

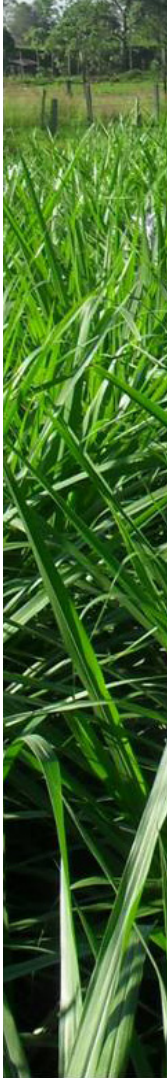


Kenya Climate Smart  
Agriculture Project



# Climate Smart Agricultural Technologies, Innovations and Management Practices for Pasture and Fodder Value Chain

## TRAINING OF TRAINERS' MANUAL



**Compiled by:** Kuria S. G., Ogillo B.P., Kubasu D., Bii, J. C., Koir B.K., Kimutai J.,  
Kidake B.K., Njuguna P.M., Wambulwa L.M., Katiku P.N.

**MARCH 2020**

## **Disclaimer**

The information presented in this manual is for advisory use only. Manual users should verify site specific appropriateness with regard to the agro-climatic zone, farming system and the value chain.

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## **TRAINING OF TRAINERS' MANUAL**

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**MARCH 2020**



## Foreword

Kenya Climate-Smart Agriculture Project (KCSAP) tasked the Kenya Agricultural and Livestock Research Organization (KALRO) with the implementation of the project's Component 2 on 'Strengthening Climate-Smart Agricultural Research and Seed Systems'. The component activities are geared towards the development, validation, adoption and delivery of context specific climate smart agriculture (CSA) technologies, innovation and management practices (TIMPS). The other responsibility was development of sustainable seed production and distribution systems for priority value chains to enhance availability and access to seed, breeds and fingerlings by target beneficiaries under Components 1 (Upscaling Climate-Smart Agricultural Practices). Against this background, KALRO and her NARS partners have developed, validated and availed CSA TIMPS for dissemination and adoption. The TIMPS have further been unpacked during the development of Training of Trainers (ToT) Manuals for use in training public and private extension service providers and lead farmers.

The ToT Manuals are instructional guides to be used for teaching and learning step-by-step procedures of implementing CSA innovations for each of the 13 value chains being addressed. The training content is drawn from the CSA TIMPS that support respective value chains. The content are arranged in progressive modules supported by extensive information from research information and background data drawn from the TIMPS. Their relevance are based on the needs teased out of the value chains and the project objectives. The ToT Manuals training design takes into consideration the delivery system, the partners and their roles, the duration of training and logical flow of the sessions. Similar content requiring similar delivery systems are grouped together while the roles of the partners are tapped in the training and planning of the training sessions.

The Manual is divided into modules, which have a uniform outline that ensures every aspect of the TIMPs are fully covered in way that the trainees can absorb and relate to. Various delivery methods are deployed and where possible demonstrations and practical work are incorporated to enable the trainees learn by participating in the actual field activities. Furthermore, to ensure that the training across various groups is standardized, trainers guidelines, detailed descriptions of the trainees, program, training methods and a training evaluation have been provided in the manual. Adhering to these guidelines, therefore, enables possibility to replicate the training in several locations without loss of details regardless of whether conducted by different trainers.

It is highly advised that the ToT Manuals should be used in conjunction with the respective value chains' TIMPs documents and facts sheets in order to provide valuable resource for both public and private extension service providers. The use of this Manual is expected to enable achievement of the envisaged 'Triple Wins' of increased productivity, enhanced resilience and reduction of greenhouse gases emissions.

I am greatly indebted to the value chain leaders and all those who participated in the preparation of the Manual, which is expected to herald a new way of delivering training content in a changing agricultural environment.

**Eliud K Kireger, PhD, OGW**

**Director General, KALRO**

## Preface

The Kenya Climate-Smart Agriculture Project (KCSAP) is a Government of Kenya project with support from both the World Bank and the government. It is a five - year project implemented in 24 counties, mainly in the arid and semi-arid lands (ASALs), at a cost of Ksh. 25B. The project development objective (PDO) is *“to increase agricultural productivity and build resilience to climate change risks in the targeted smallholder farming and pastoral communities, and in the event of an Eligible Crisis or Emergency, to provide immediate and effective response.”* This objective is to be achieved through the implementation of five key components, which are 1) Up scaling Climate-Smart Agricultural Practices, 2) Strengthening Climate-Smart Agricultural Research and Seed Systems, 3) Supporting Agro-weather, Market, Climate, and Advisory Services, 4) Project Coordination and Management and 5) Contingency Emergency Response.

Component 1 involves facilitating the empowering of farmers and communities to adopt technologies, innovations and management practices (TIMPs) to achieve the Climate Smart Agriculture (CSA) triple-wins of; increased productivity, enhanced resilience (adaptation), and reduced Greenhouse Gases (GHG) emissions (mitigation). Component 2 is charged with the responsibility of providing the TIMPs. Therefore, it supports the development, validation, and adoption of context specific CSA TIMPS to target beneficiaries under Components 1 and 3 as well as development of sustainable seed production and distribution systems.

To catalyze uptake of TIMPs, Kenya Agricultural & Livestock Research Organization (KALRO) in conjunction with partners in the National Agricultural Research Systems (NARS) and Consultative Group for International Agricultural Research (CGIAR) compiled inventories of TIMPs for each of the 13 prioritized value chains (cassava, green grams, sorghum, millet, pigeon peas, bananas, tomatoes, potatoes, apiculture, indigenous chicken (meat and eggs), dairy (cattle and camel), red meat (cattle, sheep and goats) and aquaculture and 3 cross cutting value chains (natural resource management, pastures & fodder and animal health). The TIMPs were categorized into those ready for upscaling, those that needed validation and gaps that required further research. Training of Trainers’ (ToT) manuals focusing on TIMPs that are ready upscaling for each of the value chains were subsequently developed and form the basis of training county extension staff, service providers and lead farmers. They are in turn expected to cascade this training to beneficiaries in the targeted smallholder farming, agro-pastoral and pastoral communities in the 24 project counties of Marsabit, Isiolo, Tana River, Garissa, Wajir, Mandera, West Pokot, Baringo, Laikipia, Machakos, Nyeri, Tharaka Nithi, Lamu, Taita Taveta, Kajiado, Busia, Siaya, Nyandarua, Bomet, Kericho, Kakamega, Uasin Gishu, Elgeyo Marakwet and Kisumu.

KALRO having the mandate of implementing of activities under Component 2 has been instrumental in using its information resources and those of partners and collaborators to come up with the inventories of TIMPs and corresponding ToT Manuals. The use of these information resources coupled with the accompanying training and the contribution of the other project components, will go a long way in enabling the KCSAP to meet its development objective.

The National Project Coordination Unit is grateful to all who participated in the development and production of this *Training of Trainers' Manual for Pasture and Fodder value chain*. It is my hope that counties and other users will put this resource to good use as they transform and reorient their agricultural systems to make them more productive and resilient while minimizing GHG emissions under the new realities of a changing climate.

Francis Muthami

***National Project Coordinator***

Kenya Climate-Smart Agriculture Project

## Acknowledgements

The Director General acknowledges the contribution of all the officers who worked tirelessly in the compilation of the Pasture and Fodder Training of Trainers' Manual making it a success. We are grateful to all the participants from county departments of agriculture, the research scientists from KALRO and service providers, KCSAP Secretariat, MoALF staff who in one way or another contributed to the compilation of this work.

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## LIST OF ABBREVIATIONS AND ACRONYMS

|               |  |
|---------------|--|
| <b>ASAL</b>   | Arid and Semi-Arid Lands                                   |
| <b>CTT</b>    | Core Team of Trainers                                      |
| <b>CCT</b>    | County Coordination Teams                                  |
| <b>GAP</b>    | Good Agricultural Practices                                |
| <b>GDP</b>    | Gross Domestic Product                                     |
| <b>KALRO</b>  | Kenya Agricultural and Livestock Research Organization     |
| <b>LF</b>     | Lead Trainer   |
| <b>LPAPs</b>  | Lead Pastoralists and Agro-pastoralists                    |
| <b>NaPI</b>   | Natural Pasture Improvement                                |
| <b>PAP</b>    | Pastoralists & Agro-pastoralists                           |
| <b>PAPFBS</b> | Pastoralists & Agro-pastoralists Field and Business School |
| <b>ToT</b>    | Training of Trainers                                       |
| <b>VMGs</b>   | Vulnerable and Marginalized groups                         |

# INTRODUCTION

## About this manual

This manual consists of two parts; namely Part I and Part II. Part I consists of four sections which include:

1. Background
2. The training module content including orientation and outline
3. The training design;
4. Guidelines to the facilitator for a successful training

Part II consists of 8 training modules namely;

1. Climate Smart Agriculture Practices
2. Participatory Training Methods
3. Range grass seed bulking and pasture establishment
4. Natural pasture improvement (NAPI)
5. Pasture storage and conservation
6. Livestock supplementary feeds
7. Agri-business management and market assessment
8. Gender integration and socio safeguards in pasture and fodder value chain management.



## **PART I**

This part consists of four sections including the background, module training content, training design and facilitator guidelines.



## SECTION 1: BACKGROUND

**1.1** Kenya's rangelands account for over 83% of the country's land mass and support over 70% of the country's livestock population. The livestock sub-sector in Kenya contributes 10% to 15% of the Gross Domestic Product (GDP) which accounts for 43% of the agricultural sector's GDP and employs about 50% of the agricultural labour force (ICPALD 2013, Muthee 2006). In the rangelands of Kenya, the livestock sector employs over 90% of the labour force and contributes over 95% of the household incomes (KIPPRA, 2009; Otieno, 2008). However, the rangeland ecosystems are continuously threatened by climate variability and resource degradation.

### **1.2 Climate smart perspective in pasture and fodder development**

Rangeland ecosystems are under threat from climate variability and resource degradation. Recurrent droughts are common phenomenon every 5 years. These droughts cause immense losses in resources both vegetation and livestock, thereby adversely affecting the livelihoods of pastoralists and agro-pastoralists. Community activities including over grazing, deforestation, unplanned settlement and poor water development aggravates the situation. As a result, over 50% of the ASAL population lives below the poverty line (1 USD per day) and are vulnerable to natural and manmade disasters. Restoration of pastures in degraded rangelands (e.g. through pasture reseeding) is among the interventions that can contribute to building resilience of pastoral and agro-pastoral households, increase livestock productivity and mitigate against climate change through carbon sequestration.

### **1.3 Objectives of the training**

The purpose of this training is to provide the farmers/pastoralists/trainers with knowledge and skills to empower farmers for increased productivity through adoption of Good Agricultural Practices (GAP).

The specific objectives are to:

- Provide pastoralists and agro-pastoralists trainers with relevant attitude, knowledge and skills in farming business and market assessment techniques for market led production.
- Refresh pastoralists and agro-pastoralists trainers' knowledge and skills in on-farm seed selection, establishment and management of range pasture and fodder good agricultural practices (GAP).
- Provide pastoralists and agro-pastoralists trainers with knowledge and skills in the potential in value addition at individual or group level as post-harvest pasture and fodder management.
- Provide pastoralists and agro-pastoralists trainers with knowledge and skills in participatory techniques for effective facilitation of adult learning processes through Pastoralists and Agro-pastoralists Field and Business School (APFBS) and developing inclusive stakeholder partnership development for sustainable up scaling of PAPFBSs.

## SECTION 2: TRAINING MODULE CONTENT

### 2.1 Orientation of the modules

The first part of this manual is about the training content or modules. It outlines the orientation and outline of the 8 modules. The modules are orientated so as to ensure GAP are adopted to improve productivity through improved pasture and fodder value chain competitiveness in a market led production.

### 2.2 Module outline

Each of the 6 modules have the same outline consisting of 8 parts. These parts are:

1. **Introduction to the module** – context and background to training needs, knowledge and skills gaps being addressed
2. **Module learning outcomes** – what trainees are expected to learn
3. **Module target group**-trainee categories
4. **Module users** –facilitators
5. **Module duration** –minimum number of hours of exposure to materials
6. **Module summary** –sequence of sessions, training methods, materials and duration
7. **Facilitators guideline** –detailed sessions, training methods, materials and session guides
8. **Participant’s handouts** – detailed notes and reference materials for trainees.

The outline of the 8 modules is presented in Table 1.

**Table 1: Summary of 8 modules outline for the Pasture and fodder value chain**

| No | Module Name                         | Need Addressed  | Expected Training Outcomes   | Duration |
|----|-------------------------------------|---|--|----------|
| 1  | Climate Smart Agriculture Practices | <p>Poor performance of agricultural enterprises owing to climate change</p> <p>Increasing vulnerability of pastoral and agro-pastoral communities as a result of climate change</p> | <ul style="list-style-type: none"> <li>• Enhanced understanding of climate smart agriculture Practices</li> <li>• Communicate climate smart agriculture practices effectively to master trainers</li> <li>• Enhanced adoption of climate smart agricultural practices and productivity.</li> </ul> | 2½ hours |

|   |  |   |   |           |
|---|--|---|---|-----------|
| 2 | Participatory Training Methods                     | Ineffective transfer of knowledge and skills to trainees when other training methods are applied  | <ul style="list-style-type: none"> <li>• Understand the various participatory training methods</li> <li>• Apply the various participatory training methods in pasture and fodder management.</li> </ul> | 9¼ Hours  |
| 3 | Range grass seed bulking and pasture establishment | Low supply and high cost of range grass seeds for planting in ASALs<br>Inadequate quantity and quality pasture for livestock in ASALs             | <ul style="list-style-type: none"> <li>• Enhanced availability of affordable range grass seeds</li> <li>• Quantity and quality pastures for ASAL livestock made available</li> </ul>                    | 16½ hours |
| 4 | Natural pasture improvement (NaPI)                 | Inadequate quantity and quality natural pastures for livestock in ASALs   | Quantity and quality pastures for ASAL livestock available I natural sources  | 12 Hours  |
| 5 | Pasture storage and conservation                   | High post-harvest loss of pasture quality in ASALs  | Reduced post-harvest loss of pasture quality in ASALs   | 6 Hours   |
| 6 | Livestock supplementary feeds                      | Loss of livestock productivity in ASALs due to limited supply of quantity and quality feeds particularly during prolonged dry and drought periods | Livestock productivity during prolonged dry and drought periods sustained in ASALs  | 18½ Hours |

|   |   |  |   |                 |
|---|---|--|---|-----------------|
| 7 | Agri-business management and market assessment of range pasture & pasture seeds, economics of NaPI, pasture establishment and supplementary feeding | <p>Limited adoption of agricultural technologies in ASALs</p> <p>Need to help ASALs farmers “Produce for sale” and NOT “Produce and sell” i.e. adopt the concept of farming as a business/ need to guide farmers in enterprise development</p> <p>Need to train the facilitators so as to empower farmers to increase productivity and improve marketing for enhanced incomes</p>  | <p>Enhanced adoption of Agricultural technologies in ASALs</p> <p>An increased number of farmers producing for sale i.e. doing farming as a business</p> <p>Enhanced productivity of agricultural enterprises and household incomes</p> | <b>11 Hours</b> |
| 8 | Gender integration and socio safeguards in pasture and fodder value chain management  | <p>Agricultural technologies benefiting certain gender and VMGs to a very limited extent in ASALs</p> <p>Need to:</p> <ul style="list-style-type: none"> <li>• Have increased knowledge and skills on gender awareness, lobbying and advocacy</li> <li>• Understand gender dimensions</li> <li>• Collect gender disaggregated data</li> <li>• Carry out gender analysis</li> </ul> | More equitable distribution of benefits accruing from agricultural technologies across gender and VMGs in ASALs   | 5¾ Hours        |

|                |  |  |  |          |
|----------------|--|--|--|----------|
|                |  | <ul style="list-style-type: none"> <li>• Understand approaches and strategies of gender mainstreaming and integration</li> <li>• Implement gender mainstreaming</li> <li>• Mainstream gender into leadership and governance</li> </ul> |  |          |
| Total Duration |  |  |  | 78 hours |

## SECTION 3: THE TRAINING DESIGN

### 3.1 Delivery system

The delivery system designed for this training consists of two stages:

#### 1. Establishment of a team of facilitators

- A Core Team of Trainers (CTT) trains farmer trainers as facilitators in a TOT course. This is using this manual and modules contained therein.
  - Each of the master trainers will facilitate farmers to acquire knowledge and skills in facilitating farmer led PAFBFS for fodder and pasture.
- #### 2. Up scaling –This will be done by selecting Lead Farmers (LF) to be trained in facilitation skills.

### 3.2 Partners and their Roles

The partners envisioned in this training plan are:

- **Core Team of Trainers-** Master trainers drawn from KALRO and Department of Agriculture facilitate initial training of farmer trainers. They also provide mentorship to farmers’ trainers during the first year of LF trainings. They should also be available in the evaluation of the first round of LF trainings
- **County Government Department of Agriculture-** Farmer trainers and their supervisors who can be referred to as County Coordination Teams (CCT) to take role of LF trainers, mentors and coordinators at sub county level. They assist PAFBFS’s form partnership with stakeholders for sustainability. They should also support LF’s form their networks.
- **Lead Farmer Networks-** Association of LFs in the counties to take up farmer trainings and up scaling in the future.
- **Private Sector Service Providers-** Inputs suppliers, financial and business development service providers, market players and processors to partner and support growth of individual or pasture and fodder farmer groups. This is so as to evolve into sustainable social and commercial entities

### 3.3 Training Duration

The proposed initial TOT course for Master Trainers for 8 modules in the pasture and fodder value chain shall take a total of 78 hours training period. This does not include break hours of mid-morning, afternoon and lunch breaks. Thirteen (13) days training consisting of 6 hours of training that is, 4 hours in the morning and 2 in the afternoon with mid-morning and lunch breaks per day with the exception of weekends.

- Half a day of the first day allocated for official opening and climate setting
- Another half day of the last 10th day for course evaluation, wrap up and closing ceremony.

### 3.4 Logic of Design and Flow of Sessions

The logic of design and flow of each module is that the facilitator, paying attention to the proposed methods and sessions guidelines shall:

- Introduce the module.
- Determine the participant's expectations.
- Relate trainees' expectations with module objectives or learning outcomes.
- Explore the concept and content, switching to different methods of delivery of the content (group exercise, brainstorming, excursions, plenary discussions, role plays) as the session progresses.
- Review the module at the end using participatory approaches like one participant reads one summary message and its application.
- Distribute the participants' handouts.

