



Ministry of Agriculture

Agricultural Extension Directorate

Extension System Applicable in Pastoralists/Semi-Pastoralists Area

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EXECUTIVE SUMMARY

All stakeholders in the agriculture sector are expected to exert efforts tirelessly for the growth of production through strengthening coordinated working mechanism so as to optimize production and productivity to the desired level of quality and quantity to ensure food security and produce for market based on the agriculture-led industrial development economic policy of the country.

In accordance with the information obtained from the livestock resource development road map, out of the total land of our country, the low-land area covers 60% and 12% of the population lives in this area. The main livelihood of the community is animal husbandry and in limited areas irrigation and rain-fed crop cultivation is practiced.

With a view to resolve the problems of pastoralists/semi pastoralists and increase production and productivity by generating suitable research outputs/technologies, research institutions have been established and works of research have already been commenced.

By utilizing cultural institutions and local knowledge, organizing individually or in groups pastoralists/semi-pastoralists as well as women and the youth taking in to account communal interests, accessing the various messages through various methods enable to provide sustainable and efficient extension service to the community.

The main objective of the system is to improve the living status of the community by pursuing the agriculture-led industrial development policy and strategy formulated at national level to be implemented for a period of 5-10 years with a possibility to be revised each five years, based on the needs of the pastoralists /semi-pastoralists and circumstances prevalent at the time of consideration.

The extension service for pastoralists is provided by mobile service providers that move with the pastoralists or by local professionals, whereas semi-pastoralists and stationed pastoralists families receive regular services following the designed mechanism.

The pastoralist -agricultural development executive bodies at every level are directly responsible for implementing the agricultural extension system. The executive bodies should extend attention for the effectiveness of the extension service delivery by creating healthy and competitive work spirit among performers and motivating them to work diligently.

As the extension system should be evaluated in relation to growing demand and changing situations, there will be modifications that can be made on the basis of the results of the evaluation.

The extension service should include training and counseling that enable the pastoralists supply to the market value added product to optimize benefits. This is because if the pastoralists produce and supply products as usual, they will not benefit much from it unless they marketed it by adding value.

The process of implementing the system, the first step in is to expand the best practices of the pastoralists in terms of quality and quantity production and the model pastoralists which will be expanded to other similar areas by collecting and formulating proven technologies and techniques.

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1. Introduction

As indicated in the agricultural development policy of our country, the issue of enhancing production and productivity needs to be given priority. In order to ensure food security and produce for the market by increasing the quality and quantity of agricultural production and productivity, all parties working in the sector need to work tirelessly to improve coordination. The lowlands of our country cover 60% of the total land area of the country and 12% of the total population live in this area. According to various sources, the main livelihood of the local community is based on animal husbandry. This is a major source of food for the pastoralist community and a major source of employment. According to the Animal Resource Development road Map, 40% of the total cattle, 75% of the goats, 25% of the sheep, 20% of equines and 100% of camels are found in the pastoralist and semi-pastoralist areas. All in all, the resource of this animals cover 42% of the country's animal resource. The importance of this resource is very high to the pastoralist area and national economic and social development.

Most pastoralist communities are moving from place to place in search of pasture and water. However, due to population growth, the area is experiencing increasing damage to the environment and natural resources. Most pastoralist areas are out of deteriorating. It receives disproportionate and low rainfall which is wasted by evaporation and flooding due to high temperatures and soil erosion. Therefore, it is an area where frequent droughts and man-made disasters occur. As a result, livestock production and productivity, which is the basis of local livelihoods, continue to decline. It has reached a point where it is not possible to meet even the daily needs of the local community.

To support the growth and development of semi-pastoralists / semi-pastoralists areas in the past years, development activities have been carried out in the form of programs such as irrigation, improved fodder development, natural grazing development, supply

of animal health inputs, animal health facilities (health posts and clinics).In addition, no significant agricultural extension services have been provided.

Now days, activities are being carried out by research institutes to solve the problems faced by the pastoralist and semi-pastoralist communities and to generate suitable research outputs/technologies.

In addition, in previous years, especially in the semi-pastoralist communities, appropriate technology packages have been developed by regular and demonstration programs such as crop, dairy development, meat development, poultry development, beekeeping and fodder development packages, but most of them have not been implemented. Integrated extension services such as crop, horticulture, water conservation, etc. are underway. Although there are gaps in the provision of better manpower and animal health and market infrastructure to increase livestock productivity, there are gaps in service delivery.

Due to the unusually frequent occurrence of drought in these areas, the community is using local water alternatives for small-scale crop and fodder development.

Thus, in order to further enhance the agricultural development activities of the pastoralists and semi-pastoralists, suitable farming system has been developed to contribute to the economic growth of the country by ensuring food security and sustainable livelihoods.

This allows the extension of the agricultural extension system, which can be implemented in pastoralist and semi-pastoralist areas, to provide timely and useful information to the community in an integrated and efficient manner, as well as to convey agricultural extension messages to the community through various means of communication.

2. Analysis Of Strengths, Weaknesses, Opportunities And Threats

Internal		External	
Strengths	Weaknesses	Opportunities	Threats/Risks
Implementation of capacity building activities(Access to short and long term education and training opportunities)	Limitations of coordination	The existence of government structure at all levels	Existence of illegal livestock and dairy products trading
Existence of Monitoring, support, evaluation and feedback system	Limitation of capacity to execute and perform at all levels	existence of various projects and NGOs engaged in agriculture	Climate change
The existence of pastoral training centers provision of a variety of agricultural inputs	a lack of motivation and commitment at all levels	Availability of suitable flexible policies and strategies	Market fluctuations
Preparation and distribution of various teaching manuals	Lack of continuous implementation of issued strategies and practices	Focused consideration of pastoralist / semi-pastoralist communities by government	Flexibility of the organizational structure of the institution
The designing of pastoralist and semi-pastoralist extension system	Inability to implement various incentive schemes	The existence of research institutes, universities and agricultural colleges	Existence of cross-border animal diseases
Assigning of Development site staff at the kebele level	Lack of timely supply of various agricultural input with desired variety, quantity and quality	The existence of traditional grazing and water administration	Conflicts over fodder and water
Preparation of various strategic documents	Shortage of budget and gaps in the use of inputs and technology	The existence of traditional information exchange and conflict resolution method	The spread of various weed outbreaks
Preparation of work plan	Failure to become		Existence of

for different activities in each field	operational of the various infrastructures (pastoralist training centers, animal health facilities, market centers , mall, quarantine stations and veterinary laboratory centers)		employee migration
	Weakening of the monitoring and support system at all levels;		Lack of adequate financial services institutions and facilities
	Lack of budget		Lack of insurance scheme for animals
			Lack of budget
			limitations in strong early warning and response mechanism

Table 1:- Analysis of strengths, weaknesses, Opportunities and Threats/risks in pastoralist and semi-pastoralists areas.

3. Objectives

3.1. Main Objective

The main objective of revising the extension system of the pastoralist/semi-pastoralist areas is to harmonize the current demand for the technology and to devise a uniform working mechanism compatible to the objective situation of the area, following the direction indicated in the country's agricultural policies and strategies.

3.2. Detailed Objectives

- Introducing new technologies and practices;
- Benefiting the community by increasing animal productivity;
- Conserving and protecting natural resources;
- Providing strong and timely extension services;
- Providing integrated services to pastoralists and semi-pastoralists through institutions at various levels.

4. Principles

- Following modern production methods;
- Market based mechanism
- Accessibility to Pastoralists / semi-pastoralist
- Consideration to the knowledge and skills of pastoralists / semi-pastoralists;
- Information technology oriented service;
- Consideration of the ecology of the area;
- Requiring commitments and loyalty;

- pursuing a coordinated approach,
- Participatory
- Inclusiveness
- Respect to the culture and knowledge of pastoralists / semi-pastoralists;
- pursuing Accountability,
- pursuing Transparency,
- Insuring the rule of law.

5. Scope of the System

This extension system, to be applicable in the pastoralist / semi-pastoralist areas, will be accessible to the pastoralists/semi-pastoralist community, women and youths at individual level and organized in teams as well as investors in the sector in various regions'. The system will be fictional from 5-10 years and it will be revised every 5 years depending on the needs of the pastoralists/semi-pastoralist and objective circumstances of the time of revising.

6. Goals

- Increase livestock and crop production and productivity in quality and quantity by enabling pastoralists and semi-pastoralists use new technologies and practices.
- Improve the skills of pastoralists and semi-pastoralists by providing practical capacity building training.
- Strengthen the extension service system by organizing interested pastoralists / semi-pastoralists as well as other individuals engaged in the sector under various agricultural sectors.
- Build the capacity of the community in development and use of natural resources;

- Strengthen the extension system aiding use of indigenous knowledge by the community;
- Enable pastoralist/semi-pastoralist women and youth to make an active participation in development by organizing them to use improved technologies;
- Expand integrated watershed development to alleviate the effects of drought on the community and bring about sustainable development;
- Increase the number of animals with improved variety by using modern techniques;
- Increase animal health service coverage;
- Transfer the pastoralist and semi-pastoralist from traditional to the modern animal husbandry by strengthen the extension service;
- Strengthening veterinary extension services;
- Strengthen Animal Disease research and monitoring works in pastoralists and semi-pastoralists areas;
- Increase livestock and crop production and productivity by supplying a variety of inputs with desired quality and quantity timely;
- Improve natural pasture development, management and utilization;
- Increase the income of pastoralists and semi-pastoralists by promoting improved fodder development methods;
- Develop and strengthen livestock and dairy products marketing system for benefiting pastoralists and semi-pastoralists;
- Increase foreign currency by producing livestock and crops required for industrial input and foreign market in desired quality and quantity;
- Expand nutrition-based agriculture in pastoralist and semi-pastoralist areas;

- Expand job creation in the agricultural sector by organizing women and youths in pastoralist and semi-pastoralist areas.

