NLH/AKRSP
HIGH ALTITUDE INTEGRATED NATURAL
RESOURCE MANAGEMENT

TRAINING COURSE MANUAL
ON
PASTURE, LIVESTOCK AND WILDLIFE

IN COLLABORATION WITH
NORAGRIC
NLH AGRICULTURAL UNIVERSITY OF
NORWAY

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INTRODUCTION

Background of the project

Aga Khan Rural Support Program (AKRSP) and Agriculture University of Norway (NLH) have conducted jointly a participatory applied research program on high altitude natural resource management in Basho water shed of Baltistan region. The research project started in 1997 with the mutual visits to NLH and Baltistan. In 1998, actual research work was initiated through visits to the selected area and continued till 2001.

The aim of institutional cooperation program as stated in the Project document: NLH-AKRSP, 1997, is to gain further insights into pasture and forest resources and their role in farmer’s livelihood systems. Participatory research shall enhance the capacity of AKRSP to work with village organisations and partner institutions for sustainable management of pasture and forestry resources, through providing knowledge, which may be, used in developing management and conservation strategies, initially at project sites.

The main activities in the program were:

1. Planning and conducting joint participatory field research and documentation
2. Training and capacity building of AKRSP staff, primarily through research and documentation
3. Disseminating and sharing knowledge gained through workshops, training session, networking and publication
4. Exchanging information, references and literature through library link for improved networking and information management
5. Technical advice for field level application of the knowledge generated through research.

Based on joint planning workshops in Norway and Baltistan, the partners agreed and formulated the following he research project:

- Institutions and organisations in pasture and forestry management
- Pasture, livestock and biodiversity
- Farm forestry and natural forest assessment
- Gender in natural resource management
- Information and documentation

A series of different research activities were carried out during the period mentioned under each component. Under the Pasture, Livestock and biodiversity component several other subcomponents and activities were identified and incorporated in the main stream of research such as:

1. Foraging behaviour of large and small ruminants
2. Productivity of livestock in relation to pasture quality and quantity.
3. Summer movement pattern of livestock
4. Seasonal body weight variation
5. Seasonal livestock mortality
6. Ibex survey
In 2001 the first phase of the project came to an end, although some of the activities need further follow-up work. However, keeping in mind the initial recommendations in the project proposal, it is decided to disseminate and share the research findings and suggestions/recommendations to different target audiences. This process was started in 2001 with a series of workshops in Batistan and Gilgit where preliminary results of phase 1 were discussed. Another workshop was organised in Norway in 2002 to identify effective ways to present knowledge gained from the research project. In this connection several means of communication were discussed for different target audiences. After the identification of means of communication and target audiences, the pasture, livestock and wildlife, it was decided to produce a training manual and a brochure in order to create awareness among the communities, staff and trainers through mass education and trainings based on research findings suggested by the researchers.

Below is the details of the training manual;

**AIMS of the training**

To provide the community members a good understanding about better utilization of high pastures and winter fodder management so that they could improve animal health and production.

**OBJECTIVES OF THE TRAINING COURSE MANUAL**

It refers to the main activities in the project program e.g. disseminating and sharing of knowledge gained through research.

Main objective of the course is to disseminate findings of the research and recommendations/suggestions made by the researchers among the different target groups so that they could be able to implement these effectively to improve livestock productivity and use effectively alpine pastures to reduce feed shortage in winters.

By the end of the mass education work shop the participants must be able:

- to understand the links between grazing pressure and animal productivity.
- To understand the importance of good access to green pasture when lactation starts.
- to know proper storage and harvesting techniques to improve quality and quantity of winter forages.
- to know the causes of animal mortality and disease control measures.
- To know conservation of wild life, advantages, disadvantages and different practices which could reduce disadvantages.

Topics of the course:
The topics selected in this manual are although simple but are linked to many of our research findings and also address the issues facing by the community. There will be four sessions and each session with specific title. Following topics have been identified to address different issues:

- Introduction of the course
- Efficient utilization of summer pastures
- Winter fodder and livestock productivity
- Livestock mortality
- Wild life and our economy
- Motivation session
Introduction of the course

Facilitator will describe the aims/objectives of the course and also the topics with the help of flip charts. There will be four charts and each individual chart will present: name of the course, aims, objectives and titles respectively.

