PASTORALIST FIELD SCHOOLS

GUIDELINES FOR FACILITATION

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This document is an adaptation of the publication: Groeneweg, K, Buyu, G, Romney, D and Minjauw, B. 2006. Livestock Farmer Field Schools – Guidelines for Facilitation and Technical Manual. International Livestock Research Institute, Nairobi, Kenya

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Printed and bound by Marketpower International, Nairobi

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Correct citation: FAO and VSF Belgium. 2009. Pastoralist Field School – Guidelines for Facilitation. ECHO funded Regional Drought Preparedness Project, Food and Agriculture Organization of the United Nations, Rome, Italy and Vétérinaires Sans Frontières Belgium, Nairobi, Kenya.

PREFACE

The Pastoralist Field School (PFS) approach is an adaptation of the innovative, participatory and interactive learning approach; Farmer Field Schools (FFS). The FFS approach was developed by the Food and Agriculture Organization of the United Nations (FAO) in South East Asia in 1989. It emerged as a way for small-scale rice farmers to investigate and learn for themselves the required skills for adopting integrated pest management (IPM) practices in their paddy fields. The approach proved to be very successful in helping to control rice pests and was quickly expanded to other countries in Asia, Africa, the Middle East and Latin America. In 1995, the FFS program began to broaden its scope beyond IPM to cover other types of agricultural production and incorporate socio-ecological conditions (Braun et. al., 2005).

In 2001, the International Livestock Research Institute (ILRI), with the support of the FAO and the UK's Department for International Development (DFID), adapted the FFS methodology to livestock production systems and more than 20 dairy FFSs were created in Kenya. ILRI worked with both smallholder dairy and extensive mixed farming systems in Kenya to develop and research the new schools. A direct output of the programme was the Livestock Farmer Field Schools – Guidelines for Facilitation and Technical Manual upon which this manual build heavily.

In 2006 ILRI together with Vétérinaires Sans Frontières Belgium (VSF-B), directly working in the Arid and Semi Arid and conflict prone areas of Uganda, Kenya, and South Sudan, embarked on piloting the adaptation of the FFS approach to the pastoralist situation in Turkana. The Pastoralist Field School (PFS) concept, though at infancy, has caught the attention of development agencies in the horn of Africa.

Through a collaborative effort between FAO and VSF-Belgium under the Drought Preparedness Program (OSRO/RAF/801/EC) funded by the European Commission's Humanitarian Aid Office (ECHO) the PFS approach has over the last years been scaled up in the region. This facilitation guide was developed as a guideline for PFS practitioners, inspired through a series of field activities which involved pastoralists in Moroto District, Uganda, and Turkana District in Kenya. In the light of recent experiences of VSF Belgium's Turkana Livestock Development Program (TLDP) piloting PFS in Turkana, and also of PFSs in Karamoja, this guide is based on a selection of some of the activities described in the ILRI manual, but modified to facilitate implementation by pastoralists in pastoral settings.

This Guide provides examples of PFS activities to help PFS facilitators and project managers to implement a livestock based PFS. The guide comprises two distinct sections:

1. Pastoralist Field School Methodology – The PFS methodology is introduced though description of the guiding principles and concepts of PFS, and suggestions of how to organise the overall programme and pastoralist groups.
2. Guidelines for Facilitating PFS Activities provides PFS facilitators with a course of action and specific examples to assist them in creating activities that enhance participation, promote experimental approaches and facilitate learning of livestock and livelihood related topics.

The guide should not be taken as a recipe book that provides all the answers. Rather it is an initial attempt to provide a set of tools and ideas for exercises that trained PFS facilitators can use to lead PFS groups to enhance and improve their decision-making processes and practices. In the process, the application of ecosystem concepts will be reinforced and community-based drought preparedness strategies for pastoralists will be developed through a learning-by-discovery approach. The concepts and principles

included here can be applied and adapted to any learning situation and easily be expanded to include other livestock or livelihood topics than the ones here covered.

It is hoped that the successful implementation of PFS will provide useful lessons on integrating emergency relief and sustainable development, and in empowering communities for drought preparedness and mitigation to reduce livelihood and livestock vulnerabilities.

ACKNOWLEDGEMENTS

This document is an adaptation of the ILRI Livestock Farmer Field Schools Manual[1] of which the original authors Groeneweg, K, Buyu, G, Romney, D and Minjauw, B are acknowledged with thanks. The publishers gratefully also acknowledge all the PFS facilitators, practitioners and project managers together with extension specialists and researchers who collaborated to create and test the materials for this guide.

Special thanks go to the ECHO and the FAO for providing funds and resources for development and publishing of the manual and to the VSF-B management, especially Robert Allport and the Turkana Livestock Development Pastoralist (TLDP) Field School team for their leadership in adapting and field testing PFS exercises. A special appreciation to Gertrude Buyu and Deborah Duveskog, FAO consultants, who have spent time in the field with pastoralist communities and field partners in Karamoja, Uganda and Turkana, Kenya for development of the manual.

[1] Groeneweg, K, Buyu, G, Romney, D and Minjauw, B. 2006. Livestock Farmer Field Schools – Guidelines for Facilitation and Technical Manual. International Livestock Research Institute, Nairobi, Kenya

LIST OF ABBREVIATIONS

CAHW	Community animal health worker
ECHO	European Commission's Humanitarian Aid Office
ECF	East Coast fever
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
FMD	Foot and mouth disease
ILRI	International Livestock Research Institute
IPM	Integrated pest management
ILM	Integrated livestock management
M&E	Monitoring and evaluation
NGO	Non-governmental organisation
PE	Participatory epidemiology
PESA	Pastoral-ecosystem analysis
PFS	Pastoralist Field School
PM&E	Participatory monitoring and evaluation
PRA	Participatory rural appraisal
PTD	Participatory technology development
TLDP	Turkana Livestock Development Program
TOF	Training of Facilitators
VSF-B	Vétérinaires Sans Frontières Belgium

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THE PFS METHODOLOGY – PRINCIPLES AND CONCEPTS

The Pastoralist Field School Methodology – Principles and Concepts

1. INTRODUCTION

Farmer Field Schools: a brief history

The Farmer Field School (FFS) approach was first developed in 1989 by the Food and Agriculture Organization of the United Nations (FAO). It was used to train rice farmers in Indonesia on integrated pest management (IPM) as part of their National IPM Programme. The approach proved to be very successful in helping to control rice pests and was quickly expanded to other countries in Asia, Africa, the Middle East and Latin America. During its expansion the FFS programs began to broaden its scope beyond IPM to cover other types of agricultural production and incorporate socio-ecological aspects.

In Africa, the FFS approach was introduced to Kenya in 1995 under the Special Programme for Food Security and thereafter quickly spread in the region. Over the years over 4000 FFS groups have been implemented in the region and the approach taken up by a large number of development actors and Governments.

The emergence of Pastoralist Field Schools

In 2001, the International Livestock Research Institute (ILRI) developed and adapted the FFS methodology for livestock production systems in Kenya with support from the Animal Health Programme of the UK's Department for International Development (DFID) and FAO. Smallholder dairy and extensive mixed farming systems were the focus of this project and a number of Livestock FFS groups were implemented.

Following the successful experience of the Smallholder dairy project ILRI and Veterinaires Sans Frontieres Belgium (VSF-B) embarked on piloting the adaptation of FFS to the pastoralist situation in arid and semi-arid parts of Turkana District, Kenya and thereby the development of the Pastoralist Field School (PSF) concept. PFS though still in its infancy, quickly caught the attention of several development agencies in Uganda and Northern Kenya, particularly under an ECHO funded FAO project.

What is a Pastoralist Field School?

A PFS can be described as a 'school without walls', where groups of pastoralists learn through observation and experimentation in their own context, based on methods of adult education. This allows them to improve their management skills and become knowledge experts on their own resource use practices.

The approach empowers pastoralists using experiential and participatory learning techniques rather than advising them what to do. The purpose of the PFS is thereby to improve the decision-making capacity of participants and their wider communities and to stimulate local innovation. A PFS usually comprises a group of between 30 and 40 pastoralists (including elders, men, women and youths) who meet regularly over a defined period of time to make observations that relate livestock production to the rangeland ecosystem. A trained PFS facilitator, usually from or living in the local community, guides the learning process. Unlike some other extension approaches, PFS is more about developing people than developing technology. PFS training is hands-on and continues throughout the different seasons. Usually the PFS cycle starts before the onset of the dry season, continues through the migration during the dry season and carries on after the dry season ends, enabling participants to observe and asses their coping strategies at each stage of the cycle. In this environment, the PFS learning cycle typically takes about one-and-a-half to two years, and ends with the graduation of the group members.

The PFS group provides animals and other resources to use in simple comparative experiments. These animals form the groups' study herd, on which different (but not risky) treatments are tried and observations made. Changing environmental conditions and factors affecting the study herd, such as disease outbreaks, dictate the topics to be addressed each week during the PFS session. Folk media, including songs and storytelling, is used to disseminate information on technical and social issues. Tools such as illustrations, practical demonstrations and real-life exhibits are further used as learning aids adapted for illiterate group members.

Why the Pastoralist Field School approach?

Capacity building of rural communities has traditionally been seen by research and extension institutions as a mechanism to transfer technologies to land and resource users. This approach, however, has proved inadequate in complex situations where community members must frequently adjust their practices to changing conditions. Technology packages, delivered in a 'top-down' manner, have often been too complex, expensive or poorly adapted to peoples' needs.

The pastoralists' system of livestock production is complex, based on rich experience and culture that is passed down from one generation to the next. But new developments – such as climate change or emerging diseases – mean that pastoralists need to supplement their traditional knowledge and practices: this new knowledge and innovation can be realized through participatory learning approaches, such as PFS.

The PFS approach, in contrast to most conventional extension approaches, strengthens the capacity of local communities to analyse their livelihood systems, identify their main constraints and test possible solutions. By merging their own traditional knowledge with external information, pastoralists can eventually identify and adopt the most suitable practices and technologies to their livelihood system and needs to become more productive, profitable and responsive to changing conditions.

The specific objectives of PFS include to:

- empower pastoralists with knowledge and skills to make them experts in their own context
- enable pastoralists' livelihoods to become more resilient and less vulnerable to disasters, such as drought
- facilitate pastoralist communities to learn new ways to solve problems and adapt to change
- sharpen the ability of pastoralists to make critical and informed decisions that strengthen their coping mechanisms
- help pastoralists learn how to best organise themselves and their communities
- provide platforms where pastoralist groupings and extension and research workers jointly test and adapt options within the specific local conditions.

A typical PFS session

2. OVERVIEW OF PRINCIPLES AND PRACTICE

Pastoralist Field School principles

PFS activities are guided by the following principles:

1. Learning by doing

Pastoralists do not change their behaviours and practices just because someone tells them what to do or how to change. They learn better through experience than from passive listening at lectures or demonstrations. Discovery-based learning is an essential part of the PFS as it helps participants to develop a feeling of ownership and to gain the confidence that they are able to reproduce the activities and results on their own.

2. Learner-led study

Pastoralists, not the facilitator, decide what is relevant to them and what they want the PFS to address. This ensures that the information is relevant and tailored to participants' actual needs. The facilitator simply guides them through their learning process by creating participatory exercises that provide pastoralists with new experiences.

3. Learning from mistakes

Behavioural change requires time and patience. Learning is an evolutionary process characterised by free and open communication, confrontation, acceptance, respect and the right to make mistakes. This is crucial as more is often learned from mistakes than from successes. Each person's experience of reality is unique.

4. Learn how to learn

Pastoralists learn the necessary skills to improve their ability to observe and analyse their own problems and make informed decisions. They also learn how they can educate and develop themselves further.

5. Problem-posing/problem-solving

Problems are presented as challenges, not constraints. Pastoralist groups learn different analytical methods to help them gain the ability to identify and solve any problem they may encounter in their daily life.