7. Necessity

The livelihoods of most of the pastoralists and semi-pastoralists community is based directly or indirectly on animal husbandry, and in some areas on small-scale irrigation and rain fed crop cultivation. Therefore, the necessity of implementing suitable agricultural extension system in pastoralist and semi pastoralists areas will focus on the following main points:

- Provide integrated and prevention-based veterinary services;
- Enhance animal products and productivity by identifying and improving the productive variety of animals from local or other areas;
- Introduce and develop improved fodder varieties so as to minimize the demise of animals as a result of lack of fodder during drought;
- Provide extension services on natural resource development, watershed development, soil and water conservation, natural pasture development, management and utilization;
- Provide market-oriented extension services;
- Promote and enable the community benefit from improved inputs and technologies;
- Provide appropriate extension services to pastoralists who move in search of fodder and water;
- Craft better methods for technological transformation;
- Enable the community use animals and crop development technologies and practices suitable for lowland ecology.

8. Considerations

- Prior to the implantation, implementing and performing bodies at all levels should have a thorough understanding of the document;
- The agricultural offices and structures at all levels should be based on local and current needs;
- The monitoring and support system incorporated in this document must be carried out responsibly in accordance with the timeline set by the implementing bodies and performers at all levels;
- The necessary budget and transport service should be facilitated for the monitoring and support system;
- The Kebele agriculture experts Job Evaluation and Grading (JEG) should be implemented;
- The monitoring and support system at all levels should be conducted in a way that builds capacity and should be done according to the schedule, not just for controlling purpose;
- Pastoralist training centers and animal health institutions should be built in Kebeles where they are not available;
- It is necessary to use the pastoralist training centers and model pastoralists/ semi-pastoralists work areas as the main training ground for making effective and successful the work of expanding best practices;
- Establishing pastoralist training centers and veterinary facilities in all Kebeles and furnishing them with necessary materials are believed to enable achieve better results;
- Farmers training centers should be furnished with information technologies infrastructures and should be made centers of information and knowledge transfer;

- Kebele agricultural experts and staff should not be made engage in activities other than those assigned to them in this document;
- The monitoring and support system should be based on the process and results of the work;
- The information gathered **at each level should be focused on actual activities / facts** only;
- Inputs should be supplied timely with required quantity and quality according to the needs of pastoralists;
- A community-based and applicable plan should be developed;
- Works should be done in collaboration with relevant institutions and service providers in the field;
- Local development activities should involve the community;
- It is necessary to use a better workforce with better knowledge and skills properly and creating conducive work environment,;
- Necessary incentive mechanism should be implemented to enable that development workers in the kebele provide better extension services.
- Market centers that have been built in various regions and are not operational currently, should be made operational furnishing them with necessary facilities. In addition, market centers should be constructed in areas where they are not available.

9. DIRECTION OF IMPLEMENTATION

Preparing and Implementing relevant and detailed developmental plan through identifying the ecology of pastoralist and semi-pastoralist areas, enables to make the agricultural development activities of the area and our country efficient and sustainable. Accordingly, directions to be implemented by agricultural development in pastoralists/semi-pastoralists areas have been indicated as follows.

9.1 Lifestyle and Agricultural production Oriented Agricultural Extension Service

9.1.1 Pastoralist Areas

As the livelihood of the people in this area is based on animal husbandry and the amount of rainfall is low, they move from place to place in search of pasture and water. Therefore, agricultural development work should follow this way of life and production. The extension service provided in this area should follow mobile extension approach by taking into consideration the movement direction of the community and the duration of movement. The approach focuses on the following methods of provision of the extension service.

9.1.1.1. The main activities undertaken when the pastoralist moves B

9.1.2 In Agro pastoralist Areas

In addition to raising livestock, the community in these areas uses the available rainfall and irrigation potential to improve crop yields. Therefore, the agricultural extension service provided will be based on seasons and community mobility. The service includes the following activities:

- Implement short-term and low-moisture, drought-tolerant food, fruit, vegetable and fodder development activities;
- Create a conducive market environment for post-harvest agricultural products;

- Raise public awareness through demonstrations to promote crop, vegetable and fruit development using a variety of water options;
- Conduct a breeding program by selecting and breeding animals that can produce better yields;
- Create favorable market for livestock and livestock products;
- Prevent product waste by using various post-harvest technologies;
- Introduce new veterinary health facilities and make the service more accessible by building more facilities;
- Cultivate economically viable crops using low irrigation;
- Organize fodder multiplication activities individually and in groups;
- Produce fodder products of improved quality with higher quantity by implementing different fodder development strategies using different water options;
- Provide quality extension services as far as possible.
- Expand the use of shift grazing to preserve the fertility of natural grazing land.
- Create awareness among the community on the experience of storing and using crop residues and hay;
- Promote integrated watershed development activities;
- Encourage works of digging ponds and wells and reversing flood waters for development;
- Introduce improved agricultural equipment that saves time and labor;
- Implement Proper use of natural and man-made fertilizers according to the type of soil;

- Develop and conserve natural resources individually and communally;
- Make food-based agricultural extension services accessible to ensure food and nutrition security;
- Enhance the production and utilization of variety and nutrient-rich products;
- Ensuring food quality and safety of major agricultural products;
- Reduce food and nutrient wastage and implement value-adding interventions;
- Organize extension services for semi-pastoralists living in areas with extensive irrigation systems.
- Advise them to carry out value chain activities by using technology inputs and improving procedures to carry out additional income-generating activities (fiber products, leather and leather products, metal works);
- Establish early warning system and provide timely information to the public;
- Strengthen the traditional governance and social organizations used by the community for development activities;
- Provide an extensive extension service on management of natural resources productivity, human and animal labor, time and money in an integrated manner, and on effective and efficient utilization of budget and data management;

9.2 Market-based Extension Service

In order to increase the income of pastoralist/semi-pastoralist, to enable them follow market oriented producing system and to implement agricultural trading and market ties, the agricultural extension service provided should focus on the following points:

- Conduct market research at all levels and build market linkages by strengthening and expanding market information systems based on local realities;
- Organize young people and women, create an online market information system and make market linkages to make them beneficiaries;
- Provide advisory and training service enabling to increase and enhance agricultural marketing awareness;
- Enable pastoralists increase the quantity and quality of crops, livestock and livestock products that are needed in the domestic and foreign markets provide the necessary information to local industries to use local products.
- Enable pastoralists/semi-pastoralists obtain awareness on post-production management and maintaining of quality and standard of products;
- Enable pastoralists/semi-pastoralists use inputs and market individually or by organizing them in teams and associations;
- Enable the public to benefit by implementing product quality rating guidelines in the marketing system.

9.3. Diversification and Cluster Production Method

9.3.1 Diversification

In connection to the prevalence of different climates and land relief in pastoralists / semi-pastoralists areas, the agricultural production method is mixed farming. Therefore, it is necessary to implement and expand a method of producing products for

foods and of relative economic values (diversification). This method enables the Pastoralist / semi-pastoralist to secure income and insure food security.

9.3.2 Cluster / Specialization Production Method

In pastoralists/semi-pastoralist areas where certain types of products are produced, it is necessary to follow the cluster production method, focusing on the relative economic benefits of the products. Efforts will be made to develop the necessary infrastructure, supply inputs and facilitate market linkages.

9.4 Inclusive Extension Service

Instead of focusing on model pastoralists / semi-pastoralists, the approach to agricultural extension should focus on the benefits incorporating the whole family and community approach.

9.5. Pluralistic Agricultural Extension Service

Most agricultural extension in our country is provided by the government and to some extent by other agricultural stakeholders. However, there is a gap in coordination. Therefore, in order to accelerate the extension service and reduce government expenditure, it is necessary to provide extension services to many actors (government, associations, businesses, NGOs, private institutions, input suppliers, higher education and agricultural research institutions).

9.6. Expanding best experience

The first step is to expand the best practices of pastoralists in terms of quality and quantity production and to expand them to other similar areas by collecting and

formulating technologies and practices that have been proven to be effective at the model pastoralist / semi-pastoralist level.

9.7. Developing the knowledge and skills of pastoralists / semi-pastoralists

9.7.1. Training in Model Pastoralist / Semi-Pastoralist Workplace

In order to impart good experiences to other pastoralists in the same area, the training of model pastoralists / semi-pastoralists using their workplace and pastoralist training centers will be carried out. It will also help local pastoralists learn from each other and exchange experiences, as well as makes the message conveyed during practical training more readily accepted.

9.7.2. Pastoralist Training Centers Based-Training

The agricultural extension service training will be provided in the pastoralist training centers. It is necessary to build one pastoralist trading center in each woreda/ kebele of the region that plays important role in introducing and enhancing the knowledge and skills of pastoralist/semi-pastoralist and enable them use new practices and technologies.

These centers will be made to educate the pastoralists/semi-pastoralists on the main products of the area in a way that is different from the traditional production method that fulfills technical requirements.

In addition to providing training, the following main activities are carried out at the level of pastoralists training centers:

- Organize demonstrations based on trainings for various pastoralist / semi-pastoralist activities.
- Provide modular and short-term trainings to develop the knowledge and skills of pastoralists.

- Enable pastoralists/ semi-pastoralists, investors involved in the agricultural sector and stakeholders use up-to-date information by collecting, organizing and presenting basic information timely such as (climate Animal and Plant Disease Incidents and basic environmental information etc.);
- Introduce new technologies and practices to pastoralists;
- Facilitate knowledge transfer by mobilizing agricultural technology model activities in a way that is conducive to educate and organize permanent exhibition centers.
- identify development alternative of the kebele for investors, young people, women and pastoralists/semi-pastoralists who are involved in job creation activities; provides advisory service to youth and women on profitability;
- Advise the pastoralists/ semi-pastoralists transition from traditional animal rearing methods to modern methods,
- Provide extension services for the disabled and HIV patients to benefit the from the agricultural sector.
- Implement integrated action-oriented adult education to enhance the literacy skills of pastoralists / semi-pastoralists.
- Facilitate the exchange of experiences to strengthen the transfer of knowledge from centers to centers.
- Introduce technologies that reduce the workload of pastoralist / semi-pastoralist women;
- Provide nutrition-oriented agricultural extension services;
- Improve citizens' knowledge on product safety, protection and home preparation.
- Increase the use of nutrients such as vegetables, fruits, legumes and bio fortified.

- Identify, develop and expand technologies and community knowledge to prolong food consumption period and reduce food waste.
- Provide extension services as a method of adapting to climate change

9.8. Extension service based on pastoralist training centers

Even though extension service is mainly given based on the pastoralist training center, it can also be provided to pastoralists moving from one place to another on the basis of the living condition of the community in mobile method. The service is given by establishing areas convenient for agricultural development and the community members, in each kebele. These training centers play heightened role to enhance knowledge and skills of the community, implement new working methods and technologies as well as benefiting them. Therefore, pastoralist training centers serve as a forum for conducting mobile extension program, providing theoretical and practical training of agricultural profession and information service, carrying out improved agricultural demonstrations, advisory services and exhibition center service.

