of date and time of the training that should be conducted in the FTCs. Therefore, in the two research sites, farmers have selected two days, that is every Tuesday and Thursday, starting from 8:30 - 12:30 in the morning and from 03:00 - 5:00 in the afternoon.

#### ***4.4 Farmers training in the study areas***

According to FTCs guidelines, which is presented in chapter one, in the research areas, the training is given for 6 months for 300 hours. The training is given for two days within a week, which is Tuesday and Thursday. In one day, the total hour that should be covered is 6 hours, out of this 4 hours for practical and 2 hours for theory. In the research areas DAs play major roles in the provision of farmers training in the FTCs. In two sites the training was started in 2008 and also the training is conducted only once; the next round training is not yet started.

At Howolso, the number of trainee farmers during the start of the training program was 60. But after some days, their number started to decline. At last, the number of trained farmers reached 48, of which, 12 are female and 36 male.

At Remda site, the number of registered farmers is 60. Out of this, 48 are male and the rest are female. According to the explanation of DAs, all farmers who had been registered for the training were not always coming. At times there was absenteeism and the number of the trainee could be 30, 35 or so.

#### ***4.5 Human and physical facilities of FTCs in the study areas***

In the process of farmers training, there is a need of necessary human and physical facilities. Human and physical facilities are crucial to implement farmers training within the intended period of time. According to district extension expert’s explanation, within the district, at Howolso and Remda sites, there are 8 DAs but during the research two of them were on annual leave. In addition to these DAs, there are also one assistance cooperative organizer for 3 sites and also one assistance veterinary extension worker for 5 sites.

In addition, there was discussion with 6 DAs on FTCs physical facilities. At Howolso site 4 of the DAs list the following physical facilities, which are not fulfilled in the FTCs: Different demonstration sites (for Poultry production, Horticulture production, Natural Resource Management), Farm implements, DAs residences, FTCs fences, timely supply of improved seed and fertilizer. At Remda site 2 of the DAs, in addition to the above physical facilities they have mentioned exhibition and workshop rooms. 6 of the DAs stated that lack of materials was due to budget constraints in the district. These physical facilities which are not fulfilled in the FTCs were also listed by district extension expert.

#### ***4.6 Farmers training guidance/rules in the FTCs***

As it is discussed before, out of 6 DAs 4 of the DAs have attended orientation training before they start to carry out training in the FTCs. So, DAs that received orientation training have some information as to how to train farmers and what training guidance should be used during the farmers training. Based on this information, from 6 DAs, 4 of them raised the training guidance/rules, which were not practically implemented in the research areas of FTCs are clarified as follow:

- The training was given more of theoretical instead of practical because of lack of important materials for practical training,

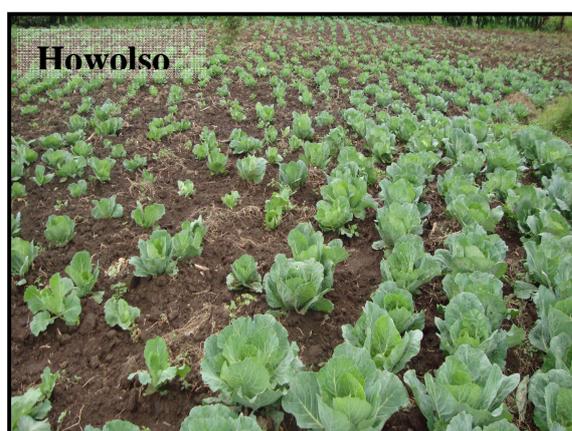
- During the selection of trainee farmers, there should not be a big variation in their age and educational level. However, during the training, there were illiterate and literate farmers within one training round in the same class.
- Trainee farmers were not selected based on their performance and female farmers also not that much included. 2 of them (1 from Howolso and 1 from Remda site) did not raise any points which are related to training guidance/rules. 4 of the DAs told that, these guidance/rules are not put into practice due to the less awareness of the DAs themselves and also community administration in each sites. In addition, district extension expert told that, these FTCs guidelines were not practically implemented because of lack of awareness of experts and DAs on FTCs guidelines and also lack of practical materials in the FTCs.

#### **4.7 Farmer to farmer training in the study areas**

In each site, there is a regulation concerning farmers' trainings. Farmers after having finished their training, they have the responsibility to share their training for untrained farmers. One trained farmer has the responsibility to train or share her/his experience with 5 or more untrained farmers. According the data which was collected from two sites during farmers' interview, 20 trained farmers have shared their experiences with a total of 211 untrained farmers. Out of this, 53% were male farmers and 47% female farmers.

#### **4.8 Alternative strategies**

In the research areas to make farmers training practical, the necessary materials should be fulfilled. However, in the research areas, there was lack of the necessary training materials. According to DAs explanation, to solve this problem and make the training more practical, DAs have used strategies. The type of alternative strategies which are being used by six of the DAs are model farmers' farms, school farms and also district demonstration sites (at Howolso for natural forest management and at Remda for livestock forage production). These alternative strategies are being used in different ways in the study areas. According to their importance, model farmers' farms were chosen by 4 DAs, district demonstration sites were chosen by 1 DA and school farms were chosen by 1 DA. (Samples of model farmers' farms are shown in the next figures).



a) Horticulture Production



b) Traditional and modern Beehives

**Figure 4 Alternative Strategies**

#### 4.8.1 The result of using these alternative strategies

In the two sites, there is no as such much difference on the type of alternative strategies except at Howolso, there is district natural forest management site and at Remda, there is livestock forage production site. Therefore, the findings which were collected from two sites are presented as follows: According to the explanation of 6 DAs, these alternative strategies have positive and negative sides. Concerning the positive side of these strategies, 4 DAs raised points, such as: something is better than nothing, it is useful for experience sharing among farmers and it motivates trained farmers. 2 of them stated that, it encourages model farmers and also it is good to observe the effectiveness of new practices.