6. The herd and the landscape is the learning ground

The heard and the landscape is the main learning ground, around which all PFS activities are organised. Pastoralists learn directly from what they observe, collect and experience in their surrounding instead of through text books, pictures or other extension materials. Participants also produce their own learning materials (drawings, etc.) based on what they observe. The advantages of these home-made materials are that they are consistent with local conditions, inexpensive to develop, and owned by the learners.

7. Facilitation, not teaching

Trained facilitators (usually community members or Community Animal Health Workers) guide the learning process, not by teaching but by mentoring and supporting the participants to take responsibility of their own learning. In the discussions the facilitator contributes and facilitates the group to reach consensus on what actions need to be taken. Facilitators are trained in a formal Training of Facilitators (TOF) course developed by experienced PFS Master Trainers. Researchers and subject matter specialists are invited to provide technical and methodological backstopping support to PFS groups and also learn to work in a participatory and consultative way with pastoralist.

8. Unity is strength

Empowerment through collective action is essential. Pastoralists united in coed groups have more power than individuals. Also, when recognised as an active member within a group, the social role of individuals within a community is enhanced. The combination of two or more minds is often more successful than one mind on its own. The PFS expresses this as 1 + 1 = 3; i.e. one mind + one mind creates a new, third mind.

9. Every PFS is unique

Learning topics within the PFS should be chosen by the community and group members. Training activities must be based on existing gaps in the community's knowledge and skills and should also take into consideration its level of understanding. Every group is different and has its own needs and realities. As participants develop their own content, each PFS is unique.

10. Systematic training process

All PFS follow the same systematic training process. The key steps are observation, reflection, group discussion, analysis, decision making and action planning.

Past experience has shown that the best results are achieved with weekly meetings. Longer intervals can slow down the learning process. The length of the PFS cycle depends on the focal activity. With livestock, a full year cycle or more is usually needed to allow for all seasonal variations to be studied. PFS increasingly include marketing and income generation activities which may lengthen the PFS learning cycle.

Pastoralist Field School core activities

Five core activities are repeated in each PFS session to provide the framework for learning: comparative experiments; pastoral-ecosystem analysis (PESA); topic of the day (special topic); group dynamic exercises; and participatory monitoring and evaluation (PM&E).

1. Comparative experiments

Comparative experimentation is a collective investigation process to solve local problems. Simple experiments or trials are carried out to enhance pastoralists' observational and analytical skills to investigate the cause and effect of major production problems. They help individuals become experts and to design simple and practical experiments to test and select the best solution to their problems.

Experiments also encourage the testing and adaptation of new technologies or practices. In this case, the experiments compare local practices with a set of available solutions presented either by the facilitator, researchers or group members. By analysing the results and developing recording skills, pastoralists are able to decide which solution (technology or practice) is best suited to their situation. See Section 6 for details on the principles of experimentation and their design and implementation.

Each experiment should include a simple cost–benefit analysis using the data recorded during PESA exercises. Assessing the economics of each option improves decision-making skills for livestock health and production activities as pastoralists often do not know whether they operate at a profit or loss. Through the exercise participants can better understand the difference between various options to determine the efficiency of their own systems.

Besides recording and analysing the financial costs and benefits of the options tested in the experiment, other indicators to validate the results of the experiment should be identified by PFS participants (e.g. labour needs, socio-cultural appropriateness, length and speed of growth, accessibility). Record keeping of indicators is required to monitor and evaluate the performance of a treatment or technology. See Section 6 for guidelines.

2. Pastoral-ecosystem analysis (PESA)

PESA is the cornerstone of the PFS approach and is based on the ecosystem concept, in which each element in the pastoral system has its own, unique role. It involves making

field observations, data collection and analysis, and finally come up with recommendations. Through regular observation of the herd-livelihood system, PESA exercises helps establish the interaction between the herd, landscape as well as other living and non-living factors. Data are collected based on key factors observed to help put a process in place for decision making. The analysis is performed in sub-groups of four to five members to enhance participatory learning. Each sub-group presents their observations and recommendations in plenary sessions for collective decision making on management actions.

PESA exercises improve decision-making skills by:

- enhancing observational and analytical skills
- developing record keeping skills by drawing and visualization
- generating discussions and sharing of member-to-member experience
- developing presentation skills to promote communal decisions.

PFS participant presents the results of her subgroup to the whole group so that collective decisions can be made

3. Facilitation of 'special topics'

Though adults learn best through a 'learning by doing' approach, where new knowledge is acquired from experience, basic technical information is usually needed before hands-on activities are implemented. Certain activities are also too risky to apply without proper expertise or information, as is often the case with animal health issues. The topic of the day or 'special topic' is used to introduce technical information. The objectives of special topics are to:

- provide an opportunity for the facilitator, researcher or specialist to give theoretical inputs needed for a general understanding of the subject before field activities are carried out
- enhance pastoralists technical knowledge and present the members with information they need at the time they need it (this also applies for non-livestock related issues)
- ensure a demand-driven learning process, where the topics for learning are based on demands by the group members
- level knowledge among the participants.

Thirty minutes to 1.5 hours of each PFS session should be reserved to discuss a specific topic relevant to the participants' needs. The topic of the day is normally a livestock-related topic but could be any subject of concern. Participants may have other problems and feel a need to discuss issues such as HIV/AIDS, micro-finance, gender inequity, etc. If the facilitator lacks the specific expertise, external specialists or other community members can be invited to lead the discussion. The role of the facilitator is to target a specific topic at the most relevant time for group participants.

This guide includes two participatory approaches to facilitate the 'special topics': a) Focus group discussions where sub-groups of PFS participants are asked to answer questions followed by a plenary discussion (see Section 6, page 89); and b) Participatory learning exercises of short- and medium-term duration (which can include simple demonstrations) to introduce technical topics and lead the group in discussing their experiences.

4. Group dynamic exercises

Group dynamic exercises are used to create a pleasant learning environment, facilitate learning and create space to reflect and share. They also enhance capacity building in communication skills, problem solving and leadership skills. Further, group dynamics such as drama and song can be an effective way to deal with sensitive topics such as domestic violence, alcoholism etc. Section 6 includes specific examples of group dynamic exercises.

Songs or poems can be effective for memorising knowledge or stimulate to thought

5. Participatory monitoring and evaluation (PM&E)

The PM&E plan is an extension of the participatory plan developed in the initial PFS stages. To implement the PFS approach, both the participants and facilitator need to be able to continuously assess whether they are making any positive changes and actually achieving the goals they set. Monitoring and evaluation (M&E) methods have been developed to help PFS practitioners (mainly project staff, facilitators and participants) actively observe and analyse situations and performances and help them understand what they are observing. Given the participatory nature of PFS, M&E should also embrace the established participatory principles (see Participatory Methods and Tool, Section 4). This Field Guide provides PM&E guidelines (Section 6, page 90) to:

- monitor and evaluate the PFS performance and assess whether it is achieving its specific objectives
- monitor and evaluate specific PFS sessions for self-evaluation purposes
- monitor and evaluate a comparative experiment.

3. ORGANISATION OF THE PASTORALIST FIELD SCHOOL

The following steps, discussed more broadly in the next section, should be followed to successfully implement a PFS:

Phase 1: Preparation

Step 1. Understand the pre-conditions

Step 2. Identification and training of PFS Facilitators

Step 3. General ground working

- establish contact with the community
- hold a community awareness-raising meeting to introduce the PFS concept
- identify the participants
- identify the focal activity (PFS learning enterprise)
- identify the learning site

Step 4. Establishing the PFS

- participatory introduction of the participants
- levelling of expectations
- identifying the host team
- participatory planning of PFS activities
    1. establishing the PFS group
    2. problem analysis and ranking
    3. identifying potential solutions
    4. developing the learning programme
    5. developing a detailed budget
    6. Submitting a grant proposal
    6. PM&E plan

Phase 2: PFS implementation

Step 5. PFS sessions with core activities

Step 6. Field days

Step 7. Exchange visits

Step 8. Graduation

Phase 3: Post-graduation

Step 9. Follow up of PFS activities

Step 10. Establish/create PFS networks

Step 11. Set up of 2nd generation PFS

Phase 1: Preparation

This phase includes the steps leading up to the actual implementation of PFS core activities. However in this phase, the funding to the PFS group will probably not yet have been disbursed. The implementing agency will therefore have to help coordinate steps 1 to 3 to enable the facilitator to establish the PFS. Typically five half-day sessions are needed to conduct all the activities in Step 4. During that period, the facilitators will also help to formalise the PFS group and to open a bank or local savings account.

Step 1. Understand the pre-conditions

Before establishing a PFS in a new region, a simple assessment should be performed by a PFS specialist to assess the conditions for PFS implementation. This will ensure that the environment is suitable for the PFS approach. Questions to be raised include:

- Is the pastoralist production system changing and is there a need for drought preparedness efforts to fill existing knowledge gaps?
- Is PFS the most suitable approach for tackling existing problems?
- Are there any cultural barriers to the PFS approach? Are peace-building efforts in place?
- Are the Ministry (agriculture/livestock) and other intervention actors supporting the PFS implementation? This is essential as PFS should be seen as an opportunity to test a new approach, not as a threat to existing systems.
- Are there any other PFS or similar programmes in the region, country or neighbouring countries? (It is important to link up PFS wherever possible.)
- Are there any PFS specialists or Master Trainers available in the region?
- Who are suitable PFS facilitators (e.g. government or non-government extension workers, pastoralists, Community Animal Health Workers (CAHW) etc.)? Are they willing to act as PFS facilitators?
- How many PFS can be guaranteed implementation after the first TOF course? Are there sufficient resources? Under which programme is the PFS going to be supported?

Results of the assessment will help assess if a PFS should be implemented in a particular region, and to determine the target communities. If authorities are supportive and a PFS has been recognised as a potentially appropriate method, the remaining results will help assess the costs and needs for external inputs to determine the level of difficulty in establishing the PFS.

Step 2. Identification and training of PFS facilitators

PFS facilitators need to be identified and trained before commencing PFS activities. The facilitators should be individuals residing in or close to the target community, who speak the local language and have some kind of technical knowledge, such as for example CAHWs. It is also preferably, but not necessary, that the facilitators are literate. Often two facilitators (or more) are identified to run one PFS as a team and the facilitators are usually identified or selected by the target community.

It is crucial that the facilitators participate in a TOF prior to facilitating a PFS. The TOF, organised by experienced PFS Master Trainers, is a two- to three-week (or longer) training programme to prepare participants in the principles and core elements of the PFS methodology and facilitation skills. Additional training on specific topics (technical and methodological) can be organised if necessary to further develop their capacity. The

TOF should also be complemented by regular refresher trainings and on-the-job mentoring of the facilitators during PFS implementation.

Step 3. General ground working

Following participation in the TOF, facilitators, with assistance from the project staff, must first determine the actual needs of their community. Basic area information is collected using participatory tools (see page 26) to better understand the local livelihood system and enable future M&E. Activities should begin at least two months ahead of the planned start of the PFS. The following steps are recommended for this phase:

Establish contact with the community: Initial contact with the community is needed to understand the area and characterise the livelihood systems. In most places, community and *manyatta* leaders should be contacted first to seek their advice and authorisation. Following their approval, facilitators can plan an awareness-raising meeting to introduce the PFS approach to the community (Section 5, page 40).

The awareness-raising meeting: A meeting with the community to introduce the PFS concept is necessary in areas where awareness is low (Section 5, page 40). The facilitator needs to ensure that community members have a clear understanding of what they can expect from the PFS. Participants and the facilitator can then discuss how to move forward to plan the PFS implementation (Section 5, page 53).

A community awareness-rising meeting to introduce the concept of PFS

Identification of participants: Through consultations with the community and the help of local leaders, 30–40 PFS participants should be identified (groups tend to shrink to 25–30 after the first few sessions). In the identification process the facilitator needs to be aware of gender relations and cultural practices within the community. Ideally the group should include a mix of men, women, youth and elders from a cluster of villages. In case of a nomadic pastoral community it is good if about half of the group is made up of permanent residents of the *manyatta* and the other half of members who seasonally migrate to *kraals*. If participants are drawn from several clans they should all migrate to the same kraals and share key grazing resources.