9.9. Participatory Agricultural Extension Service

Agricultural extension system primarily enables pursuing of participatory method that enables the user community solves its problems by its own there by encourage participatory direction in the agricultural sector. In order to make this a reality, individuals and the community are expected to first identify their problems and place them in their sequence as well as work with stakeholders beginning from plan preparation to follow up and evaluation. Awareness should also be created in order that the user community be convinced and would own, and participate fully in the development work process. Therefore, since the agricultural extension takes in to consideration the knowledge accumulated by pastoralist/semi-pastoralist for long, the participatory extension service incorporates important activities indicated in the following sections.

9.10. Motivating the community

It is clear that the pastoralist community has a self-governing socio-cultural institution. The institutions are led by highly respected and accepted tribal leaders, and they play roles as regards natural pasture and water utilization, resolving prevailed inter-ethnic conflicts, reconciling people, and serve as a bridge communicating the community and the government.

Therefore, it is important for the development worker to first and foremost create strong relations with tribal leaders, kebele governing bodies, religious leaders, local elders as well as celebrated women and youth and make them aware him and his development ideas in order that they would motivate the community towards the effort of development. Accordingly, the community is made to identify the weakness of traditional agricultural practices, particularly by examining that cultural and economic organization are ready to receive new mechanisms and avoid the older harmful traditions. In this regard, it is necessary that the above-mentioned personalities be involved in extensive work of triggering the community to stand by for cultural change and salute new technologies and practices.

9.11. Organizing the community

To provide efficient and sustainable extension services and convey extension messages easily to the pastoralists / semi-pastoralists, it is necessary to organize the community around development teams and packages using the cultural organization and based on the communal interests.

The benefits include: -

- Enables conducive situation for development workers reach many pastoralists / semi-pastoralists; enables the community use new technologies easily;

- Enables to create suitable situation for pastoralist /semi-pastoralist learn from each other and help each other in the course of plan preparation to the implementation of development works;
- Allows easy receipt and use of new technologies communally which are impossible to use at individual level;
- Helps easily access of input supply and distribution in accordance with the demand of the community;
- Helps to solve problems that cannot be resolved separately and to carry out developmental works;
- Helps to obtain market information swiftly by creating market chains for products;
- Helps to exchange information regarding shortage of fodder and water during draught season and prevalence of animal and plant diseases;
- Creates conducive situation for colleague to colleague experience sharing;
- Uses to insure participation of youths and women in the developmental activities and benefiting from it.

9.12 Integrated Rivers Basin Development Oriented Extension Service

As pastoralist and semi-pastoralist areas are blessed with valleys and ground and underground water, water-centered integrated basin development will be implemented to resist the reiterated drought prevailing these areas and bring about suitable development

10. Agricultural Extension Service Presentation

Whereas agricultural extension service providing in pastoral areas focuses on livestock resources, market-oriented packages will be prepared on animal health, fodder development, cultivating vegetables in wet areas and suitable crops so as to supply desired quality and quantity products.

10.1. Pursuing the full package presentation method

A complete package is a type of package that is effective in animal, crop or natural resource development activities based on pastoral / semi-pastoral level experience; this is supported by business planning and data management.

10.1.1 Full package implementation directions

- The implementation will be based on local specialization oriented;
- Focus will be given to products that have high market demand;
- In order to increase production and productivity, practices that are proven effective at the pastoralist / semi-pastoralist level will be identified and implemented;
- It will be implemented by providing consecutive trainings and advisory service in a way that Enables pastoralist and semi-pastoralist participate fully;
- Information regarding areas implanting the package and package users will be maintained separately;
- Pastoral / semi-pastoralists who have implemented the full package will be visited by other pastoralists / semi-pastoralists.
- Inputs necessary for the package implementation will be identified and supplied timely;
- Credit services will be facilitated to those who are unable to by in pay;
- activities carried out during autumn and those done with irrigation will be identified and carried out in accordance prepared plan;
- All pastoralists / semi-pastoralists will be provided with the necessary technical assistance to prepare and keep a business plan for their activities.
- The youth and women will be made to participate actively in the development;
- The space required for the implementation of the package will be facilitated.

- Pastoral / semi-pastoralists who are organized individually and in groups engaged in value-added agricultural products will be linked to industry and will benefit from inputs.

- Create a market by linking the export of agricultural products with exporters;

10.2. Following the practice of expanding the Good Experience Package

A good experience is one of the technologies or practices that have been implemented at the pastoral / semi-pastoral level that have yielded better results than normal productivity.

Collecting and formulating these experiences and expanding them to similar ecosystems are the key to agricultural extension.

10.2.1. Directions to expand a good experience

Effective technologies and practices at the pastoral / semi-pastoral level will be fully assembled, formulated (by compiling the formulas as they are developed and expanding the experience to other areas as the experience expands).

- Facilitate awareness raising forums on established best practices;
- Identify pastoralists and semi-pastoralists who apply the good practice.
- Facilitate loans for pastoralists / semi-pastoralists who do not have sufficient starting capital.
- A business plan will be developed for specific pastoralists / semi-pastoralists.
- Practice-based trainings will be provided at all levels, experiences will be exchanged,
- Provides the necessary inputs for the best practices.
- Practical experiences are put into practice;

- Make the necessary monitoring and support effective.
- Create market linkages for your products;

10.3. Followed by an extension service to add value

Necessary support will be provided to pastoralists who are willing to engage in specialization-based activities to increase production value, supply of non-privately purchased post-harvest equipment, and engage in cultural crafts, fodder, crop, fruit and seed multiplication. To do this, follow these steps.

- Encourage pastoralists, youth and women to engage in this work.
- Provides skills training by organizing those with similar interests according to their needs;
- Facilitate input, workplace and credit services;
- Necessary professional support and supervision will be provided

10.4. Following the PFS approach of pastoralist field / workplace

It is one of the approaches for pastoralist / semi-pastoralists to provide extension education in the field, where they can learn, analyze, identify and analyze their common problems by comparing their knowledge and practice with each other in the workplace. They seek solutions and develop their own skills with equal participation and without direct bureaucracy, they communicate directly with research centers and resource providers, with a team of 25-30 members who are partly self-employed and self-employed. It is a way of communicating directly with donors and institutions. Therefore, it is important to pay attention to the implementation of this approach in the pastoral / semi-pastoralist areas.

- Develops mutual knowledge transfer;

- Assess their own actions, help them solve problems, and develop new knowledge and practices;
- Develop self-confidence in decision making;
- Develops group discussion
- Eliminates potential problems by experimenting with new practices as they are directly involved and researched in their own field.
- Improves their ability to easily monitor and reason because they have less space to learn.
- Develop their ability to find solutions to their problems;

11. Agricultural Extension user community

Any community involved in agriculture work is legible to increase agriculture extension service. As the Pastoral list / semi-pastoralist community of our country pursue traditional practices the extension service should be provided in an enhanced manner.

The benefits (users) of such extension service are:

- Pastoral list / semi-pastoralist community family heads, and family members who can work
- Pastoralist / semi-pastoralist Youth and women
- investors [n the region
- People with disabilities and HIV patients

Pastoralists / semi-pastoralists who use extension services vary and in their usage of technology and scores

The rating for pastoralists/ semi-pastoralists will be based on the expansion strategy.

This allows knowing and providing the extension support needed. Every pastoralist / semi-pastoralist is categorized under 3 rank classes based on their productivity and use of inputs. Those who achieved the first and second status are encouraged to do their best to support their colleagues in the third class to qualify the first level.

Accordingly, in order for pastoralists/ semi-pastoralists to be categorized under first-class, they should fulfill the following requirements: one who has

1. Specialized in market-oriented products and produce other products side by side.
2. Prepared a business plan of the agricultural task and implement it in accordance with the schedule
3. Achieved results using comprehensively and efficiently those inputs enabling to increase productivity:
 - Used best animal, fodder and crop varieties;
 - Implemented crop, livestock and fodder development activities according to the package;
 - Used land fertility increasing inputs /fertilizers, manure, compost and lime/
 - Used inputs to prevent animal and crop pests and diseases;
 - Has done the necessary agricultural development work through improved procedures.
 - Used technologies that help to reduce post-harvest waste and maintain product quality;
4. Increased his revenue by securing the benchmark target for the area.
5. Recorded and maintained the relevant information,
6. Become Exemplary by showing and supporting other pastoralists/semi pastoralists;
7. Repay the loan on time,

8. Utilizes and benefits from natural resources development properly;
9. Implemented crop, livestock and fodder development activities in accordance with the package;
10. Carried out works of water harvesting, draining and irrigation as needed.
11. Continuously increased his capital by avoiding waste;

Second-class pastoralists / semi-pastoralists are those who have implemented most part of the full package composition and scored performance of 70 to 80 percent.

Third-class pastoralists / semi-pastoralists are mostly those who do not use for various reasons inputs that help to increase production and productivity, and who do not implement improved practices.

12. Organization and functions of Agricultural Extension providers

The structure of the extension service delivery is organized in an effective way. The extension service requires efficient service delivery and requires uniform and integrated conveying of the extension messages. The task of implementing agricultural extension is the responsibility of the pastoralist agricultural development implementing bodies at various levels. Creating strong organization enables to provide better agricultural extension service, helps to the effectiveness agricultural development policies and strategies as well as the top - bottom and bottom - top transfer of knowledge and information follow. The pastoralist agricultural development offices at every level shall have technical team of experts (SMS) raised from various professions and composition of the team members shall be determined based on the objective situation of the area which generally include the following.

1. Extension Communication expert

2. Crop cultivation and conservation expert
3. Animal husbandry expert
4. Veterinarian
5. Natural resource development and conservation expert
6. Irrigation development expert
7. Cooperative Expert
8. Dietician and nutrition expert
9. Horticulture expert
10. Agricultural Economist
11. Forage Development and Natural Pasture expert
12. Irrigation Engineer.