Efficient utilization of summer pastures

During this session the trainer the facilitator will ask the participants in groups to tell time frame of animal moments to high pastures i.e. brainstorming activity. The trainer will note down the responses on a chart. Facilitator will describe the participants present grazing and moment systems and goat experiment findings. The goat experiment will be presented on charts. First chart will show goats and milk production at beginning, second shows milk production increase with concentrate, third chart will show goat weight and milk without concentrate etc.

Suggestions and recommendations flip chart
- Pastures are sufficient for body weight gain
- Delay calving, kidding and lambing period
- Move animals up earlier

Livestock Mortality
Participants will assess livestock mortality (group activity)

Chart plan on preventive measure
- Keep disease animal separate
- Don’t allow sick animal into the valley
- Vaccinate animals against contagious diseases

Flash cards with the same points mentioned above

Wildlife and our economy

- Facilitator asks participants to list down the types and species of wild life in their area with the help of a chart having wild animal drawings on it.
- Facilitator will describe the causes of wild life reduction with help of a case study

Scenes
- Wildlife in the mountains
- Hunter with gun
- People not allow him to hunt
- Trophy hunting
- Development in the village

- Facilitator will describe the benefits of wild life and its conservation
Leaflet

The purpose is to disseminate the results and recommendations for those who can read. Colour pictures will be added to it to make attractive for readers.

It will consists of:
- Brief introduction of the project
- Main findings of research activities
- Recommendations/suggestions
- Benefits
## Session Plan

<table>
<thead>
<tr>
<th>Duration</th>
<th>One day workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Pasture and livestock</td>
</tr>
<tr>
<td>Target group</td>
<td>Community members</td>
</tr>
<tr>
<td>Aims</td>
<td>To provide the community members good understanding about the better utilization of high pastures and fodder management so that they could improve animal health and production.</td>
</tr>
<tr>
<td>Objectives</td>
<td>By the end of the mass education workshop the participants must be able:</td>
</tr>
<tr>
<td></td>
<td>- to understand the implications of early moments of animals to higher pastures.</td>
</tr>
<tr>
<td></td>
<td>- to know the effect of supplement feeding on milk production.</td>
</tr>
<tr>
<td></td>
<td>- to know proper storage and harvesting techniques to improve quality and quantity of winter forages</td>
</tr>
<tr>
<td></td>
<td>- to know the causes of animal mortality and disease control measures</td>
</tr>
<tr>
<td></td>
<td>- to know at least three main causes of animal mortality.</td>
</tr>
<tr>
<td></td>
<td>- To know conservation of wild life and its benefits</td>
</tr>
<tr>
<td>Introduction</td>
<td>Facilitator will briefly discuss the aims and objectives of the workshop</td>
</tr>
<tr>
<td>Contents</td>
<td>Facilitator briefly describes the following topics of the mass education workshop with the ways of presenting it;</td>
</tr>
<tr>
<td></td>
<td>- Efficient utilization of summer pastures</td>
</tr>
<tr>
<td></td>
<td>- Winter fodder and livestock productivity</td>
</tr>
<tr>
<td></td>
<td>- Livestock mortality in Basho</td>
</tr>
<tr>
<td></td>
<td>- Wild life and our economy</td>
</tr>
<tr>
<td>Review</td>
<td>Review the session QPN</td>
</tr>
<tr>
<td></td>
<td>Link to the next session</td>
</tr>
<tr>
<td>Training Material</td>
<td>Flip Charts, real objects, Flash Cards, Picture card etc.</td>
</tr>
</tbody>
</table>
### Session Plan 1

<table>
<thead>
<tr>
<th>Duration</th>
<th>45 minutes</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Efficient utilization of summer pastures</td>
<td></td>
</tr>
<tr>
<td>Target group</td>
<td>Community members</td>
<td></td>
</tr>
<tr>
<td>Aims</td>
<td>To provide the participants enough knowledge about the pastures quality in relation to animal population and their productivity so that they can use pastures efficiently to increase livestock productivity.</td>
<td></td>
</tr>
</tbody>
</table>
| Objectives | By the end of the session the audiences would be able:  
- to understand at least one reason to move up the animals little a bit earlier to summer pasture and bring back them to villages at proper time.  
- to know the effect of supplement feeding on milk production. |
| Introduction | Facilitator will brief the audiences about the present session and its importance with the above aims/objectives. |
| Contents | - Facilitator will divide the participants into groups ask them to tell the time frame about the moments of livestock to high pastures and back to villages. Facilitator will list down their points on a chart.  
- Facilitator will describe the results of research in Basho about goat experiment linking it with the fodder quality and quantity in the pastures and movement patterns of animals.  
- Ask participants to tell about possible reasons of good health on high pastures in summer and milk production with concentrate.  
- Notes down participants responses on sheets/black board  
- Then the facilitator will explain the suggestions and recommendations with the help of flipcharts. |
| Review | Review the session QPN  
Link to the next session  
Give handouts to participants |
| Training Material | Flip charts, hand outs |