Criteria for selecting participants are:

- common interest (i.e. all members have the same enterprise interest – cows, goats, fodder production etc.)
- the enterprise is the main source of livelihood
- the participant is a decision maker in his or her household
- all participants are from the same socio-economic level, since the learning process can be hampered by influential personalities such as local chiefs who may impose their views and impede participation
- the participants be of the same clan and share key resources and migrate to the same *kraals*
- all participants should live within a relatively short distance of the PFS learning site, preferably the same village (see 'Identification of learning site' below)
- there are no known conflicts between participants
- the participant must aim to attend all sessions during the PFS cycle
- the participant must be willing to work in a team and share ideas with others, including non-members
- the participant must be willing to contribute financially, in material inputs or in personal time to the PFS work
- the participant must be interested in learning and not expect material benefits
- at least one participant must be willing to provide a herd, animal or field for group learning and experimentation.

Section 5, page 42, provides guidelines for PFS participant selection.

Identifying the focal activity (PFS learning enterprise): Sufficient time should be spent on identifying the focus of the PFS, to avoid involving pastoralists in activities that are not of interest to them. The selection of the PFS enterprise depends entirely on local peoples' needs and interest. For a cattle-focused PFS, the community's main enterprise should be livestock herding. It is therefore important during the initial stage for the facilitator to help in analyzing the community, identify the components of its livelihood system and whether they have problems concerning this system (Section 5, page 55).

Identification of learning site: The PFS group will select a site to conduct meetings. A field and/or animal is also needed as a study object. Criteria for learning site selection are:

- the site or animal/herd must be suitable for the enterprise
- it must be representative of the problems in the area
- it must be central and accessible to group members and facilitators
- it should be democratically selected by the group members
- site and animal/herd security should be ensured
- the meeting place should be spacious enough to hold a group of about 30 persons, and provide shade, such under a big tree.

Section 5, page 45, provides complete guidelines for identification of the learning site. By following all these steps and criteria, the facilitator should now have formed a cohesive group of pastoralists willing to commit themselves to PFS activities.

Step 4. Establishing the PFS

Participatory introduction of the participants: The PFS participants might already know each other, however to break the ice and get to know each other better a participatory introduction of all actors present is highly recommended (Section 5, page 47).

Levelling of expectations: In order to facilitate the learning process and avoid disappointment it is important to level the expectations of the participants and of the facilitator (Section 5, page 49).

Host team: The host team is the helping hand of the facilitator. In turns, sub-groups of PFS members are responsible for the day's activities and additional responsibilities in the (field/herd) tasks (Section 5, page 51).

Participatory Planning of PFS activities

i. Establishing a PFS group: The group of pastoralists responding to the criteria will officially establish their own PFS by:

- choosing a name for their PFS and choosing a slogan (optional but recommended)
- setting ground rules or a constitution also called 'Setting of learning norms'. The PFS members will set the learning norms to ensure a suitable learning environment and avoid interruptions and frustrations (for guidelines see section 5, page 51)
- electing officials, e.g. a chairperson, secretary, treasurer
- registering officially at the respective Government office
- opening a bank or local savings account: each member will need to contribute money as a deposit for group activities; money withdrawals need to be supported by a letter explaining the purpose of the withdrawal, signed by PFS officials and some members
- sourcing funds to finance their activities (even when a grant is provided it is recommended that the PFS looks for additional funds).

ii. Problem analysis and ranking: The first PFS sessions will be used to analyse the problems perceived by the pastoralists in the focal activity/enterprise of their choice. These problems will be defined and prioritised and will direct the learning programme of the PFS (Section 5, page 55).

iii. Identifying potential solutions: The main problems need to be analysed intensively. PFS group brainstorming sessions aim to develop options that can be tested and evaluated.

iv. Developing the learning curriculum: Once the PFS group is established, the facilitator develops a programme (i.e. the curriculum for the PFS, based on the main problems identified). In collaboration with the group, the facilitator decides what activities need to be undertaken to further explore the problems, test the solutions and identify what kind of outside assistance is needed. Key activities to facilitate learning in the PFS are the PESA, field comparative experiments and special topics, where group discussion and short- and medium-term learning exercises are conducted. Field trips or exchange visits with other PFS groups are also useful methods to enhance learning and participants' motivation. A curriculum defining the PFS season and outlining dates of meetings and the

topics of discussion needs to be drafted on a flip chart and made accessible to all (Section 5, page 56).

***v. Developing a detailed budget*:** Having identified which activities the PFS will perform, the group will establish a budget. An overview of the budget required for the PFS needs to be drafted (especially when the PFS group wants to apply for a grant or loan). This normally includes (for guidelines see Section 5, page 58):

- stationery (flip charts, pens, markers, etc.)
- inputs for the learning activities and experiments (livestock, feed, seeds, veterinary drugs etc.)
- management tools (weigh bands, castration tools, rain gauge etc.)
- field days and M&E activities
- exchange visits (seed money to compliment members own contribution)
- graduation (displays, transport, certificates etc.)
- facilitation: allowance/motivation of the facilitator (both the main facilitator and potential external 'special topics' facilitators).

vi. Submitting a grant proposal: To enable a PFS group to test alternative solutions and risk experimenting with new technologies, a learning grant is often made available by the implementing agency to cover all or part of the PFS budget. The implementing agency should have a system in place to effectively process grant proposals and rapidly deposit the funds to the PFS group's bank account, or in a local savings account. These funds are then managed exclusively by PFS members, empowering them to achieve the goals set out in their activity plan. A delay between the grant application and fund allocation might discourage participants. However, if there is a delay, the facilitator should promote low cost or income generating activities in the meantime to maintain cohesion within the group.

There are many advantages in allocating the PFS budget as cash directly to the group rather than purchasing and distributing the required items on project level. By managing the funds the group members get an opportunity to practically learn aspects such as financial management, simple book keeping and where/how to source inputs and products. With the group paying the facilitator allowance the facilitator feel directly accountable to the group rather than to the project office. Having an active bank account in place, well managed, may also facilitate access to other funding sources in future.

It is necessary that the groups consider any external funding as a 'seed for learning' that should compliment the groups own resource mobilization. Ways that the group can save or raise money for learning include; regular savings, establish income generation activities such as marketing of livestock, sale of agro-veterinary inputs or provision of specialized community services.

vii. Participatory monitoring and evaluation plan: PM&E needs to be planned to ensure that the objectives of the PFS group are met and progress can be tracked. Examples of PM&E tools are provided in Section 6, page 90. The data generated in the problem analysis need to be well recorded as they provide baseline information for evaluation. A PM&E plan can then be developed describing why evaluations are done, what is being evaluated, who is evaluating, when and where the evaluations should be done and what resources are needed (Section 6, page 90).

Phase 2: PFS implementation

Step 5. PFS sessions with core activities

Enrolled PFS members agree with the facilitator when the learning programme will start, the frequency of meetings and the length of the cycle before graduation. In general, the PFS group meets for a half-day session once a week and the members agree to join the PFS for a full year to enable the implementation of medium-term field comparative experiments and learning exercises related to livestock issues (e.g. feeding, animal health etc.). The learning cycle should cover a full seasonal cycle, from when the rainy season starts, continuing through the dry season and back to the next rainy season, giving hands-on experience at all stages. In the case of a nomadic community the learning should start in the *manyatta* and when the group splits during the seasonal migration the learning sessions continues in the *manyatta* and *kraal* in parallel.

Since many participants are likely to be illiterate illustrations, practical demonstrations, exhibits of real-life examples and folk media such as songs and storytelling are used. All sessions are conducted in the appropriate local language. The table below indicates a typical PFS session.

Table 1. A typical PFS session schedule

Time	Activity	Objectives	Responsible persons
07.30 - 08.00	Opening – someone blows the horn to call members to the session Roll call and brief recap of last session: could be in form of song or role play	- Alert members that the session is about to begin - Record who is present - Reinforce the learning achieved in the last session	Host team
08.00 - 08.30	General observation of the condition of the animal herd	- Improve observational skills and detect any problems, changes or opportunities	All
08.30 – 09.00	Pastoral-ecosystem analysis (PESA) – systematic observation and analysis of comparative field/livestock trials	- Monitor progress of trial by collecting data	Subgroups
09.00 – 09.30	PESA analysis and discussions in subgroups	- Sharpen analytical skill and data analysis	Subgroups
09.30 – 10.00	- Presentation of PESA results and decision making by whole group *(followed by release of study animals for grazing)*	- Results and subgroups' discussion points shared with whole group	Facilitator and host team
10.00 – 10.30	Group dynamics	- Develop songs and other aids for memorization of key information - Energize the group and build team spirit - Enhance participation	Facilitator and host team
10.30 – 11.30	Special topic	- Widen knowledge and skill base responding to felt needs of group - Promote discussions and introduce new ideas and concepts	Facilitator or guest specialist if appropriate
11.30 – 11.40	Review of day's activities	- Reinforce the day's learning and evaluate the group's achievements	Facilitator
11.40 – 11.50	Planning of follow-up activities and next session	- Plan follow-up activities that will take place outside the PFS session - Plan activities for the next session	Host team
11.50 – 12.00	Roll call Announcements Thanks Close	- Record late-comers - Share news and announcements - Thank everyone for their efforts - Bring the session to a timely close	Host team

An important component of the PFS group is the host team. These are a small subgroup chosen from the larger PFS group who take on a number of responsibilities, including: a) assisting the facilitator; b) preparing the PFS programme and venue for each session; c) running the group dynamic activities; d) introducing visitors; e) keeping attendance records; f) acting as time keepers. For guidelines see Section 5, page 50.

Step 6. Field days

Field days provide an opportunity for non-participants and the larger community to be exposed to the PFS group's lessons and the skills and knowledge gained in the process. In addition, they provide the PFS members with an opportunity to display and share their experiences, e.g. the experimentation results and learning activities, including group dynamics. Field days also reinforce the PFS cohesion and raise awareness among the community, the government and other organisations in the area, creating support and new demand for PFS (Section 6, page 22)

Step 7. Exchange visits

Exchange visits are educational tours to another PFS, agricultural institution or innovative communities. They encourage PFS members to compare the activities of other groups with their own and to exchange tested technologies and unique innovations. It may not be possible for all PFS members to go on the visit: in this case a few representatives can be chosen by the group who will then report back on what they learn at the next PFS session.

Step 8. Graduation

PFS members with a good record of attendance (e.g. 75% of sessions) can graduate for the specific activities completed during the PFS learning cycle. The graduation is organised by the group and the facilitator and involves an official ceremony to which community members, (government) officials, programme staff and neighbouring communities are invited. Participants are awarded a certificate by the supporting agency/programme to recognise their efforts and celebrate their achievements. At the same time, other community members will be attracted and the event marks the end of an official learning period.

Phase 3: Post-graduation

The PFS does not end with the graduation, as in many cases the PFS group expresses a need for more training, either in the same focal activity or in a different enterprise. However the programme and the activities are different and the approach is aimed towards the sustainability of the group and the implementation and dissemination of the lessons learned.

Step 9. Follow-up of PFS activities

At the end of a learning cycle and after the graduation ceremony, the PFS normally continues. With help from the facilitator, the group evaluates the PFS and develops an action plan based on the evaluation of what has been learned and what the gaps are. In addition, new sessions (different topics or more in-depth learning of the specific topics), implementation of commercial activities, and linkages with researchers, extension workers and other PFS are planned.

Step 10. Establish/create PFS networks

When there are several PFS in a region, PFS networks should be encouraged. Networking is a sustainable mechanism to support economic activities and support the development of existing and new PFS. It initiates commercial ventures in all affiliated PFS, facilitates fundraising and helps to coordinate marketing activities.