12.1 Functions and Responsibilities of Extension technical Team of the ministry of Agriculture Bodies

The extension technical team of the ministry of agriculture, to support pastoralist / semi-pastoralists, shall have the following functions and responsibilities:-

- Insures the implementation of agricultural extension system based on the principles of agricultural development policies and strategies;
- Introduce, distribute to regions and provide professional support on Agricultural technologies, improved mechanisms and effective practices by formulating them in the form of package with regard to extension services provided on mobile and stationary methods;
- To insure that the agricultural extension system is directed through integrated mechanism, strengthen councils of research and extension communication of the pastoralist/semi-pastoralist and create enhanced and compatible work relations with stockholders, and support them.

- Introduce through various extension messages, conveying methods those by compelling and organizing current agricultural information and practices build the awareness pastoralist/semi-pastoralist community;
- Build technical capacity of regions by facilitating training forms, workshops and experience sharing forms that enables to strengthen extension service capacity of the regions;
- By working coordinated with regional pastoralist and agricultural development bureau gather information and conduct work of monitoring around agricultural extension practices and identify problems prevailed in the course of implementation; study, evaluate and propose solutions, support and insure implantation.

12.2. Functions and Responsibilities of Regional Pastoralist Agricultural the Extension Technical Team

The regional extension technique team shall have the following factions and responsibilities to support pastoralist/ semi-pastoralists:-

- Plan and implement agricultural extension service in away compatible to the objective situation of the region and focusing on the principles indicated in the national agricultural development policies and strategies;
- Prepare technologies and packages receive from the federal bodies and other stockholders by making them compatible to the objective situation of the region and suitable for permanent and mobile extension service delivery, disseminate them to woredas and users as well as work towards expanding them;
- Provide training to experts at various level and evaluate effectiveness of the training;
- Introduce up to date agricultural information and practices that raises awareness of pastoralists/ semi-pastoralists community through extension messages transferring methods;

- Implement solutions to problems up on which discussion and evaluating is made with woredas and other concerned bodies or on its own initiative by conducting the regional agricultural extension practices and performances in general;
- Capacitate woreda experts through training and build their competence of performance
- Monitor and enhance the agricultural research and extension communication of pastoralist/ semi-pastoralist of the region discharge their tasks; facilitates the prevalence of strong ties among various stockholders by organizing forms; works and directs the prevalence of integrated working mechanism;
- Facilitate the condition in which experience exchange is conducted between woredas;
- Extend necessary professional support Pastoralist training centers based on the request submitted from woredas;
- Extend full support by identifying woredas/ kebeles in which mobile extension service is provided so that the pastoralists would receive proper service in areas where they are moving; follow up implementation;
- Extend professional support and follow up to woredas quarterly without interruption;
- Provide incentives and encourage Pastoralist/ semi-pastoralist and development workers who have registered good results with regard to agricultural extension service delivery and implementation.

12.3. Functions and responsibilities of Woreda Pastoralist Office Extension Technical Team

An extension technique team uncountable to the woreda pastoralist agricultural development office head will be organized the team, which is composed of various experts, conveys messages it received from regional extension team to concerned upper and lower bodies. Functions and responsibilities of extension technique team experts of woreda pastoralist agricultural development offices will be the following:-

- Provide quality technical, professional and other necessary supports to agricultural experts assigned at kebele level;
- facilitate the provision of comprehensive up-to-date extension service to pastoralist/semi- pastoralist;
- Extend support in the preparation of kebele level work plan in the participation of pastoralist/semi- pastoralist;
- Disseminate and expand the various extension packages, improved technologies and practices to development sites where they can be implemented; monitor the implementation;
- Facilitate the extensive delivery of extension service by coordinating and evaluating closely extension performance and practices implemented at woreda level;
- facilitate the timely supply of agricultural inputs by collecting and compiling necessary information regarding demands and the like;
- Distribute the inputs timely and follow up its utilization;
- insure that trainings and demonstration works in the pastoralist training centers are conducted following the relevant manual; conduct necessary technical support, monitoring and involution;

- Work towards creating close ties between the work processes at woreda extension and stakeholders;
- Carryout capacity building activities by organizing necessary trainings and seminars to upgrade technical competence of development workers;
- Motivate and coordinate the involvement of Pastoralists / semi-pastoralists in communal agricultural development works, in addition to their individual engagement; provide necessary professional support and facilitate experience sharing form;
- Identify the kebeles where in which mobile extension service is provided, extend on the necessary support to enable them obtain proper service in the areas of mobility and monitor the situation;
- provide and encourage pastoralists/semi-pastoralists and development workers who have registered good results in the provision and implementation and extension services and implementation of agricultural extension services.

12.4. Organization and function of pastoralist community

12.4.1. Relation of development teams with the development workers

Given the extension service provided in the mobile pastoralist areas, there will be one pastoralist training center for each stationed (none mobile) pastoralist area at suitable central area in each center developmental workers with various profession, namely, animal resource development, assistant animal health expert natural resource development expert, crop cultivators and cooperatives. Organizing expert will be assigned and privet service.

For the realization of this mechanism extension service will be provided compatibly with the settlement and living condition of the communal. In this regard, the community will be organized in development teams and obtain extension service through development workers. Even though the training advisory and demonstrations

tasks are provided mainly by the model pastoralists/ semi-pastoralists, when even the convey message and perform demonstration activities at every level the development workers will accompany and provide necessary support in accordance with the schedule.

12.4.1.1 The proportion between development workers and pastoralists / Semi-Pastoralists

Since the ties between the development worker and the user community is decisive in the course of providing the extension service, it is necessary to know the proportion them.

The determining conditions for the proportion the local weather condition, topography, population battlement and density, suitability for transport, hardihood and production method and level of awareness of the user are notable.

If the area very hot, the population is scattered, moves from one another place in search of pasture and water, the service provision areas.

Are for a part lack suitable transport means 3 development workers are essentially assigned a work in each kebele so as so as to provide quality and efficient extension service.

In a kebele (smallest administrative structure) 300-350 pastoralist are estimated to live and a development worker (agent) provides extension service to about 100-120 pastoralist in a single kebele development teams pastoralists/ semi-pastoralist are established. Each team will be consisted of 20-25 pastoralists/semi E pastoralists. Each team shall have a representative to be elected by members. On the other hand, in areas where there is better transport service, the people live closely in river and valley areas conducive for cultivation conduct integrated farming and the community has better awareness, it is estimated that 500-700 semi pastoralists line in a kebele. Here, a development worker provides extension service to 170-230 semi pastoralists. In one

kebele, there will exist 22-31 semi pastoralist development teams. Each team embraces estimated number of 20-25 users each team shall have a representative to be elected by members. Team leaders (representatives) extend support in conveying extension messages by connecting the development worker with pastoralists/semi-pastoralists serving; they serve as a model to introduce new practices and technologies. Accordingly, as the development worker-the pastoralist ration is proportionate, it enables be worker to works closely with the community, understand them problems easily and youth with the community and provide quality advisory service. However, if the ration not proportionate, the service to be provided will be minimal, the ties with community will be weak and the quality of work will be low.

However, the ratio in the regions determine based on the affirmation objective situations of the region.

12.4.1.2. Election of development teams Leaders

Each team will have a leader/ representative to be elected by members. The team leaders to be elected can be who:

- Are It need and religious leaders;
- Are Renewed persons among the community;
- can right and read ;
- Willing to accept new practices;
- have willingness and interest to work with development workers;
- have interest full to share knowledge and skills they gained;
- Gather member's problems; submit them to development workers insert of solution.

The development workers and woreda experts extend close follow and support to team leaders on their duty of have distributing extension messages to members organized under their team.

12.4.1.3. Organizing Women in Teams

Even though women have pronounced rolls in the agricultural extension, they have not receive desired extension service in the past extension systems. In order to field the gap and enhance the contribution women offer to the development replacing it with modern practice, it is necessary to create ways in which they are given lessons by organizing them in teams.

Accordingly development workers assigned will conduct necessary work of announcement, organize them in teams and provide necessary education and support.

The services provided by development worker are:-

- Seek suitable technologies enabling women pastoralist/semi-pastoralists generate income and benefit from it.
- Exert all necessary efforts to make women pastoralists benefit from development by taking them out of harmful and backward practices that are bottle neck to the development;
- Provide awareness rising lesson in relation to the unjust outlook of the community towards women so as to make them bring about behavioral change;
- Extend support to the women to enable them solve their problems on their own by integrating their labor, time and knowledge;
- Facilitate the condition in which pastoralist/semi-pastoralists women will participate and benefit equitably from package and modular trainings;
- Extend necessary support to women family heads so that they can resolve their familial food security and other social problems by enabling them use and benefit from new agricultural technologies and working mechanisms/ practices.

12.4.1.4 Establishing Youth clubs

It is necessary to organize the local youth in teams raise the by creating awareness of youths particularly students on agricultural activities and natural resources to enable the youth clubs benefit from agricultural activities. Development workers facilitate ways of establishing youth clubs by discussing and working in integration with local schools. While youth clubs can contribute highly, particularly in planting seedlings and environmental conservation they can also participate extensively in other agricultural activities namely, vegetables, small scale animal husbandry bee keeping, fodder development and the like. As the youth have wider opportunities to share the knowledge and skills they obtained from their clubs to family members, the work should be conducted seriously. Conducting demonstration works in schools compound should be done with high considerations as it contributes much to the dissemination of new practices.

In addition, young pastoralists outside of schools to be organized under youth club thereby enabling them participate in income generating development sectors as well as modern agricultural development activities and secure self sufficient livelihood.

Therefore, it is essential to carry out the following tasks with attention:-

- Facilitate the ways in which pastoralist/semi-pastoralist youths participate in the various income generating development sectors;
- Facilitate conditions in which pastoralist/semi-pastoralist youths participate in development works is enhanced in agricultural technologies and technical supports there by change their outlook towards the work;
- Sensitize the youth, train them and demonstrate practically to enable the youth acquire common understanding on their residential areas and participate actively in the local developmental activities and environmental conservation process;
- Provide necessary support to enable them solve their problem on their own by coordinating their knowledge, capacities, time and labor;
- Facilitate ways in which they obtain inputs and material necessary for development activities on credit;
- Prepare and implement income securing projects that support the youth based on their needs and participation; facilitate condition in which performance of diligent youths demonstrated to enable other youths gain lesson.
- Conduct experience sharing program to strengthen development activities;
- Organize youths around value adding agricultural activities and enable them benefit from local market centers by creating market link;

- Facilitate the delivery of current information to youths.