On the negative side of these options, 5 DAs raised the following points: when there is visiting program of these alternative strategies, it consumes time and energy; it is not used as practical training. 1 of the DA also told that, sometimes model farmers may not be interested to be visited by other farmers. Moreover, in Remda site one DA stated that, “Currently there is no that much wide alternative strategies in the site, but this condition is good for me to think better on how to make this training more practical. Therefore, for next round, I already have discussed with one farmer to make one model poultry production unit.”

During interview (20 male and female farmers) and on focus group discussion (20 male and female farmers), there was a discussion on the general view of farmers on the given training, which were being used in the FTCs. From the total of 40 farmers, 28 (70%) of them were happy, they said that, because most of the time they were busy on their farming activity, now it is a good opportunity to get more knowledge and also it is good to get more friends and talk some jocks, 8 (20%) of them are not that much happy because some farmers states that they have better things to do and their coming to the training is a waste of time and 4 (10%) of them are in the middle, with a dilemma to say whether they were happy or not happy about the training.

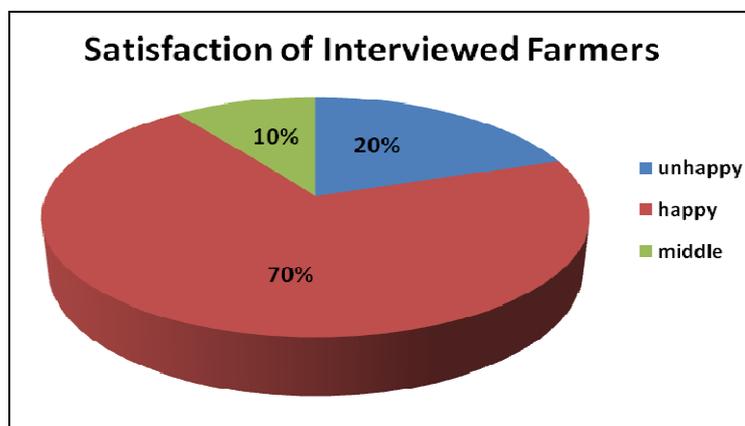


Figure 5 Satisfaction of interviewed farmers on the given the given training

#### 4.9 Follow up program in the research areas

Based on the explanation of the district extension expert, within the district there are 32 sites. To follow up these sites, there is a Subject Matter Specialist (SMS) team, which has 18 experts. This team has two sub teams, and each team has 9 experts. One of the responsibilities of the team is to follow up and support 16 sites, where different agricultural activities are carried out. Therefore, District office and DAs have the responsibility to follow up and support FTCs. The detail information is presented as below:

- According to the district extension expert's explanation, the methods of the follow up program of the district agricultural office was being conducted by discussing with DAs on the current issues of planned agricultural activities at DAs office and field levels. The actual follow up program of the field was done by observing the definite farmers activities, which were being implemented at farm levels. The frequency of the follow up program at FTCs level is 4 times per month. However, most of the time this program is not fixed. It is flexible due to the occurrence of some urgent issues, which need immediate responses. The types of support being given by SMS team are more of filling the gap type, which is observed during the follow up program. In addition, sometimes, DAs should be encouraged whenever necessary to implement effective and seasonal agricultural activities.
- According to the explanation of 6 DAs, each site is divided into 3 sub sites and each sub site is followed by one DA. Each DA has the responsibility to follow up and support 300 farmer households. Out of 6 DAs, only one DA visits each farmer at their home and farm level. 5 of them visit only at farm level. For the period of the follow up program, 6 of the DAs gave advice and demonstrated how to manage and use the introduced new technologies. 1 DA told that, "some farmers' farm is far from the FTC, so it is difficult to reach those farms and also some are not interested to be visited and follow up by DAs."

#### 4.10 Opinions given by male and female farmers on the given training

Both trained male and female farmers gave their feedback and opinions on the positive and negative aspects of farmers training (See Figure 6 and 7).