Step 11. Set up of 2nd generation PFS

The PFS facilitator and participating members identify a few PFS members willing to play the role of facilitator and who have the potential to be trained further. The individuals selected will start by assisting the current facilitator, and will learn the basics. When ready, he/she can thereafter conduct a PFS on his/her own in the same or a neighbouring community. The so-called 2nd generation PFS is backed up by the originally trained facilitator. The facilitator can oversee many 2nd generation PFS groups, helping to scale up the methodology.

Lessons learned in PFS

- The support and goodwill of the authorities at various levels is essential, especially that of community leaders, programme staff and supervisors of the PFS facilitators.
- PFS cannot operate in a vacuum. Clear understanding of the PFS concepts and procedures should be established and effective linkages formed between stakeholders.
- The PFS can effectively integrate with other participatory methods and this should be encouraged to enhance the overall outcome.
- The PFS curriculum is very demanding on the facilitator and, in general, a PFS requires at least one day per week of his/her time.
- To enhance learning among illiterate participants, learning tools based on drawings and pictures should be encouraged. Technical information should also be memorized in the form of songs and drama to ensure retention of the knowledge gained.
- Technologies tested and applied in the PFS should be locally available for pastoralists to practice them in their own situation.
- The PFS concept and implementation should be flexible enough to be modified to fit with local conditions.

- Facilitators should have both local knowledge and more 'modern' knowledge of the topics under study, including knowledge on the terminologies used (e.g. pests, diseases, etc.).
- The PFS facilitators need to be well trained in the PFS methodology.
- Internalising facilitation skills among PFS facilitators takes time and, in general, facilitators need regular support and mentoring from a PFS Master Trainers during the whole PFS implementation process.
- Adequate resources and logistical support are key first steps. Financial resources should be in place prior to the start of PFS activities.
- Distribution of learning grants directly to PFS groups is highly encouraged.
- Balance of sexes should be encouraged as it enhances the whole learning process for all participants and encourages communication between men and women.
- Built-in M&E methods are needed to assess the PFS's impact on participants' lives and livelihoods.
- Sustainability mechanisms should be started from the onset of the PFS. Income generating activities such as the sale of local products ensures a financial base for the group. Also regular contributions by individual PFS participants are useful for ensuring financial sustainability of the group.
- The process and results should be well documented by the group and facilitator.

Facilitation Guidelines for Pastoralist Field School Activities

4. PARTICIPATORY METHODS AND TOOLS – AN OVERVIEW

The PFS approach is a participatory process focusing on peoples' needs, knowledge and capacity for learning. Because the approach is based on the principles of participatory learning and action, this guide provides an overview of the principles of participation and the types of participatory methods and tools. It also provides guidelines on how the methods and tools can be used.

Principles of participation

Participatory methods and approaches are becoming increasingly important in the context of sustainable development, while participation, action research and adult education are all helping to empower the poor. Participation also helps to develop people as it enhances the communication and understanding between different groups. In addition, interaction between people from different institutional contexts tends to promote innovation.

There are many variations in the way participatory methods are used, not only because each site is unique, but also because the methods can be employed to serve many different objectives. This guide focuses mainly on the use of participatory methods for participatory planning, learning, and for monitoring and evaluation (M&E). When using participatory methods, PFS facilitators should take account of the following principles (adapted from Pretty et al., 1995):

- *Multiple perspectives.* Everyone is different and makes different evaluations of situations; therefore everyone's opinion is important. Seek diversity not simplicity.
- *Group learning processes.* Ensure that groups interact and that diverse views are incorporated in the learning process. Unity is strength.
- *Context specific.* The approach should be adapted to suit each different condition, objective and community.
- *Experts as facilitators.* External experts should help people carry out their own studies, thereby learning and achieving their own objectives.
- *Leading to change.* The process of joint analysis and dialogue helps people to take action to implement the defined changes.

Participatory epidemiology

Epidemiology looks at the dynamics of diseases in a population (how diseases are transmitted, controlled and eradicated). Participatory epidemiology (PE) is based on the use of participatory techniques for the harvesting of qualitative epidemiological data contained within community observations, existing veterinary knowledge and traditional oral history. It relies on the widely accepted techniques of participatory rural appraisal (PRA) (Mariner, 2001). The facilitators can use this information to disseminate information on disease prevalence, design relevant participatory field experiments and introduce more successful surveillance and control strategies.

PE is extremely useful in helping new facilitators evaluate local knowledge, understand peoples perception and acquire information on local ethno-veterinary practices. When PE exercises are repeated, they will evaluate changes in knowledge and practices and thus become part of the PM&E plan of the PFS. Many of the participatory methods described below can be used for PE purposes.

Features of participatory methods

The three main ways to apply participatory methods are:

- Oral methods: informal interviews, group discussions, drama and role plays, songs, poems etc.
- Visual methods: sketches, maps, calendars, venn diagrams, photographs, etc.
- Ranking and scoring methods: matrix scoring, proportional piling, etc.

All these methods are supported by knowledge of secondary literature and direct observation. Ideally, the methods are used together. The results from one method should be compared with those of other methods to ensure the information captured is trustworthy.

Important features of participatory methods are:

The use of a key person (key informant): Within communities, certain local people are recognised as possessing particular knowledge and skills. These local experts or key persons can be identified by asking community members to state who knows most about a certain topic, and then seeing which names are mentioned repeatedly. Key persons can be used to provide detailed information on specialised areas, such as specific aspects of animal husbandry or human health.

Building relationships: The type of interaction between for example a facilitator and a community member determines the relationship and trust that develops, and affects the types of issues and information that people are willing to discuss in an open manner. Therefore, facilitators must be constantly aware of their own attitudes and behaviour.

Respect: Facilitators must believe that a community member has something useful to say. This means respecting local views and opinions and being open to ideas that may not necessarily agree with *modern* knowledge. This does not mean that a livestock expert must automatically accept all indigenous knowledge as valid and useful. The idea is to identify local knowledge and skills that seem to agree with professional know-how to develop existing local capacity further. At the same time, possible gaps in local knowledge can be identified and discussed.

Non-verbal communication and listening skills: Everything we do in a community influences information flow. This is not only what we say, but also how we behave. Such non-verbal communication can take many forms, for example, how we dress and appear, what we carry with us – our possessions, how we travel – on foot, bicycle, local transport or project vehicle (bearing the project logo), our body posture and our behaviours. For examples see Box 1.

Do-it-yourself: One way to show people that you are interested in their way of life is to take part in the everyday working tasks that they perform. This can show people that you are not too proud to work alongside them and at the beginning of a project it helps to create good rapport. In many cases, facilitators have to be taught how to perform a certain job. This role reversal, where the 'expert' learns from local people, shows that local knowledge and skills are valuable.

Work in teams: Many of the methods work best when a team of two or more facilitators work together. Roles within the team should be clearly defined. One person should be the facilitator. The facilitator introduces the session, asks questions, explains the method and checks the information as it arises from the participant. The facilitator interacts directly with the group and does not need to write anything down. This avoids interrupting the communication flow. Another team member acts as the recorder. This

person usually sits slightly back from the group and records the discussion or results as they arise. The recorder also watches the group dynamics and notes who are contributing and who are not. If necessary, the recorder can remind the facilitator to include people who are not contributing in the discussion.

Team members need to prepare their use of participatory methods and decide who is going to do and say what. It can be very confusing for participants if, for example, the team members interrupt or contradict each other when explaining a particular method.

Box 1. Non-verbal communication dos and don'ts

- Don't dress formally or in expensive clothes: this creates the impression that the facilitator is more wealthy and powerful than the participants.
- Do sit at the same level: sitting at a higher level makes the facilitator automatically look down on the participants.
- Do make proper personal introductions and begin meetings according to local customs and manners: this gives the impression that local customs are important.
- Do arrange meetings and interviews at times to suit local people: pastoralists are busy people and may only be available at certain times.
- Don't show signs of boredom or fatigue, e.g. yawning.
- Don't show signs of impatience, e.g. foot tapping or repeatedly looking at a watch.
- Don't dominate the discussion or interview and don't lecture people.
- Do accept offers of local food or drink.

Oral methods

Informal interviews

Background

Informal dialogue and interviewing is generally one of the first steps in participatory planning activities. Taking time to talk to people will set the right atmosphere. Interviewing is a specialised skill that improves with practice. Guidelines on how to use interview methods and techniques are presented below.

Objectives

- set the right atmosphere for PFS development
- collect general and specific information.

Time

Interviews should be planned to last about an hour. After an hour, participants will begin to lose interest and the quality of information will decline. Learn to spot signs of fatigue or boredom.

Steps

1. A participatory approach does not use interview questionnaires. Instead, the facilitator prepares a checklist of important points and exercises to be covered. This allows the interview to be flexible and the pastoralists to express themselves in their own words. Box 2 contains an example checklist that identifies and prioritises animal

health problems. It provides a starting point and facilitators should adapt it to local needs and personal preferences. A checklist provides overall direction and ensures no major points are missed. It also allows time for the pastoralists to deviate into areas of special interest to them and for the facilitator to investigate specific themes raised by the participants. These diversions are often a gold mine of information that would have been missed in a rigorously structured interview.

Box 2. Checklist used in semi-structured interviews

1. Introduce the facilitator.
2. Identify the pastoralists.
3. Describe pastoralists' livelihood system.
4. List livestock species kept and their roles.
5. Discuss husbandry systems.
6. Map grazing locations and migration routes.
7. Identify and describe problems in one livestock species enterprise (e.g. sheep or cattle).
8. Rank problems.
9. Rank diseases (e.g. using a ranking method).
10. Direct observations (e.g. transect walks etc.).

2. The site and time of interviews has a large effect on the amount of information gathered. Unfortunately, the facilitator does not always have control over this aspect, but every effort should be made to arrange a convenient time and a quiet and comfortable location.

3. The first step in any interview is to perform proper introductions, which should be accurate and should not bias the response of the participants. The facilitator must also explain the purpose of the interview, taking care not to put too much emphasis on one particular subject, or the participants' replies will also emphasise that topic. The facilitator must be careful not to raise community expectations concerning future projects or services. Normally, the facilitator records the names and community memberships of the participants.

4. It is essential to the reliability of the information collected that questions are open-ended and do not restrict or direct the participant to a particular response or type of response. Open questions begin with "who", "how", "what", "where", "when" or "why". Avoid closed questions that can be answered with a simple "yes" or "no". A good question does not make assumptions. In an animal health appraisal it is often best to begin with a question such as: "What animal health problems are you experiencing?" Questions should be ordered so that the interview progresses from general themes to specifics. As far as possible, the participant should determine the direction of the interview. As a result, the majority of questions cannot be pre-determined.

   During interviews, it is very important to observe as well as listen. Are the participants relaxed and confident? Is there eye contact? What types of body language are being expressed? Are some topics sensitive? Is everyone participating? Who is not participating? Are some people comfortable and others not? What are the differences in appearance between those participating and those who are not? Is gender, wealth or age the issue (don't ask, observe)? Follow-up interviews can be arranged, with 'non-participating' participants in different groupings where they may feel more comfortable.

5. 'Probing' is asking detailed questions on a specific subject that has been raised by the pastoralists and can help gather more detailed information on a particular subject. Probing can also verify the internal consistency of information: an important means of data quality control. Examples of probing questions are: Can you explain that in a more detail? What do you mean by…?

Group discussion

A group discussion aims to collect general information, clarify details or gather opinions from a small group of selected people who represent different viewpoints. A group of 4–8 people is ideal. The group is presented with a broad question, for example: "What impact do you think the PESA has on members' practices?" Let the group discuss this question for the time period agreed upon. The facilitator observes and helps the group to maintain the focus of the discussion. After the discussion has ended, the facilitator notes down the results.

Group discussions; a mean for sharing of information and viewpoints

Drama and role play

Drama and role play can explore a topic in a relaxed, creative and expressive way. For planning purposes, a drama can be used to ask PFS participants to play how they want their lives to be after PFS. For M&E purposes, participants are asked to respond to a question by expressing their opinions or knowledge in the drama. Role plays can also be used to clarify a specific learning topic.