13. Integrated Mechanism of the Extension System with Development Partners

13.1. Relation of Agricultural Research and Extension

There should be a mechanism in which the system extension and the agricultural research shall have clothed ties so as to identify the problems of pastoralists /semi-pastoralists and submit them to researchers for finding desolutions. For this to happen, it is necessary to strength the relationship between agricultural research and extension council relations mechanism impresses agricultural research, agricultural extension executive bodies, higher educational institutions involved in agricultural instruction and research, institutions supplying inputs and loans at level as well as the benefiting community. Therefore the research and extension advisory councils at any level shall have the following objectives

- Enhance technology transfer and information exchange
- In by coordinating the joint efforts of research and extension institution identify production bottle neck in area pastoralists /semi-pastoralists and generate relevant technologies and implement them in a continuous and in a lucrative manner.
- Facilitate circumstances in which stakeholders in the agricultural development work jointly for common objective and conduct discussion
- Generate, distribute and utilize technologies in un interrupted, connected and continuous way by associating it with the direction of the research and extension agenda
- Monitor and evaluate jointly the activities of pastoralists/semi-pastoralists, agricultural development and other stakeholder

- Submit decision proposals that would be input to national policies by discussing agriculture, related policy matters

13.2. Relations with Partners in order for the Agricultural Extension Activities

Implemented comprehensively, it is decisive to create relations with support providing institutions such as credit and input supplying institutions. Accordingly, the credit and input supplying institutions will be requested to release the loan or supply the inputs based on the request compiled gathering information on the demands of users and development sites and present to the wereda in advance. In addition to this advice is provided on the source of the inputs namely on where, When, and How to get it.

13.2.1. Relations with Input Suppliers

It will create convenient situation in order to be able to deliver varieties of supplies with adequate quantity and desired quality timely by facilitating the realization of smooth relations between supplying institution and executive bodies.

13.2.2. Relations with Creditors

Capital is necessary to make effective any developmental activities. The capital to be secured in the form of loans should take into consideration the demand and capacity of the client community, the time, the condition and the reasons and the places at which the loan will be effective should be addressed through assessment. Besides, a work of creating awareness on the timely repayment of the loan will be conducted and various activities of sensitizing clients will be carried out.

13.2.3. Relations with Governmental Non-Governmental Organizations

Efforts will be made to create integrated work relations between agricultural offices of pastoralists/semi-pastoralists and other governmental and Non-governmental organizations contributing to agricultural development directly or indirectly so as to

contribute to the achievement of the goals of agriculture-led development strategy. In general, this working situation enables or concerned stakeholders work towards identify problems of pastoralists/ semi pastoralists, seek solutions for the problems and implement results. Such stakeholders include agricultural extension service provider at all level, governmental and non-governmental institutions (private Institutions, agro-processing institutions, input suppliers, merchants, unions of cooperatives etc.

Therefore, it is necessary to create clothe relations among this institutions and plan, impalement, follow up and evaluate activities jointly. These co-coordinating activities are conducted by the advisory council of research and extension relations (communication) where the council is established. In zones and weredas where there are no research centers, zonal and wereda pastoralist and agricultural development offices shall take the responsibility and create the communication forum.

14. Training

It is necessary to provide trainings which enable to apply new technologies and work mechanisms and to fill gaps observed in the course of implementation to the benefiting community and to the development agents. As the budget allocated for trailing is thier right, the work sector and employee with less knowledge as skills is identified in advance so as to realize the allocated budget properly. Training providing bodies should be discuss with experts and offices at various levels at sites and identify trainings needs and facilitate ways of providing practical trainings for experts according to their to be by working integrated with the researchers in the area and focusing the identified training needs. It is necessary to measure the effectiveness of the training, particularly by evaluating with focus the outcomes achieved as a result of the training.

14.1 Training of experts

Through the training, experts should be capacitated to the level building and increasing their knowledge by integrating identifying important local knowledge with the new

technologies and providing the training effectively and way fully the gaps. They should be introduced with newly released technologies and working mechanism's. In addition Experts at every level should be given long and short-term trainings in the fields of study so as to enable them improve to scale up their academic status.

14.2 Development workers training

In order to raise their capacity, training will be given to development workers on duty in accordance with the training needs identified in advance. Also, they will be given training in all packages so as to familiarize them with newly introduced research results and new working mechanisms.

Besides, based on the local objective situation, they should be given trainings for up grading their professional competence in a way they specialize on local and satiating products such as animal husbandry and dairy products, fodder, natural pasture management and utilization, rice, sesame, irrigation, vegetables and fruits.

14.3 Pastoralists and semi Pastoralists

In order to realize fundamental change in agricultural sector, it is necessary to create educated Pastoralists /semi Pastoralists. Among the main tools to convey extension messages, one is training. It is necessary to provide practical training to raise their skills. Accordingly, the training provided should be based on the following objectives.

- To create awareness on practice oriented working and producing mechanisms.
- To build interest towards using various technology alternatives and strengthen the desire to work ;
- To enable trainees propose solutions for their problems exchanging experience among themselves.

Accordingly, training is given based on the objective situation of the area in which the pastoralist training centers are located and in two ways. These are the modular and short-term package implementing skills training.

14.3.1 Modular Training

Whereas the training provided by the pastoralist-training center is supported with curriculum, the trainees will be awarded green certificate up on specializing on specific job. The detailed training procedure will be indicated in the pastoralist.

Training center manuals

14.3.2 Package training

The package training is a training given to the extension workers in the form of theory or practical manner .The training is given with the help of demonstration sites in the pastoralist training centers and model pastoralist/ semi pastoralist farms and given to the pastoralists/semi pastoralists organized in their surrounding by showing the activities incorporated in the process of production from the beginning to the end.

15. Agricultural Extension Service Methods

Development workers use the following methods individually or in groups based on the characteristics of the messages to be conveyed

15.1. Individual Presentation Method

This is a method in which development worker transmit the message meeting physically each pastoralists/semi-pastoralists directly the method will be conducted through:

- Meeting pastoralists/semi-pastoralists in their work place, discussing with them and demonstrating
- Provide family oriented extension services paying house to house visit
- Provides advisory service at development worker's office based on the permanent program issued by the development worker
- Conveys extension messages on religious, holidays, at market places and other events

This extension service method shall be applicable all permanent and mobile pastoralists/semi-pastoralists extension service.

15.2.Group/Team Presentation Method

The group presentation method is a type extension service conducted by gathering more than a pastoralist/semi-pastoralist. The method through organizing demonstration sites, communal site visits and experience sharing, organizing events and agricultural exhibitions. This method is particularly useful when development workers provide proper extension service by moving with pastoralists in search of pasture and water.

15.2.1. Demonstrations Sites

Demonstration are instructional tools that enables to motivate, make decision and implement the newly introduced and desired technologies by showing the difference the new mechanism has with the traditional method of pastoralist/ semi-pastoralist there are two times extension service demonstrations, namely procedural method and output demonstration.

15.2.1.1. Procedural Method Demonstration

Procedural method demonstration is a method in which pastoralists/semi-pastoralists are taught step by step in persuasive and clear ways about improved method/technology or technical utilization (improved agricultural tools usage, selected seed and lined sowing improved fodder development, animal husbandry and management...)

This demonstration type is intends to:

- Focus on Local problems and provide solutions
- Provide enable to adequate lesson and interpret gathered information
- Incorporate fully necessary materials and tools/seed, fertilizer, pharmaceutical pharm tools.

15.2.1.2. Output Demonstration

Result demonstration is utilize when the improved working mechanisms as soon their work of research is completed and ready to be distributed to pastoralists/semi-pastoralists that are shown practically comparing with their working mechanism and understanding the betterment of the new mechanism and convinced to use it. For this reason, the output of a research should address earlier problems that had been discussed for being a bottle neck for production by experts and directed to research institutions to solve local problems. For example, it is a mechanism to show selected grain seed, fodder animal species and local seed outputs

In terms of quality and profitability and late pastoralists be convinced to use the better once. This teaching method should be implemented as it enables pastoralists/semi-pastoralists bring about outlook changes and motivated for enhancing production and productivity growth by observing, Lessing, discussing and participating on new technologies or improved and proven production methods. Therefore, based on the importance of this demonstration both types of demonstrations will be implemented

following objective local situations and the necessity. After adequate training has been given to the pastoralists/semi-pastoralists about the technology or the method, they will be implemented in the work place or area of model pastoralists/semi-pastoralists who received support and interested semi-pastoralists as well as of training sites where convenient conditions are created. In any situation, the technology or the working mechanism will never be implemented directly as a demonstration in their work area. The demonstration will be conducted with assistance of the development worker by pastoralists/semi-pastoralists themselves after the training, based on the type of technology and the level of training. By issuing a program, the local pastoralists/semi-pastoralists will be made to observe the demonstration from the beginning to the end result and draw lessons from it.

15.2.2. Joint Field Visit and Experience Sharing

Whereas communal field visits and experience sharing are methods conducted by to pastoralists/semi-pastoralists to draw lessons and experiences by visiting exemplary works in other kebele's, wereda's and regions. Physically, the areas to be visited should be identified in advance. The visit should include development team leaders, model and famous pastoralists/semi-pastoralists women, use and experts.

15.2.3. Pastoralists/Semi-Pastoralists Holiday

- This is a method in which development workers will gather numerous pastoralists/semi-pastoralists and investors involved in agricultural activities to visit various and selected pastoralists/semi-pastoralists work areas and their by provide necessary lesson.
- Raise the awareness of the pastoralists/semi-pastoralists by organizing pastoralists/semi-pastoralists days at various times
- Garner the remarks and understandings of the pastoralists/semi-pastoralists on the day of the event and combine the information for the prospective work

- Let heads and experts at various levels extend proper support on the day of the event.
- Conduct a meeting to discuss on selected agenda of agricultural practices by pastoralists/semi-pastoralists
- Invite ethnic leaders, elders and religious fathers to attend the event.