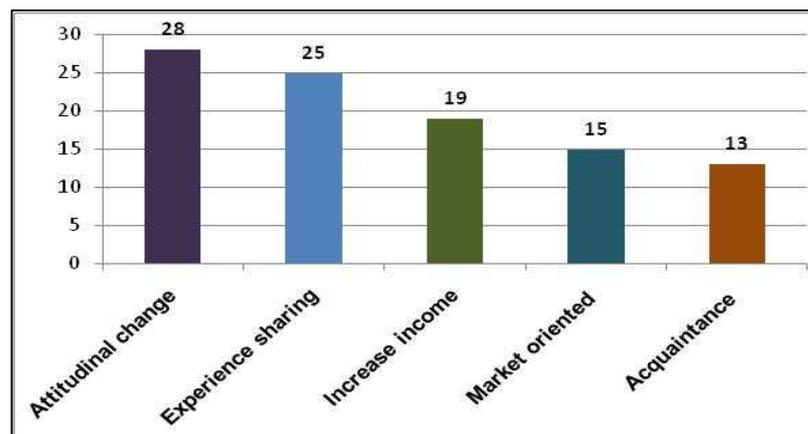
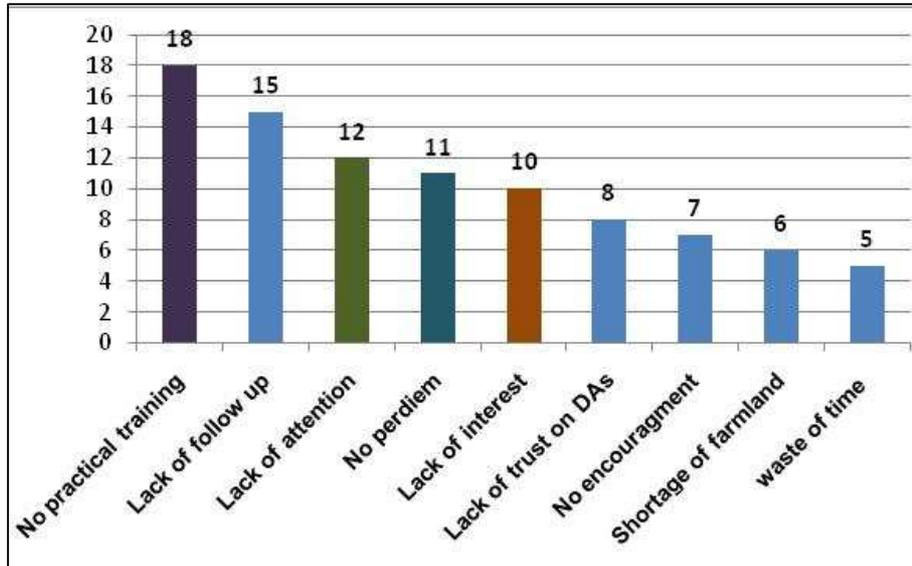


Figure 5 Percentage of positive feedback on the given training

During the interview, highest percentage of farmers indicated attitudinal change on the importance of new practices and technologies as main advantage acquired from the training, while the other benefits were rated as shown above (Figure 6).



**Figure 6 Percentage of negative feedback on the given training**

As shown in the figure, the highest percentage of response on the drawbacks of the training was that the training lacked practical aspect, while the other weaknesses were rated as shown above.

All the above negative issues were also raised during focus group discussion. Moreover, during this discussion, farmers stated that, some farmers who couldn't read and write faced difficulties to attend the theoretical part of the training and also most of the time the training program was interrupted when other urgent tasks were given to the trainers.

At Howolso site, during female farmers' focus group discussion, they stated that, even though they were the participants of the training, sometimes, when there is a visiting program on alternative strategies, DAs have not informed them. They also stated that farmers' training is very good for female farmers as it is for male farmers. In addition, even if they are so busy with different activities, they still need extra training to increase their income because they have heavy responsibility to fulfill family food needs. During the discussion, one woman indicated that, some DAs didn't consider female farmers as farmers. Moreover, another opinion was noted by two untrained female farmers who stated that they need the training as well, and as of now, they only use their indigenous knowledge for their daily agricultural activities.

Female farmers, therefore, from the perspectives of their gender role, they have the following opinions.

- If possible, in addition to male DAs, there also should be female DAs to share their problems with her.
- They need continuous training since they have got additional income after the first training to put aside as saving, in order to fulfill their children's basic need and pay school fees.
- Even if there is shortage of time, they need additional training on saving and credit schemes.

## **CHAPTER FIVE: ANALYSIS AND DISCUSSION**

This chapter discusses the empirical findings of the study and where possible, integrates with the literature reviewed in chapter 2.

### ***5.1 Detailed analysis of the respondents***

The majority of DAs who participated during the research have more than 10 years of work experience and also except one (he has BA degree), all DAs have Diploma in agricultural science, which is useful for farmers training, because they can contribute scientific knowledge.

The majority of farmer respondents were literate (see Table 2), which is good to attend the given training more effectively. In addition, the majority of the respondents were at the age of 20-60 years. Therefore, they have the capacity to put the acquired knowledge and skill in practice. However, even if the majority of the respondents were literate, there were also illiterate and aged farmers within one class. This means that there is educational and age variation among trained farmers within the same training round. These variations, however, might influence the processes of farmers' training. In fact, in the case of experience sharing, there could be a positive contribution as the aged farmers have more experiences than the younger. But the variation in the level of literacy may slow the training process since the literate and illiterate are combined all together during the training process.

Though, according to region, female farmers play significant role both on farm and house hold activities and their working hour ranging from 13 to 17 hours/day (National Ethiopian women policy, 2004). Sometimes female farmers are not recognized as farmers and are given less chance to participate in the trainings offered. This was indicated by the low number of female trainees and on feedbacks given during focus group discussion at Howolso site regarding the lack of acknowledgement of female farmers as farmers. However, as Vanclay (2000) stated, female farmers are the integral part of farms because they are playing major role in the agricultural activities in the rural areas.