Stories of significant change

Stories of significant change of an individual or group identifies significant/critical changes – positive and negative – relating to a key objective. Recording these stories highlights a project's impact and people's perception of it. Stories document a sequence of events over time related to a person, location, household or organisation and give insight into the history of a community or the impact of the PFS, e.g. how people deal with change and why change occurs in specific ways. Stories also help the project team to learn about people's experiences and expectations and can help highlight obstacles to future plans.

Transect walk

The transect walk helps in mapping, data collection and monitoring. The facilitator and group members take a structured walk through a selected area or landscape, observing inhabitants activities and environmental characteristics. The facilitator needs to identify indicators for observation before the walk and should record the findings in a diagram (usually a cross-sectional view of the route clearly indicating the key observations).

Visual methods

Participatory mapping

Background

Mapping is a popular participatory method and a useful tool to locate biophysical, economic and social indicators (e.g. problems, resources, innovations) that have a geographic distribution. Examples of maps include livestock mobility and grazing maps, natural resource maps, social maps, etc. Mapping is a useful method as both literate and non-literate people can contribute, and when large maps are constructed on the ground many people can be involved and contribute ideas. People will correct each other, providing accurate information. Maps can represent complex information that would be difficult to describe using text alone and can act as a focus for discussion.

Objectives

- provide a visual representation of information of how people perceive any focus issue
- facilitate recording, analysing and feedback.

Materials

Locally available materials (sticks, stones, leaves, etc.) and flip charts, marker pens and notebooks.

Time

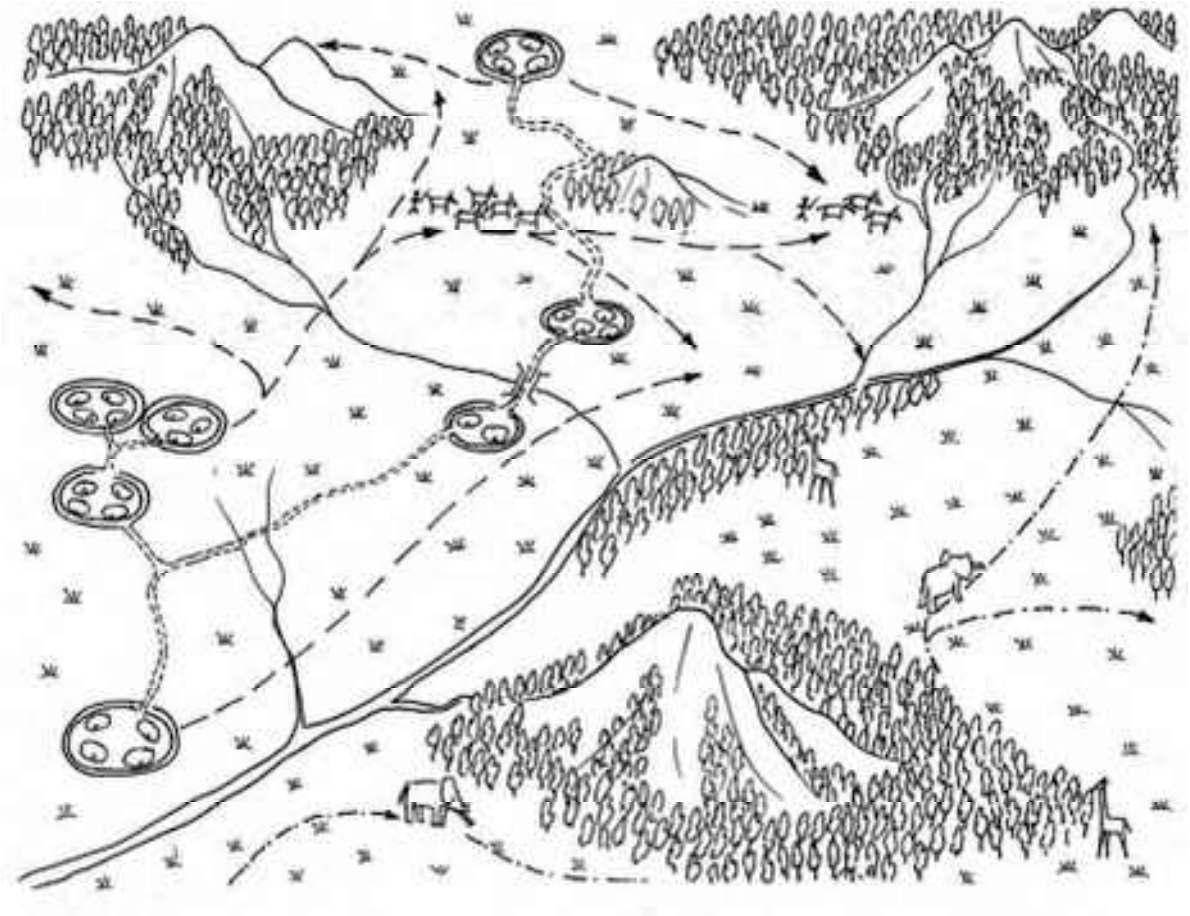
One hour.

Steps

1. Mapping works best with a group of 5–15 persons. Find a clean piece of open ground. Explain that the map should be constructed on the ground using any materials that are to hand (e.g. sticks can be used to show boundaries) and that you would like the group to produce a picture showing features such as:
    - geographical boundaries; in pastoral areas, these should include the furthest extent of grazing
    - main human settlements
    - roads and main footpaths
    - rivers, wells and other water sources
    - grazing areas, restricted areas, forests and other natural resources
    - services e.g. veterinary clinics, drug shop or agrovet shops
    - ethnic groups

- seasonal movements of livestock by livestock type
- seasonal and spatial contacts with herds from other communities or wildlife
- areas of 'high risk' (e.g. tsetse flies or ticks).

2. When you are confident that the group understands the task they are being asked to perform, leave the group alone and do not interfere with the construction of the map.
3. After 30 minutes, check on their progress and give them more time if they need it.
4. When the group is happy with the map, ask them to explain the key features. The process of 'interviewing' the map enables the facilitator to learn more about the map and pursue interesting features.
5. Add some kind of scale to the map. This can be done by asking how many hours it takes to walk from a main settlement to one of the boundaries. A north–south orientation can also be added.
6. When maps are used to show seasonal variations in livestock movements and locations of tick or tsetse-infested areas, the information can be cross-checked using seasonal calendars.



An example of the kind of map that participants may come up with

Seasonal calendars

Background

Seasonal calendars are a useful method for understanding seasonal variations in disease occurrence, weather, labour needs, cash, fodder availability, etc. They help participants to visualise, understand and discuss when and why problems occur. The following exercise looks at seasonality of diseases and would normally be used during a PE investigation.

Objectives

- enhance understanding of seasonal variations and help plan to prevent and control problems
- guide decision-making (e.g. to come up with a disease control strategy).

Materials

Locally available materials (sticks, stones, leaves, etc.), about 30 stones, markers, flip charts, pens and notebooks.

Time

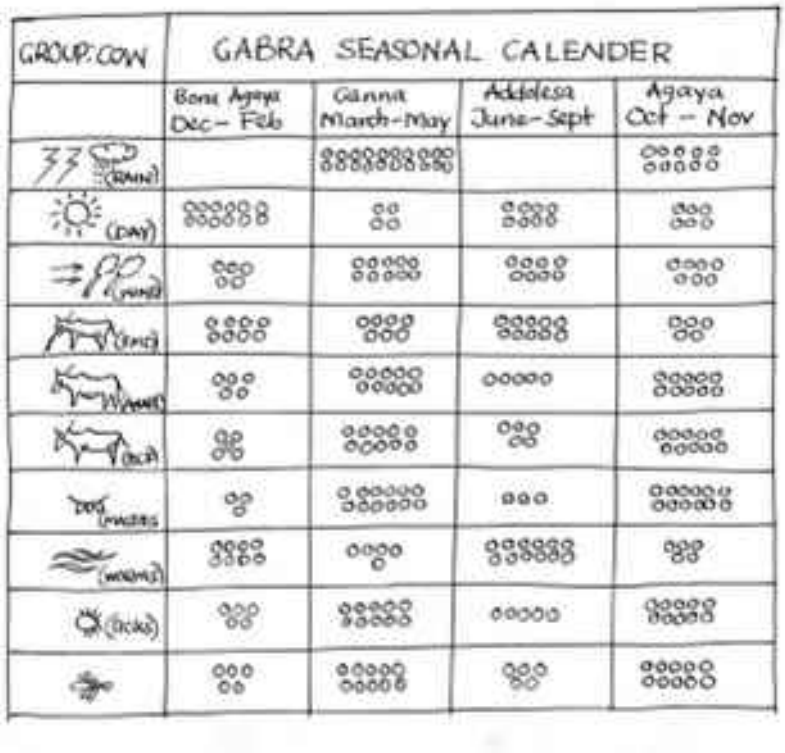
One hour.

Steps

1. Construct a one-year time line. Explain to the participants that you are interested in learning about how a specific topic (e.g. a disease) changes throughout the year. Draw a horizontal line on the ground to represent a year. The line should be at least one metre in length. Divide the line according to local definitions of month or season. Label each month or season using either a piece of card with the local name or an everyday object to represent each month or season. Carefully explain the meaning of the cards or objects to the participants and ask them questions to check that they understand.
2. It is useful to choose rainfall as the first event to be illustrated on the calendar. This is because rainfall is often the main determinant of livestock movements, animal interactions and populations of disease vectors such as biting flies, snails, etc. Give the participants a pile of about 30 stones and ask them to divide the stones into seasons (or months) to show the typical pattern of rainfall throughout the year. The greater the rainfall in a particular season, the greater the number of stones assigned to that season. Similarly, a season with no rain should have no stones. A similar exercise can be done for temperature, wind, frost, etc. Record the final scores and leave the stones in place.
3. Show seasonal patterns in the topic under discussion (e.g. diseases and vectors) by asking the participants to illustrate on the diagram the occurrence of the events under investigation (e.g. livestock diseases identified previously during a livestock disease scoring or ranking exercise). Each disease or vector should be represented by written labels, pictures or actual specimens. It is often useful to pre-prepare the pictures on pieces of card. Illiterate participants, although very knowledgeable on animal health matters, can become isolated from the method if written labels are used. Take each disease or vector in turn, and ask the participants to show the seasonal variation using piles of stones. Use the same number of stones for each item.

4. Interviewing the diagram involves asking the participants to explain interesting aspects of the diagram, i.e. the positioning and relative scores of the various diseases and parasites. Use probing questions (e.g. "Why?", "How?", etc.) to follow up interesting leads. Examples of questions include: "Why do you see this disease mainly in the wet season?", "You've shown me that this disease (give local name) is seen mainly in the wet season – when is the best time to prevent this disease?" and "Why do you see this disease in the dry season?"

This stage is crucial. It helps to cross-check the information presented in the diagram and enables the facilitator to explore the reasoning behind the scores. It also ensures local analysis of the information. The facilitator should take detailed notes of the questions and discussion – these notes are part of the 'results' of the seasonal calendar and should be presented in any reports arising from the use of the method. Give a copy of the result to the participants for their records.



Example of a seasonal calendar

Using drawings and pictures

Background

Many participatory methods can be conducted using no written words. An important aspect of participatory methods is their capacity to reach illiterate people and involve them in the description and analysis of local problems. With methods requiring people to write or understand text, illiterate people can easily become isolated and may not contribute because they are embarrassed, or because literate people dominate the discussion. Drawings and pictures, especially when made or taken by the PFS participants themselves, are easily understood and thus facilitate learning.