## SECTION 4: FACILITATOR GUIDELINES

### 4.1 Preparation of Training Materials

The training materials suggested require adequate preparations and should be available before the actual training dates. In addition:

- The facilitators should familiarize themselves and internalize the guidelines provided by this manual prior to the training.
- The stationery required should be available within the training institution 3 days before the training. These include name tags, writing materials, paper punch and medium size box files for trainees' handouts filing.
- Flip charts and good quality felt pens could be used interchangeably with LCD projections. Each trainee will require one felt pen while the trainers will require two sets of felt pens.
- Visual aids like field equipment and tools should also be arranged in time before the sessions start.
- There should be adequate copies of trainee handouts (one per participant) to be distributed at the end of each session or as may be suitable and
- Copies of the modules are distributed at the end of each module,

### 4.2 Preparation of Training Venue and Sites

The training venue will include the training room and field demonstration sites

- i **Training Room** – should have adequate space for 25-30 participants with LCD projector, a flip charts holder and white wall to act as a projector screen.
- ii **Demonstration Site** – Should be within 15 minutes walking distance with at least 5 distinct pasture and fodder plots for practical.

### 4.3 The Trainees

The trainees who will participate are Service providers and Public County Extension Officers with elaborate training background in agriculture and extension. The facilitator should not lecture but draw out and build on their knowledge, skills and experiences that they shall bring in. As a golden rule, do not lecture them but facilitate and listen and let them feel like equals to each other and the CTT members.

### 4.4 Training Program

The facilitator will require a program that consists of the actual training modules and the corresponding days and time allocation. Health breaks should be considered when drawing the training program. The training program should preferably be based on the outline presented in Annex 1 to allow flow of ideas and topics. However, should the situation demand, the sequence and day of coverage for whole or parts of the modules can be modified to suit emerging situations.

### 4.5 Training Methods

The training methods proposed for each session are suitable for adult learners and appropriate for addressing knowledge, skills and attitudes of the participants. The choice of

the methods has been informed by the competency issues being addressed, available time and experiences of the author of this manual. Depending on time available, the facilitator can modify these training methods but as a golden rule no presentation by the facilitator should take more than 30 minutes continuously; but should be separated by the other participatory training methods. The list of available training methods is presented in Table 1.

**Table 2: Description of training methods during ToT trainings**

| Training Method   | Description of Method   |
|---|---|
| Plenary presentations   | Use of PowerPoint or flip charts and plenary discussions in situations where knowledge and opinion or consensus is required |
| Group exercises, buzz groups, visits and brainstorming sessions | To be considered where skills are an issue requiring sharing and trying   |
| Role plays and problem-solving exercises                        | Plenary discussions have been considered as training methods where attitude is an issue                                     |
| On-farm practical demonstration and exchange visits             | To be considered where hands-on practical skills are acquired through sharing and demonstration                             |

#### 4.6 Planning Schedule and Guidance for ToT preparation

While planning for this training, the CTT leader should ensure the content as outlined Table 1 is ready.

**Table 3: Duration of activities to be done before training as part of the preparation**

| Duration to Training | Activities to be Done   |
|----------------------|---|
| Six weeks            | Recruit master trainers, compose CTT, identify the practical demonstration sites  |
| Four weeks           | Send out invitation letters to participants and special guests detailing purpose, venue and program. Follow up on demonstration sites. Brief the CTT members.   |
| Two weeks            | Confirm names of participants; reproduce training materials for facilitators and package, confirm preparedness of the field sites to be visited. Hold briefing of CTT members to finalize training plan. Confirm special guests if any. |
| Four days            | Confirm training sites preparedness, prepare sitting arrangements and brief assistants.   |
| One day              | Arrange training room furniture, place materials, equipment and stationery on the tables. Arrange for reception of trainees at residence proposed.  |

|              |   |
|--------------|---|
| On first day | Arrange for reception of trainees at the training venue. Ensure climate setting is done before the course is officially opened. This includes: <ol style="list-style-type: none"> <li>1. Registration</li> <li>2. Welcome to venue by host</li> <li>3. Elaborate introduction of CTT and participants</li> <li>4. Ground rules</li> <li>5. Group formation</li> </ol> |
|--------------|---|

#### 4.7 Evaluation of Training

Half day has been allocated for planning for way forward and evaluation of the TOT on the last day of the training. The first evaluation is by individual trainees without consulting each other through an evaluation form such as the one in Annex 2. The evaluation forms are then collected and analyzed by the CTT members. Table 4 only lists the topics in the Trainers' Manual for evaluation.

**Table 4: Individual Sample Evaluation Form**

| Aspect / Module   | Rating                |                  |                         |
|---|-----------------------|------------------|-------------------------|
|   | Very useful (3 marks) | Useful (2 marks) | Of limited use (1 mark) |
| Climate Smart Agriculture Practices   |                       |                  |                         |
| Participatory Training Methods  |                       |                  |                         |
| Range grass seed bulking and pasture establishment  |                       |                  |                         |
| Natural pasture improvement (NaPI)  |                       |                  |                         |
| Pasture storage and conservation  |                       |                  |                         |
| Livestock supplementary feeds   |                       |                  |                         |
| Agri-business management and market assessment of range pasture & pasture seeds, economics of NaPI, pasture establishment and supplementary feeding |                       |                  |                         |
| Gender integration and socio safeguards in pasture and fodder value chain management  |                       |                  |                         |

The second evaluation is by the group of trainees. They elect a chair and a secretary to objectively and constructively evaluate the training in about 45 minutes in the absence of the CTT members. They then present their evaluation to the CTT members and as they present, the CTT members should only give points of clarifications if any misunderstanding occurred but not try to be defensive. The CTT members then use the two evaluation results to write a report highlighting aspects that went on well and can be replicated, challenges that were encountered, and opportunities for future ToT's improvement.

#### 4.8 Participant's Training Notes and Reference Materials

Two key references should be provided for each module plus a list of other relevant publications for reference.

#### 4.8.1 List of Pasture and Fodder publications

The trainers will be advised to issue at most two publications for each of the training sessions. This is because if trainees go away with many publications in a training, they will not read them all and thus not benefit from them. Some of them may just take away as many as they can if allowed.

The list of all individual publications will be stored and made available as electronic copies – mainly PDFs. The service providers are strongly advised to keep these electronic copies on a memory stick, CD or portable hard drive so that farmers can easily access them and if necessary, print any of them out at a local internet café.



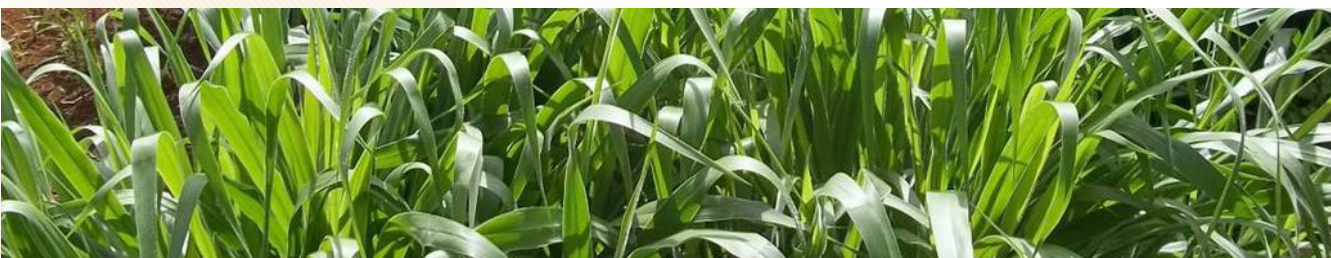


## PART II

This part consists of eight modules namely: Climate Smart Agriculture Practices; Participatory Training Methods; Range grass seed bulking and pasture establishment; Natural pasture improvement (NAPI); Pasture storage and conservation; Livestock supplementary feeds; Agri-business management and market assessment of range pasture & pasture seeds, economics of NaPI, pasture establishment and supplementary feeding; , Gender integration and socio-economics of pasture and fodder production.

All the modules will be divided into the following:

1. Introduction to the module
2. Module learning outcomes
3. Module target group
4. Module users
5. Module duration
6. Module summary
7. Facilitator's guidelines
8. Participants' handouts



# MODULE 1

## CLIMATE SMART AGRICULTURE PRACTICES

### 1.1 Introduction to the module

Climate-smart agriculture (CSA) is an approach of transforming and reorienting agricultural systems to effectively support development and ensure food security in a changing climate. The CSA entails agricultural practices that promote community adaptation to climate change or mitigate climate change effects.

Some examples of CSA practices are as follows:

- Establishment of drought tolerant pastures species which provide feed for livestock and also act as carbon sink.
- Rearing of drought tolerant livestock breeds which help the community adapt to climate change.
- Increasing vegetation cover for enhanced carbon sequestration.
- Promote adoption of improved soil and water management technologies.
- Improving animal feed quality for efficient utilization and minimal greenhouse gas emissions.

### 1.2 Module learning outcomes

By the end of this module, the following outcomes should be achieved:

- Appreciation of training climate smart agriculture enhanced to the extent of being able to communicate the skills to the farmers.
- Effective communication of climate smart agriculture practices to master trainers enhanced.
- Adoption of climate smart agricultural practices and productivity enhanced.

### 1.3 Module target group and categories

This module is intended for service providers and county public extension agents.

### 1.4 Module Users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

### 1.5 Module duration

The module is estimated to take 4 hours 50 minutes

## 1.6. Module summary

| Sessions   | Training methods   | Training material                     | Time       |
|--|--|---------------------------------------|------------|
| Expectations, Introduction, Objectives.  | Personal introductions<br>P/point Presentation<br>Discussions              | Flip charts<br>PowerPoint<br>Handouts | 30 Minutes |
| i) Definition of terms; <ul style="list-style-type: none"> <li>• CSA</li> <li>• Climate change</li> <li>• Climate change adaptation</li> <li>• Climate change mitigation</li> <li>• Climate change sustain-ability</li> <li>• ii) Schematic presentation of climate change</li> <li>• iii) Causes of climate change</li> </ul> | Presentation<br>Discussion   | Flip charts<br>PowerPoint<br>Handouts | 30 Minutes |
| Effects of climate change.<br>Observed climate shocks<br>Consequences of climate change<br>Impacts on livelihood systems<br>Economic implications of climate change<br>Socio implications of climate change<br>Environmental implications of climate change  | Presentation<br>Discussion   | Flip charts<br>PowerPoint<br>Handouts | 30 Minutes |
| Climate change adaptation and activities   | Group work on adaptation activities<br>Presentation<br>Plenary discussions | Flip charts<br>PowerPoint<br>Handouts | 30 Minutes |

|  |   |                                       |                         |
|--|---|---------------------------------------|-------------------------|
| Climate change mitigation and activities | Group work on mitigation activities<br>Presentation<br>Plenary discussions  | Flip charts<br>PowerPoint<br>Handouts | 30 Minutes              |
| Farm visit                               | Demonstration on effects of climate change, climate adaptation and climate mitigation activities, causes of environmental degradation |                                       | 2 Hours                 |
| Wrap up                                  | Summary of main points  |                                       | 20 Minutes              |
| <b>Totals</b>                            |   |                                       | <b>4 Hrs 50 Minutes</b> |

## 1.7 Facilitator guidelines

|   |   |
|---|---|
| <b>1.7.1 Welcome, Introduction and Levelling Expectations (30 minutes)</b>  | <b>Session Guide</b>  |
| <p><i>(The facilitator welcomes trainees to the module and introduces themselves by stating their profile and experience).</i></p> <p><b>Introduction</b><br/>The facilitator invites the trainees to state their expectations. The facilitator then presents modules objectives.</p> <p><b>Module Objectives</b><br/>By the end of the module training, the trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Differentiate between climate adaptation and mitigation as climate smart activities.</li> <li>• List climate adaptation and mitigation activities in the pasture and fodder value chain.</li> <li>• Identify advantages of climate smart agriculture approaches in the era of Climate Change.</li> </ul> | <ul style="list-style-type: none"> <li>• Distribute Participants Handouts</li> <li>• Module Objectives</li> <li>• Training Program</li> </ul> |
| <b>1.7.2 Definitions (30 minutes)</b>   | <b>Session Guide</b>  |
| <p><i>Facilitator presents PowerPoint slides on:</i></p> <p>i) Definitions of CSA, climate change, climate change adaptation, climate change mitigation, climate change sustainability.</p> <p>ii) Schematic presentation of climate change.</p> <p>iii) Causes of climate change.</p> <p>Question and answer session</p>   | Participants Handouts   |

|   |  |
|---|--|
| <b>1.7.3 Effects of c common forage species found in their localities limte change (30 minutes)</b>   | <b>Session Guide</b>                                       |
| <ul style="list-style-type: none"> <li>• <b>Power point presentation on:</b></li> <li>• Effects of climate change</li> <li>• Observed climate shocks</li> <li>• Consequences of climate change</li> <li>• Impacts on livelihood systems</li> <li>• Economic implications of climate change</li> <li>• Socio implications of climate change</li> <li>• Environmental implications of climate change.</li> </ul> <p>Question and answer session</p> | Participants' handouts                                     |
| <b>1.7.4 Climate change adaptation (30 minutes)</b>   | <b>Session Guide</b>                                       |
| <p>Group work on climate adaptation activities</p> <p>Presentation</p> <p>Plenary discussions</p>   | Participants Handouts                                      |
| <b>1.7.5 Climate change mitigation (30 minutes)</b>   | <b>Session Guide</b>                                       |
| <p>Group work on climate mitigation activities</p> <p>Presentation</p> <p>Plenary discussions</p>   | Participants Handouts                                      |
| <b>1.7.6 Farm visit (2 hours)</b>   | <b>Session Guide</b>                                       |
| <p>Demonstration on effects of climate change, climate adaptation and mitigation activities, causes of environmental degradation</p> <p>Questions and answer session between trainees and farmers</p>   | <p>On Farm demonstrations</p> <p>Participants Handouts</p> |
| <b>1.7.7. Wrap up of the module (20 minutes)</b>  | <b>Session Guide</b>                                       |
| <p>The facilitator allows the trainees to review module and then guides them through a summary of the important points to note about the module. The key points are listed on a flip chart. Also ask questions to the trainees to test their level of understanding</p>   |  |

## 1.8 Participants' Handouts

1. Michael Okoti - How Kenya's pastoralists are coping with changes in weather patterns
2. Philemon Lagat. (2016). The Effects of Climate Variability on Livestock Production in Kenya. Journal of Agricultural Policy ISSN 2520-7458 (Online) Vol.1, Issue No.1, pp 58 - 79, 2016

3. Giridhar Kandalam and Anandan Samireddypalle. (2015). Impact of Climate Change on Forage Availability for Livestock. DOI: 10.1007/978-81-322-2265-1\_7
4. Victor Savatia. (2010). Impacts of Climate Change on Water and Pasture Resulting in Cross-border Conflicts: A Case Study of Turkana and Pokot Pastoralists of Northwestern Kenya. Journal of Meteorology and Related Sciences Volume 5 ISSN: 2412-3781

# MODULE 2

## PARTICIPATORY TRAINING METHODS

### 2.1 Introduction

The choice of the training methods should be informed by the competency issues being addressed, time available and experiences of the author of this manual. Depending on time available, the facilitator may modify these training methods but as a golden rule no presentation by the facilitator should take more than 30 minutes continuously; but should be separated by the other participatory training methods.

There are several types of non-formal education approaches that are useful for adult learners. These can be tailor-made to assist trainees to acquire knowledge, skills and or change their attitudes towards certain practices and beliefs. This module presents a pool of these methods which the facilitator can choose from in the course of training.

### 2.2 Module learning outcomes

By the end of the module training the following outcomes should be achieved:

1. Improvement of participatory training methods.
2. Use of participatory training methods in pasture and fodder management enhanced.

The module covers a number of participatory training methods including but not limited to:

#### a) **Sharing and Discussions in Plenary**

This is the free exchange of knowledge, ideas and opinions on a particular subject among trainees and facilitators through plenary presentations. The method is suitable where the application of information is a matter of opinion. It is used to change attitudes and as means of obtaining feedback about the way in which trainees may apply the knowledge learned. It should be noted that the trainees may be led away from the subject matter or fail to discuss it exhaustively and may become entrenched in their attitude rather than be prepared to change them.

#### b) **Panel Discussion (as a method for presenting case studies)**

Participants are divided into groups and answer question written on the board. A facilitator will serve as moderator, time keeper and at the same time set the rule and regulations for the activity. Ask the groups to draw lots as to which one will be the first discussant and the first to act as panel of interrogators, and so on. After a group, has presented its answers to their assigned questions, the panel can ask questions related to the discussions/answers made. This exercise is appropriate for assessing learning and participants' performance in trainers' training and helps develop capability to communicate ideas and knowledge with other trainees.

#### c) **Case Studies**

Case studies fall into two broad categories:

- Those in which trainees diagnose the case of a particular problem

- Those in which trainees set not to solve a particular problem.

This method is most suitable when trainees need to view a problem objectively or free from the pressures of actual events. It provides opportunities for exchange of ideas and consideration of possible solutions to problems the trainees will face in their work situation. However, trainees may get the wrong impression of the real work.

#### d) **Role Play**

Trainees enact, in the training situation, the role they will be called upon to play in their job. Use role playing mainly for the practice of dealing with face-to-face situation, i.e., where people come together in the work situation. This method is suitable where the subject is one that is a near-to-life practice to the training situation. The trainees can practise and receive expert advice or criticism and opinions from fellow trainees in a “protected” training situation. This gives confidence and offers guidelines. The trainees get the feel of the pressures of the real-life situation. The trainees may be led away from the subject matter or fairly to discuss it usefully.

#### e) **Problem Solving Exercise**

It is usually a practice or a test of knowledge put over before the exercise. Before further information or new ideas are introduced the method may help to discover trainees’ existing knowledge or ideas. Use problem-solving exercises with individuals or with groups. The method is used when trainees need to practise following a particular pattern or formula to reach a required objective. The trainees are on their own thereby ensuring a highly active form of learning. Use problem-solving exercises to find out the extent of assimilation of knowledge by trainees. There is a big room for experimenting and trying out things using this method for the imaginative facilitator.

#### f) **Group Dynamic**

Trainees are put in situations where:

1. The behaviour of each participant is subject to examination and comment by the other trainees.
2. The behaviour of the group or groups as a whole is examined.

This method is a suitable way for trainees to learn the effects of their behaviour on other people and other people’s behaviour on them. It increases trainees’ knowledge of how and why people at work behave as they do. It increases skills in working with other people and in getting work done through other people. This method is valuable in learning the skills of communication.

### **I. Points to watch**

Problems may arise if what the participant learns about himself is distasteful to him. They may “Opt-out” if they feel turned off by the searching examination of motives. It is important that problems arising within the group are resolved before the group breaks up. Small Group and Big Group Discussion.