### ***5.2 Perception on FTCs guidelines***

Currently within the country, FTC guideline is an instruction, which shows the direction how to implement the farmers training in FTCs. Yet, it became clear that all the concerned bodies that have responsibility on the function of FTCs in the study areas do not have the detail information on FTCs guidelines. This shows that most of the district experts and DAs consider that, conducting training for farmers is as a routine duty for agricultural experts, and therefore, they naturally pursued giving the training without asking for FTCs guidelines. As a result, most of the training processes are carried out without the reference of FTCs guidelines. In fact, some of the FTCs requirements seemed to be difficult to fulfill in the rural areas. Because for example, according to my observation, there is shortage of land around FTCs to use as a demonstration sites, however, in the guideline it is stated that there is a need of different demonstration sites around FTCs compound.

### ***5.3 Training needs assessment in the research areas***

Training need assessment is crucial to find out the training needs of the relevant institution and individuals. A pre-designed training program is rarely going to fit the specific needs of a new

institution or group of trainees. The findings indicated that farmers at Howolso and Remda sites had not participated in the process of training need assessments, such as identifying the knowledge gap and their training interest. According to the district extension expert, DAs and farmers explanation, trained farmers only participated in the date and time setting of the training that should be carried out in the FTCs, nothing more. Concerning the participation of farmers on the identification of their training needs, one of the DAs at Remda site, for example, stated that there is no need for involving farmers as the rest is best handled by the DAs themselves. This approach can discourage the trainee farmers. In addition, most of the farmers might not have the feeling of ownership on FTCs program and lack of commitment towards taking care of and strengthening the FTCs training.

#### ***5.4 Training in the research areas***

Training is more effective in changing behavior, if it is related to ones actual work situation. According to the trained farmers explanations (Figure 6), even if there is lack of enough practical training, farmers have brought about some attitudinal changes by participating in the training. The training, they said, has also created opportunities for experience sharing among farmers. These overall has some contribution to increase farmers' production and productivity, which ultimately results in the improvement of the life of farmers' family as a whole. During female farmers' focus group discussion at Howolso site, one female farmer indicated that, the training which they have got has some contribution to increase their income. As it is discussed in chapter 4, the number of trainee farmers has decreased from day to day, this shows that these farmers can have their own reason to be absent and this will be a good indicator whether the training is interesting or not. Moreover, the training which is given by DAs might be tiresome and boring for farmers as the time might be too long without any practical training to keep them active and motivated. And this was indicated by 10% of the interviewed farmers who stated lack of interest of farmers as a drawback in the training. On the other hand, it could be due to farmers' impression on the young educated but inexperienced DAs, that they lack the experiential knowledge and that they are better off without the training. All in all, however, even if there was no practical exercise in the processes of farmers' training, there was dialogue among trainee and model farmers during the visiting program which served as an opportunity to observe some practical things from alternative strategies.

#### ***5.5 Human and physical facilities to FTCs***

As it is stated in chapter four, in the study areas FTCs, there are reasonable human resources. However, the physical facilities which can be useful for practical training are not fulfilled in the FTCs. To make FTCs trainings practical, DAs must understand not only the extension process but also must have adequate technical knowledge of the discipline in which he/she is trained (Belay, 2004). It also stated that lack of extension materials, extension agents' limited practical skills and experience in using extension materials, and shortage of extension personnel are some of the barriers for adoption of modern technologies. This study also confirmed that some DAs do not have enough practical knowledge on their expertise; which affects their ability (DAs) to train farmers.

Therefore, lack of well-trained DAs and shortages of important physical materials that can be used for practical training seem to be the main causes for absence of practical training. The reason for lack of training materials is because of lack of district budget, which should be allocated for FTCs. According to Baharein and Dalo (2010), the case different in Malaysia, where there has been a notable increase in the funding for farmers' training allocated by the

government. This is also the case in India, where there are farmers training centers which play major role in the provision of agricultural extension activities. These FTCs are established in the rural areas and its recurrent budget is allocated from government fund (MoARD, 2009).

### ***5.6 Farmers training guidance / rules in the FTCs***

The training guidance/ rules which are indicated in the guidelines are important for effective implementation of farmers' training. As it is stated in chapter four, most of the training instructions are not practically implemented in the study areas FTCs. According to DAs explanation, the major reasons for these lack of detail information on FTCs guidelines is lack of orientation training on the FTCs guidelines for concerned bodies. These situations have contributed for weaknesses of farmers' training in the research areas FTCs.

### ***5.7 Alternative strategies***

To make farmers training more practical, DAs have used alternative strategies. Based on the importance of alternative strategies, model farmers' farms were chosen by the majority of the DAs (4). In my understanding, DAs efforts and initiations to use these strategies should be appreciated and acknowledged. Hence, one of the major alternative strategies which are carried out by DAs is field visit. According to Ilahang et al 2006, field visit is one of an effective training and information dissemination tool. These field visits are carried out on model farmers' farms because in the study areas, there are different type of productions, like horticulture, crop, root crops, and cash crops (coffee, spices) and so on. These types of production are directly related to the given training in the FTCs. In case of school farms, there are no as such much production varieties and the same is true for district demonstration sites. According to DAs explanation, school farms are sometimes used for exercising new practices, while district demonstration sites are used for onsite observation only, for example, at Howolso, the district demonstration site is used only for natural forest management and also at Remda, the site is used only for forage production, where farmers would come and observe how the practices are being carried out.