Objectives

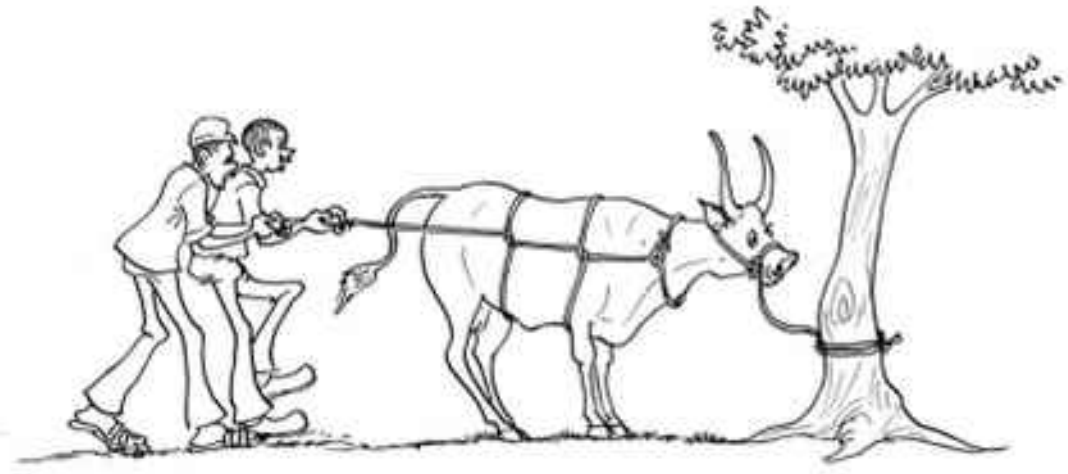
- enhance involvement of illiterate PFS participants and facilitate discussion and learning
- depict impact and track changes through a sequence of images
- record, analyse data and share findings.

Materials

If taking photographs: a disposable or digital camera. When using drawings, make sure they are clear, and provide pens/markers in different colours and paper.

Steps

1. By picturing the same spot at regular intervals, changes can be identified. This will provoke discussion about the causes of the changes, whether they are a sufficient explanation and what other actions might be needed, etc. It is also useful for auto-evaluation when actors take pictures of their own performances.
2. When using pictures, it is always necessary to check that the participants understand the meaning of the pictures. The facilitators need to show each picture to the group and explain the meaning, e.g. this is a picture of a bull that has died suddenly or this picture shows a cow with wounds on its feet.
3. When discussing causes or sources of diseases associated with parasites, actual specimens of the insects are better than pictures and ensure that the facilitator and the participants are talking about the same thing. Pictures can be misleading when there is no scale to show the actual size.



Example of clear drawing

Venn/network diagrams

Venn diagrams show the relationships between groups, institutions and individuals. The technique uses circles of different sizes to indicate the significance of the actor, while the position of the circle marks the closeness of relationship. Network diagrams show changes in the type and degree of contact between people and services.

Historical trends and time lines

These help to obtain a historical understanding of sequential changes relating to particular points of interest. From an M&E perspective, this could focus on specific indicators, be used as a trigger in discussions to assess if certain changes can be attributed to project activities, and list changes in context that help explain effects of the project. Participants are asked to draw a line and to define the start and end (i.e. dates, major events, seasons, etc.). They then draw meaningful events in the relevant place along the line, inviting group discussion.

Ranking and scoring methods

Matrix scoring

Background

This method is used for understanding local characterisation of (livestock) problems, ideas, diseases, etc. It facilitates communication, for example to establish whether a facilitator and a pastoralist are talking about the same disease.

Objective

- establish the relationship between certain criteria and the items evaluated. For example, what do pastoralists understand about the relationship between clinical signs and different diseases?

Materials

About 30 stones, locally available materials such as sticks, leaves, stones, etc., cards, markers and flip charts. Pictures and drawings can facilitate the exercise.

Time

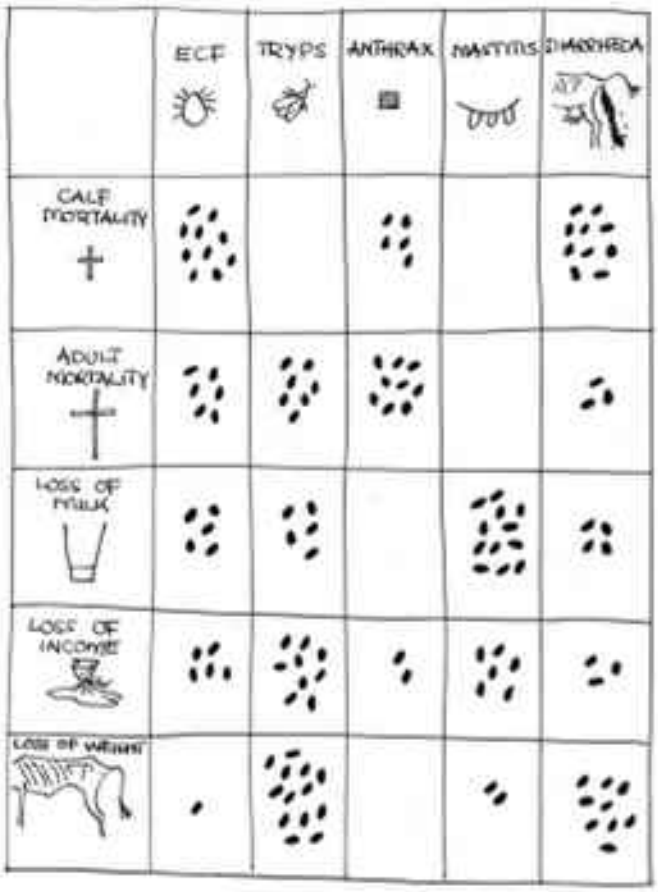
One hour.

Steps

1. If the topic of discussion is animal diseases, write the disease names on cards or use different objects to represent them. Place the cards/objects in a row on the ground. Once again, check that the participants understand the meaning of the cards or objects. Then ask the participants to mention one indicator i.e. symptom of a disease. Write this indicator on a piece of card or use a picture to represent the indicator.
2. Score the animal diseases verses indicators. Ask the participants to distribute the stones according to the strength of the relationship between this indicator and each of the diseases in the row. Explain that all stones must be used.
3. After the stones have been allocated to each item, check the scoring with the participants and allow them to alter the distribution of stones if they wish. Record the final number of stones allocated to each disease.
4. Repeat steps 1–3 with the same diseases, placing a new indicator below the first. (It is useful to prepare all the pictures for the indicators in advance. Draw the pictures on strong pieces of card that will not become damaged in the field. Keep going until all the indicators are scored. You should have the beginnings of a matrix on

the ground. The illustration below shows how the matrix might appear. At the top of the illustration the various objects can be seen representing the diseases. Along the left side are various picture cards depicting the indicators. The stones will show the associations between the diseases and the indicators.

5. The facilitator should interview the matrix on the ground, asking questions and developing discussion among the participants. By physically pointing to particular scores, the facilitator can summarise all the indicators associated with a particular disease. Open and probing questions can be used to explore the knowledge of the pastoralists. This is the most difficult stage of the method. Facilitators often forget to ask additional questions about the matrix. Copy the matrix onto flip chart paper.



Example of matrix scoring

Proportional piling

Background

Proportional piling helps to compare the importance of one element versus another. It can be used to understand the importance given to different problems, to visualise resource allocation or, as in PE, to evaluate herd age-structures, disease incidence and mortality.

In a PFS, proportional piling is a useful tool for PE. It is useful for production systems with large numbers of animals where it is difficult to assess herd size. It also avoids having to

ask sensitive questions like "How many cattle do you own?" The method involves comparing different diseases and therefore avoids exaggeration of a particular disease when assessing incidence and mortality.

Objectives

- understand the importance given by PFS participants to different problems
- visualise resource allocation.

Time

- Twenty minutes per person interviewed.

Materials

Notebook, pen, 100 stones, paper, markers.

Steps

1. Proportional piling is done with one pastoralist at a time. It is important to interview a large number of pastoralists within the same area to achieve meaningful results.
2. Ask the pastoralist to define the different animal categories in a herd, e.g. suckling calves, weaners, lactating cows, bulls, oxen, etc.
3. For each animal category:
    - give 100 stones to the pastoralist and tell him/her that they represent all of his/her calves during last year. The pastoralist does not know the number of stones
    - ask the pastoralist to divide his/her herd of calves (all stones) into calves that got sick and those that remained healthy
    - ask the pastoralist to mention the main diseases experienced during the last year
    - take the pile of stones representing the sick calves and ask the pastoralist to distribute them against the diseases mentioned
    - for each disease, as k the pastoralist to divide the pile into animals that recovered and those that died.
4. Since we started with 100 stones, the number of stones under each disease represents the percentage of animals that were sick during the last year. This is the incidence of that disease. The number of stones representing the percentage of animals that died from each disease is the specific mortality rate.
5. Repeat the process for all animals or animal categories.

5. PFS PREPARATION

In section 3, it was mentioned that the preparation for establishing a PFS started with a pre-condition survey and the TOF. These two activities are normally performed by Master Trainers or PFS experts and thus are not part of facilitators' responsibilities and activities. Below follows a brief overview of the various steps in the preparation i.e. ground working and the establishment of an PFS.

General ground working

Basic area information is collected using participatory tools to better understand the local livelihood and production systems and enable future M&E. The following activities should begin at least a couple of month ahead of the planned start of the PFS. The steps to follow in ground working are:

a) The initial survey

b) The awareness-raising meeting – Introducing the PFS

c) Identification of participants

d) Identification of the PFS focal activity

e) Identification of the learning site.

The initial survey

Background

Initial contact with the community needs to be made to determine whether the area has suitable potential for a PFS. In most cases, the first step is to talk to the community leaders or elders, since they are the entry point to the community. Sometimes the community and the facilitator already know each other, or the community has requested the PFS. The first contact with the community leaders is important since you want them to give you the green light and you want to get a feel of the attitudes to expect. Once you have the approval of the leaders you can plan together for an awareness-raising meeting where the community and the facilitator can express their needs and identify common ground.

Objectives

- get the advice and approval of the community opinion leaders on the possibility of starting an PFS
- identify opportunities for collaboration between the facilitator and the community
- plan a date for an awareness-raising meeting with the whole community.

Materials

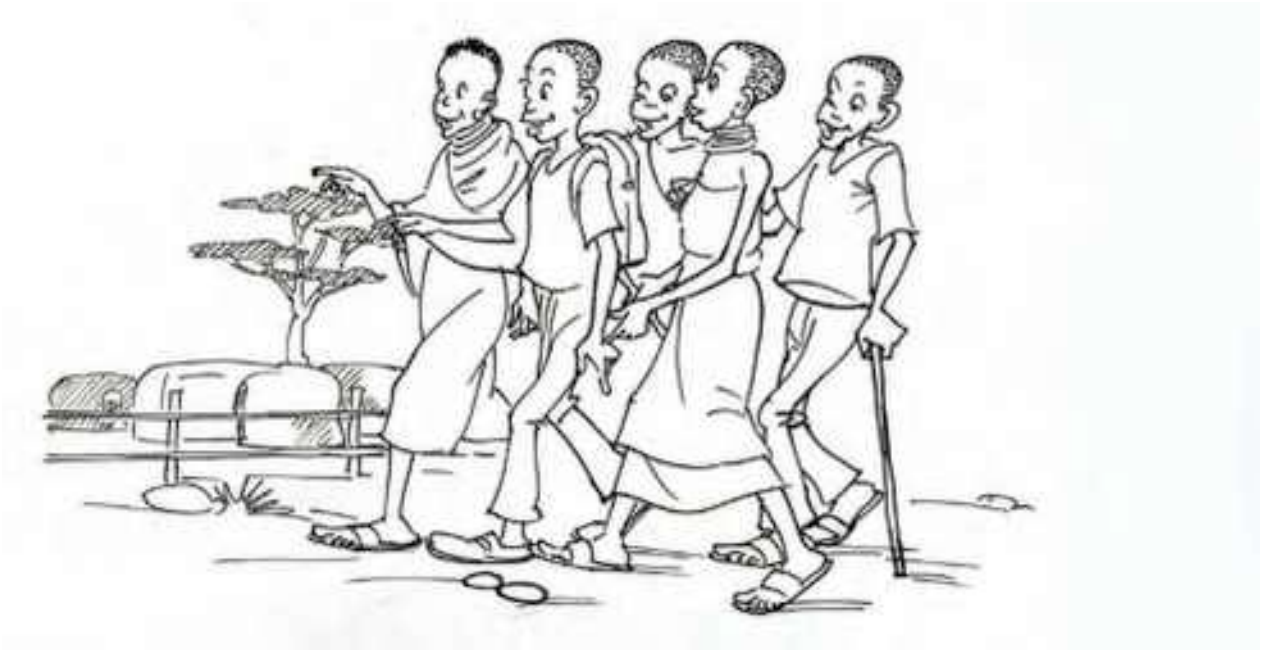
Pen and notebook.