## **II. Procedure**

Divide trainees into small groups, giving each group a particular task to accomplish and discuss. Give every member of the small group the chance to share his ideas about the assigned task. Leaders that each of the groups chooses lead the discussions. After a certain given time, ask all groups to convene and process their discussion with the bigger group. This method is suitable when eliciting participation and sharing of experiences as well as ideas from individual in-groups. It is easier for an individual to share his ideas with a small group than in a big group. This is true when trainees are not comfortable with the big group or in instances when the training program has just started. Sometimes, trainees may feel intimidated or threatened when asked to share their ideas with a big group. Thus, it becomes helpful to structure training in such a way that small group discussions precede large group work/discussions. The ideal size for small group discussions is at least five but not more than ten members. Big group discussion should not exceed thirty members.

Some members of the group may impose on others, i.e., insist on their ideas. There is also a danger that some trainees may use up much time in presenting their opinions. These situations may lead to others not having the chance to speak. The facilitator should always be sensitive to these behaviours and be able to handle the group so that each member is given a chance to be heard. Accept all opinions to show respect for individual members. It might be helpful if the facilitator will remember that there are different kinds of people, i.e., need to be encouraged to speak up or some need recognition. It is his role to clarify inputs and tasks to avoid problems that may arise as a result of differences in personalities. Facilitators must maintain good judgments and should not be swayed by opinions of any one of the group members.

### **g) Brainstorming**

This may be in either in small groups or as big group and gives trainees an issue or problem to be discussed about and deliberated on exhaustively. In brainstorming, accept all ideas during the discussion. After a thorough deliberation on the issue or problem, the entire group comes up with a consensus as a final output. The method is suitable when tackling issues and problems that need or call for group decision-making. It is particularly helpful when trainees are expected to actively join in the deliberation and share their ideas, experiences as well as knowledge about the issue on hand. A group of not less than five and not more than ten members should give the best results. If the issue or problem is not clear to the group/s it is possible that trainees will not be able to come up with what is expected of them. Discussions may move away from the topic. As in the small and big group discussion methods, some members of the group may impose on others i.e. insist on their ideas. There is also a danger that some trainees may use up much time in presenting their opinions. These situations may lead to others not having the chance to speak. The facilitator should always be sensitive to such behaviors and be able to handle the group so that each member is given a chance to be heard and a consensus reached. However, it is important that all opinions be accepted to demonstrate respect for individual group member.

### **2.3 Module target group and categories**

This module is intended for service providers and county public extension agents.

## 2.4 Module Users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

## 2.5 Module duration

The module is estimated to take 6 hours.

## 2.6 Module summary

|       | Sessions  | Training methods   | Training material                     | Time       |
|-------|---|--|---------------------------------------|------------|
| 1.    | Introduction, Objectives<br>Expectations                  | Personal<br>introductions<br>Presentation<br>Plenary     | Flip charts<br>PowerPoint<br>Handouts | 30 Minutes |
| 2.    | Methods of Participatory<br>Training                      | Discussions<br>Presentation                              | Flip charts<br>PowerPoint             | 30 Minutes |
|       | Effective methods of<br>communication and<br>facilitating | Discussions<br>Presentation                              | Flip charts<br>PowerPoint             | 30 Minutes |
| 2. a) | Sharing and Discussions in<br>Plenary                     | Discussions  | Flip charts                           | 60 Minutes |
| 2. b) | Panel Discussion  | Discussions<br>Illustrations                             | Flip charts                           | 30 Minutes |
| 2. c) | Case Studies  | Discussions  | Flip charts                           | 30 Minutes |
| 2. d) | Role Play   | Discussions<br>Illustrations, skit                       | Flip charts                           | 60 Minutes |
| 2. e) | Problem Solving Exercise                                  | Discussions<br>Illustrations                             | Flip charts                           | 30 Minutes |
| 2. f) | Group Dynamic   | Discussions  | Flip charts                           | 30 Minutes |
| 2. g) | Brainstorming   | Discussions<br>Illustration                              | Flip charts                           | 30 Minutes |
| 2. h) | Module exercises  | Group work<br>Participatory<br>training<br>Communication | Discussions<br>Flip charts            | 30 Minutes |

|  |                 |                                      |             |                           |
|--|-----------------|--------------------------------------|-------------|---------------------------|
|  | Module exercise | Field visit to exercise use of tools | Field visit | 3 Hours                   |
|  | <b>Total</b>    |                                      |             | <b>6 Hours 30 Minutes</b> |

## 2.7 Facilitator guidelines

|   |   |
|---|---|
| <b>1. Welcome, Introduction and Levelling Expectations (30 minutes)</b>   | <b>Session Guide</b>  |
| <p><b>Introduction</b></p> <p><i>(The facilitator invites the trainees to introduce themselves and state their expectations (15 minutes).</i></p> <p>The facilitator presents modules objectives.</p> <p><b>Module Objectives</b></p> <p>By the end of the module training, the trainee should be able to:</p> <ol style="list-style-type: none"> <li>1. List/recall and practice the various participatory training methods</li> <li>2. Identify barriers to effective communication when passing on knowledge gained to potential end users.</li> <li>3. Apply participatory training methods to effectively impart knowledge and skills to the farmers and other stakeholders.</li> </ol> <p><b>Expectations</b></p> <p>Facilitator summarizes trainees' expectations on a flip chart and display sheet on the wall (15minutes).</p> | <ul style="list-style-type: none"> <li>• Participant Handouts</li> <li>• Training program</li> <li>• Training objectives</li> </ul> |
| <b>2. Methods of Participatory Training</b>   |   |
| <b>a) Sharing and Discussions in Plenary (30 minutes)</b>   | <b>Session Guide</b>  |

|   |  |
|---|--|
| <p><b>Plenary presentation</b><br/>Facilitator presents on training methods to the trainees.</p> <p><b>Group Exercises</b><br/>Question and answers session</p>   | Participants'<br>Handouts                    |
| <b>b) Panel Discussion (60minutes)</b>  | <b>Session Guide</b>                         |
| <p><b>Plenary presentation</b><br/>Power point presentation</p> <p><b>Group Exercises</b><br/>Question and answer session</p>   | Participants'<br>Handouts                    |
| <b>c) Case Studies (90minutes)</b>  | <b>Session Guide</b>                         |
| <p><b>Plenary Presentations</b><br/>Field visit preceded by brief remarks by the facilitator and beneficiary.</p> <p><b>Group Exercises</b><br/>Facilitator leads the trainees in discussing their observations during the field visit through question and answer approach. The facilitator then summarizes the presentations on all cases given out in the field visit.</p> | Field visit<br>Participants'<br>Handouts     |
| <b>d) Role Play (90minutes)</b>   | <b>Session Guide</b>                         |
| <p><b>Group Exercises</b><br/>Facilitator selects trainees to conduct demonstrations to the rest through role play. Facilitator allows further interaction through questions and answers.</p>   | Participants'<br>Handouts<br>Role play       |
| <b>e) Problem Solving Exercise (30minutes)</b>  | <b>Session Guide</b>                         |
| <p><b>Group Exercises</b><br/>Facilitator leads in problem solving through Question and answer approach.</p> <p><b>Plenary Presentation</b><br/>Facilitator summarizes in a PowerPoint presentation, factors to consider in problem solving</p>   | Participants'<br>Handouts<br>Problem solving |
| <b>f) Group Dynamics (30 minutes)</b>   | <b>Session Guide</b>                         |
| <p><b>Plenary Presentation</b><br/>The facilitator introduces group dynamics complete with illustration/ demonstration.</p> <p><b>Group Exercises</b><br/>Facilitator leads trainees to interact through question and answers and uses the session to demonstrate the noticeable group dynamics in play.</p>  | Participants'<br>Handouts<br>Group dynamics  |

|  |  |
|--|--|
| <b>g) Brainstorming (30minutes)</b>  | <b>Session Guide</b>                       |
| <p><b>Plenary Presentation</b><br/>Facilitator presents on brainstorming clearly indicating what points to consider in a brainstorming session and to keep it focused.</p> <p><b>Group Exercises</b><br/>The facilitator divides Trainees into group work/clusters and presents each with a brainstorming problem. Group work/clusters Use question and answer approach and report results that demonstrate brainstorming method works</p> | Participants'<br>Handouts<br>Brainstorming |
| <b>h) Wrap up of the module (20 minutes)</b>   | <b>Session Guide</b>                       |
| <p><b>Plenary Presentation</b><br/>The facilitator guides the trainees through a summary of the important points to note about the module. The key points are listed on a flip chart. Also ask questions to the trainees to test their level of understanding.</p>   | Flip Chart                                 |

## 2.8 Participants' Handouts and References

1. KCSAP- Project implementation manual
2. Pasture and fodder Extension Manual
3. Community Integrated Action Planning Manual-Notes

# MODULE 3

## RANGE GRASS SEED BULKING AND PASTURE ESTABLISHMENT

### 3.1 Introduction to the Module

Livestock productivity in extensive and semi-intensive production systems is mainly limited by inadequate quantity and quality of feed. Although sowing new pastures or improving an existing natural pastures are viable options to alleviate the feed constraints, this requires a reliable source of quality seeds of appropriate species. Appropriateness refers to capacity of the grass species to meet livestock feed needs for farmers. This which is influenced by: the environment (rainfall, soil type, terrain); type and class of the grazing animal being reared cattle steers, cows, calves, sheep, goats; the animal product meat, milk, coat and, kind of grazing system practised by the farmers (*in situ* grazing, cut and carry, silage making, hay making).

Going by experiences elsewhere in the world, two major seed production systems are recognized – opportunistic and specialized. The two systems could be either mechanized or labour intensive. The opportunistic labour intensive system is found where seed is harvested by hand from existing stands, mostly natural ones. Specialized system is the other extreme whereby fields are established for the express purpose of forage seed production and the process is mechanized. In between the two systems are different possibilities. One example is the opportunistic-mechanized system, a practice by large-scale livestock producers, who can use rested paddocks to harvest seed for sale. Seed multiplication is a function of production system, site selection, species selection, seed harvesting, seed processing and seed quality testing.

### 3.2 Learning Outcomes

By the end of the module training, the following outcomes should be achieved:

- Description of common forage species found in their localities (indigenous & Introduced and varieties) both in their vernacular or common names achieved
- Ecological and climatic requirements of forage species described and understood
- Selection description of seed bulking sites of forage species selection done
- Importance of land preparation in pasture seed sowing stressed
- Watering for irrigated seed production, fertilizer application and weed control appreciated
- Skills on seed processing, storage and seed quality testing acquired.

### 3.3 Module Target Group

This module is intended for service providers and county public extension agents.

### 3.4 Module users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

### 3.5 Module Duration

The module is estimated to take 16½ hours

### 3.6 Module Summary

|   | Sessions  | Training methods   | Training material  | Time       |
|---|---|--|--|------------|
| 1 | Introduction, Objectives<br>Expectations  | Personal<br>introductions<br>Presentation<br>Plenary               | Flip charts<br>PowerPoint<br>Hand outs   | 30 Minutes |
| 2 | Introduction to forage<br>species, ecological and<br>climatic requirements<br><br>Group discussion on<br>identification of common<br>indigenous & introduced<br>forage species found in<br>the different localities | Theory<br>Practical<br>Discussion &<br>answer session              | Stationery<br>Flip chart board<br>Power point slides   | 1 Hour     |
| 3 | Selection of seed<br>bulking sites  | Theory<br>Discussion,<br>question &<br>answer session              | Stationery (note<br>books, pens, felt<br>pens, flip charts)<br>Flip chart board<br>Open field<br>Power point slides<br>Hand outs | 30 Minutes |
| 4 | Forage species selection  | Theory<br>Practical<br>Discussion,<br>question &<br>answer session | Samples of suitable<br>grass species<br>Demonstration field<br>Power point slides  | 1½ Hours   |
| 5 | Land preparation and its<br>importance  | Theory<br>Practical<br>Discussion,<br>question &<br>answer session | Land, tillage tools/<br>tractor, oxen and<br>ox-plough<br>Power point slides<br>Hand outs  | 1 Hour     |

|    | Sessions                                   | Training methods   | Training material  | Time  |
|----|--|--|--|---|
| 6  | Forage seed sowing                         | Theory<br>Practical<br>Discussion,<br>question &<br>answer session | Seeds, tree<br>branches, sticks<br>Power point slides<br>Hand outs   | 1 hour  |
| 7  | Watering for the<br>irrigated seed bulking | Theory<br>Discussion,<br>question &<br>answer session              | Water<br>Irrigation<br>infrastructure<br>Power point slides<br>Hand outs   | 1 hour  |
| 8  | Fertilizer application and<br>weed control | Theory<br>Practical<br>Discussion,<br>question &<br>answer session | Fertilizer, Broad<br>leafed plants<br>selective herbicide<br>Sprayer<br>Water<br>Hand outs   | 1 hour  |
| 9  | Seed harvesting                            | Theory<br>Practical<br>Discussion,<br>question &<br>answer session | Containers,<br>Hand gloves<br>Hand outs  | 1½ hour   |
| 10 | Seed processing and<br>storage             | Theory<br>Practical<br>Discussion,<br>question &<br>answer session | Canvas, sticks,<br>storage containers<br>Hand outs   | 1 hour  |
| 11 | Forage seed quality<br>testing             | Question &<br>answer session<br>Practical's                        | Seed, sand paper,<br>petri dish, blotting/<br>filter paper, distilled<br>water, calendar,<br>magnifying glass,<br>hand water sprayer | 5 hours for<br>setting, daily<br>germination<br>data<br>collection for<br>21 days |
| 12 | Grass harvesting for hay<br>making         | Theory<br>Practical<br>Discussion<br>Question &<br>answers         | Tractor, mower,<br>rake, baler, sisal<br>twine, sickle, hay<br>box   | 1½ hours  |
|    | <b>Totals</b>                              |  |  | <b>13 Hours 15<br/>Minutes</b>  |

### 3.6: Facilitator Guidelines

| 3.6.1 Introduction And Levelling Expectations (30 minutes)   | Session Guide  |
|--|--|
| <p><b>Introduction</b><br/> <i>(Facilitator summarize trainees' expectations on a flip chart and display sheet on the wall).</i></p> <p>The facilitator presents modules objectives (15 minutes).</p> <p><b>Module Objectives</b></p> <p>By the end of the module training, the trainees should be able to:</p> <ol style="list-style-type: none"> <li>1. List common forage species found in their localities</li> <li>2. Recall/demonstrate technologies employed in establishing pasture either for seed or hay production.</li> <li>3. Explain the steps for harvesting seeds, processing and storing</li> <li>4. List the steps in harvesting hay, bale and store to a level where they can effectively teach farmers on the same.</li> <li>5. Explain importance of fertilizer application, weed control and watering irrigated seed production</li> </ol> | <ul style="list-style-type: none"> <li>• Participants' Handouts</li> <li>• Training program</li> <li>• Objectives</li> </ul> |
| 3.6.2 Introduction to forage species, ecological and climatic requirements (30 minutes)  | Session Guide  |
| <p><b>Plenary presentation</b></p> <p>Facilitator presents on:</p> <ul style="list-style-type: none"> <li>• The importance of weather outlook in seed bulking activities</li> </ul> <p>Questions and answer session</p> <p><b>Group Exercises</b></p> <p>Facilitator leads the trainees on:</p> <ul style="list-style-type: none"> <li>• Flow of activities in seed bulking and the different players involved</li> <li>• Source of weather information</li> <li>• In which season should planting for seed bulking be done?</li> </ul> <p>The facilitator leads the trainees through a questions and answers to enhance understanding.</p>  | <p>Group exercise<br/> Participants' Handouts</p>  |

| 3.6.3 Selection of seed bulking site (30 minutes)  | Session Guide  |
|--|--|
| <p><b>Plenary presentation</b></p> <ul style="list-style-type: none"> <li>Seed bulking site selection</li> </ul> <p>Question and answer session</p> <p><b>Group Exercises</b><br/>Facilitator divide trainees into two groups and ask them to discuss what they would consider in identifying suitable sires for seed bulking, followed by plenary presentation by the groups, then questions and answers to ensure everyone understands well.</p>   | <p>Group exercise<br/>Participants'<br/>Handouts</p> |
| 3.6.4 Forage species selection (60minutes)   | Session Guide  |
| <p><b>Plenary presentation</b></p> <p>Facilitator presents on seed bulking site selection</p> <ul style="list-style-type: none"> <li>Pasture and fodder species selection</li> <li>Common indigenous species found in trainees localities, their indigenous/common names.</li> <li>Farmer perceived preference of the species</li> <li>Examples of pasture and fodder species</li> </ul> <p>Question and answer session</p> <p><b>Group Exercises</b><br/>Facilitator conducts demonstrations where:</p> <ul style="list-style-type: none"> <li>Trainees will be asked to identify the forage species they are familiar with and those that they may have already tried to plant.</li> <li>Trainees will do an exercise of identification of species on display prepared by the trainer.</li> </ul> <p>Question and answer session</p> | <p>Group exercise<br/>Participants'<br/>Handouts</p> |

| 3.6.5 Land preparation (60minutes)   | Session Guide   |
|--|---|
| <p><b>On-farm practical demonstration and exchange visits</b><br/> <i>Facilitator arranges to conduct demonstrations/practical session on land preparation.</i></p> <p><b>Group Exercise</b><br/>           Through questions and answers approach, the facilitator guides the trainees discuss:</p> <ul style="list-style-type: none"> <li>• Land preparation for rain fed pasture production</li> <li>• Different methods and equipment used in land preparation.</li> </ul> | Demonstrations<br>Participants'<br>Handouts   |
| 3.6.6 Pasture seed sowing (30minutes)  | Session Guide   |
| <p><b>On-farm practical demonstration and exchange visits</b><br/> <i>Facilitator arranges to conduct demonstrations/practical session on pasture seed sowing methods.</i><br/>           Practical demonstration on pasture seed sowing methods</p> <p><b>Plenary Presentation</b><br/>           Facilitator presents on pasture seed sowing<br/>           Question and answer session</p>  | Practical demonstration on pasture seed sowing methods<br>Participants'<br>Handouts |
| 3.6.7 Watering for the irrigated seed production (30minutes)   | Session Guide   |
| <p><b>On-farm practical demonstration and exchange visits</b><br/> <i>Facilitator arranges to conduct demonstrations/practical session on for irrigated seed production Furrow irrigation.</i></p> <ul style="list-style-type: none"> <li>• Demonstration on land preparation for irrigated seed production Furrow irrigation</li> <li>• Irrigation water management</li> </ul>  | Demonstration<br>Participants'<br>Handouts  |
| 3.6.8 Fertilizer application and weed control (30 minutes)   | Session Guide   |
| <p><b>On-farm practical demonstration and exchange visits</b><br/>           Field demonstration on fertilizer application and weed control</p> <ul style="list-style-type: none"> <li>• Manure and commercial fertilizers</li> <li>• Fertilizer application</li> <li>• Weed control</li> </ul> <p>Question and answer session</p>   | Field demonstration<br>Participants'<br>Handouts                                    |

| 3.6.9 Forage seed harvesting (30minutes)  | Session Guide                                    |
|---|--|
| <p><b>Plenary presentation</b></p> <p>Practical demonstrations on:</p> <ul style="list-style-type: none"> <li>• Identification of mature seeds ready for harvest.</li> <li>• Different methods of seed harvesting.</li> </ul> <p>Question and answer session</p> <p><b>Group Exercises</b></p> <p>Facilitator divides the trainees into groups to discuss;</p> <ul style="list-style-type: none"> <li>• Timing</li> <li>• Seed harvesting</li> </ul> <p>Further discussion of forage seed harvesting through questions and answers.</p> | <p>Group exercise<br/>Participants' handouts</p> |
| 3.6.10 Forage Seed Processing, Packaging and Storage (60 minutes)   | Session Guide                                    |
| <p><b>Plenary presentation</b></p> <p>Demonstration on seed processing, packaging and storage</p> <ul style="list-style-type: none"> <li>• Seed drying</li> <li>• Seed cleaning</li> <li>• Threshing and winnowing</li> <li>• Packaging</li> <li>• Storage</li> </ul> <p><b>Group Exercise</b></p> <p>Question and answer session</p>   | <p>Group exercise<br/>Participants' Handouts</p> |
| 3.6.11 Seed Quality Testing (30 minutes)  | Session Guide                                    |
| <p><b>Plenary presentation and Group Exercises</b></p> <p>Demonstration: Take the trainees through the seed germination set up and observation process</p> <p>Plenary Discussions, questions and answers.</p>   | <p>Participants' Handouts</p>                    |

|   |   |
|---|---|
| <b>3.6.12 Grass harvesting for hay making (90 minutes)</b>  | <b>Session Guide</b>  |
| <p><b>On-farm practical demonstration and exchange visits</b></p> <p>Practical demonstration on harvesting and baling</p> <ul style="list-style-type: none"> <li>• Grass harvesting methods</li> <li>• Hay baling methods</li> </ul> <p>Question and answer session</p> | <p>Practical demonstration</p> <p>Participants' Hand outs</p> |
| <b>3.6.13 Wrap up of module(20 minutes)</b>   | <b>Session guide</b>  |
| <p>The facilitator guides the trainees through a summary of the important points to note about the module. The key points are listed on a flip chart. Also ask questions to the trainees to test their level of understanding.</p>                                      |   |

### 3.7 Participants' Handouts and References

1. Good quality range grass seed manual, KALRO Kiboko (published)
2. Brochure: How to harvest range grass seeds.
3. Brochure: Packaging and storing range pasture seeds for natural pasture improvement in arid and semi-arid areas.