15.2.4. Agricultural Exhibition

It is a method in which lesson is provided by gathering works done at various areas or models in a center. In addition:

- Helps to show the relation to be establish between pastoralists/semi-pastoralists and investors
- The forum should be a platform at which clever and vigilante pastoralists/semi-pastoralists, development workers discharged their duties adequately, kebele agricultural office heads and experts will be awarded.
- This system of incentive should be conducted at kebele, wereda, zonal and regional level once annually.
- The exhibition should be in corporate in to the work plan with necessary budget.

15.2.5. Mass Media

This method is use full to convey agricultural messages through local languages on the radio, newspapers, magazines as well as leaflet so as to access numerous pastoralists/semi-pastoralists leaving scattered in wide areas.

To conclude, the above mentioned extension messages conveyed methods can be put to use separately or integrated based on characteristics of the message to be conveyed.

16. Functions and responsibilities of Agricultural Extension

Service Providers

The agricultural extension providing directorate- work process establish a technical team of experts at all level to accomplish the following functions and responsibilities.

16.1.1. Functions and Responsibilities Federal Agricultural Extension

- Designs agricultural Extension strategies, generate the agricultural development policies and based on associated principles.
- Follow up and insure the implementation of agricultural extension system; revise it where necessary;
- Introduce and distribute to regions By gathering, formulating and preparing in the form of package newly issued technologies from research centers and selected practices; follow up the implementation
- Identify the problems of pastoralists- semi-pastoralists and their demand, and submit the issue to the director and to the communication council of development bodies. So as to provide user oriented extension service.
- Prepare current agricultural message that would rays pastoralist-semi pastoralists community awareness and transmit them through varies extension transmitting methods.
- in order to rise the capacity of regional experts, organize training forums, workshops and experience sharing among regional state;
- Analysis and make ready information explaining extension service process by collecting information from various sources.
- Seek and propose solutions on agricultural extension working mechanism and implementation incorporation with regional experts and
- Follow up its implementation utilize as input for the works of the prospective year those results obtained from the field assessment, conducted workshop and feedback given in various forms of evaluation workshop
- Transfers to others centers by formulating the effective works of pastoralist training centers and conducts experience sharing.
- Extends necessary support to pastoralist – semi-pastoralist training center;
- Co-ordinate agricultural development stakeholder;
- Establishes /SMS Team/ and co-ordinates them

- Prepares a manual that helps to organize and mobilize the community for the development work and facilitate prompt extension service; follow up the implementation
- Prepares manual for participatory working mechanism and follow up its implementation;
- Measures the results of performances based on the strengths and weakness of follow up, monitoring and support activities conducted by the technical team, in cooperation of the director

16.1.2. Functions and Responsibilities Regional Agricultural Extension

- Designs agricultural Extension strategies, generate the agricultural development policies and based on associated principles.
- Follow up and insure the implementation of agricultural extension system; revise it where necessary;
- Introduce and distribute to regions By gathering, formulating and preparing in the form of package newly issued technologies and selected practices; follow up the implementation
- Identify the problems of pastoralists- semi-pastoralists and their demand, and submit the issue to the extension work process coordinator and to the communication council of development bodies So as to provide user oriented extension service. Prepare current agricultural message that would raise pastoralist-semi pastoralists community awareness and transmit them through various extension transmitting methods.
- In order to rise the capacity of zonal and wereda, organize training forums, workshops and experience sharing
- Analysis and make ready information explaining extension service process by collecting information from various sources, based on the objective situation of the region.

- Seek and propose solutions on agricultural extension working mechanism and implementation incorporation with wereda experts and
- Follow up its implementation utilize as input for the works of the prospective year those results obtained from the field assessment, conducted workshop and feedback given in various forms of evaluation workshop
- Transfers to others centers by formulating the effective works of pastoralist training centers and conducts experience sharing; Extends necessary support to pastoralist – semi-pastoralist training center;
- Co-ordinate agricultural development stakeholder and Establishes /SMS Team/ technical team, co-ordinates them and extends budget and logistics support.
- Combines the report submitted from weredas and deliver it to the federal extension coordinating body; discharges its duties for the implementation of the plan
- Prepares a manual that helps to organize and mobilize the community for the development work and facilitate prompt extension service; follow up the implementation
- Distributes to zones and weredas the working manual prepared as the federal level; follows up its implementation,
- Based on the strengths and weakness identified by the technical team and extension work process coordinator, measures performance results.

16.1.3. Functions and Responsibilities of the Wereda Agricultural Office Extension

- Implements agricultural extension system in the wereda based on the principal of agricultural development policies and strategies as well as objectives situation of the wereda;
- Gathers and Expands selected practices obtained from the wereda to other kebeles; submits the formulated practice to the region; expands the good practice formulated and presented to it by distributing it to site development employees/agents

- Works identify the problems and needs of the users and submit it to wereda extension work process coordinator and communication council of development bodies so as to provide pastoralist- semi pastoralist extension service.
- Identify the problems of pastoralists- semi-pastoralists and their demand, and submit the issue to the extension work process coordinator and to the communication council of development bodies So as to provide user oriented extension service. Prepare current agricultural message that would raise pastoralist-semi pastoralists community awareness and transmit them through various extension transmitting methods.
- Provides necessary technical and professional support to kebele agricultural experts so as to extend comprehensive and timely extension service to pastoralists/ semi-pastoralist
- Extend support at kebele level for the preparation of work plan in the participation of pastoralists/semi-pastoralists; deliver the work plan timely to the region
- Extends support in the preparation of business plan prepared by the pastoralists/semi-pastoralists at kebele level
- Facilitate training forums, workshops and experience sharing among kebeles based on the identified gaps that enables to build capacity of kebele experts.
- Analysis and make ready information explaining extension service process by collecting information from various sources, based on the objective situation of the wereda.
- Identify problems encountered in the implementation process by working with kebele experts; Generate and implement solutions; transfer to the region those problems that are beyond their capacity
- Follow up its implementation utilize as input for the works of the prospective year those results obtained from the field assessment, conducted workshop and feedback given in various forms of evaluation workshop;

- Facilitate the building of residential houses for site development workers in order to enable them assist pastoralists/semi pastoralists closely;
- Incorporate in the work plan the construction, organization and fulfilling of logistics of pastoralist training centers and implements it
- Co-ordinate agricultural development stakeholder; Establishes /SMS Team/ and co-ordinates them
- Transfers to others centers by formulating the effective works of pastoralist training centers and conducts experience sharing.
- Provides timely support and monitoring work through wereda technical team; forward feedback based on the strengths and weakness to kebele experts
- Prepares a manual that helps to organize and mobilize the community for the development work and facilitate prompt extension service; transfers to others those effective works of organization and good practices.
- Insure that trainings and demonstration works are organize in accordance with the prepared manual by working towards fulfillment of necessary materials and inputs for the pastoralist training centers and demonstration sites; extends necessary technical support;
- Motivate and coordinate the pastoralist/ semi-pastoralist for the communal works, in additions to the private agricultural activities.

16.1.4. Functions and Responsibilities of Kebele Agricultural Office Extension

The kebele experts are accountable to the kebele agricultural office head. The teams incorporate 3-5 agricultural development experts namely, crop development, animal resource development, natural resource development, and assistant veterinary and cooperative organizer one for each who are assigned permanently at a location where the extension service is provided. In addition, a team facilitates the way in which pastoralists obtained extension services whenever they move from place to place in

search of pasture and water. Accordingly, heads of kebele agricultural development offices will be accountable to the head of wereda agricultural office and shall have the following functions and responsibilities:

- Head of the kebele agricultural development office coordinate and supervises development experts assigned under it
- Plans the permanent program by making it compatible with the development workers program/jointly; follows up, supports and evaluate they implementation; transfers those issues that require solution to the wereda pastoralist agricultural office;
- Prepares checklist and make it available for development workers to enable them perform activities timely; receives timely performance results
- Extends support to pastoralist training centers in order to enable them discharge duties properly.
- Provides skill training to pastoralists/semi-pastoralists in areas where there is shortage of development of workers.
- Delivers to the wereda good practices obtained in the area by working with development site employees; expands those good/best practices received from wereda. Incorporation with development site employees.
- Conveys extension message received from wereda to development site employees and follows up the implementation
- Evaluates activities at site jointly with wereda technical team experts each fifty nights
- Provides support in the preparation of work plan to the kebele in accordance with the procedural manual of participation;
- Delivers the combined plan to the wereda timely; prepares his./her own work plan
- Extends professional support in the preparation of the business plan pastoralists/ semi pastoralists prepare at kebele level.

16.1.5. Functions and responsibilities of Kebele Development

Workers

Development workers are accountable to the kebele agricultural office head regarding technical matters, and they have the following functions and responsibilities.

- Gathers and put to use information on social, economic and indigenous knowledge and experience of the pastoralists/semi-pastoralists community to whom the extension service is provided.
- Based on agricultural development policy and strategy prepares annual plan and delivers it to the kebele agricultural office in a way that involved the community and local capacity; revises the plan timely based on the changing situations and implements it;
- Provides training, technical and professional support to enable pastoralists/semi-pastoralists be directed by prepared business plan and work for the implementation; extends professional support incorporating development team leaders, students and appreciative ship students in technical and vocational college students.
- Schedules and impalements the daily, weekly and monthly work program jointly with concerned bodies so as to provide better extension services at kebele level
- Facilitates the participation of pastoralists/ semi-pastoralists community in the increasing of production and productivity by motivating them to the development and organizing them in development teams;

- Provides necessary advice to development teams in order strengthen relationship among them; expands the practices of those structures that achieved considerable results to other areas/ structures;
- Provides assistant to Pastoralists/semi-pastoralists to enable them strength their capacity learning from each other through their development team organization
- Motivates the interest of pastoralists/semi-pastoralists use agricultural inputs and improved work mechanisms that contribute for the increment of production and productivity;
- Delivers to the kebele agricultural granary local information on good/best practices; expands receive and formulated good/best practice among Pastoralists/semi-pastoralists
- Encourages Pastoralists/semi-pastoralists to use properly ground and underground water as important inputs;
- Facilitate the delivery of alternative technology packages to the community considering the needs of Pastoralists/semi-pastoralists;
- Prepares materials for practical trainings; provides practice/assisted training
- Provides extension services taking into account the interest of women, youth, persons with disabilities and HIV patients
- Enables the community benefit from the development by motivating the public to participate in the environmental and natural resource development and protection Works and raising their awareness
- Maintains information on the performance of the kebele Pastoralists/semi-pastoralists indicating the level their performance; Works towards enabling Pastoralists/semi-pastoralists reach the status of vanguard Pastoralists/semi-pastoralists by enabling them fill Gaps in the usage of technologies;
- Works towards insuring the module training be compatible with the curriculum incorporating theoretical and practical methods prepared based on the needs of the Pastoralists/semi-pastoralists