Time

Approximately three days in a new area.

Steps

1. If you are new in the area, make an appointment with the local leaders, elders or chiefs.
2. Visit the leaders at their homestead or office or attend the local development committee meetings.
3. Initiate a conversation on the activities going on in the community, the successes and problems and, if you think the conditions are suited for an PFS, explain your intentions.
4. Level expectations by stressing that PFS is a training methodology and do not provide materials, gifts or presents, and that the PFS aims to work with willing and committed community members.
5. Once you have the green light – and only when you are confident that there is a potential for an PFS – you can plan the date and site for the sensitisation meeting.
6. If you do not know the area, take a walk around the community to become aware of its environmental and cultural characteristics (do a transect walk, see page 31).
7. Prepare for the awareness-raising meeting (see below).



Familiarising yourself with an area and talking to community leaders are essential to determining whether a community is suitable for PFS. Here a facilitator and community elders go on a transect walk together

Introducing the concept of PFS and discovery-based learning

Background

Where PFS are new and/or not all community members are aware of the principles, an initial meeting might be needed to introduce the concept. To explain the PFS well, so that participants know what to expect, it is important that this first contact makes a sound

and clear impression. Show the community what they can expect when participating – give them a little PFS experience!

Objectives

- introduce the PFS methodology, with its specific characteristics, to community members
- provide those community members who are interested in participating in the PFS with a clear and real view of the PFS approach so they know what to expect.

Materials

Pieces of paper/flip charts, pens/markers, one or more tick specimens (or any other insect that is common) and a display board.

Time

Around 45 minutes.

Steps

1. The facilitator initiates the activity by asking the participants to draw a tick. Everybody knows what a tick looks like, so it should not be difficult. This exercise can be carried out by each person, by sub-groups or by a few volunteers (it is good to have as many people drawing as possible).
2. The facilitator collects the drawings and displays them somewhere where all the participants present can clearly see them.
3. The facilitator asks how many legs the ticks in the drawings have. The participants look, count and share what they see.
4. If the number of legs differs from drawing to drawing, the facilitator mentions that people have different ideas and asks why that is.
5. The facilitator brings out a tick (or more than one) and shows it to the participants, asking them to have look and count how many legs the tick has.
6. The facilitator explains that by observing and discussing the tick, we are able to determine how many legs it has (something we previously did not know or were not paying attention to). We did not need to bring in an expert. Together we found out, simply by paying attention, observing and discussing together – that this is what the PFS is all about.
7. The facilitator then starts explaining the concepts, principles and activities of an PFS.

Identification of PFS participants

Background

An PFS takes place in the community, so it is important to target pastoralists who are involved in making decisions related to the focal activity, if the community is to benefit from the knowledge and skills gained during an PFS. When selecting participants, it is easy to choose the loud, rich and educated, because they are visible in group meetings. The challenge is to reach the people who will benefit most from their participation.

It is also important to understand gender relations and cultural practices in respect to the focal activity. For example, in most pastoral communities women rarely participate in educational activities. However, they are often responsible for looking after the animals and undertaking the daily routines that maintain the health of livestock. To select the most appropriate PFS participant within a family (husband, wife, son, etc.) a PFS participant analysis needs to be performed, keeping in mind the selection criteria presented Section 3, page 18.

Objectives

- identify and select about 30 participants who will find the PFS relevant for their development
- mobilise PFS participants who are committed to investing in learning and pastoral development
- create a group with common interests (these are the people that have a major interest in the focal activity).

Materials

Flip chart, paper, markers in two different colours, tape, 100 stones.

Time

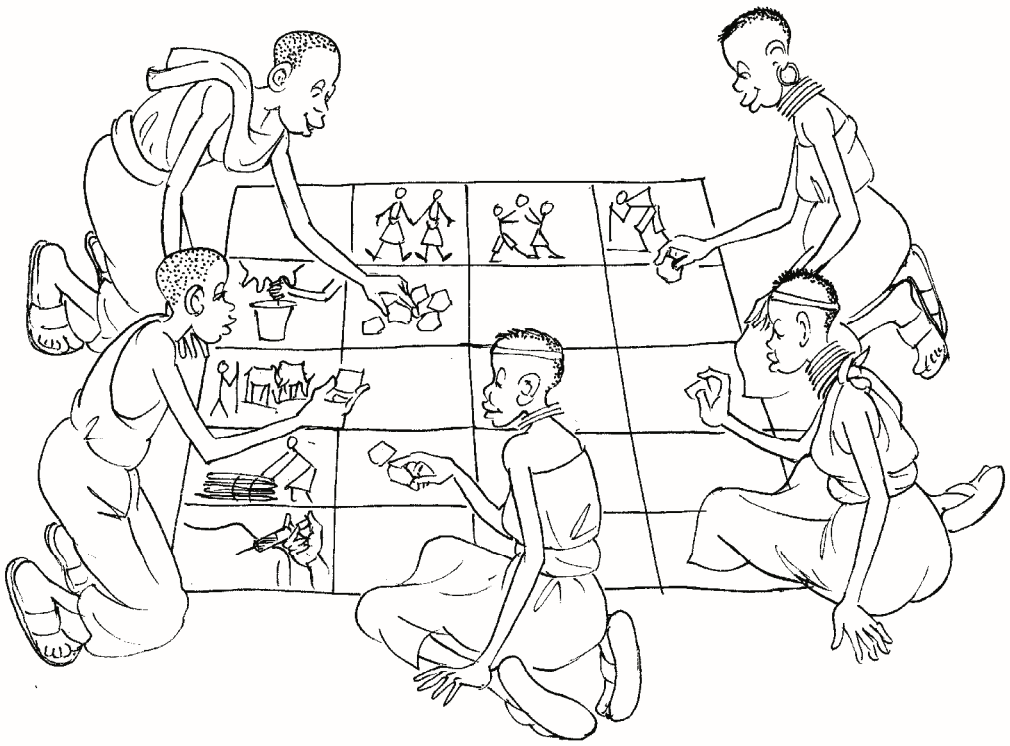
Three hours.

Steps

1. In a plenary session with interested participants, the facilitator asks the group what the activities (tasks) are in the identified focal activity (e.g. cattle production).
2. Write a detailed list of activities on a flip chart. In livestock production this can be herding, milking, selecting breeding stock, fodder collection, selling of milk, etc.
3. The facilitator asks people to suggest how the society is differentiated (by roles/status/age). For example, young women, young men, old women, old men, community elders, etc.
4. Make sure that all the participants understand the classifications and then form groups by the classes identified. Thus the participants have to stand with the group they think they belong to.
5. The facilitator and the group use the list of activities and the different classified groups to form a matrix, marked out with the tape (see illustration overleaf).
6. Each group receives the same number of stones and has to discuss which activity they are responsible for by putting stones in the matrix. If they think they are very responsible for a specific activity they put down three stones; two stones when

they share the responsibility of the activity; one stone when they help out and no stones when they are not involved in that activity.

7. When the groups have completed the exercise, the matrix is analysed by all in a plenary session to see who is responsible for what.
8. The facilitator can use the following questions to enhance the discussion: "For this activity (e.g. herding), which group is the most responsible?", "Which groups work together (share specific responsibilities)?" and "Which group(s) is/are the most important in cattle production?"



9. Following the discussion and looking at the results of the matrix, the facilitator asks the group to choose which group(s) is/are important for livestock production, then asks: "Is this group the most suitable to participate in a PFS on cattle?" In addition, they discuss what the profile of a PFS participant looks like (i.e. responsible for animals, committed to participate throughout the PFS, share information, etc.)
10. Discuss who (specific people out of the whole group) should be the direct participants of the PFS (e.g. let each person write a name on a piece of paper of someone they think is qualified as a PFS participant). Explain that the entire family is an indirect member of PFS and that the direct PFS participants have the duty to pass on what they learn to other family members and neighbours.
11. Make a first list of the people that decide to participate in the PFS.

This is not the final meeting for the identification of participants. It is more for sensitising community members to who should be participating.

Identification of the PFS focal activity

Background

Past experience shows that is important to dedicate sufficient time to identify the learning focus of the PFS. Some pastoralists might have previously been involved in activities that were of little interest to or imposed on them and from which they benefited little. The selection of the PFS focal activity depends on participants' needs and interests. For a cattle-focused PFS, the communities (or participants') main activity should be cattle production. The problems they are facing should be relevant so they feel a need to look for solutions. For this reason, during the initial survey (page 39) it is important for the facilitator to determine the community's main activities and livelihood sources (i.e. of the food and income) and whether they face significant problems. The facilitator also has to decide if the focal activity (enterprise) is suitable in the area and has potential for development.

Objectives

- ensure the PFS is targeting the right activity and problems
- ensure there is potential to solve these problems
- ensure both the PFS group and the facilitator have an opportunity to discuss and agree upon the focal activity (enterprise) and problems identified.

Materials

Flip chart, markers (different sizes and colours), cards, manila papers, pens, notebooks.

Time

Three hours.

Steps

1. Search for Background information to gain an understanding of the area, its conditions and problems. Local ministries and community organisations normally have reports, maps and other useful documents.
2. Verify the information with visits to the community. During these visits the following participatory methods can be applied:
    - A transect walk is a structured walk through a selected area to observe the main livelihood and environmental characteristics.
    - Mapping can be very useful during this stage of the PFS to identify the focal activities (enterprises) of the community. Maps can represent complex information and act as a focus for discussion and planning (Section 4, page 31).
    - A seasonal calendar is a useful method for identifying pastoralists' associations between diseases, environmental factors and interactions with animals, vectors and human beings (Section 4, page 33).
    - Informal interviews are used to gain face-to-face information from individual or a small group. To identify a focal activity, ask the following types of questions: "Is it a valued economic activity?", "Is it culturally accepted?", "Is it controversial?", "Is it suitable in the area?", "Does the

focal activity (enterprise) have problems?", "Are there solutions for these problems?", "Is there a potential for development in that community?" and "Are the potential solutions self-sustaining?" (Section 4, page 28).

Identification of the host herd and learning site

Background

The PFS is a 'school without walls' and the landscape and/or animal/herd are the main learning tools. Pastoralists learn directly from what they see, collect and experience and not from a text book, pictures or other extension materials. The advantages of learning in the field are that the materials are completely relevant to local conditions and the problems are recognised and owned by the pastoralists. However, the learning site needs to meet certain criteria to provide suitable conditions.

Objective

- select a learning site and host herd that has the required conditions to facilitate learning.

Materials

Flip charts, markers, coloured paper and map of the community/area.

Time

One hour.

Steps

1. Use the map of the area made during the participatory planning. If this has not yet been made, divide the group in two and ask each group to make a drawing of the community/area indicating participant's homestead (*manyattas* and *kraals*), settlement, animal herds, forests, grazing areas, boreholes, rivers, roads, etc.
2. Discuss the rules governing the use of the resources mapped.
3. Place the map(s) where everyone can see it/them.
4. Identify with the group the study objects required for learning, e.g. herd of animals, access to land resources, a shady and wind protected meeting place, etc.
5. Follow the criteria for selection of learning site presented in Section 3, page 45.
6. Use the maps to discuss the selection criteria and select the appropriate sites. Mark the location of the sites/animals and herds selected on one of the maps as this can be used as reference and demonstration material. Ranking methods can be used if PFS participants have conflicting opinions. The different sites chosen need to be directly linked to the learning programme plan by answering the question: "Which PFS activity will take place where and when?" "Whose herd or animals will the PFS group have access to for study activities? "Will the group be allowed access to the required resources?"