# MODULE 4

## NATURAL PASTURE IMPROVEMENT (NAPI)

### 4.1 Introduction to the Module

The main causes of land degradation and loss of natural pasture as already indicated under module one are poor land uses and agricultural practices, overgrazing or deforestation and the frequent droughts which has led to deterioration and erosion of soil properties resulting to loss of ground cover. In the Kenyan rangelands, degradation of grazing lands is associated with loss of primary productivity, mostly as a result of overgrazing coupled with frequent droughts. In natural pastures degradation involves: loss of vegetation, reduction in palatable forage species, decrease in palatable perennial grasses, and increase in annual plants, species rarity, weed invasion and bush encroachment. The end result is increase in unpalatable species in some areas where continuous grazing is done. Bush encroachment becomes apparent when species like *Prosopis juliflora* and *Acacia reficiens* become dominant. Weed invasion becomes a problem with proliferation species like *Ipomoea kituensis* and *Astripomoea hyocyamoides*. Reseeding of natural pastures has potential for environmental protection and increase in forage supply for livestock. This includes both herbaceous such as grasses and browse species. Natural pasture improvement will help realize the three pillars of climate smart agriculture as follows: (1) increased pasture production thus increasing livestock productivity which in turn will results in better incomes and food security of the ASAL communities with positive impacts to the environment, (2) increased adaptation to climate change by ASAL communities by reducing the short term risks caused by inadequate pasture which will build their capacity to deal with longer-term stresses, (3) increased vegetation cover will mitigate GHG emissions through increased carbon sequestration.

### 4.2 Learning Outcomes

By the end of the module, the following outcomes should be achieved:

- Forage species, ecological and climatic requirements introduced and discussed
- Skills on construction of micro catchments acquired
- Protection/fencing of the pasture field, management of bush and weeds, methods of sowing and fertilizer/manure use discussed and understood
- Knowledge of utilization and conservation of pastures acquired.

### 4.3 Module Target Group and Categories

This module is intended for service providers and county public extension agents.

### 4.4 Module users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

#### 4.5 Module Duration

The module is expected to take 12 hours

#### 4.6 Module Summary

|   | Sessions   | Training methods                                | Training material   | Time       |
|---|--|---|---|------------|
|   | Introduction, Objectives Expectations                                | Personal introductions Presentation Plenary     | Flip charts PowerPoint Hand outs  | 30 Minutes |
| 1 | Introduction to forage species, ecological and climatic requirements | Theory Plenary discussions                      | Power point slides Stationery (note books, pens, felt pens, flip charts) Flip chart board Hand outs                                 | 1 hour     |
| 2 | Protection/fencing of the pasture field                              | Theory Plenary discussions Field demonstrations | Power point slides Stationery Farm tools (Panga, axe, hammer etc.) to cut the fencing material Hand outs                            | 1 hour     |
| 3 | Construction of micro- catchments                                    | Theory Plenary discussions Field demonstrations | Power point slides Stationery Farm tools (panga, hoes, shovels etc.) Measuring tape Oxen and ox-plough Tractor Sub-soiler Hand outs | 3 hours    |
| 4 | Methods of sowing  | Theory Plenary discussions Field demonstrations | Power point slides Stationery Pasture seeds Tree branches Sticks Hand outs  | 2 hours    |
| 6 | Management of bush and weeds   | Theory Plenary discussions Field demonstrations | Power point slides Stationery Herbicide Sprayer Nose masks Gloves Water Hand outs   | 2 hours    |

|   | Sessions                        | Training methods                                      | Training material  | Time     |
|---|---------------------------------|---|--|----------|
| 7 | Utilization of Natural Pastures | Theory<br>Plenary discussions<br>Field demonstrations | Power point slides<br>Stationery<br>Grazing livestock<br>Sickles<br>Hay box<br>Modified manual hay bailer & Twine<br>Hand outs | 1 hour   |
|   | <b>Total</b>                    |   |  | 12 hours |

#### 4.7 Facilitators' Guidelines

| 4.7.1 Introduction and Levelling Expectations (30 minutes)  | Session Guide  |
|---|--|
| <p><i>(The facilitator invites the trainees to introduce themselves and state their expectations).</i></p> <p>The facilitator then summarizes the trainees expectations and display them on training hall wall and presents modules objectives.</p> <p><b>Module Objectives</b><br/>By the end of the module, the trainee should be able to:</p> <ol style="list-style-type: none"> <li>1. List the different technologies applicable in improving natural pastures in ASALs.</li> <li>2. Describe the various methods and steps in natural pasture improvement.</li> <li>3. Explain importance of protection/fencing of the pasture field, and weed management methods of sowing.</li> <li>4. Demonstrate utilization and conservation of pastures.</li> </ol> | <ul style="list-style-type: none"> <li>• Participants' Hand outs</li> <li>• Program</li> <li>• Objectives</li> </ul> |
| 4.7.2 Range forage species (1 hour)   | Session Guide  |
| <p><b>Plenary Presentation</b></p> <ul style="list-style-type: none"> <li>• Facilitator presents on introduction to forage species, ecological and climatic requirements with reference to:</li> <li>• Weather outlook</li> <li>• Examples of range pasture species</li> </ul> <p>Question and answer session</p> <p><b>Group Exercises</b><br/>Facilitator leads trainees to brainstorm on forage species, ecological and climatic requirements through questions and answer session.</p>  | <p>Group exercise<br/>Participants' Hand outs</p>  |

|   |  |
|---|--|
| <b>4.7.3 Protection/fencing of the pasture field (2 hours)</b>  | <b>Session Guide</b>   |
| <p><b>On-farm practical demonstration and exchange visits</b><br/>Facilitator leads trainees to an on-farm practical demonstration and asks the trainees to make observations on:</p> <ol style="list-style-type: none"> <li>1. Identify denuded field</li> <li>2. How natural pasture has been fenced</li> <li>3. A well-managed pasture field</li> <li>4. Trainees to suggest best approaches for improving the identified denuded field.</li> </ol> <p>Question and answer session</p> <p><b>Group Exercise and Plenary Presentation</b><br/>Facilitator invites the trainees to brainstorm through question and answer method the differences observed and then concludes with a presentation importance on fencing and protection of the natural pasture land.</p> | <p>Field demonstration<br/>Participants' Hand-outs</p>               |
| <b>4.7.4 Construction of micro catchments (3 hours)</b>   | <b>Session Guide</b>   |
| <p><b>On-farm practical demonstration and exchange visits</b><br/>Facilitator demonstrates how the following are done:</p> <ul style="list-style-type: none"> <li>• Range pits making</li> <li>• Furrow making using ox-plough or tractor.</li> </ul> <p>Question and answer session</p> <p><b>Group exercise and Plenary presentation</b><br/>Facilitator leads the trainees in a question and answer session to discuss the role of micro-catchments in natural pasture improvement. Facilitator summarise the trainees contributions in a presentation.</p>  | <p>Field demonstration<br/>Participant Hand-outs</p> <p>Brochure</p> |
| <b>4.7.5 Methods of sowing (2 hours)</b>  | <b>Session Guide</b>   |

|   |  |
|---|--|
| <p><b>On-farm practical demonstration and exchange visits</b><br/>In the field, facilitator demonstrates:</p> <ul style="list-style-type: none"> <li>• How to come up with seed rate for sowing seeds</li> <li>• How to sow grass seeds</li> </ul> <p>Facilitator ensures trainees brainstorm on</p> <ul style="list-style-type: none"> <li>• Source of seeds and when to sow</li> <li>• The different methods of pasture and fodder seed sowing</li> </ul> <p>Facilitator then summarises with a presentation on all the sources of seed and methods of sowing pasture seeds.</p>                      | <p>Field demonstration<br/>Participant Hand outs</p> <p>Brochure</p> |
| <p><b>4.7.6 Use of Fertilizer/manure (1 hour)</b></p>   | <p><b>Session Guide</b></p>  |
| <p><b>On-farm practical demonstration and exchange visits</b> conduct demonstrations on:<br/>How to apply fertilizer<br/>Application equipment<br/>Soil sampling procedure</p> <p><b>Group Exercise</b><br/>Facilitator invites trainees in groups to brainstorm on:</p> <ul style="list-style-type: none"> <li>• Types of fertilizers and application rate</li> <li>• When and how to apply fertilizer.</li> </ul> <p>The facilitator then presents in summary on the recommended types of fertilizers, when and how to apply and application rates.</p>   | <p>Field demonstration<br/>Participants' Hand outs</p>               |
| <p><b>4.7.7 Management of bush and weeds (2 hours)</b></p>  | <p><b>Session Guide</b></p>  |
| <p><b>On-farm practical demonstration and exchange visits</b><br/>Facilitator leads trainees to a demonstration site where they will be shown how to control bush/weeds in pastures. Ask the trainees to note:</p> <ul style="list-style-type: none"> <li>• Equipment used</li> <li>• Methods of weed and bush (brash) control</li> </ul> <p><b>Group Exercise and plenary presentation</b><br/>Facilitator leads the trainees in discussing the equipment used and methods of weed control and any other observations they made. The facilitator guides in summarizing key points of the activity.</p> | <p>Field demonstration<br/>Participant Handouts<br/>Brochure</p>     |

| 4.7.8 Utilization of Natural Pastures (1 hour)  | Session Guide  |
|---|--|
| <p><b>On-farm practical demonstration and exchange visits</b><br/>Facilitator leads participant to a field site with natural pastures and demonstrate how to utilize them.</p> <p><b>Plenary Presentation</b><br/>Facilitator presents on The importance of proper utilization of pasture for sustained pasture production.</p> <p>Questions and answer session</p> | <p>Field demonstrations<br/>Participants Hand outs</p> |
| 4.7.9 Wrap up of Module (30 minutes)  | Session Guide  |
| <p><b>Group exercise and Plenary presentation</b><br/>The facilitator guides the trainees to review the module by giving the highlights of the module and extent to which the expectations have been met.</p>   |  |

#### 4.8 Participants' Handouts and References

1. Rangeland Rehabilitation and Pasture Production for Improved Livestock Productivity and marketing in ASALs manual, KALRO Kiboko (Unpublished)
2. How to produce good quality range grass seeds (Mnene *et al.* 2017).
3. Pasture production manual, University of Nairobi (Unpublished)
4. Brochure: Adapted range pasture species for natural pasture improvement in arid and semi-arid areas

# MODULE 5

## PASTURE STORAGE AND CONSERVATION

### 5.1 Introduction to the module

The Arid and Semi-Arid lands (ASALs) produce large quantities of feed material of high quality during the wet seasons. The need to bridge the gap in fodder seasonality in drylands is growing, more so, with the current trends of climate variability and change. The excess feed produced can be conserved to be used during dry season. This would minimize livestock bodyweight loss and unwarranted deaths witnessed during dry season. Despite the perennial feed challenge characterizing pastoral livestock production, adoption of feed conservation is very low or non-existent in most pastoral communities. On the other hand, some pastoralists have adopted inappropriate methods of feed conservation leading to avoidable feed wastage.

### 5.2 Module learning outcomes

By the end of the module training, the following outcomes should be achieved:

- Appreciation of importance of pasture and fodder storage done
- Trainees exposed to methods of pasture and fodder storage and structures used to store pasture and fodder
- Knowledge of construction of suitable hay and silage structures acquired.

### 5.3. Module Target Group and Categories

This module is intended for service providers and county public extension agents.

### 5.4 Module Users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

### 5.5 Module Duration

The module is estimated to take a minimum of **6hrs**

## 5.6 Module summary

|   | Sessions  | Training methods  | Training material  | Time           |
|---|---|---|--|----------------|
| 1 | Introduction,<br>Objectives<br>Expectations                 | Personal introduction<br>presentation plenary                   | Flip charts<br>PowerPoint<br>Hand outs   | ½ hour         |
|   | Importance of<br>pasture and fodder<br>storage              | Theory<br>Practical Discussion &<br>answer session              | Stationery<br>Flip chart board<br>Power point slides   | ½ hour         |
| 2 | The different<br>methods of pasture<br>and fodder storage   | Theory<br>Practical<br>Discussion, question<br>& answer session | Stationery (note books,<br>pens, felt pens, flip<br>charts)<br>Flip chart board<br>Power point slides<br>Hand outs | ¾ hour         |
| 3 | Different structures<br>used to store pasture<br>and fodder | Theory<br>Practical<br>Discussion, question<br>& answer session | Poster carrying all the<br>structures<br>Hand outs   | 1¼ hour        |
| 4 | Construction of<br>suitable hay and si-<br>lage structures  | Theory<br>Practical<br>Discussion, question<br>& answer session | Photos of the<br>recommended pasture<br>and fodder storage<br>structures   | 1 hour         |
| 5 | Wrap up of hay<br>fodder storage                            | Theory<br>Practical<br>Discussion, question<br>& answer session |  | ½ hour         |
|   | <b>Total</b>  |   |  | <b>5 Hours</b> |

## 5.7 Facilitator's guidelines

| 5.7.1. Introduction And Levelling Expectations (30 minutes)  | Session Guide  |
|--|--|
| <p><i>(The facilitator invites the trainees to introduce themselves and state their expectations).</i></p> <p>The facilitator summarizes trainees expectations and pin them on a wall. The facilitator presents modules objectives.</p> <p><b>Module Objectives</b></p> <p>By the end of the module training , the trainee should be able to:</p> <ol style="list-style-type: none"> <li>1. Explain important to store and conserve pasture and fodder in ASALs</li> <li>2. List the various methods of pasture and fodder storage and conservation, merits and demerits and how to construct.</li> <li>3. List steps of constructing hay and silage structures</li> </ol> | <ul style="list-style-type: none"> <li>• Participant Handouts</li> <li>• Training program</li> <li>• Module Objectives.</li> </ul> |
| 5.7.2. Importance of pasture and fodder storage (30 minutes)   | Session Guide  |
| <p><b>Plenary presentation</b></p> <p>The facilitator presents on the importance of pasture and fodder storage.</p> <p>Questions and answer session</p> <p><b>Group exercises</b></p> <p>The facilitator organises trainees brainstorm the importance of pasture and fodder storage in groups for enhanced understanding of the subject.</p>   | <p>Participant Hand outs</p>   |

| 5.7.3. The different methods of pasture and fodder storage (180 minutes)  | Session Guide  |
|---|--|
| <p><b>Plenary presentation</b><br/>The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Qualities of good silage</li> <li>• Cut hay</li> <li>• Standing hay</li> <li>• Processed feed material</li> </ul> <p>Question and answer session</p> <p><b>Group Exercises</b></p> <p>In a group format and using questions and answer approach, the facilitator guides trainees to discuss qualities of good silage, cut hay, standing hay and processed feed material comparing the advantages of each. The facilitator then summarizes the main points.</p> <p><b>On-farm practical demonstration and exchange visits</b><br/>Facilitator leads trainees to a demonstration site where they will be shown how to:</p> <ul style="list-style-type: none"> <li>• Make silage</li> <li>• Make hay</li> </ul> | <p>Demonstrations</p> <p>Participant Hand outs</p>                 |
| 5.7.4. Different structures used for pasture and fodder storage, construction (90 minutes)  | Session Guide  |
| <p><b>On-farm practical demonstration</b><br/>Facilitator leads trainees to a demonstration site where they will be shown:</p> <ul style="list-style-type: none"> <li>• The different types of structures for pasture and fodder storage used by farmers with more emphasis being put on the recommended one(s)</li> <li>• How to construct a good pasture and hay storage structure.</li> </ul> <p><b>Plenary presentation</b><br/>The facilitator will present on qualities of good pasture and fodder storage structure and open a question and answer session to enhance understanding by the trainees.</p>   | <p>Illustrations/<br/>demonstrations<br/>Participant Hand outs</p> |

|  |                      |
|--|----------------------|
| <b>5.7.5. Wrap up of hay and silage module (20 minutes)</b>  | <b>Session Guide</b> |
| The facilitator will list on a flip chart, the key points to note on pasture and fodder conservation and pin it on the wall. He/she will ask the trainees to congregate around the flip chart and guide them through the points. The facilitator will at the same time be asking questions to the specific trainees and asking them to answer as a way of testing their level of understanding |                      |
| <b>5.7.5. Wrap up of the module (20 minutes)</b>   | <b>Session Guide</b> |
| The facilitator lists on a flip chart, a summary of the key points on the module.. He/she guides the trainees through the summary and then pin it on the wall.   |                      |

## 5.8 Participants' Handouts and References

1. ASARECA LFP PRJ 14 End of Project Report 14. November 2011 to December 2013
2. Brochure: Hay making and storage for livestock production in arid and semi-arid areas

# MODULE 6

## LIVESTOCK SUPPLEMENTARY FEEDS

### 6.1 Introduction to the Module

In the ASAL, whereas feed may be abundant during the wet season, there is hardly any during the dry season. The little that is available nonetheless is of low quality with low crude protein, highly fibrous and least digestible. There seems to be a change in the farming practices in the rangelands towards more of cultivation than pastoralism leading to decreased land for grazing livestock. Forage for livestock has therefore continued to decrease in quantity and quality because most of the high quality and more palatable forage is overgrazed. Most farmers especially from the agro-pastoral communities practise supplementation of pasture using crop residues and locally available leguminous fodder. However, guidelines for such supplementation are inadequate leading to improper use of the supplements. There is also need to identify crude protein rich supplements which are available in the ASALs to be used to supplement the low quality pastures. Consequently, improvement in protein in the diet boosts multiplication of the rumen microorganisms and therefore improve digestibility of the highly fibrous feed. In addition to serving as source of protein to the rumen microorganisms, protein supplements also provides direct source of protein for the ruminant livestock. There are locally available crude protein sources in the ASAL including *Acacia tortilis* pods, *Prosopis juliflora* pods and cotton seedcake. Pastoralists utilize these feeds by in different ways such as letting livestock to feed on them directly in the field except cotton seedcake. For improved livestock productivity, these supplements need to be utilized in quantities appropriate for optimum productivity. This will address challenges including slow growth rate of calves, kids and lambs.