- Provides short term practical trainings considering the skill gaps of the Pastoralists/semi-pastoralists
- Extends necessary follow up and support in order for trained Pastoralists/semi-pastoralists be involved in fields they are trained
- Establishes and organizes permanent exhibition in the Pastoralists/semi-pastoralists training center;
- Facilitate convenient situation for the producing of products on demand or that can be produced in the area by identifying them and arranging them in their demand sequence of importance; gathers market information and distribute it to users;
- Enables pastoralists in the training center through the demonstration activities, that implement the activities attentively for they enables them secure additional income
- Establish various demonstration sites in the center in accordance with the manual; follow up the operational activities and plan implementation

16.1.6. Development Works Mobilization

There will be one pastoralist training center in a kebele in the center, 3-5 development workers namely, crop cultivation, animal science, natural resource, assistant veterinary and cooperative organizing experts are assigned. The number of development workers may be increased based on the development capacity of the area, topography and demography. These experts are accountable to the kebele agricultural office head. These development workers provide regular extension services to pastoralists/ semi-pastoralists embraced by the kebele, in addition to the theoretical and practical trainings the offer in the center. In order to create convenient situation, the kebele can be divided into three zones or more. A development worker who conducts coordinated will be assigned for each zone. Even though development workers have interest to work from one zone to the other, the mechanism is not advisable as it is less effective. Problems observed with regard to such working mechanisms are:

- Transfer of development workers to other zones before completing commenced activities in one zone
- Failure to enable a pastoralist/semi-pastoralist reach designer achievement
- Creating convenient situation for in efficient development workers/weak
- Problem of managing the work as owner/problem of accountability difficulty to evaluate the work based on results.
- Failure to create close relationship is pastoralist/semi-pastoralist.

However, it is necessary to create convenient situation for providing extension services moving through zones/ketena on the basis of annual program. The assistant veterinary expert and cooperative organizing expert will offer services in the three zones/ketena.

Activities carried out employees of development sites at ketene level:

- Gathers and maintains basic and current information of the ketena;
- Organizes and strengthens development teams
- Facilitates the participatory preparation and revising of the plans of individual and development team plans of the pastoralists/semi-pastoralists.
- In cooperation with development team leaders, prepares work schedule for the prospective week by evaluating the weekly performance of the development teams.
- Facilitate the expanding of good/best practices achieved in the ketene and those obtained from wereda to all pastoralists/semi-pastoralists in the zone/ketene; conduct experience sharing
- Follows up and supports the expanding activities conducted in the ketene with regard to animals rearing crop cultivation and natural resources;
- Co-ordinate the ketene/zone with regard to development works carried out communal

Functions carried out by site development Workers at Kebele Level

- Organize and Maintain basic and current information
- Provide training on best/good practice expansion and module based on their profession;
- Provide professional supports needed in all zones or ketenes
- Prepare annual plan and revise it where necessary;
- Gather best practices and transfer it to others with comprehensive information
- Conduct experience sharing in order to deliver to all pastoralists /semi-pastoralists good/best practices obtained in the kebele and received from wereda
- Prepare the prospective weekly work schedule based on the performance evaluation of the previous week and carried out activities accordingly;
- Facilitate the timely implementation of the planned activities
- the site Development workers meet in advance in the pastoralist training center and exchange information on the zone/ketene in which they will carry out activities.

The kebele agricultural office head monitors and controls that site development workers have carried out the works they are assigned to by visiting the kebele physically; any development related matters from structures of wereda and above wereda to the site development workers should be received transferred through kebele agricultural office.

16.1.7. Structures under Kebele Extension

16.1.7.1. Development task force of Kebele

The leadership is the main responsible body for the execution of agricultural works conducted at kebele level, where as the chief administrator of the kebele serves as chair person for the kebele development task force to be established incorporating 12- 13

members which are accountable to the kebele leadership the members of the task force are the following:

Kebele administrator	Chair Person
Head of Kebele agricultural office	secretary
Kebele development workers (3-5)	members
Ketene representatives (3)	members
Kebele public associations/use, women and pastoralist/sem-pastoralist members.	(3)

The kebele development task forces all have the following functions and responsibilities

- Prepares kebel's agricultural development plan based on the work plan submitted to it by zones/ketene
- Conducts the work of awareness creation and mobilization for development so as to make pastoralist/semi-pastoralist community be active participants in the expansion of agricultural works and local development
 - ✓ Disseminate among the public identified development directions
 - ✓ Create awareness on the planned activities
 - ✓ Works for the realization of pastoralist/semi-pastoralist that follows modern agricultural mechanisms
 - ✓ Identifies and develops kebele's development opportunities with respect to specialization and diversification
- Accomplishes the work of input supplies and distribution so as to create organize conducive distribution scheme for the pastoralist/semi-pastoralist who seek input at kebele level.
- Co-ordinate the work of building residential houses for development site workers and pastoralist training center workers

- Works towards availability of sufficient land for training and establishment of demonstration sites for the pastoralist/semi-pastoralist training center
- Works towards expanding in the kebele effective good/best practices that are proved to be effective has the level of pastoralist/semi-pastoralist level
- Co-ordinates those stakeholders participating directly or indirectly in the agricultural activities in the kebele and lets them extend better contributions
- Controls the proper utilization of the income of the pastoralist training centers
- Co-ordinates the activities of natural resources and environmental protection
- Identifies those activities that enables to secure additional income and facilitate their development so as to increase they income of pastoralists/semi-pastoralists community
- Organizes, supports and coordinates activities in order for women and the use benefit from job creation in the agricultural center

16.1.7.2. Organization of Development teams

Organizing the pastoralist/semi-pastoralist in development teams is very useful in order to make Extension service delivery conducive and assessable. Accordingly, 10-15 family-heads of pastoralists/semi-pastoralists on average will be organized in a development team on the voluntarily. The organization takes into account residential areas of members embraced in a development team. For example, if there are 1000 pastoralists/semi-pastoralists in a kebele, there would be 66-100 development teams. Each development team is led by a vanguard pastoralist/semi-pastoralist. Each development team shall have a chair person and a secretary as a leadership, who are elected by members. Election criteria for Development team leadership

- Members who are assumed vanguard and attained results using package
- Renown among the public for their good ethical conduct
- Who are volunteer to transfer knowledge and skills they gained to other pastoralists/semi-pastoralists

- Those who are willing who to present to the development workers problems of members and work for the solution
- The members who is elected as a secretary should be able to read and Wright
- Those who are ready to accept and implement new working mechanisms
- Those who are able to express themselves and accept the views of others.

It is necessary to make follow up so that the leadership may not limit members from participation. Whenever necessary, members shall have the right to replace the development team leadership.

Functions and responsibilities of development team leadership:

- Participatory and local environmental development oriented plan and work schedule of the development team will be prepared wear the support of development workers; follow up and support the implementation
- Based on the support provided, they prepared business plan and support other pastoralists/semi-pastoralists to prepare business plan.
- Discuss and Deliver messages submitted through development workers to members; present to development site workers those issues raised by members
- Gather basic information about the members and their surroundings
- Deliver the report on the development activity of members to development workers.
- In accordance with the schedule, in cooperation with development worker evaluate the overall performance of the activities and indicate direction for future activities as well as implement it
- Encourage pastoralists/semi-pastoralists for training provided based on their needs and in accordance with skill gap identify.
- Co-ordinate the activities of acquiring knowledge and the good/best practice expanding

- Co-ordinate the work of conducting the activities of experience sharing between vanguard pastoralists/semi-pastoralists and development team members so as to enable members participate in the agricultural expansion.
- Select from among members those who interested to participate in various good/best practice packages and send them to development workers

Functions of the Chair Person

- Chairs meetings of the development team; participates in other meetings.
- Representing the team, participate in other meetings
- Follows up that development team leadership discharged duties properly
- Delivers plan performance report of the development team to the development worker.

Functions of the Secretary

- Co-ordinate the activities of the team in the absence of the chair person;
- Reads to members messages received through by development workers
- Maintains documents compiled based on the information gathered from the development team; delivers to users when ever required.

Functions and Responsibilities of Development Team Members

- Implement effective good/best practice effective that have been implemented in other and local pastoralist/semi-pastoralist areas level, based on their interest; introduce it to other members; conduct experience sharing;

- Utilize ground and underground water as decisive input;
- Utilize jointly those technologies and inputs that cannot be used separately
- Accomplish environmental development works that are carried out communally
- Evaluate jointly their overall activities in accordance with their program.
- Prepare and revise annual work plan separately and jointly and implement it in accordance with the schedule
- Observe joint decisions; team manual and statuette
- Execute the activities orders by team chair person
- Provide information requested by development worker or team leader.

16.2. Teams of pastoralists/semi-pastoralists organized on the basis of value adding activities and technologies

The extension presentation should in corporate lessons, trainings and advisory services that enable pastoralists/semi-pastoralists produce output by adding value for better market prices. Otherwise, the pastoralists/semi-pastoralists cannot benefit from there agricultural activities as expected if they fail to ad values to their product. Therefore in order to benefit from the sector it is advisable to mobilize and support part of the community (pastoralists/semi-pastoralists, women, use and landless plural residents).

In activities of value addition to their products, which is the other direction to be followed by extension service. Besides the mechanism enables pastoralists/semi-pastoralists use technologies organize in team from other teams organized to deliver technologies on rental basis. This in turn enables members of the team members secure guaranty for their livelihood.

Among technologies that are supplied by teams agro processing or value addition activities:

- Milk processing

- Honey packaging
- Fish packaging
- Meat packaging
- Fodder preparation
- Leather and hide processing
- Oil producing
- Rice cleaning and etc

Post production technologies

- Grass cutting and ting machines
- Milk processing machines
- Honey filtering and packing machine
- Meat processing machines
- Fodder processing machines
- Leather and hides processing machines
- Fish processing machine
- Oil producing machines
- Winnowing machine
- Cleaning machines
- Milling machines and etc

Therefore, the following activities should be carried out in order for extension service to be applicable.