15  
25  
40
## Session Plan 2

<table>
<thead>
<tr>
<th>Duration</th>
<th>40 minutes</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td>Winter fodder and livestock productivity</td>
<td></td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>Community members</td>
<td></td>
</tr>
<tr>
<td><strong>Aims</strong></td>
<td>To provide the participants good understanding about the factors effecting animal health and production so that they might able to improve the health and production of livestock.</td>
<td></td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>By the end of the session the trainees should be able to know at least two techniques to store forage for winter in order improve both quality and quantity. To know right time of harvesting of natural grass to save nutritive value of fodder</td>
<td></td>
</tr>
</tbody>
</table>
| **Introduction**  | Review of the previous session  
Importance of the present session | 5 |
| **Contents**      |  
- Participants will be divided into groups and asks them to list down the types of winter and storage techniques in practice.  
- Facilitator will elaborate the lusted points  
- Facilitator will brief the participants about the research findings of body weight loss in livestock and with the help of flip charts.  
- Facilitator will describe the factors effecting the quality and quantity of winter forage (harvesting time, feeding practice, storage) | 15  
25  
40 |
| **Review**        | Revision of the session by QPN  
Link to next session that is Mortality  
Hand outs | |
| **Training Material** | Flip charts, hand outs | 45 |
# Session Plan 3

<table>
<thead>
<tr>
<th>Duration</th>
<th>40 minutes</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td>Livestock mortality in Basho</td>
<td></td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>Community members</td>
<td></td>
</tr>
<tr>
<td><strong>Aims</strong></td>
<td>To provide knowledge to participants main causes of animal mortality so that could be able to enhance livestock productivity through reduction in various losses.</td>
<td></td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>By the end of the session the participants must be able: To know at least three main causes of animal mortality. to know at least three preventive measures to reduce the losses.</td>
<td></td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td>Review the previous session Introduce the present session</td>
<td>5</td>
</tr>
</tbody>
</table>
| **Contents**      | - Facilitator asks participants one by one to tell number of died of animals during the last year and will note on a chart.  
- Facilitator describes causes of animal mortality annually illustrating with flip charts.  
- Facilitator will explain possible preventive measures with flip charts.  
- Facilitator will review the preventive measures with flush cards | 20 30 40 50 |
| **Review**        | Review the session with gape hand outs Links to the next session Say good by | 55 |
| **Training Material** | Flip chart on preventive measures, flip chart on animal mortality, gape hand outs |
## Session Plan 4

<table>
<thead>
<tr>
<th>Duration</th>
<th>40 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Wild life and our economy</td>
</tr>
<tr>
<td>Target group</td>
<td>Community members</td>
</tr>
<tr>
<td>Aims</td>
<td>To create awareness among the participants so that they could be motivated to conserve wild life for their own economic benefits.</td>
</tr>
<tr>
<td>Objectives</td>
<td>By the end of the session the participants must be able: To know at least three benefits from wild life. To describe three main causes of wild animal reduction in the area and two methods to protect these.</td>
</tr>
<tr>
<td>Introduction</td>
<td>Review the previous session. Introduce the present session with aims and objectives.</td>
</tr>
</tbody>
</table>
| Contents       | - Facilitator asks participants to list down the types and species of wild life in their area with the help of a chart having wild animal drawings on it.  
                 - Facilitator will describe the causes of wild life reduction with help of a case study.  
                 - Facilitator will describe the benefits of wild life and their conservation linking with ibex survey. |
| Review        | Review the session with gape hand outs. Links to the next session. Say good by. |
| Training Material | Flip chart on preventive measures, flip chart on animal mortality, gape hand outs. |