#### 6.1.1 THE *ACACIA TORTILIS* SUB-MODULE

#### 6.1.2 Learning Outcomes

By the end of the module training, the following outcomes should be achieved:

- Appreciation of the nutritive value of *Acacia tortilis* pods done
- Knowledge of harvesting, collection and processing of *Acacia tortilis* pods acquired
- Procedure of feeding weaner goats and lambs on *Acacia tortilis* pods outlined
- Methods of estimating live weight gain as a result of supplementation discussed and tried.

#### 6.1.3 Sub-module Target Group

This module is intended for service providers and county public and private extension agents.

#### 6.1.4 Module Users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should

familiarize themselves with the associated handouts.

### 6.1.5 Sub-module Duration

The module is estimated to take a minimum of 5 hours, 10 minutes.

### 6.1.6 Sub-Module Summary

|   | Sessions   | Training methods  | Training material  | Time          |
|---|--|---|--|---------------|
|   | Expectations<br>Introduction/<br>Background,<br>Objectives<br><br>Gross energy of major<br>feed constituents | Personal<br>introductions<br><br>Presentation<br><br>Plenary  | Flip charts<br>PowerPoint<br>Hand outs   | 30<br>Minutes |
| 1 | The nutritive value of<br><i>Acacia tortilis</i> pods  | Power point<br>presentation<br>Question & answer<br>session   | <ul style="list-style-type: none"> <li>• Stationery</li> <li>• Flip chart board</li> <li>• Power point slides</li> </ul>   | 35<br>Minutes |
| 2 | Harvesting and<br>processing of <i>Acacia<br/>tortilis</i> pods.   | Power point<br>presentation<br>Question & answer<br>session<br>Field<br>demonstrations  | <ol style="list-style-type: none"> <li>1. Stationery (note books,<br/>pens, felt pens, flip<br/>charts)</li> <li>2. Flip chart board</li> <li>3. Location with <i>Acacia<br/>tortilis</i> trees with ripe<br/>pods or sample of <i>A.<br/>tortilis</i> pods</li> <li>4. Gunny bags</li> <li>5. Power point slides</li> <li>6. Hand outs</li> </ol> | 1 hour        |
| 3 | Procedure of feeding<br>weaner goats and<br>lambs on <i>Acacia<br/>tortilis</i> pods                         | Power point<br>presentation<br><br>Question & answer<br>session<br><br>Group work on total<br>protein given to<br>shoats (basal feed<br>and supplement)<br><br>Practical<br>demonstration on<br>feeding | <ul style="list-style-type: none"> <li>• Sample of <i>A. tortilis</i><br/>pods</li> <li>• Weighing balance</li> <li>• Buckets</li> <li>• Demonstration field</li> <li>• Power point slides</li> <li>• Stationery (note books,<br/>pens, felt pens, flip<br/>charts)</li> <li>• Flip chart board</li> </ul>   | 1 ½<br>hours  |

| Sessions     | Training methods  | Training material  | Time   |            |
|--------------|---|--|--|------------|
| 4            | Methods of estimating live weight gain as a result of supplementation | Power point Presentation<br>Illustrations<br>Question & answer session<br>Practical demonstrations on weighing | <ul style="list-style-type: none"> <li>• Weighing balance, weigh band</li> <li>• Live weaner goats and lambs</li> <li>• Demonstration field</li> <li>• Power point slides</li> <li>• Stationery (note books, pens, felt pens, flip charts)</li> <li>• Flip chart board</li> <li>• Ropes</li> <li>• Gunny bags</li> </ul> | 1 ½ hours  |
| 5            | Data to be collected  | Power point Presentation<br>Questions and answer   |  | 15 minutes |
| <b>TOTAL</b> |   |  | <b>5 Hrs 10 Minutes</b>  |            |

### 6.1.7 Facilitator Guidelines

| 6.1.7.1 Introduction And Levelling Expectations (30 minutes)   | Session Guide   |
|--|---|
| <p><i>(The facilitator invites the trainees to introduce themselves and state their expectations). The facilitator then summarizes the expectations on a flip chart and pin on the wall.</i></p> <p>The facilitator presents modules objectives</p> <p><b>Module Objectives</b></p> <p>By the end of the module training, the trainee should be able to:</p> <ol style="list-style-type: none"> <li>1. Explain importance of supplementary feeds to livestock</li> <li>2. List the various supplementary feed options available in ASALs and demonstrate how they are harvested, processed and fed to livestock</li> <li>3. Recall the steps for feeding weaner goats and lambs on <i>Acacia tortilis</i> pods</li> <li>4. Estimate live weight gain using simple methods</li> </ol> | <ul style="list-style-type: none"> <li>• Participant Handouts</li> <li>• Training program</li> <li>• Module objectives</li> </ul> |
| 6.1.7.2 The nutritive value of <i>Acacia tortilis</i> pods (35 minutes)  | Session Guide   |

|  |   |
|--|---|
| Facilitator makes a presentation and then invites question from trainees.<br><ul style="list-style-type: none"> <li>• Power point presentation</li> </ul>  | <ul style="list-style-type: none"> <li>• Participant Handouts</li> </ul>  |
| <b>6.1.7.3 Harvesting and processing of <i>Acacia tortilis</i> pods (60 minutes)</b>   | <b>Session Guide</b>  |
| Facilitator makes a presentation and then invites questions from trainees.<br><ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Question &amp; answer session</li> <li>• Field demonstrations</li> </ul>  | <ul style="list-style-type: none"> <li>• Illustration/ demonstrations</li> <li>• Participant Handouts.</li> </ul> |
| <b>6.1.7.4 Procedure of feeding weaner goats and lambs on <i>Acacia tortilis</i> pods (90 minutes)</b>   | <b>Session Guide</b>  |
| Facilitator makes a presentation and then invites questions from trainees.<br><ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Question &amp; answer session</li> <li>• Group work on total protein given to shoats (basal feed and supplement)</li> <li>• Practical demonstration on feeding</li> </ul> | <ul style="list-style-type: none"> <li>• Field demonstrations</li> <li>• Participant Handouts</li> </ul>          |
| <b>6.1.7.5 Methods of estimating live weight gain as a result of supplementation (90 minutes)</b>  | <b>Session Guide</b>  |
| Facilitator makes a presentation and then invites questions from trainees.<br><ul style="list-style-type: none"> <li>• Power point Presentation</li> <li>• Illustrations</li> <li>• Question &amp; answer session</li> <li>• Practical demonstrations on weighing</li> </ul>   | <p>Field demonstration</p> <p>Participant Handouts</p>  |
| <b>6.1.7.6 Data to be collected (15 minute)</b>  | <b>Session Guide</b>  |
| Facilitator makes a presentation and then invites questions from trainees.<br><ul style="list-style-type: none"> <li>• Power point Presentation</li> <li>• Question and answer session</li> </ul>  | Participant Handouts  |

## 6.8 Participants' Handouts and References

1. Kuria – Power point presentation
2. Lengarite M I. (2014). Use of processed *Acacia tortilis* pods and local grass as dry season feed supplements for lactating goats in the rangelands of northern Kenya. TRB-6-2014. East Africa TIRI Research
3. Lengarite M I. (2015). Growth Performance of Sheep and Goats Fed Formulated Drought Tolerant Forages in Marsabit County, Kenya. TRB-6-2014. East Africa TIRI Research.
4. Tura Isako, Moses Lengarite and Hussein Walaga. (2010). How to reduce Kids and Lambs mortality among pastoral flocks in ASALs of Kenya. Bochure. KALRO HQ - Nairobi
5. KARI. (2012). Inventorization of KARI technologies, innovations & information. Eastern Africa Agricultural Productivity Project (EAAPP), KALRO HQ - Nairobi.
6. Mbuku S.M., Kitilit J.K. and Muhuyi W.B. (2008). How to supplement sheep and goats using local dry land tree legumes. Brochure, KALRO HQ, Nairobi.
7. Estimating live weight of livestock Handout

### 6.2.1 The *Prosopis Juliflora* Sub-Module

#### 6.2.1.1 Learning Outcomes

By the end of the module training, the following outcomes should be achieved:

- Appreciated nutritive value of *Prosopis juliflora* pods.
- Knowledge of harvesting, collection and processing of *Prosopis juliflora* pods and procedure of feeding them to weaner goats and lambs acquired.
- Methods of estimating live weight gain as a result of supplementation learnt and tried.

#### 6.2.1.2 Sub-module Target Group

This module is intended for service providers and county public extension agents.

#### 6.2.1.3 Module Users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

#### 6.2.1. Sub-module Duration

The module is estimated to take 5 hours, 10 minutes.

#### 6.2.1.5 Sub-Module Summary

|   | Sessions  | Training methods  | Training material  | Time          |
|---|---|---|--|---------------|
|   | Expectations<br>Introduction,<br>Objectives<br>Gross energy of major<br>feed constituents | Personal<br>introductions<br>Presentation<br>Plenary  | <ul style="list-style-type: none"> <li>• Flip charts</li> <li>• PowerPoint</li> <li>• Hand outs</li> </ul>   | 30<br>Minutes |
| 1 | The nutritive value of<br><i>Prosopis juliflora</i> pods                                  | Power point<br>presentation<br>Question & answer<br>session   | <ul style="list-style-type: none"> <li>• Stationery</li> <li>• Flip chart board</li> <li>• Power point slides</li> </ul>   | 35<br>Minutes |
| 2 | Harvesting and<br>processing of <i>Prosopis<br/>juliflora</i> pods.                       | Power point<br>presentation<br>Question & answer<br>session<br>Field demonstrations   | <ul style="list-style-type: none"> <li>• Stationery (note books, pens, felt pens, flip charts)</li> <li>• Flip chart board</li> <li>• Location with <i>Prosopis juliflora</i> trees with ripe pods or sample of <i>Prosopis juliflora</i> pods</li> <li>• Gunny bags</li> <li>• Power point slides</li> <li>• Hand outs</li> </ul> | 1 hour        |
| 3 | Procedure of feeding<br>weaner goats and<br>lambs on <i>Prosopis<br/>juliflora</i> pods   | Power point<br>presentation<br><br>Question & answer<br>session<br><br>Group work on total<br>protein given to<br>shoats (basal feed<br>and supplement)<br><br>Practical<br>demonstration on<br>feeding | <ul style="list-style-type: none"> <li>• Sample of <i>Prosopis juliflora</i> pods</li> <li>• Weighing balance</li> <li>• Buckets</li> <li>• Demonstration field</li> <li>• Power point slides</li> <li>• Stationery (note books, pens, felt pens, flip charts)</li> <li>• Flip chart board</li> </ul>                              | 1 ½<br>hours  |

| Sessions     | Training methods  | Training material  | Time                    |
|--------------|---|--|-------------------------|
| 4            | <p>Methods of estimating weight gain as a result of supplementation</p> <p>Power point Presentation</p> <p>Illustrations</p> <p>Question &amp; answer session</p> <p>Practical demonstrations on weighing</p> | <ul style="list-style-type: none"> <li>• Weighing balance, weigh band</li> <li>• Live weaner goats and lambs</li> <li>• Demonstration field</li> <li>• Power point slides</li> <li>• Stationery (note books, pens, felt pens, flip charts)</li> <li>• Flip chart board</li> <li>• Ropes</li> <li>• Gunny bags</li> </ul> | 1 ½ hours               |
| 5            | <p>Data to be collected</p> <p>Power point Presentation</p> <p>Questions and answer</p>   |  | 15 Minutes              |
| <b>Total</b> |   |  | <b>5 Hrs 20 Minutes</b> |

### 6.2.1. 6 Facilitator’s Guidelines

| 6.1.7.1 Introduction And Levelling Expectations (30 minutes)   | Session Guide   |
|--|---|
| <p><i>The facilitator then summarizes the trainees’ expectations on a flip chart and pins it on the wall.</i></p> <p>The facilitator presents modules objectives</p> <p><b>Module Objectives</b><br/>By the end of the module training, the trainee should be able to:</p> <ol style="list-style-type: none"> <li>1. Explain the nutritive value of <i>Prosopis juliflora</i> pods as a feed supplement</li> <li>2. List the steps in harvesting, collection and processing of <i>Prosopis juliflora</i> pods and procedure of feeding them to weaner goats and lambs</li> <li>3. Estimate live weight of animals using simple methods.</li> </ol> | <ul style="list-style-type: none"> <li>• Participant Handouts</li> <li>• Training program</li> <li>• Module objectives</li> </ul> |
| 6.1.7.2 The nutritive value of <i>Prosopis juliflora</i> pods (35 minutes)   | Session Guide   |

|   |  |
|---|--|
| Facilitator makes a presentation and then invites questions from trainees. <ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Question &amp; answer session</li> </ul>  | <ul style="list-style-type: none"> <li>• Participant Handouts</li> </ul>   |
| <b>6.1.7.3 Harvesting and processing of <i>Prosopis juliflora</i> pods (60 minutes)</b>   | <b>Session Guide</b>   |
| Facilitator makes a presentation and demonstration and then invites questions from trainees. <ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Field demonstrations</li> <li>• Question and answer session</li> </ul>  | <ul style="list-style-type: none"> <li>• Illustration/ demonstrations</li> <li>• Participant Handouts</li> </ul> |
| <b>6.1.7.4 Procedure of feeding weaner goats and lambs on <i>Prosopis juliflora</i> pods (90 minutes)</b>   | <b>Session Guide</b>   |
| Facilitator makes a presentation and demonstration and then invites question from trainees. <ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Practical demonstration on feeding Group work on total protein given to shoats (basal feed and supplement)</li> <li>• Question and answer session</li> </ul> | Field demonstrations<br>Group work<br>Participant Handouts   |
| <b>6.1.7.5 Methods of estimating live weight gain as a result of supplementation (90 minutes)</b>   | <b>Session Guide</b>   |
| Facilitator makes a presentation and demonstration and then invites questions from trainees. <ul style="list-style-type: none"> <li>• Power point Presentation</li> <li>• Practical demonstrations on weighing</li> <li>• Question &amp; answer session</li> </ul>  | <ul style="list-style-type: none"> <li>• Field demonstration</li> <li>• Participant Handouts</li> </ul>          |
| <b>6.1.7.6 Data to be collected (15minutes)</b>   | <b>Session Guide</b>   |
| Facilitator makes a and then invites questions from trainees. <ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Questions and answer sessions</li> </ul>   | <ul style="list-style-type: none"> <li>• Participant Handouts</li> </ul>   |

### 6.1.8 Participants' Handouts

1. Koech O.K.*et al* (2010). Effects of *Prosopis juliflora* seedpod meal supplement on weight gain of weaner galla goats in Kenya. *Research Journal of Animal Sciences 4* (2):58-62, 2010.

2. Chellapandian M and D. Thuremeignanam. (2019). Nutritional Evaluation of *Prosopis Juliflora* pods for sheep. International Journal of Science, environment and Technology, Vol. 8, No 1, 2019, 165 – 169
3. Estimating Live Weight of Livestock
4. Kuria – Power point presentation

### 6.3.1 COTTON SEED CAKE SUB-MODULE

#### 6.3.1.1 Learning Outcomes

By the end of the module training, the following outcomes must be achieved:

- Appreciation of the nutritive value of cotton seedcake done
- Knowledge of collection and processing of cotton seedcake and procedure of feeding weaner cattle on cotton seedcake acquired.
- Methods of estimating live weight gain as a result of supplementation with cotton seedcake learnt and tried.

#### 6.3.1.2 Sub-module Target Group

This module is intended for service providers and county public extension agents.

#### 6.3.1.4 Module Users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

#### 6.3.1.5 Sub-module Duration

This module is estimate to take 5 hours, 10 minutes.