1. Identify types of products that enable to secure better market and needs further value addition work through kebele experts of extension service
2. Identify technologies that pastoralists/semi pastoralists may not obtain separately but on rental basis;
3. Identify sect of the society (pastoralist/semi pastoralists, women, uses, the land less) who can be involved in occupations mentioned in number 1 and 2 above

4. Agitate, discuss with and advise them to start business those clients who are identified to do so
5. Organize in teams those who are willing
6. Provide skill training on specified field of business to the sect of the society that are organized in teams
7. Facilitate situations in which teams secure inputs and loans
8. Provide training on the preparation of business plan to tin numbers and pursued its necessity
9. Team members should not exceed 20 as much as possible
10. Provide skill training for team members;
11. Enable team members to issue their own statute
12. Facilitate ways in which teams involved in the sector of technology hiring and value addition would receive market related and other information
13. Support organized teams in the process of transferring them to legal associations through time

16.3 Organizing Women in a Team

Even though pastoralists/semi pastoralist's women have heightened contribution in agricultural activities they couldn't receive necessary service from the former extension systems because of cultural influence, lack of awareness and information as well as work burden. In order to feel the gap, strengthen contribution extended by women with modern production method and enable them use extension service fully as well as raise their participation in the development, it has become necessary to organize them in team. It is required to enable them own and access the extension service by organizing pastoralists/semi pastoralist women, family heads and married women in development teams. Moreover, the method of organizing women in team enables them contribute their share involved in food security activities while participating in development sector of their interest and resisting cultural influences on them.

Accordingly, development workers assigned in each thinning/ketena will make necessary work of agitation and awareness raising as well as extent the following supports:

- Seeking labor saving and relevant technologies as well as building capacity that enables to secure income, work for benefiting those members who have similar interests of technology
- Enable them uses best practices and working methods
- Raise the awareness of the society with regard to unjust full out look to wards women and enable them benefit from the developmental efforts relieving them from arm full and back ward activities;
- Support them in integrating their knowledge and physical capacities so as to solve their own problems;
- Enable them participate in and benefit from equally with regard to package and modular trainings;

16.4. Organizing Youth in a Team

It is necessary to enable them participate pastoralists/semi pastoralists youths in varies income generating in order to make them self sufficient by creating convenient situation and enabling them use extension services for this reason, the following activities should be carried out with focus attentively;

- Enable the youth benefit from extension service by identifying income generating alternatives and their interest of technology, organizing them in teams, providing them trainings and land as well as facilitating ways to secure loans
- Raise their awareness on their environs and actively participate in the development works and protection of the environment;

- Support them in integrating their knowledge, skills and physical capacities as well as participation so as to solve their own problems;
- Support the youth in the Preparation project proposals that enable to secure finance and implement it example;
 - ✓ Supply inputs specifically required for the area
 - ✓ Supply to the market value added local products
 - ✓ Utilize animal packages etc
- Open activities s completed for visit by others and conduct experience exchanging forum so as to expand the work
- Enable the obtain necessary information

17. Creating Incentive Scheme

It is necessary to create a competitive spirit and motivating reward to build capacity of performance so as to provide effective extension service.

An incentive scheme is a mechanism in which those who have done a good job are encouraged and those who did not perform will be motivated to achieve better results.

To this end, incentive scheme should be implemented so as to enable agricultural experts and development site staff at all levels achieve better results.

The incentives will be applicable at all levels, in the form of financial, material, certification, promotion, educational opportunities and relocation, awards etc.

18. Monitoring, Support and Evaluation Mechanism

Monitoring, support and evaluation system will be participatory and the implementation process includes all the stake holders. The extension system should be revised and improved by considering and evaluating performance in relation to the growing demand and changing situations based on the results of the evaluation. The monitoring and evaluation work can be considered in two ways. The first is concerned

with monitoring works conducted every time and the second involves the evaluation of the system as a whole.

18.1 Objectives of Monitoring and Evaluation

In order to implement the extension system, it is necessary to follow up the work and to identify problems encountered in the process and take necessary corrective measures:

- To identify the goals achieved out of the planned
- To take corrective measure at every level by informing the results of all the follow up and evaluation.

Therefore, when monitoring and evaluation is conducted, it should be carried out using the above-indicated points in conjunction with key performance indicators.

The standards will be implemented using questionnaires prepared by monitoring and evaluation with close follow up and site/field/ activities in accordance with the work plans.

18.2. Monitoring and Support

The Performance monitoring and support is accomplished by bodies at every level and it focuses not only on plan performance but mainly on building the overall capacity of the performers at every level. In order for this to happen:

- First of all, the current activities and locations at which monitoring is conducted are identified.
- Prepare follow up and support checklist
- Encourage performance at kebele level and fill gaps observed, provide feedback and forward prospective direction,
- Forward feedback to the concerned bodies after the field work by discussing the report and proposing solutions.

18.2.1 Follow up and Support Scheme at Varies Levels

18.2.1.1. At Kebele Level

- Meet and discuss weakly with leaders of development team and evaluate past weeks' plan performance and reach agreement on the plans of the prospective week.
- In accordance with the time table they schedule jointly, they will be available physically for three days in a week to provide support in pastoralist training centers where they began providing the training. Also, they extend support for five days in a week in kebeles where in modular training has not been begun. In addition to this, they follow up with attention and insure that pastoralists /semi- pastoralists are working by following the example of the vanguard pastoralists and semi-pastoralists
- Kebele Agricultural office heads should visit once a week the zone/ketena, extend necessary professional support and evaluate the performance jointly and report it to the wereda. They request the support of wereda experts if there are issues beyond their capacity.

18.2.1.2. Wereda Level

The wereda agricultural expert's team visits the kebele development station employees and development teams at least twice a month to insure that they are doing activities expected of them properly ,and provide necessary support and conduct works of follow up.

For example, if there are 20 kebeles in a wereda on average and it sought to visit this kebeles twice a month, it requires to organize the team of experts in the wereda into four sub-teams incorporating experts working in the sector of crop, livestock, natural resource and communication, and conducting the visit through these teams enable to cover all kebeles in five days. A sub- team of the experts will have the capacity to visit

and support five kebeles per-day. In this way of monitoring, each kebele will receive support twice a month. In order to make this mechanism fruitful, it is necessary to facilitate proper transport services and the budget.

18.2.1.3. Regional Level

The team of experts organized at regional level conducts visits at sites physically and extend necessary support and conduct necessary monitoring work in zones, special weredas and selected weredas as well as kebeles in the region by organizing itself at least in two sub-teams of experts based on the number of zones in the region. The teams conclude their duties by conducting support and monitoring works as well as providing feedback where deemed necessary in zones, weredas and kebeles that are selected for the purpose. This activity is carried out quarterly.

18.2.1.4. At Federal Level

Where necessary, the team of federal experts organizes its self into two sub-teams and conduct technical support, work of monitoring and evaluation by visiting quarterly the selected regions, zones, weredas and kebeles. This team concludes its duties after it has evaluated activities at each level and provided feedback, has provided feedback on the performance report of the work of support and monitoring in the presence of higher officials of the regional state and the agricultural sector officials, and has conducted concluding discussion. Similarly, a discussion in which federal agricultural experts and officials are participated is conducted at federal level to evaluate the monitoring and support report, and send the feedback to the regions timely.

18.3. Evaluation of Performance

Whenever evaluation is conducted, the following issues should be considered:

- The results obtained through the activities carried out in accordance with the plan;

- The strengths and weaknesses observed;
- Whether the extension service system has enabled to achieve the desired objectives and goals;
- Whether the monitoring and support works; have been provided properly at every level;
- Whether the development bodies /stakeholders have discharged responsibilities properly;
- If lessons drawn and directions of solution for prospective works have been indicated and etc.

The performance evaluation is conducted in the following ways:

- Leaders of development teams will meet for one day weakly with development team members and discuss on their current activities, at a time convenient for them.
- At zonal level, development site employees and development leaders meet weakly and evaluate their weakly activities;
- At kebele agricultural office level, head of the office and experts of the development site meet once weekly and evaluate their activities;
- At kebele level, employees of the development site, development team leaders and kebele development task force meet monthly and evaluate their activities;
- At wereda level, wereda experts evaluate their activities once a month;
- At wereda level, wereda experts, wereda development committee and kebele agricultural office heads meet once a month for discussion;
- At regional level, discussion is conducted to evaluate activities quarterly in the participation of zonal and special wereda agricultural heads as well as the regional development committee;

- At federal level, discussion to evaluate activities will be conducted annually in the participation of regional agricultural bureau heads and extension work process leaders.

19. Reporting Mechanism

In addition to the monitoring and support works at every level, the reporting mechanism should be given focus. As the report should be based on facts and incorporates only the accomplished activities, it should be approved by concerned bodies before it has been submitted.

- Basic information will be reported each quarter through document or email
- Work plan performance report will be submitted at every level monthly in written form (document) or through email
- Those phenomena that require urgent responses/emergency such as animals and plants diseases, pests, input demand, natural and manmade disasters etc. will be reported through telephone and fax.

20. Definitions

- "System" means a scheme incorporating various sub-entities that strives for the achievement of the goal by using various inputs and carrying out activities following logically frame worked communal procedures and principles logic. Each of these entities contributes positively or negatively may affect the effectiveness of each other in their work relation and interaction;
- 'Pastoralist' means an individual or a person over 50% of whose life/livelihood is based on rearing of animals;
- "Semi-pastoralist" means an individual or a person 50% of whose life/livelihood is based on rearing of animals;
- "*Good Practice*" means practices and technologies implemented at pastoralist /semi-pastoralist level that enabled to obtain better productivity than the usual practices.;

- *'Formulating Good Practice'* means preparing the above mentioned practices and effective mechanisms in a convenient way that enables to expand the Process they come through.

21. References

1. Ethiopian Livestock Master Plan, August 2015, Addis Ababa, developed by the LMP team for the Ministry of Agriculture: Livestock Resources Development sector.
2. Ethiopian Agricultural Extension Strategy, May 2010, Addis Ababa.
3. Ministry of Agriculture, Evaluation of GTP II Agricultural Extension and Plan of the Prospective 10 years, November 2020.
4. Livestock and Fish Resources Sector GTP 11 (2015 - 2020).