### ***5.8 The results of using these alternative strategies***

These alternative strategies have positive and negative results. The major positive results are: it is useful for experience sharing among model and trainee farmers; it encourages model farmers because they feel confident by their success and also motivates trained farmers since farmers can freely discuss among themselves and also with model farmers when they visit the model farmers' farm. Everybody learns in his or her way since they have different level of adoption rate. Based on this type of situation, DAs have to understand these differences as a resources rather than problems (Leeuwis, 2004). This requires using a variety of methods, including visual and auditory aids. In the study areas these alternative strategies are used as visual aids. According to DAs explanation there is no other training aid materials like posters, in the study areas. Therefore, the absences of these training aids contribute to decrease the effectiveness of farmers training.

On the other side, the major negative results of these alternative strategies are: if the model farmers' farm is far, it consumes much time and labor. Sometimes, unknowingly, there may be destruction of model farmers' farms by trainee farmers whenever they visit. In general, these strategies are useful mostly for observation. In fact, these alternative strategies have a very good contribution to observe and understand many things, but it is not be considered as

practical training, in which farmers are allowed to try and make mistakes, get feedback, etc. Then according to farmers' response, if farmers' training is supported by effective practical training and with improved technologies, farmers would be eager to attend and support the implementation of the training.

Some farmers, when they attend training and also especially whenever they go far away to visit these alternative strategies, they expect per diem. Farmers develop this expectation from other NGO (such as Plan Ethiopia). This NGO whenever it gives training, it pays per diem for farmers who have attended the training (40 Eth. birr/day) or about 2.5 euro/ day. Hence, failure to meet this expectation in the study areas FTCs, as it is discussed with DAs during the time of training, has led to scenario, where some farmers came late with an increase of absenteeism from day to day.

### ***5.9 Follow up program in the study areas***

According to the explanation of district extension expert, the follow up program is being carried out by SMS team and DAs. This team has sub teams, each teams have the responsibility to follow up DAs at site and DAs office levels. However, most of the time, the follow up program is not carried out based on their schedules. Because of shortage of means of transportation and also sometimes, there might be other urgent issues which are not planned. The type of support being given by SMS team is more of filling the gap type which is observed during the follow up program.

DAs also have their own follow up program at grassroots level. As it is discussed in chapter 4, each DA has his/her site. Farmers to DA ratio in the study areas are 1:300. DAs follow farmers' activities more at field levels. Most of the time, DAs visit and follow up farmers' farm, which is nearer to their offices because of shortages of transportation means. For this reason, the follow up program carried out by most of the DAs do not have uniformities and hence, creates differences between farmers since those who have not been visited think they are marginalized or discriminated. As Mulanda<sup>1</sup> et al (1999) clarified; farmer to farmer training is very effective when the right "farmer trainers" is well trained on theory and practical training. In the study areas also there is a start of farmers to farmers training. However, in my opinion to carry out farmers to farmers training, there should be strong follow up and support program by district extension experts and DAs. Because, If a farmer misunderstood about some agricultural practices, it creates obstacles for other farmers also. Therefore, well and organized follow up and support program is needed by district extension experts and DAs. Moreover, the importance of strong follow up and support program was also raised during female and male focus group discussion.

### ***5.10 SWOT analysis of FTCs at the research areas***

SWOT analysis is useful to identify the strengths, weaknesses, opportunities and threats of the study areas FTCs. These are essential to improve plans, make decisions and solve problems by prioritizing issues, which are identified in the research. Based on the preceding sections, the following SWOT analysis has been done:

#### **Strengths**

- Fulfillment of the majority of the required human resources/trainers
- FTC is established and the training is given in farmers locality
- Farmers are interested to know and exercise new practice and technologies

- Some DAs make efforts to use alternatives strategies such as visiting model farmers' farms to make the farmers training more practical

### **Weakness**

- Lack of necessary physical facilities that can be used for practical trainings
- Lack of demonstration sites for FTCs training
- DA's residences has not been constructed around FTCs
- Lack of means of transportation for DAs
- Inability to give training according to the schedule because of the urgent activities
- FTCs are not fenced and as a result of this the seedlings of trees and forages planted in the compound were damaged by livestock
- Lack of regular budget for the FTCs to run the program
- Lack of commitment of community administration to follow up FTCs
- Shortage of follow up and supervision by district offices and DAs on FTCs
- Some DAs do not have well technical capacity and interest to train farmers and
- Low quality of FTCs construction in the study areas

### **Opportunities**

- The presence of government support for implementation of FTCs
- The presence of other organizations and projects (RCBP, Plan Ethiopia, World Vision), which can give support to strength FTCs
- Availability of some infrastructures (electricity, primary school, health center and road)
- In the future it has the chance to serve as a center of information

### **Threats**

- Unless the FTCs materials and facilities are fulfilled and the training program is supported by practical exercise the training program may stop to be implemented
- Additional and unplanned activities may interrupt the training program
- Unless attention is given to the function of FTCs , it will not be effective and sustainable
- If the capacity of DAs is not upgraded, the participation of farmers will decrease over time
- If the extension approach methods of DAs is not improved, the linkage between DAs and farmers will not be effective
- If the construction of FTCs are not well designed and established, it might be broke within a short period of time.

## CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes and draws conclusions based on the preceding chapters. In the second part of this chapter a number of recommendations will be presented.

### 6.1 CONCLUSION

The research was carried out to explore and suggest/recommend the possible options to make FTCs trainings more practical in the study areas. As per the need to establish one FTC in each site of districts, the establishments of FTCs in some sites will soon be completed. From the existing FTCs, the research focused at two sites. To facilitate the training, there is FTCs a guideline, which is prepared by MoARD in collaboration with regional representatives. This guideline is important in the implementation of farmers training in the FTCs. However, to carry out the training according to the instruction of FTCs guideline, there are some barriers which affect the implementation of farmers training in the FTCs. These barriers are clarified as follows:

- FTCs guideline shows the direction on how to implement the farmers training in FTCs. However, in the study area, all six DAs who have participated during the interview do not even know the presence of FTCs guidelines. Therefore, to assess their perception on FTCs guideline was difficult as they do not know whether the guideline is workable or not. Though, before the farmers training has started in the study areas, there was orientation training for some DAs on how to train farmers in the FTCs, still, the absence of the guideline and their perception on the guideline, has contributed for the unaccomplishment of some important requirements, such as practical training.
- There are sufficient human resources, as there are regular 8 DAs in the two sites, and one assistant veterinary technician for 3 sites and also one assistant cooperative organizer for 5 sites. However, the necessary physical facilities which are needed for implementation of farmers' training are not fulfilled in the FTCs. These physical facilities, which are not fulfilled in the two FTCs, were found to be as follows: lack of different demonstration sites, agricultural inputs (farm implements, seed, fertilizers and so on), DAs residences, exhibition rooms, workshop materials, and FTCs fences. As it is clarified in chapter 4, these physical facilities, are not fulfilled because of shortage of district budgets.
- According to FTCs guideline, there are farmers training guidance/rules, which should be governed and followed in the FTCs. However, the following training guidance/rules are not practically implemented in the research areas FTCs, such as:
  - The training is given more of theoretical instead of practical because of lack of important physical facilities for practical trainings,
  - Between the trainee farmers, there shouldn't be a big variation in their age and educational level of the trainees. However, the research findings show that during the training, there were illiterate and literate trainees, and also there was a case where participants' age had a significant difference.
  - During the selection of trainee farmers, there is a need of consideration of gender; however, the total number of female farmers is low.
  - According to DAs explanation, trainee farmers are not selected based on their performance.

The above clarified training guidance/rules are not implemented according to the instruction of FTCs guidelines, concerning this situation DAs told that, this has happened because of the less awareness levels of concerned bodies (district extension experts, DAs themselves and also community administration) on the FTCs guidelines at the research areas.

In the study areas FTCs, DAs play major roles in order to tackle the above barriers and to make the farmers training practical. The following are the efforts made by the DAs.

- To compensate the absence of practical training, DAs have used other strategies. The types of the strategies which were being used by DAs are model farmers' farms, school farms and district agricultural demonstration sites. As it is discussed in chapter four, from these strategies, 4 DAs have given priority for model farmers' farms. Though the effort was made, these strategies still have both positive and negative results. The major positive results of these strategies are: it is useful for experience sharing among model and trained farmers; it encourages and helps to develop confidence for model farmers; and it also motivates trained farmers to follow the examples. In addition, these strategies are used as visual aids. On the other side, the major negative results of these strategies are: if the model farmers' farm is far, it consumes much time and labor. Some farms might not be carried out according to the standard of the requirements of the demonstration sites. Sometimes, unknowingly there may be destruction of model farms by trainee farmers whenever they visit and also these strategies cannot be used 100 percent as a practical training.
  - In the research areas, after the completion of the training, there is a need to follow up and support program by DAs. As it is discussed before, the majorities of DAs follow and support farmers at farm levels. Farmers who lived around FTCs are the ones more likely to be followed and supported by DAs. This has happened because of shortage of transportation means. For this reason, the follow up program carried out by most of the DAs do not have uniformities and hence, creates differences between farmers since those who have not been visited think as if they are marginalized. The type of support which is given by DAs is advice on how to put in to practice their training and also demonstrate on farmers' farm whenever there is a need. Therefore, though the DAs put their effort in seeing in to the follow ups, because of the problems mentioned earlier, not all farmers are satisfied with the follow ups given to them.
- It is safe to say that most positive and negative side of farmers training in the research areas are also possible scenarios in other parts of Ethiopia. Because even if there are different agro-ecological zones in the country, there is only one FTCs guideline which should be implemented in each regions and administrative towns. Therefore, the systems and the approaches to implement the farmers training in each FTCs of the country are more or less similar. Hence, this research result has shown some indication about the level and the situation of FTCs training in the country.
- Even if all the regions and administrative towns have their own autonomy to carry out the different agricultural training in their respective regions, MoARD has vast responsibilities to follow up and evaluate the effectiveness of farmers training. Therefore, this research result can be used as an input for MoARD, especially for AED for further follow up and evaluation of farmers training in each site of FTCs within the country.

## **6.2 RECOMMENDATIONS**

Based on the findings of the research areas, the following points are forwarded as recommendations that help to improve the practicality and effectiveness of farmers training in the FTCs.