#### 6.3.1.6. Sub-module Summary

|   | Sessions   | Training methods  | Training material  | Time          |
|---|--|---|--|---------------|
|   | Expectations<br>Introduction,<br>Objectives<br>Gross energy<br>of major feed<br>constituents | Personal<br>introductions<br>Presentation<br>Plenary        | Flip charts<br>PowerPoint<br>Hand outs   | 30<br>Minutes |
| 1 | The nutritive value<br>of cotton seedcake  | Power point<br>presentation<br>Question & answer<br>session | <ul style="list-style-type: none"> <li>• Stationery</li> <li>• Flip chart board</li> <li>• Power point slides</li> </ul> | 35<br>Minutes |

|   | Sessions  | Training methods   | Training material  | Time       |
|---|---|--|--|------------|
| 2 | Sourcing the cotton seedcake  | Power point Presentation<br><br>Question & answers<br><br>Question & answer session  | <ul style="list-style-type: none"> <li>• Stationery (note books, pens, felt pens, flip charts)</li> <li>• Flip chart board</li> <li>• Sample of cotton seedcake Gunny bags</li> <li>• Power point slides</li> <li>• Hand outs</li> </ul>   | 1 hour     |
| 3 | Procedure of feeding weaner cattle on cotton seedcake                 | Power point presentation<br><br>Question & answer session<br><br>Group work on total protein given to shoats (basal feed and supplement)<br><br>Practical demonstration on feeding | <ul style="list-style-type: none"> <li>• Sample of cotton seedcake Weighing balance</li> <li>• Buckets</li> <li>• Demonstration field</li> <li>• Power point slides</li> <li>• Stationery (note books, pens, felt pens, flip charts)</li> <li>• Flip chart board</li> </ul>  | 1 ½ hours  |
| 4 | Methods of estimating live weight gain as a result of supplementation | Power point Presentation<br><br>Illustrations<br>Question & answer session<br><br>Practical demonstrations on weighing   | <ul style="list-style-type: none"> <li>• Weighing balance, weigh band</li> <li>• Live weaner goats and lambs</li> <li>• Demonstration field</li> <li>• Power point slides</li> <li>• Stationery (note books, pens, felt pens, flip charts)</li> <li>• Flip chart board</li> <li>• Ropes</li> <li>• Gunny bags</li> </ul> | 1 ½ hours  |
|   | Data to be collected  | Power point Presentation<br><br>Questions and answer   |  | 15 Minutes |

| Sessions | Training methods | Training material | Time                              |
|----------|------------------|-------------------|-----------------------------------|
|          |                  | <b>TOTAL</b>      | <b>5 Hours<br/>10<br/>Minutes</b> |

### 6.3.1.7 Facilitator's Guidelines

| 6.1.7.1 Introduction And Levelling Expectations (30 minutes)  | Session Guide   |
|---|---|
| <p><i>The facilitator then summarizes the expectations on a flip chart and pins it on the wall</i></p> <p>The facilitator presents modules objectives.</p> <p><b>Module Objectives</b><br/>By the end of the module, the trainee should be able to:</p> <ol style="list-style-type: none"> <li>1. Explain the nutritive value of cotton seed cake in feed supplementation</li> <li>2. Explain how cotton seed cake is feed to weaner cattle, goats and lambs</li> <li>3. Estimate live weight of animals using simple methods.</li> </ol> | <ul style="list-style-type: none"> <li>• Participant Handouts</li> <li>• Training program</li> <li>• Module objectives</li> </ul> |
| 6.1.7.2 The nutritive value of cotton seed cake (35 minutes)  | Session Guide   |
| <p>Facilitator makes a presentation and then invites questions from trainees.</p> <ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Question &amp; answer session</li> </ul>   | <ul style="list-style-type: none"> <li>• Participant Handouts</li> </ul>  |
| 6.1.7.3 Sourcing of cotton seed cake (60 minutes)   | Session Guide   |
| <p>Facilitator makes a presentation and then invites questions from trainees.</p> <ul style="list-style-type: none"> <li>• Power point Presentation</li> <li>• Question &amp; answers</li> </ul>  | <ul style="list-style-type: none"> <li>• Participant Handouts</li> </ul>  |
| 6.1.7.4 Procedure of feeding weaner goats and lambs on cotton seed cake (90 minutes)  | Session Guide   |
| <p>Facilitator makes a presentation and then invites questions from trainees.</p> <ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Question and answer session</li> <li>• Practical demonstration on feeding</li> </ul> <p>Group work on total protein given to shoats (basal feed and supplement)</p>  | <p>Field demonstrations<br/>Participant Handouts</p>  |

|   |  |
|---|--|
| <b>6.1.7.5 Methods of estimating live weight gain as a result of supplementation (90 minutes)</b>   | <b>Session Guide</b>                                   |
| <p>Facilitator makes a presentation and demonstration and then invites questions from trainees.</p> <ul style="list-style-type: none"> <li>• Power point Presentation</li> <li>• Question and answer session</li> <li>• Practical demonstrations on weighing</li> </ul> | <p>Field demonstration</p> <p>Participant Handouts</p> |
| <b>6.1.7.6 Data to be collected (15 minutes)</b>  | <b>Session Guide</b>                                   |
| <p>Facilitator makes a presentation and then invites question from trainees and finally wraps up the whole topic.</p> <ul style="list-style-type: none"> <li>• Power point presentation</li> <li>• Questions and answer session</li> </ul>                              | <p>Participant Handouts</p>                            |

## 6.8 Participants' Handouts

1. Estimating live weight of livestock
2. Kuria – Power point presentation

# MODULE 7

## AGRI-BUSINESS MANAGEMENT AND MARKET ASSESSMENT

### SUB-MODULE 7.1. AGRI-BUSINESS MANAGEMENT

#### 7.1.1 Introduction to the Sub-Module

This sub-module is designed for use in training mother trainers on farming business management. This is necessary in order to improve their knowledge skills and attitude on enterprise farm business management, so as to enable producers become market oriented, profitable and competitive.

Farming in Kenya in most cases is practised as a subsistence undertaking by small holder farmers with most producing without clear marketing strategies. This often leads to low prices for produce and hence reduced income thereby leaving the farmer with little for reinvesting on the farm. This is attributed to a number of factors which include poor entrepreneur attitude, low adoption of appropriate technology, poor seed quality and inadequate training in GAP. Rarely is enterprise analysis and planning done before establishing an enterprise. Leading farmers to continue producing and making loses since they take farming as a traditional past time.

#### 7.1.2 Sub-Module Learning Outcomes

This sub-module aims at developing entrepreneurial attitudes and promoting commercial farming for a particular value chain. By the end of the module the following training outcomes must be achieved:

- Skills to facilitate farmers to adopt the concept of farming as a business developed and acquired
- Knowledge of developing an enterprise business plan acquired
- Skills to guide farmers in enterprise development acquired.

#### 7.1.3 Sub-Module Target Group

This sub-module is intended for service providers and county public and private extension agents.

#### 7.1.4 Sub-Module Users

This sub-module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

#### 7.1.5 Sub-Module Duration

The sub-module is estimated to take 5 hours 30 minutes

### 7.1.6 Sub-Module Summary

| Sessions  | Training Methods   | Training Materials  | Time               |
|---|--|---|--------------------|
| <b>Introduction, Objectives Expectations</b>          | <ul style="list-style-type: none"> <li>• Personal introductions</li> <li>• Sharing</li> <li>• Presentation</li> <li>• Plenary</li> </ul>     | <ul style="list-style-type: none"> <li>• Flip charts</li> <li>• PowerPoint</li> <li>• Handout Module</li> <li>• Objectives</li> <li>• Felt pens, masking tape or sticker glue, note books and pens</li> </ul> | 30 Minutes         |
| <b>Introduction to farm business management</b>       | <ul style="list-style-type: none"> <li>• Plenary presentation</li> <li>• Summary presentation</li> </ul>                                     | <ul style="list-style-type: none"> <li>• PowerPoint presentations</li> <li>• Exercise handouts</li> <li>• Flip charts felt pens,</li> <li>• Participants' handouts</li> </ul>                                 | 30 Minutes         |
| <b>Concept of commercial farming</b>                  | <ul style="list-style-type: none"> <li>• Plenary discussions</li> </ul>  | <ul style="list-style-type: none"> <li>• Flip charts felt pens, participants' handouts</li> </ul>   | 30 Minutes         |
| <b>Record keeping for an agri-business enterprise</b> | <ul style="list-style-type: none"> <li>• Brain storming</li> <li>• Plenary presentation and discussions</li> <li>• Group exercise</li> </ul> | <ul style="list-style-type: none"> <li>• PowerPoint presentations</li> <li>• Handouts</li> <li>• Flip charts</li> </ul>   | 1 hour, 20 Minutes |
| <b>Analysis of enterprise management</b>              | <ul style="list-style-type: none"> <li>• Plenary exercise</li> <li>• Group exercise</li> </ul>   | <ul style="list-style-type: none"> <li>• PowerPoint presentations</li> <li>• Gross margin analysis chart, Flip charts</li> </ul>  | 1 hour, 20 Minutes |
| <b>Enterprise business planning</b>                   | <ul style="list-style-type: none"> <li>• Plenary presentation</li> </ul>   | <ul style="list-style-type: none"> <li>• PowerPoint</li> <li>• Sample business plan</li> <li>• Flip charts</li> </ul>   | 30 Minutes         |
| <b>Enterprise business financing</b>                  | <ul style="list-style-type: none"> <li>• Brain storming</li> <li>• Presentation</li> </ul>   | <ul style="list-style-type: none"> <li>• PowerPoint presentations</li> <li>• Flip charts</li> </ul>   | 30 minutes         |
| <b>Module review</b>                                  | <ul style="list-style-type: none"> <li>• Participants' questions and comments</li> <li>• Facilitator's summary</li> </ul>                    | <ul style="list-style-type: none"> <li>• Participants' Handouts module review</li> </ul>  | 20 Minutes         |

| Sessions | Training Methods | Training Materials | Time                |
|----------|------------------|--------------------|---------------------|
| TOTAL    |                  |                    | 5 hours, 30 Minutes |

### 7.1.7 Facilitators' Guidelines

|   |   |
|---|---|
| <b>7.1.7.1 Introduction to the Module, Objectives and levelling the expectations (30 minutes)</b>   | <b>Session Guide</b>  |
| <p><i>(The facilitator invites the trainees to introduce themselves and state their expectations).</i></p> <p>The facilitator presents modules objectives.</p> <p><b>Sub-Module Objectives</b></p> <ul style="list-style-type: none"> <li>• By the end of the module training, the trainee should be able to:</li> <li>• Appreciate the principles of farming as a business and be able to adequately train famers on the same.</li> <li>• Compute ex-ante enterprise analysis and planning to be able to train the farmers.</li> </ul> | <ul style="list-style-type: none"> <li>• Participants' Handouts</li> <li>• Training program</li> <li>• Module Objectives</li> </ul> |
| <b>7.1.7.2 Introduction to Farm Business Management (30 minutes)</b>  | <b>Session Guide</b>  |
| <p><b>Plenary presentation</b></p> <p><i>The facilitator presents on the common terms and characteristics of a good business allowing participants to ask questions while he/she answers them during the presentation for clarity.</i></p>  | <ul style="list-style-type: none"> <li>• Participants' Handouts</li> </ul>  |
| <b>7.1.7.3 Concept of Commercial Farming (30 minutes)</b>   | <b>Session Guide</b>  |
| <p><b>Plenary presentation</b></p> <ul style="list-style-type: none"> <li>• The facilitator presents on:</li> <li>• Principles of business management and have a session for questions and answers</li> </ul>   | <p>Group exercise</p> <p>Participants' Handouts</p>   |
| <b>7.1.7.4 Record keeping for an agri-business enterprise (1 hour, 20 minutes)</b>  | <b>Session Guide</b>  |

|   |   |
|---|---|
| <p><b>Plenary presentation</b><br/>The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Key requirements for enterprise.</li> <li>• Costs of Production and marketing</li> <li>• Types and importance of record keeping</li> <li>• Strategies to enhance returns from farming</li> </ul> <p>Questions and answers</p> <p><b>Group exercise</b><br/><i>The facilitator groups the participants and facilitates discussions ensuring participation of all group members. The facilitator then make a summary of the points raised by the groups and share the results. Pin the points on the wall.</i></p> <ul style="list-style-type: none"> <li>• How to differentiate between commercial and traditional subsistence farming.</li> <li>• What are the inputs, operation and marketing requirements for production of pasture and fodder for livestock?</li> <li>• Options for sourcing business funding</li> <li>• How and where would farmers’ best keep their farming enterprise records?</li> <li>• Practical demonstration</li> </ul> <p>The facilitator demonstrates to the participants how to keep records</p> | <p>Group discussion</p> <p>Demonstrations</p> <p>Participants’ Handouts</p> |
| <p><b>7.17.5 Analysis of Enterprise (1 hour, 20 minutes)</b></p>  | <p><b>Session Guide</b></p>   |
| <p><b>Plenary presentation</b><br/>The facilitator presents on farming gross margin analysis, carrying capacity and maximum production factors.</p> <p><b>Group exercise</b><br/>The facilitator will present different groups with different case studies. The discussion outcomes will be summarized on a flip chart and displayed on a wall.</p>   | <p>Group exercise</p> <p>Participants’ Handouts</p>                         |
| <p><b>7.1.7.6 Enterprise Business Planning (30 minutes)</b></p>   | <p><b>Session Guide</b></p>   |
| <p><b>Plenary presentation</b><br/>The facilitator will presents on:</p> <ul style="list-style-type: none"> <li>• Components of a business plan</li> </ul> <p><b>Questions and answers</b></p> <ul style="list-style-type: none"> <li>• The facilitator guides trainees through a question and answer session to ensure good understanding Enterprise Business Planning.</li> </ul>   | <p>Participants’ Handouts</p>   |

| 7.1.7.7 Enterprise Business Financing (30 minutes)   | Session Guide   |
|--|---|
| <p><b>Plenary presentation</b></p> <p>The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Definition business financing</li> <li>• Sources of business finances.</li> <li>• Steps in business planning</li> </ul> <p>Question and answer session</p> | <p>Group discussion</p> <p>Participants' Handouts</p> |
| 7.1.7.8 Module Review (20 minutes)   | Session Guide   |
| <p>The facilitator summarizes points to remember about the sub-module and guides the trainees through the summary. The key points on a flip chart are pinned to the wall for reference by participants.</p>  |   |

### 7.1.8 Participants Handouts and References

1. Brochure: Economics of seed and hay production and marketing in arid and semi-arid areas
2. Power point presentation- Benson Mulei

## SUB-MODULE 7.2: MARKET ASSESSMENT

### 7.2.1 Introduction to the Sub-Module

This sub-module is designed for use in training master trainers on market assessment. This is necessary in order to provide knowledge and skills necessary for market assessment and developing market plans. Consequently, this will enable the facilitator to guide farmers to produce for a target market that has been identified. “Produce to sell rather than produce and sell”.

Farmers have low understanding of how the market operates and thus produce with uncertainty. There is a disconnect between production and marketing where most farmers believe their role ends when the produce matures. Selling of farm produce is done at the farm gate. In most cases, farmers engage middle men to link them to the produce market. These middlemen facilitate through engaging in upstream value chains activities like sorting, grading, packaging, storage and bulking that should otherwise have been undertaken by the farmer or farmer groups. In the process, the middle men may earn more than the farmers.

### 7.2.2 Sub-Module learning outcomes

By the end of this module the following outcomes must be achieved:

- Knowledge of improving farmers earnings through exploiting market assessment acquired
- Enhanced improvement of marketing for enhanced incomes. Skills to conduct market assessments acquired and enhanced.

### 7.2.3. Sub-Module Target Groups

This module is intended for service providers and county public extension agents.

### 7.2.4 Sub-Module Users

This sub-module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

### 7.2.5. Sub-Module Duration

The sub-module is estimated to take 5 hours 30 minutes

### 7.2.6. Sub-Module Summary

| <b>MARKET ASSESSMENT</b>                                 |   |   |                           |
|--|---|---|---------------------------|
| <b>Sessions</b>  | <b>Training Methods</b>   | <b>Training Materials</b>   | <b>Time</b>               |
| Introduction to module, Objectives Leveling Expectations | <ul style="list-style-type: none"> <li>• Personal introductions</li> <li>• Presentation</li> <li>• Plenary</li> </ul> | <ul style="list-style-type: none"> <li>• Flip charts</li> <li>• PowerPoint</li> <li>• Hand outs</li> <li>• Felt pens, masking tapes and sticker glue</li> </ul> | 30 Minutes                |
| Introduction to market assessment                        | <ul style="list-style-type: none"> <li>• Plenary presentation and discussions</li> </ul>                              | <ul style="list-style-type: none"> <li>• Flip charts felt pens</li> <li>• PowerPoint presentation</li> </ul>  | 40 Minutes                |
| Market assessment tools and procedures                   | <ul style="list-style-type: none"> <li>• Plenary presentation and discussions</li> </ul>                              | <ul style="list-style-type: none"> <li>• Flip charts felt pens</li> <li>• PowerPoint presentation</li> <li>• Designed market assessment survey tool</li> </ul>  | 50 Minutes                |
| Practical market assessment                              | <ul style="list-style-type: none"> <li>• Market walk</li> <li>• Plenary discussions of data collected</li> </ul>      | <ul style="list-style-type: none"> <li>• Samples for assessment</li> <li>• Handout - Survey tools</li> <li>• Flip charts</li> </ul>                             | 2 hours                   |
| Analysis of market data                                  | <ul style="list-style-type: none"> <li>• Plenary discussion</li> <li>• Group Exercise</li> </ul>                      | <ul style="list-style-type: none"> <li>• Flip charts</li> <li>• Analysis template</li> <li>• Participants' handouts</li> </ul>                                  | 40 Minutes                |
| Developing a marketing plan                              | <ul style="list-style-type: none"> <li>• Plenary presentation</li> <li>• Plenary discussions</li> </ul>               | <ul style="list-style-type: none"> <li>• Participants' handouts</li> <li>• PowerPoint slides</li> <li>• Flip charts, felt pens</li> </ul>                       | 30 Minutes                |
| Module review  | <ul style="list-style-type: none"> <li>• Participants' Facilitator's summary</li> </ul>                               | <ul style="list-style-type: none"> <li>• Participants' Handouts module review</li> </ul>  | 20 Minutes                |
| <b>TOTAL</b>   |   |   | <b>5 hours 30 Minutes</b> |

## 7.2.7 Facilitators' Guidelines

| 7.2.7.1 Introduction to sub-module, Objectives and levelling expectations (30 Minutes)  | Session Guide  |
|---|--|
| <p><i>(The facilitator invites the trainees to introduce themselves and state their expectations).</i></p> <p>The facilitator presents modules objectives</p> <p><b>Module Objectives</b></p> <ul style="list-style-type: none"> <li>• By the end of the sub-module, the trainee should be able to:</li> <li>• Demonstrate how to analyze and identify produce markets</li> <li>• Train farmers to analyze and identify so that farmers “produce to sell” and ‘not produce and sell’</li> </ul> | <ul style="list-style-type: none"> <li>• Participants’ Handouts</li> <li>• Training program</li> <li>• Module Objectives.</li> </ul> |
| 7.1.7.2 Introduction To Market Assessment (40 minutes)  | Session Guide  |
| <p><b>Plenary presentation</b></p> <p>The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Definition of market and market assessment;</li> <li>• Dimensions and benefits of market assessment.</li> <li>• Information gathered from a market assessment</li> <li>• Marketing mix data (8Ps)</li> </ul> <p>Allow questions and answers to ensure proper understanding.</p>   | <p>Group discussion/ brainstorming</p> <p>Participants’ Handouts</p>   |
| 7.1.7.3 Market Assessment Tools And Procedures (50 minutes)   | Session Guide  |
| <p><b>Plenary presentation</b></p> <p>Facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Factors to consider when undertaking market assessment</li> <li>• Tools of market Assessment</li> <li>• Procedures of market assessment</li> <li>• Different respondents in market assessment data collection</li> <li>• Discuss through a designed market assessment tool and the expected data from each question</li> </ul> <p>Question and answer session</p>                   | <p>Participants’ Handouts</p> <p>Designed market assessment survey questionnaire</p>   |

|  |   |
|--|---|
| <b>7.1.7.4 Practical Market Assessment (120 minutes)</b>   | <b>Session Guide</b>  |
| <p><b>Market tour and Demonstration</b><br/> <i>The facilitator identifies a market, plans and execute a market tour for trainees.</i></p> <p>In the market place, the facilitator demonstrates how market assessment is conducted. He/ She provokes the trainees by through questions to randomly pickled individuals and asking them to answer to test their level of understanding.</p>   | <p>Tour and demonstration</p> <p>Participants' Handouts</p>   |
| <b>7.1.7.5 Analysis of Market Data (40 minutes)</b>  | <b>Session Guide</b>  |
| <p><b>Group exercise</b><br/> Using the group approach, the facilitator guides the trainees in analyzing data collected during market assessment.</p> <p>Question and answer session</p>   | <p>Participants handouts</p>                                  |
| <b>7.1.7.6 Developing A Marketing Plan (30 minutes)</b>  | <b>Session Guide</b>  |
| <p><b>Plenary presentation</b><br/> The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Market and competitor profile and a marketing plan</li> <li>• The elements of a marketing plan</li> </ul> <p>Questions and answer session</p> <p><b>Brainstorming</b><br/> Using the group approach, the facilitator guides trainees to brainstorm:</p> <ul style="list-style-type: none"> <li>• What to produce for the market and competitors.</li> <li>• Generating a marketing plan</li> </ul> <p>He/ she summarizes the main points from each group and presents in the plenary receiving questions and answers the trainees to ensure good understanding</p> | <p>Discussion/Brainstorming</p> <p>Participants' Handouts</p> |
| <b>7.1.7.7 Module wrap up (20 minutes)</b>   | <b>Session Guide</b>  |
| <p>The facilitator prepare a summary highlighting key points to remember and guides the participants through a summary. The summary is pinned on the wall for reference by participants.</p>   |   |

## 7.1.8 Participants' Handouts and References

1. Manyeki, J K; Kirwa E C; Ogillo P B, Mnene W N, Kimitei R, Mosu A and Ngetich R. (2015). Economic analysis of natural pasture rehabilitation through reseeding in the southern rangelands of Kenya. LLRD 27 (3) 2015.

## 2. Power point presentation- Benson Mulei

# MODULE 8

## GENDER INTEGRATION AND SOCIO SAFEGUARDS IN PASTURE AND FODDER VALUE CHAIN MANAGEMENT

### 8.1 Introduction to the Module

Gender is the social construction of roles, responsibilities and behaviour patterns assigned to men, women and youth in a given society. Through the process of socialization, society provides gender identity to males and females. It differs from culture to culture and changes with time. The UN women (2001) states that most societies show “differences and inequalities between women and men in responsibilities assigned, activities undertaken, access to and control over resources, as well as decision-making opportunities”. Gender inequalities in division of labour, access to and control of resources and decision making within the household limit especially women and youth access to and benefit from technologies at different nodes of the value chain. At the macro-level, effective participation of women and youth in group and market activities is constrained by their low decision making power, lack of voice and lack of access to financial resources. Gender analysis examines the productive and reproductive roles of men and women; access, control and ownership of resources; beneficiaries; levels of power relations; differential needs, constraints and opportunities; and impact of these differences (positive/ negative) on lives of men, women and youth.

Agricultural value chain interventions when designed and implemented with gender equitable principles, can foster adoption of technologies and hence enhance productivity. For instance, women are highly involved in key activities in dairy production, but sometimes not integrated in training activities. Moreover, they may not have control and ownership of animals or revenue from sale of milk. Where women and youth lack access to finance and are constrained by gender division of labour and responsibility, as well as social norms of appropriate behavior, they are likely to be left out at the different levels of production, market and social group engagement.

The overall objective of this module is to ensure that gender integration in TIMPs is enhanced by field agricultural practitioners and extension officers as an effort geared towards achieving Climate Smart Agriculture “triple win” in target counties.

### 8.2 Learners Outcomes

By the end of the module training, the following outcomes should be achieved:

- Basic concepts of gender are introduced and appreciated
- Knowledge and skills on gender awareness, lobbying and advocacy acquired and increased
- Knowledge on gender dimensions, analysis and gender disaggregated data acquired
- Approaches and strategies of gender mainstreaming and integration appreciated
- Mainstreaming gender into leadership and governance adopted

### 8.3 Target group

This module is intended for county public and private extension agents.

### 8.4 Module Users

This module is intended for use by master trainers who are members of the Core Team of Trainers (CTT). The facilitators (TT) are also expected to use modules and should familiarize themselves with the associated handouts.

### 8.5 Module Duration

The estimated time for this module is 5 hours

### 8.6 Module Summary

| <b>Gender integration and socio safeguards in pasture and fodder value chain management</b>   |  |   |             |
|---|--|---|-------------|
| <b>Sessions</b>   | <b>Training Methods</b>  | <b>Training Materials</b>   | <b>Time</b> |
| Introduction, Objectives<br>Expectations  | Personal<br>introductions<br>Presentation<br>Plenary   | <ul style="list-style-type: none"> <li>• Flip charts</li> <li>• PowerPoint</li> <li>• Hand outs</li> </ul>  | 20 Minutes  |
| <b>Introduction to gender</b> <ul style="list-style-type: none"> <li>• Definition of gender</li> <li>• Difference between gender and sex</li> <li>• Gender related concepts</li> <li>• Concept of gender mainstreaming</li> </ul>   | Short lectures<br>Question and answer<br>Discussion<br>Group exercise  | <ul style="list-style-type: none"> <li>• Flip chart/<br/>flipchart stand</li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• LCD projector</li> <li>• Computer</li> </ul> | 40 Minutes  |
| <b>Gender awareness lobbying and advocacy</b> <ul style="list-style-type: none"> <li>• Concepts of gender awareness, lobbying and advocacy</li> <li>• Gender concerns that need awareness and lobbying</li> <li>• Approaches and methods of gender awareness, lobbying and advocacy</li> <li>• Process of developing a gender awareness, lobbying and advocacy</li> </ul> | Brainstorming<br>Group/plenary discussions<br>Case studies<br>Role play/<br>demonstration<br>Question and answer | <ul style="list-style-type: none"> <li>• Flip chart/<br/>flipchart stand</li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• LCD projector</li> <li>• Computer</li> </ul> | 1 Hour      |

|   |  |  |                   |
|---|--|--|-------------------|
| <p><b>Gender dimensions</b></p> <ul style="list-style-type: none"> <li>• Definition of Gender dimensions</li> <li>• Types of gender dimensions</li> <li>• Relationship between gender dimensions and TIMPs</li> </ul>   | <p>Question and answer<br/>Discussion<br/>Group exercise</p>                                   | <ul style="list-style-type: none"> <li>• Flip chart/ flipchart stand</li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• LCD projector</li> <li>• Computer</li> </ul>        | <p>1 Hour</p>     |
| <p><b>Gender disaggregated data</b></p> <ul style="list-style-type: none"> <li>• Gender disaggregated data</li> <li>• Types of gender disaggregated data</li> <li>• Purpose of collecting gender disaggregated data</li> </ul>  | <p>Question and answer<br/>Discussion<br/>Group exercise</p>                                   | <ul style="list-style-type: none"> <li>• <b>Flip chart/ flipchart stand</b></li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• LCD projector</li> <li>• Computer</li> </ul> | <p>1 Hour</p>     |
| <p><b>Gender analysis</b></p> <ul style="list-style-type: none"> <li>• Gender analysis and its purpose</li> <li>• Gender analysis frameworks commonly used</li> <li>• Application of gender analysis tools</li> </ul>   | <p>Question and answer<br/>Discussion</p>  | <ul style="list-style-type: none"> <li>• Flip chart/ flipchart stand</li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• LCD projector</li> <li>• Computer</li> </ul>        | <p>1 Hours</p>    |
| <p><b>Approaches to gender mainstreaming and integration</b></p> <ul style="list-style-type: none"> <li>• Concepts of gender mainstreaming and integration</li> <li>• Approaches to gender mainstreaming and integration</li> <li>• Existing policies in support of gender mainstreaming and integration</li> <li>• Existing institutional frameworks for gender mainstreaming and integration</li> </ul> | <p>Question and answer<br/>Demonstration/ presentation<br/>Group discussion<br/>Case study</p> | <ul style="list-style-type: none"> <li>• Flip chart/ flipchart stand</li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• LCD projector</li> <li>• Computer</li> </ul>        | <p>25 minutes</p> |

|   |   |   |                           |
|---|---|---|---------------------------|
| <b>Methods and strategies of gender mainstreaming</b> <ul style="list-style-type: none"> <li>• Strategies and methods in gender mainstreaming</li> <li>• Levels of gender mainstreaming</li> <li>• The process of gender mainstreaming at various levels</li> <li>• Monitoring, evaluation and reporting in gender mainstreaming</li> </ul> | Group discussions<br>Group exercises<br>Questions and answers     | <ul style="list-style-type: none"> <li>• Flip chart/ flipchart stand</li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• Plain papers</li> <li>• Masking tape/pins</li> <li>• Glue</li> </ul> | 25 minutes                |
| <b>Mainstreaming gender into leadership and governance</b> <ul style="list-style-type: none"> <li>• Gender responsive leadership</li> <li>• Gender responsive governance</li> <li>• Best practices in governance</li> </ul>   | Question and answer<br>Discussion<br>Group exercise<br>Case study | <ul style="list-style-type: none"> <li>• Flip chart/ flipchart stand</li> <li>• Plain papers</li> <li>• Marker pens</li> <li>• Masking tape</li> <li>• Meta cards</li> <li>• LCD projector</li> <li>• Computer</li> </ul>                         | 25 minutes                |
| <b>Total</b>  |   |   | <b>6 Hours 15 Minutes</b> |

## 8.7 Facilitator's guidelines

| <b>8.7.1. Introduction and Levelling of Expectations (20 minutes)</b>   | <b>Session Guide</b>   |
|---|--|
| <p><i>(The facilitator invites the participants to introduce themselves and state their expectations).</i></p> <p>The facilitator presents modules objectives</p> <p><b>Module Objectives</b></p> <p>By the end of the module training, the trainee should be able to:</p> <ul style="list-style-type: none"> <li>• Define basic concepts of gender</li> <li>• Explain what gender awareness, lobbying and advocacy are</li> <li>• Demonstrate gender dimensions, analysis and use of gender disaggregated data</li> <li>• Demonstrate approaches and strategies of gender mainstreaming and integration</li> <li>• Appreciate importance of mainstreaming gender into leadership and governance</li> </ul> | <ul style="list-style-type: none"> <li>• Participants Handouts</li> <li>• Training program</li> <li>• Module objectives</li> </ul> |

|   |  |
|---|--|
| <b>8.7.6.2 Gender, gender awareness, lobbying and advocacy (100 Minutes)</b>  | <b>Session guide</b>                                 |
| <p><b>Plenary presentation</b><br/>The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• <b>Gender and gender concepts</b></li> <li>• Awareness</li> <li>• Lobbying</li> <li>• Advocacy</li> <li>• Concerns that require awareness</li> <li>• Processes of creating awareness.</li> </ul> <p>Question and answer session</p> <p><b>Group exercise</b><br/>The facilitator through group approach guides participants to discuss:</p> <ul style="list-style-type: none"> <li>• Differentiate between gender and sex.</li> <li>• Give examples of gender stereotypes/norms that affect the implementation of TIMPs.</li> <li>• Relate gender awareness and advocacy issues in their locality with the TIMPs and suggest possibly ways of addressing them.</li> </ul> <p><i>The facilitator then summarizes the key points from each group and presents allowing questions and answers for enhanced understanding. Pin points on the wall for reference.</i></p> | <p>Group discussion</p> <p>Participants Handouts</p> |
| <b>8.7.3 Gender dimensions 60 minutes</b>   | <b>Session Guide</b>                                 |
| <p><b>Plenary presentation</b><br/>The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Types of gender dimensions</li> <li>• Relationship between gender dimension and pasture &amp; fodder TIMPS</li> </ul> <p>Questions and answers session</p>   | <p>Participants handout</p>                          |

| 8.7.4 Gender disaggregated data 60 minutes  | Session guide                                  |
|---|--|
| <p><b>Plenary presentation</b><br/>The facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Types of gender disaggregated data</li> <li>• Purpose of collecting these data</li> </ul> <p>Questions and answer session</p> <p><b>Group exercise</b><br/>Facilitator constitute groups and guide participants to discuss:</p> <ul style="list-style-type: none"> <li>• Gender dimensions.</li> <li>• Gender disaggregated data.</li> <li>• Design a simple tool that relates gender dimension to the TIMPs and is gender disaggregated.</li> <li>• Key points to be listed on a flip chart and shared in plenary, later pinned on the wall for reference by participants.</li> </ul> | <p>Group work</p> <p>Participants' handout</p> |
| 8.7.5 Gender Analysis 60 minutes  | Session guide                                  |
| <p><b>Plenary presentation</b><br/>Facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Purpose of gender analysis</li> <li>• Frameworks commonly used</li> <li>• Application of analysis tools</li> </ul> <p>Question and answer session</p>  | <p>Participants' Handouts</p>                  |
| 8.7.6 Approaches to gender mainstreaming and integration 25 minutes   | Session guide                                  |
| <p><b>Plenary presentation</b><br/>Facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Concepts of mainstreaming and integration</li> <li>• Approaches to integration</li> <li>• Existing policies on integration</li> <li>• Institutional frameworks.</li> </ul> <p>Question and answer session</p>  | <p>Participants' Handouts</p>                  |

|   |  |
|---|--|
| <b>8.7.7: Methods and strategies of gender mainstreaming 25 minutes</b>   | <b>Session guide</b>                       |
| <p><b>Plenary presentation</b><br/>Facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Methods and strategies of gender mainstreaming</li> <li>• Case study</li> </ul> <p>Question and answer session</p> <p><b>Group exercise</b><br/>Facilitator constitute groups and guide participants to discuss:</p> <ul style="list-style-type: none"> <li>• Strategies that have been used to mainstream gender they are aware of.</li> </ul> <p>Key points to be listed on a flip chart and shared in plenary, later pinned on the wall for reference by participants</p> | Participants' Handouts<br>Group Discussion |
| <b>8.7.8: Mainstreaming of gender into leadership and governance 25 minutes</b>   | <b>Session guide</b>                       |
| <p><b>Plenary presentation</b><br/>Facilitator presents on:</p> <ul style="list-style-type: none"> <li>• Gender responsive leadership</li> <li>• Gender responsive governance</li> <li>• Best practices</li> </ul> <p>Question and answer session<br/>Facilitator presents a case study</p>   | Participants' Handouts                     |
| <b>8.7.8. Wrap up of the module(20 minutes)</b>   | <b>Session Guide</b>                       |
| The facilitator prepare a summary highlighting key points to remember and guides the participants through a summary. The summary is pinned on the wall for reference by participants.   |  |

## 8.8 Key Reference

1. KCSAP Extension manual

## ANNEXES 1: TRAINING PROGRAMME

| Time   | Day 1  | Duration   | Remarks / Facilitator  |
|--|--|------------|--|
| <b>MODULE 1: CLIMATE SMART AGRICULTURE PRACTICES</b> |  |            |  |
| 10.30am-10.40am                                      | Introduction, Objectives<br>Expectations   | 10 minutes |  |
| 10.40am-10.55am                                      | Definition of terms;<br><ul style="list-style-type: none"> <li>• CSA</li> <li>• Climate change</li> <li>• Climate change adaptation</li> <li>• Climate change mitigation</li> <li>• Climate change sustainability</li> </ul> | 15 minutes |  |
| 10.55am-11.10am                                      | Effects of climate change.   | 15 minutes |  |
| 11.10- 11.30 am                                      | Climate change adaptation  | 20 minutes |  |
| 11.30 am-11.50am                                     | Climate change mitigation  | 20 minutes |  |
| 11.50pm- 12 noon                                     | Recap  | 10 minutes |  |
| 12noon- 1.30pm                                       | LUNCH BREAK  | 1 hour     |  |
| 1.30pm- 4pm  | Farm visit   | 1hour      | Farm visit to areas affected by climate change and areas where CSA practices are ongoing |
| Time   | Day 2  | Duration   | Remarks / Facilitator  |
| <b>MODULE 2: PARTICIPATORY TRAINING METHODS</b>      |  |            |  |
| 8.30am-9.00am  | Introduction, Objectives<br>Expectations   | 30 minutes |  |
| 9.00am-9.30am  | Methods of Participatory Training  | 30 minutes |  |
| 9.30am-10.30am                                       | Sharing and Discussions in Plenary   | 60 minutes |  |
| 10.30am-11.00am                                      | Tea Break  | 30 minutes | Health Break   |
| 11.00am-11.45am                                      | Panel Discussion   | 45 minutes |  |
| 11.45am-12.30am                                      | Case Studies   | 45 minutes |  |
| 12.30pm-1.00pm                                       | Role Play  | 30 minutes |  |
| 1.00pm-2.00pm  | Lunch Break  | 1 hour     |  |
| 2.00pm-2.30pm  | Cont. Role Play  | 30 minutes |  |

|   |  |                          |                              |
|---|--|--------------------------|------------------------------|
| 2.30pm-3.00pm   | Problem Solving Exercise   | 30 minutes               |                              |
| 3.00pm-3.30pm   | Group Dynamic  | 30 minutes               |                              |
| 3.30pm-4.00pm   | Brainstorming  | 30 minutes               |                              |
| 4.00pm-4.30pm   | Coffee Break   | 30 minutes               |                              |
| <b>Time</b>   | <b>Day 3</b>   | <b>Duration</b>          | <b>Remarks / Facilitator</b> |
| <b>MODULE 3: RANGE GRASS SEED BULKING AND PASTURE ESTABLISHMENT</b> |  |                          |                              |
| 8.30am-9.00am   | Introduction And Levelling<br>Expectations   | 30 minutes               |                              |
| 9.00am-9.30am   | Introduction to forage species,<br>ecological and climatic requirements<br>Discussions (Questions & Answers) | 15 minutes<br>15 minutes |                              |
| 9.30am-10.00am  | Selection of seed bulking site<br>Discussions (Questions & Answers)  | 15 minutes<br>15 minutes |                              |
| 10.00am-10.30am   | Tea Break  | 30 minutes               | Health Break                 |
| 10.30am-11.00am   | Selection of seed bulking site (30<br>minutes)<br>Discussions (Questions & Answers)                          | 15 minutes<br>15 minutes |                              |
| 11.00am-11.30am   | Forage species selection<br>Discussions (Questions & Answers)  | 15 minutes<br>15 minutes |                              |
| 11.30pm-<br>12.00noon   | Land preparation<br>Discussions (Questions & Answers)  | 15 minutes<br>15 minutes |                              |
| 12.00noon-<br>12.30pm   | Pasture seed sowing<br>Discussions (Questions & Answers)   | 15 minutes<br>15 minutes |                              |
| 12.30pm-1.00pm  | Watering for the irrigated seed<br>production<br>Discussions (Questions & Answers)                           | 15 minutes<br>15 minutes |                              |
| 1.00pm-2.00pm   | Lunch Break  | 1 hour                   |                              |
| 2.00pm-2.30pm   | Fertilizer application and weed<br>control<br>Discussions (Questions & Answers)                              | 15 minutes<br>15 minutes |                              |
|   | Forage seed harvesting<br>Discussions (Questions & Answers)  | 15 minutes<br>15 minutes |                              |
| 2.30pm-3.00pm   | Forage Seed Processing, Storage and<br>Packaging<br>Discussions (Questions & Answers)                        | 15 minutes<br>15 minutes |                              |
| 3.00pm-3.30pm   | Seed Quality Testing (30 minutes)<br>Discussions (Questions & Answers)                                       | 15 minutes<br>15 minutes |                              |
| 3.30pm-4.00pm   | Plenary discussions on the module  | 30 minutes               |                              |
| 4.00pm-4.30pm   | Coffee Break   | 30 minutes               |                              |