As the data which is collected from the district shows that in some sites, the establishment of FTCs is ongoing. In the research areas FTCs are already established, however, the necessary materials which should be useful for effective implementation of practical training are not fulfilled. This has happened because of shortage of district budget that should be allocated for FTCs. Therefore, MoARD instead of increasing the number of FTCs, it should be better to start with limited number and equipped with the necessary human and physical facilities and eventually, increases the numbers after first evaluating the results.

According to DAs explanation and my observation in the study areas, the possibility of getting farm land to establish different demonstration sites based on the instruction of FTCs guidelines seems to be difficult. Therefore, to make FTCs guideline workable, it should be revised by concerned bodies (MoARD, BoARD, farmers and so on) considering the real context of the rural areas. In addition, it should be introduced and better known to different concerned bodies to increase their awareness and improve their perception on the detail information of FTCs guideline.

In the research areas, even if these alternative strategies might not still be a total substitute for the practical farmers' training, they have significant contribution for experience sharing among farmers, observation and so on. Therefore, DAs initiation and efforts should be valued and recognized by concerned bodies.

Based on the results of the research, having illiterate and literate farmers mixed in the training, MoARD and BoARD should have to prepare audio visuals aids; posters, films etc...since, these are useful to communicate and transfer the messages easily. In addition, the use of handouts is also recommended for further references for those who can read and understand.

In the research areas FTCs, the technical capacity of some DAs is limited; therefore, there are difficulties to carry out practical training. FTCs function is mainly dependent upon the ability, quality and commitment of DAs. Therefore, BoARD should arrange in service training for DAs on technical training of their expertise, gender and also on extension approaches. In addition, to motivate DAs it is better to use the carrier structure based on their performances.

Based on the results of the research, after the training is accomplished, when farmers are trying to execute based on their acquired skill, they might be on the right way or not. Therefore, extension expert and DAs should have to carry out continues follow up and support program.

Farmers have their own way of learning and also have different needs and can implement new technologies in different stages. Therefore, DAs should have to accept these differences as resources/ opportunities rather than problems and also they have to treat farmers according to their needs.

In the research areas, female farmers play major role in the agricultural activities and they are an integral part of the farm. Extension workers need to acknowledge and appreciate the role of female farmers. In addition female farmers should be encouraged to get involved or participated

on the different agricultural training. Based on the result of female farmers' focus group discussion, for them to be more productive and approach easily they need more female DAs. Therefore, if it is possible BoARD should assign additional female DAs in the research areas.

According to the results of the research areas and also my observation, there is a big gap on information sharing on FTCs guidelines from national up to site level, therefore, I recommend that for effective implementation of farmers training there should be continues follow up and evaluation program at regional, district and site levels by concerned bodies.

During farmers' interview and focus group discussion, the importance of practical training is highly raised by male and female farmers. Therefore, to make the training more likely by adult trainee farmers, DAs should have to carry out practical training based on the context of the areas. This will be useful for literate and illiterate trainee farmers to upgrade their knowledge, attitude and practical abilities.

Training need assessment is important to find out the training needs and gaps of the rural farmers. Before any training program is planned and designed, training need assessment of farmer should have to be carried out by concerned bodies.

From SWOT analysis of the research areas FTCs, I can suggest that, if the weaknesses of the research areas FTCs are improved and opportunities are used effectively, there will be great change on farmers' training.

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# ANNEXES

## ***Annex 1: check list***

### **Check lists for Head of Shebdino district office of ARD**

1. Perception on FTC Guideline and its practicality
2. Human and physical facilities in the FTC
3. Training guidance/rules of the FTC guideline
4. Alternative options / strategies to make FTCs training more practical
  - 4.1 Results of these options/strategies
5. Follow up and support program of Shebdino district office of ARD

### **Check lists for District extension experts**

1. Perception on FTCs Guideline and its practicality
2. Human and physical facilities in the FTC
3. Training guidance / rules of the FTC guideline
4. Alternative options / strategies to make FTCs training more practical
  - 4.1 Results of these options/strategies
5. Follow up and support program

### **Check lists for DAs**

1. Perception on the guideline and its practicality
2. Human and physical facilities
3. Responsible body to fulfill these facilities
4. Training guidance/rules which are not implemented in the FTCs
5. Alternative strategies to make FTCs training more practical
6. Results of these strategies
7. Follow up program

### **Check list for farmers**

1. Types of practical training which are given for farmers
2. How is it organized
3. Where it is organized
4. Follow up program
5. Feelings on
  - training
  - follow up
  - support program
6. Motivation to recommend this training for your neighborhoods and friends