| Time  | Day 4   | Duration   | Remarks / Facilitator |
|---|---|--|-----------------------|
| 8.30am-9.00am                                       | Recap of Day 3  | 30 minutes                                       |                       |
| 9.00am-2.30pm                                       | Field Demonstrations on:<br>Watering for the irrigated seed production<br>Fertilizer/manure application<br>Pasture seed sowing<br>Forage seed harvesting<br>Forage Seed Processing, Storage and Packaging | 1 hour<br>1 hour<br>1 hour<br>1 hour<br>1½ hours |                       |
| 2.30pm-3.00pm                                       | Lunch Break   | Half hour  |                       |
| 3.00pm-6.00pm                                       | Field Demonstrations on:<br>Hay making<br>Silage making<br>Pasture and fodder storage structures  | 1 hour<br>1 hour<br>1 hour                       |                       |
| Time  | Day 5   | Duration   | Remarks / Facilitator |
| <b>MODULE 4: NATURAL PASTURE IMPROVEMENT (NAPI)</b> |   |  |                       |
| 8.30am-9.00am                                       | Introduction And Levelling<br>Expectations  | 30 minutes                                       |                       |
| 9.00am-10.00am                                      | Range forage species<br>Discussions (Questions & Answers)   | 30 minutes<br>30 minutes                         |                       |
| 10.00am-10.30am                                     | Tea Break   | 30 minutes                                       | Health Break          |
| 10.30am-11.30am                                     | Protection/fencing of the pasture field<br>Discussions (Questions & Answers)  | 30 minutes<br>30 minutes                         |                       |
| 11.30am-12.30pm                                     | Construction of micro catchments<br>Discussions (Questions & Answers)   | 30 minutes<br>30 minutes                         |                       |
| 12.30pm-1.30pm                                      | Methods of sowing<br>Discussions (Questions & Answers)  | 30 minutes<br>30 minutes                         |                       |
| 1.30pm-2.30pm                                       | Lunch Break   | 1 hour   |                       |
| 2.30pm-3.30pm                                       | Use of Fertilizer/manure<br>Discussions (Questions & Answers)   | 30 minutes<br>30 minutes                         |                       |
| 3.30pm-4.00pm                                       | Plenary discussions for Day 3   | 30 minutes                                       |                       |
| 4.00pm-4.30pm                                       | Coffee Break  | 30 minutes                                       |                       |

| <b>Time</b>                                       | <b>Day 6</b>  | <b>Duration</b>          | <b>Remarks / Facilitator</b> |
|---|---|--------------------------|------------------------------|
| 8.30am-9.00am                                     | Recap of Day 5  | 30 minutes               |                              |
| 9.00am-10.00am                                    | Management of bush and weeds<br>Discussions (Questions & Answers)   | 30 minutes<br>30 minutes |                              |
| 10.00am-10.30am                                   | Tea Break   | 30 minutes               | Health Break                 |
| 10.30am-11.30am                                   | Utilization of Natural Pastures<br>Discussions (Questions & Answers)  | 30 minutes<br>30 minutes |                              |
| 11.30am-1.00pm                                    | Setting up the grass seed germination test for seed quality testing   | 90 minutes               |                              |
| 1.30pm-2.30pm                                     | Lunch Break   | 1 hour                   |                              |
| 2.00pm-4.00pm                                     | Setting up the seed germination test continued  | 120 minutes              |                              |
| 4.00pm-4.30pm                                     | Coffee Break  | 30 minutes               |                              |
| <b>Time</b>                                       | <b>Day 7</b>  | <b>Duration</b>          | <b>Remarks / Facilitator</b> |
| <b>MODULE 5: PASTURE STORAGE AND CONSERVATION</b> |   |                          |                              |
| 8.30am-9.00am                                     | Introduction and Levelling<br>Expectations  | 30 minutes               |                              |
| 9.00am-10.00am                                    | The different methods of pasture and fodder storage<br>Discussions (Questions & Answers)  | 30 minutes<br>30 minutes |                              |
| 10.00am-10.30am                                   | Tea Break   | 30 minutes               | Health Break                 |
| 10.30am-11.30am                                   | Different structures used to store pasture and fodder<br>Discussions (Questions & Answers)  | 30 minutes<br>30 minutes |                              |
| 11.30am-12.00pm                                   | Participants check progress on the seed germination tests   | 90 minutes               |                              |
| 12.00pm-1.00pm                                    | Lunch Break   | 1 hour                   |                              |
| 1.00pm-3.30pm                                     | Field practical's on Land preparation, Construction of micro catchments, Management of bush and weeds and Protection/fencing of the pasture field | 2 ½ hours                |                              |
| 4.30pm-5.00pm                                     | Coffee Break  | 30 minutes               |                              |
| <b>Time</b>                                       | <b>Day 8</b>  | <b>Duration</b>          | <b>Remarks / Facilitator</b> |
| <b>MODULE 6: SUPPLEMENTARY FEEDING</b>            |   |                          |                              |

|                 |  |   |                              |
|-----------------|--|---|------------------------------|
| 9.00am-10.10am  | <p>Introduction<br/><i>Acacia tortilis</i> sub-module</p> <ul style="list-style-type: none"> <li>• Levelling expectations</li> <li>• Module objectives</li> </ul> <p>The nutritive value of <i>Acacia tortilis</i> pods</p>  | <p>10 minutes</p> <p>30 minutes</p> <p>30 minutes</p>                   |                              |
| 10.10am-10.40am | Tea break (Group Photo)  | 30 minutes  | Health Break                 |
| 10.40am-1.10pm  | <p>Harvesting and processing of <i>Acacia tortilis</i> pods</p> <p>Procedure of feeding weaner goats and lambs on <i>Acacia tortilis</i> pods</p> <p>Methods of estimating live weight gain as a result of supplementation</p> <ul style="list-style-type: none"> <li>• Field demonstration: demonstrate weighing using weigh bridge, weigh band and spring balance</li> </ul> <p>Results and conclusion</p> | <p>30 minutes</p> <p>30 minutes</p> <p>60 minutes</p> <p>30 minutes</p> |                              |
| 1.10pm-2.10pm   | Lunch break  | 60 minutes  |                              |
| 2.10pm-3.20pm   | <p><i>Prosopis juliflora</i> sub-module</p> <ul style="list-style-type: none"> <li>• Levelling expectations</li> <li>• Module objectives</li> </ul> <p>The nutritive value of <i>Prosopis juliflora</i> pods</p>   | <p>15 minutes</p> <p>15 minutes</p> <p>40 minutes</p>                   |                              |
| 3.40pm-4.10pm   | Tea break  | 30 minutes  |                              |
| 4.10pm-5.25pm   | <p>Harvesting and processing of <i>Prosopis juliflora</i> pods</p> <p>Procedure of feeding weaner goats and lambs on <i>Prosopis juliflora</i> pods</p> <ul style="list-style-type: none"> <li>• Demonstrate weighing of the pods to get the amounts to feed individual animal</li> </ul> <p>Display livestock feeding on the pods</p>   | <p>30 minutes</p> <p>30 minutes</p> <p>15 minutes</p>                   |                              |
| <b>Time</b>     | <b>Day 9</b>   | <b>Duration</b>   | <b>Remarks / Facilitator</b> |

|                  |  |   |  |
|------------------|--|---|--|
| 8.30 am-10.10 am | <p>Methods of estimating live weight gain as a result of supplementation with <i>P. juliflora</i> pods.</p> <ul style="list-style-type: none"> <li>Field demonstration: demonstrate weighing using weigh bridge, weigh band and spring balance</li> </ul> <p>Results and conclusion</p>  | <p>10 minutes</p> <p>60 minutes</p> <p>30 minutes</p>                   |  |
| 10.10am-10.40 am | Tea break  | 30 minutes  |  |
| 10.40am-1.00pm   | <p>Cottonseed cake sub-module</p> <ul style="list-style-type: none"> <li>Levelling expectations</li> <li>Module objectives</li> </ul> <p>The nutritive value of cotton seedcake</p> <ul style="list-style-type: none"> <li>Table showing nutritive value of cotton seedcake e.g. Crude protein</li> <li>Comparison of nutritive value of the cotton seedcake with grass hay</li> </ul> <p>Sourcing the cotton seedcake</p> <ul style="list-style-type: none"> <li>Sources</li> <li>Availability</li> <li>Cost</li> </ul> | <p>20 minutes</p> <p>25 minutes</p> <p>50 minutes</p> <p>45 minutes</p> |  |
| 1.00pm-2.00pm    | Lunch break  | 60 minutes  |  |

|   |  |   |                              |
|---|--|---|------------------------------|
| 2.00pm-4.00pm   | <p>Procedure of feeding weaner cattle on cotton seedcake</p> <ul style="list-style-type: none"> <li>• Demonstrate weighing of the cotton seedcake to get the amounts to feed individual animal</li> <li>• Display livestock feeding on the pods</li> </ul> <p>Methods of estimating live weight gain as a result of supplementation with cotton seedcake</p> <ul style="list-style-type: none"> <li>• Field demonstration: demonstrate weighing using weigh bridge, weigh band and spring balance</li> </ul> <p>Results and conclusion</p> | <p>45 minutes</p> <p>45 minutes</p> <p>30 minutes</p> |                              |
| <b>Time</b>   | <b>Activity</b>  | <b>Duration</b>                                       | <b>Remarks / Facilitator</b> |
|   | <b>Day 10</b>  |   |                              |
| <b>MODULE 7.0: AGRI-BUSINESS MANAGEMENT AND MARKET ASSESSMENT</b> |  |   |                              |
| 8.30am-9.30am   | <ul style="list-style-type: none"> <li>• Introduction to the module (Two sub modules)</li> <li>• Objectives</li> <li>• Expectations</li> </ul>   | 1 hour  |                              |
| 9.30am-10.30am  | <p><b>Agri-business Management</b></p> <ul style="list-style-type: none"> <li>• Introduction to farm management</li> <li>• Introduction to concept of commercial farming</li> </ul>  | <p>40 minutes</p> <p>20 minutes</p>                   |                              |
| 10.30am-11.00am   | <b>Tea break (Group Photo)</b>   | <b>30 minutes</b>                                     |                              |
| 11.00am-1.00pm  | <ul style="list-style-type: none"> <li>• Cont. Concept of commercial farming</li> <li>• Key requirements for enterprise management</li> <li>• Analysis of enterprise management</li> </ul>   | <p>40 minutes</p> <p>1 hour</p> <p>20 minutes</p>     |                              |
| 1pm-2pm   | <b>Lunch Break</b>   | <b>1 hour</b>   |                              |

|                 |  |   |                              |
|-----------------|--|---|------------------------------|
| 2pm- 4pm        | <ul style="list-style-type: none"> <li>Cont. Analysis of enterprise management</li> <li>Enterprise business planning</li> <li>Enterprise business financing</li> </ul> Module review | 20 minutes<br><br><ul style="list-style-type: none"> <li>40 minutes</li> <li>40 minutes</li> </ul> 20 minutes |                              |
| 8.30am-9.30am   | Market Assessment <ul style="list-style-type: none"> <li>Introduction to market assessment</li> <li>Market assessment plan</li> </ul>  | 30 minutes<br>30 minutes  |                              |
| 10.30am-11.00am | <b>Tea break (Group Photo)</b>   | <b>30 minutes</b>   | <b>Health Break</b>          |
| 11.00am-1.00pm  | Practical market assessment  | 2 hours   |                              |
| 1pm- 2pm        | <b>Lunch Break</b>   | <b>1 hour</b>   | <b>Health Break</b>          |
| 2pm- 4pm        | <ul style="list-style-type: none"> <li>Analysis of market data</li> <li>Developing a market plan</li> <li>Module review</li> </ul>   | 40 minutes<br>1 hour<br>20 minutes  |                              |
| <b>Time</b>     | <b>Activity</b>  | <b>Duration</b>   | <b>Remarks / Facilitator</b> |

**DAY 11**

**MODULE 8: GENDER INTEGRATION AND SOCIO SAFEGUARDS IN PASTURE AND FODDER VALUE CHAIN MANAGEMENT**

|                  |  |  |  |
|------------------|--|--|--|
| 8.00am-9.00am    | <b>Introduction to gender</b> <ul style="list-style-type: none"> <li>Levelling expectations</li> <li>Module objectives,</li> <li>Definition of gender</li> <li>Difference between gender and sex</li> <li>Gender related concepts</li> <li>Concept of gender mainstreaming</li> </ul>  | 10 minutes<br>10 minutes<br>10 minutes<br>10 minutes<br>10 minutes<br>10 minutes |  |
| 9.00am – 9.40 am | <b>Gender awareness, lobbying and advocacy</b> <ul style="list-style-type: none"> <li>Concepts of gender awareness, lobbying and advocacy</li> <li>Gender concerns that need awareness and lobbying</li> <li>Approaches and methods of gender awareness, lobbying and advocacy</li> <li>Process of developing a gender awareness, lobbying and advocacy</li> </ul> | 10 minutes<br><br>10 minutes<br><br>10 minutes<br><br>10 minutes                 |  |

|                   |   |  |  |
|-------------------|---|--|--|
| 9.40 am -11.00 am | Tea Break   |  |  |
| 11.00am-12.00pm   | <b>Gender dimensions</b> <ul style="list-style-type: none"> <li>• Definition of Gender dimensions</li> <li>• Types of gender dimensions</li> <li>• Relationship between gender dimensions and TIMPs</li> </ul>          | 20 minutes<br>20 minutes<br>20 minutes |  |
| 12.00pm-1.00pm    | <b>Gender disaggregated data</b> <ul style="list-style-type: none"> <li>• Gender disaggregated data</li> <li>• Types of gender disaggregated data</li> <li>• Purpose of collecting gender disaggregated data</li> </ul> | 20 minutes<br>20 minutes<br>20 minutes |  |
| 1.00pm-2.00pm     | Lunch Break   | 60 minutes                             |  |
| 2.00pm - 3.00pm   | <b>Gender analysis</b> <ul style="list-style-type: none"> <li>• Gender analysis and its purpose</li> <li>• Gender analysis frameworks commonly used</li> <li>• Application of gender analysis tools</li> </ul>          | 20 minutes<br>20 minutes<br>20 minutes |  |

|                   |   |            |  |
|-------------------|---|------------|--|
| 3.00pm – 3.25pm   | <p><b>Approaches to gender mainstreaming and integration</b></p> <ul style="list-style-type: none"> <li>• Concepts of gender mainstreaming and integration</li> <li>• Approaches to gender mainstreaming and integration</li> <li>• Existing policies in support of gender mainstreaming and integration</li> <li>• Existing institutional frameworks for gender mainstreaming and integration</li> </ul> | 25 minutes |  |
| 3.25pm-3.50 pm    | <p><b>Methods and strategies of gender mainstreaming</b></p> <ul style="list-style-type: none"> <li>• Strategies and methods in gender mainstreaming</li> <li>• Levels of gender mainstreaming</li> <li>• The process of gender mainstreaming at various levels</li> <li>• Monitoring, evaluation and reporting in gender mainstreaming</li> </ul>  | 25 minutes |  |
| 3.50 pm – 4.10 pm | <p><b>Mainstreaming gender into leadership and governance</b></p> <ul style="list-style-type: none"> <li>• Gender responsive leadership</li> <li>• Gender responsive governance</li> <li>• Best practices in governance</li> </ul>  | 20 minutes |  |
| 4.10 pm - 5.00 pm | <p><b>Wrap up:</b> Review of the training course</p> <ul style="list-style-type: none"> <li>• Way forward</li> <li>• Course evaluation (individual and group evaluation)Official closing remarks</li> <li>• Logistics</li> <li>• Departure</li> </ul>   | 10 minutes |  |

## ANNEX 2: INDIVIDUAL SAMPLE EVALUATION FORM

Thank you for participating in the Pasture and Fodder Value Chain ToT Training Workshop which has just ended. Kindly take a few minutes to complete this Evaluation Form and return it to the Training Facilitator. Note the information you provide will be used to improve on the planning, organization, and management of future workshops and training. Tick once in the box for each category

**1.0 I rate the training venue in terms of**

**a) Food is:**

V. Good      Good      Average      poor

**b) Workshop facilities is**

V. Good      Good      Average      poor

**2.0 In general, I would rate the ToT Training as:**

V. Good      Good      Average      poor

**3.0 On balance, I would rate the attainment of the ToT Training purpose as:**

V. Good      Good      Average      Poor

**4.0 Specifically, I would rate the attainment level of the expected ToT Training outputs as:**

V. Good      Good      Average      Poor

**5.0 Please indicate two things that you liked about this Training:**

5.1 \_\_\_\_\_

5.2 \_\_\_\_\_

**6.0 My rating of the ToT Training facilitation per module is:**

| Module  | Rating  |      |         |      |
|---|---------|------|---------|------|
|   | V. Good | Good | Average | Poor |
| <b>Module 1: Climate Smart Agriculture Practices</b>                |         |      |         |      |
| <b>Module 2: Participatory Training Methods</b>                     |         |      |         |      |
| <b>Module 3: Range Grass Seed Bulking and pasture establishment</b> |         |      |         |      |
| <b>Module 4: Natural Pasture Improvement</b>                        |         |      |         |      |
| <b>Module 5: Pasture Storage and conservation</b>                   |         |      |         |      |

|   |  |  |  |  |
|---|--|--|--|--|
| <b>Module 6: Supplementary Feeding</b>  |  |  |  |  |
| <b>Module 7: Gender integration and Socio Safeguards in pasture and Fodder Value Chain Management</b> |  |  |  |  |
| <b>Module 8: Agribusiness and Market Assessment</b>   |  |  |  |  |

**7.0 Please indicate two things that you did not like about this Training:**

7.1 \_\_\_\_\_

7.2 \_\_\_\_\_

**8.0 Suggest what you would like done differently about the course in future**

8.1 \_\_\_\_\_

8.2 \_\_\_\_\_

Thank you for taking time to provide this information





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