**Check lists for focus group discussion (for men farmers)**

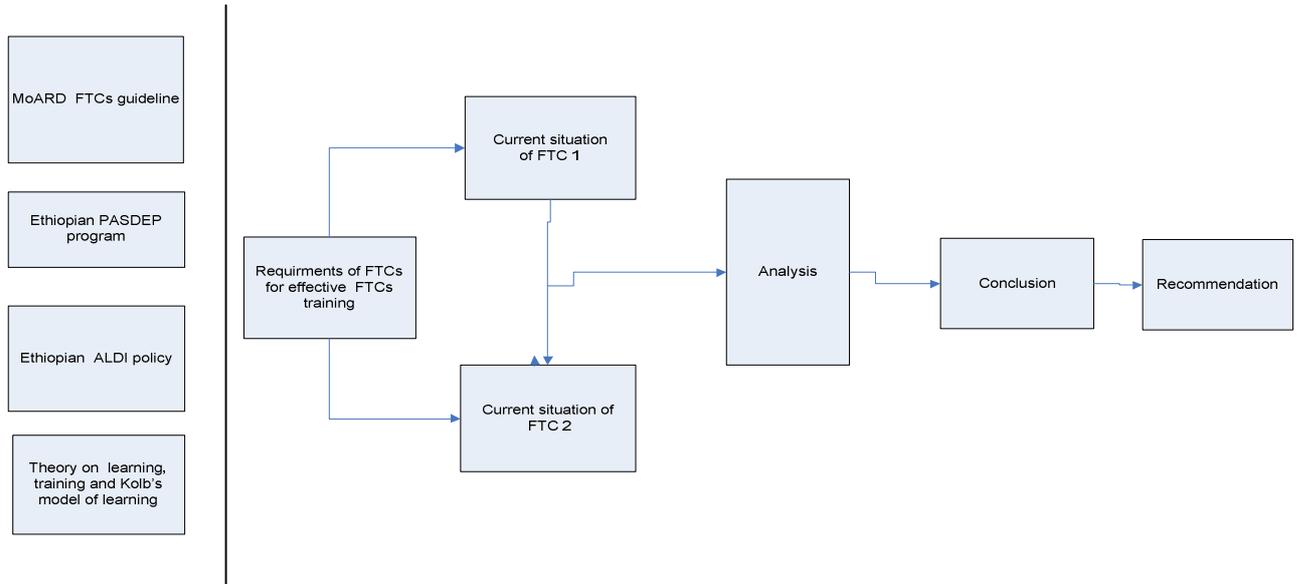
1. Feelings regarding training attended on
2. Motivation to recommend this training for your neighborhoods and friends
3. Use fullness of these trainings
4. Types of practical training which are given for farmers
5. Where it was organized?
6. Follow up program
7. Support program
8. Cross checking questions

**Check lists for focus group discussion (for female farmers)**

1. Feelings regarding training attended as women farmers
2. Motivation to recommend this training for your neighborhoods and friends
3. Use fullness of these trainings
4. Types of practical trainings
5. Where it was organized?
6. Follow up program
7. Support program
8. Cross checking questions
9. Difficulties to attend the training as female farmers from the perspective of their gender roles

## Annex 2: Research frame work

**The research framework is a schematic and highly visualized rough representation of the steps to be taken to realize the research objective (Verschuren and Doorewaard, 2005). Based on this idea, the framework of the research is shown below.**



**Annex 3: Alternative strategies at the two research sites**



District forage demonstration at Remda site



Model farmer farm at Remda site



Seedling nursery on model farmers farm at Howolso site



Inter cropping on model farmers farm at Howolso site

#### **Annex 4: List of persons who have interviewed at different levels**

List of head and experts who have interviewed from Shebdino district

No.	Name	Educational back ground	Responsibilities	Work experience
1.	Mr. Anesa Gobaro	Animal and Range Science (Bsc)	District Agricultural and Rural Development Office head	9 years
2.	Mr. Leta Legese	Animal and Range Science (Bsc)	District Agricultural and Rural Development vice head	1 year
3.	Mr. Kebede Kayamo	Plant Production and Dry land Farming (Bsc)	Extension expert	25 years

List of DAs who have participated during the research interview at Howolso site

No.	Name	Age	Educational back ground	Work experience
1.	Mr. Tegegn Haile	26	Diploma in plant science	7
2.	Mr. Addisu Desalegn	25	Degree in plant science	7

List of farmers who have participated during the interviewed at Howolso site.

No.	Name	Age	Educational background
1.	Mr. Tesfaye Takel	40	10
2.	Mrs. Sheto Batre	35	4
3.	Mr. Endal Engmo	42	6
4.	Mr. Dawit Godehesa	43	7
5.	Mr. Shemles Genemo	36	5
6.	Mr. berara Hoka	36	8
7.	Mrs. Asnakech Abat	26	8
8.	Mrs. Berket Dukem	24	9
9.	Mr. Kasahun Mekonen	80	-
10	Mr. Bogal	40	9

**List of DAs who have participated during the research interview at Remda site**

No	Name	Age	Educational back ground	Work experience
1.	Ms. Zeritu Sakuma	30	Natural Resource Management (Diploma)	16
2.	Mr. Alemseged Asfaw	42	Plant Science (Diploma)	21
3.	Mr. Mulatu Muse	32	Plant Science (Diploma)	14
4.	Mr. Matewos Hoyesa	26	Animal Science (Diploma)	1

**List of farmers who have participated during the research interview at Remda site**

No.	Name	Age	Educational background
1.	Mr. Mekonen Almu	39	12
2.	Mr. Henok Eshetu	32	5
3.	Mr. Neguse Torba	25	4
4.	Mrs. Tigest Tamru	28	9
5.	Mr. Anash Bokra	32	5
6.	Mrs. Almenesh Atara	22	7
7.	Mr. Alito Atra	25	10
8.	Mr. Milkias Afta	30	2
9.	Mrs. Abebech Petros	20	4
10	Mr. Aqam Haro	40	3