A typical PFS learning site

Establishing the PFS

A significant part of the PFS preparation phase, after having completed ground working activities, is the establishment of the PFS group. Guidelines are provided to implement the following activities required to establish a PFS:

- Participatory introduction of participants
- Levelling of expectations
- Host team
- Participatory planning of PFS activities
    1. Establishing a PFS group
    2. Problem analysis and ranking
    3. Identifying potential solutions
    4. Developing the learning programme
    5. Developing a detailed budget
    6. Participatory monitoring and evaluation plan

Participatory introduction of participants

Background

When the ambiance is good, people feel comfortable and give their best. The first step in establishing a good learning environment is to ensure the PFS participants know and feel comfortable with each other. Even when the participants already know each other it is useful to do this exercise to encourage participation from the beginning. It breaks the ice. Two methods for participant introduction are presented below.

Objectives

- encourage the participants to get to know each other and learn a little about each others' personalities
- break down any barriers between the participants and the facilitator (to help participants relax)
- discover what the participants want to achieve from the PFS.

Option 1: Pair-wise interviewing

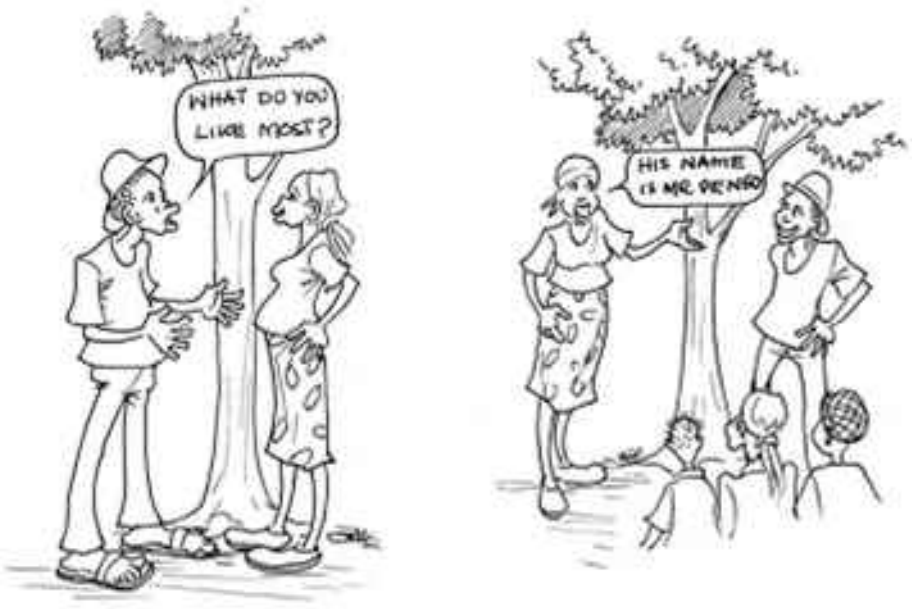
The key to this exercise is that participants do not introduce themselves. In this way they do not become nervous while waiting for their turn. The exercise is neutral to seniority as participants sitting next to each other do the interview together.

Time

Approximately 45 minutes (five minutes for explaining the exercise; five minutes for the interview and two minutes each per presentation. The total amount of time depends on the number of participants).

Steps

1. Split the participants into pairs (e.g. by combining people that sit next to each other). Ask each participant to interview their partner by focusing on questions such as: "What is your name?", "Can you share your experiences as a pastoralist?", "What do you do?", "What is your interaction with the CAHWs or other advisors?" and "Can you name two likes and dislikes?"
2. After five minutes of interviewing each other, participants then report in a plenary session about their partner, summarising the main information in two minutes.



It is important that participants get to know each other so that they feel comfortable and can contribute their best to the PFS

Option 2: Spider web introduction

Materials

A ball of sisal twine.

Time

Twenty minutes.

Steps

1. All the participants form a circle.
2. One participant holds the ball of twine and says his/her name. The participant then holds the end of the twine in his/her hand and throws the ball to any another participant.
3. The participant receiving the ball says his/her name and throws the ball to another participant, keeping hold of the twine. This is repeated until all participants have said their names and a spider web has been formed.
4. The facilitator says that the spider web connects all the participants forming an PFS group.
5. In order to practice and remember the names of each participant, the spider web is unravelled. The last person to receive the ball returns it to the person it came from, saying the name of the person he/she is returning the ball to. The person that receives the ball says the name of the participant he/she got the ball from, rolls up the twine and throws the ball to the participant he/she is attached to.
6. When participants are no longer connected, they can leave the circle.

Levelling of expectations

Background

To avoid disappointment and drop-out among PFS participants, it is important that the facilitator and the group are aware of what everybody expects of the PFS. In this way, at a very early stage, unrealistic expectations can be recognised and aligned before the participants commit themselves. Only a well-informed person can fully commit themselves. In addition, being aware of expectations helps the group to plan the PFS and, later on, to monitor whether they are still focused on the initial objectives.

Objectives

- discover what participants want to get out of the PFS learning process
- become aware of unrealistic expectations
- help the facilitator and group plan the programme of the PFS
- help the facilitator and the participants monitor and evaluate the PFS.

Materials

None

Time

One hour.

Steps

1. Do the levelling of expectations after the participant introduction with the whole group or in sub-groups.
2. The facilitator presents the following questions: "Why have you joined the PFS?", "What do you hope to gain?", "What do you expect from me (the facilitator)?" and "What do you think I (the facilitator) expect from you?"
3. The facilitator divides the group into sub-groups each with a maximum of five participants who then discuss the questions among themselves.
4. The facilitator invites a representative of each sub-group to present their responses to the whole group.
5. The facilitator and the group summaries the expectations.
6. The facilitator discusses and responds to each expectation and asks the group whether they think the expectation is realistic and achievable within the PFS cycle.
7. The facilitator has to make sure that unrealistic expectations are levelled out and realistic expectations become part of the PFS programme.

It is also possible to incorporate the questions for the levelling of expectations with the pair-wise introduction exercise explained in the previous section.

To ensure commitment to the PFS it is important to determine participants' expectations and resolve any unrealistic ones at the beginning

The host team

Background

The host team is an important functional element in the running of the PFS and has responsibility for:

- assisting the facilitator
- preparing the daily programme and schedule of activities
- arranging and preparing the training venue
- leading energisers/group dynamics
- introducing visitors (e.g. a resource person) to the PFS
- checking the weekly attendance of the PFS participants
- serving as time-keepers
- distributing reading and other material
- acting as a recorder and reporter of discussions
- upon request, assisting the facilitator in other functions.

Objectives

- enhance responsibilities, participation and PFS ownership of the participants
- support the PFS facilitator in the set up and facilitation of the PFS activities
- enhance pastoralists' organisational and communication (presentation) skills.

Materials

Notebooks, pens/pencils, flip charts, marker pens.

Time

Thirty minutes (to form the host team).

Steps

1. The facilitator introduces the concept of the host team and explains its functions.
2. The facilitator splits the PFS group into sub-groups. The following exercise can be used: The facilitator assigns the numbers one to five to the participants and those who have the same number form a group (see also page 136; the goats and the lion exercise). Each of the five sub-groups selects a leader and a secretary, decides on the sub-group's name and develops a sub-group slogan.
3. Each sub-group presents their members, name and slogan in the plenary to the other PFS members.
4. Each sub-group will be host team at least once. A schedule is made for each sub-group to be aware of which dates they are responsible for as the host team.

PFS group identity and norms

Background

To establish the PFS group it is recommended that the group create an identity, organised structure and the resources to work effectively. Pastoralists effectively united in a group interact, share experiences and stimulate learning. However, a disorganised group is a burden to all and can even make the PFS dissolve.

Time

A full PFS session.

Steps

1. To establish the PFS group several activities need to be undertaken:
2. The group needs to choose a name and slogan.
3. The group needs to elect officials e.g. a chairperson, secretary, treasurer and members to form a board. The roles and responsibilities of each person in the board should be defined and be clear to all.
4. The PFS needs to register officially with the respective ministry.
5. The group needs to open a bank account in the name of the PFS to be able to receive potential funding. To open a bank account the group needs to make a deposit, which needs to come out of individual members' contributions. Money withdrawals normally need to be supported by a letter explaining the purpose of the withdrawal, signed by the three officials and some of the board members.

6. The group needs to plan how to source additional funds, for example by agreeing on personal contributions, commercial production, looking for donors, etc.
7. Having done this, the group together with the facilitator sets ground rules (learning norms) or develops a constitution. The PFS members will set the learning norms to ensure a suitable learning environment and avoid interruptions and frustrations. Interruptions such as people coming in late or under the influence of alcohol, using mobile phones, not turning up, having a domineering attitude, not participating, etc. hamper the learning process and should be controlled. Ask the group what they think the learning norms should be. The facilitator then guides the group to produce more norms and suggestions on what should be done in case of:
    - latecomers, e.g. member has to pay a fine, member has to dance, etc.
    - absenteeism, e.g. group can decide on how many sessions a participant needs to attend to be able to graduate (e.g. 75%)
    - dominant people or lack of order in the group, e.g. use a token – only the person holding the token (such as a stick) is allowed to speak; when someone wishes to speak they must raise their hand and be given the stick. Alternatively, use a slogan to get the group's attention
    - people not contributing to group work, e.g. should pay for a day's labour
    - members who do not respect other people's opinions, e.g. should receive a reprimand.

The learning norms should be pinned up on the wall for everybody to see throughout the PFS sessions.

A PFS group should establish some ground rules (learning norms) so that it can operate effectively

Participatory planning – Developing a PFS study plan

Background

Once the PFS participants have been selected, their expectations levelled and they have a clear understanding of the objectives of the PFS approach, the group needs to develop its own group study plan.

Objectives

- be focused! The study plan should set out a clear path identifying what the PFS will achieve and how you are going to achieve it
- create feelings of ownership among the PFS group and thus enhance commitment and sustainability
- pool resources, synchronise efforts and avoid duplication
- increase accountability and transparency and thus permit monitoring and evaluation of the performances of the PFS
- train pastoralists in how to organise and manage themselves better.

Time

Not more that two weeks (including two full PFS sessions). Official registration can take longer.

Steps

To develop a study plan the group needs to define focal livestock species; analyse problems and opportunities; develop the learning curriculum; develop a budget and define a common vision. Examples for how to go about these activities are presented below.

1. Identifying the focal livestock species

Background

Pastoralists usually keep several types of animals. For the sake of establishing priorities for the PFS learning activities it is important to discuss and agree on which livestock species that should become the main entry point for learning exercises and trials in the PFS.

Objectives

- to identify what benefits the community gets from each livestock species
- to agree on which species of livestock the community views as its most important asset.

Materials

Three sets of 100 stones of a similar size, paper and marker pens

Time

Two hours

Steps

1. The facilitator asks the whole group to list the livestock species that they keep, and make a drawing of each.
2. The group then identifies benefits they obtain from these livestock species, and make a drawing representing each benefit.
3. The group is divided into three subgroups: older men, young men and women.
4. Each subgroup constructs a matrix on the ground with the drawings of species listed along one axis and the drawings of benefits along the other.
5. Each group is given 100 stones and asked to divide them up amongst the species; the livestock species from which they derive the greatest benefit is allocated the most stones, the one from which they derive the least benefit is allocated the least number of stones.
6. Next for each species, distribute the stones allocated to that species between the different types of benefit: the greater the benefit, the more stones are allocated.
7. The facilitator probes by asking questions: are the groups happy with the allocation of stones – do they represent the true situation; do they want to reallocate any stones?
8. Once each subgroup has completed the task, they explain their choices to the other groups.
9. The facilitator guides a discussion with the whole group: did the different subgroups rank the livestock species differently – if so why? Did the subgroups rank the benefits differently – if so why?
10. Can the subgroups agree on which livestock species, overall, is most important to the whole community? This species will become the livestock species on which the PFS will focus their attention.

2. Problem tree analysis of focal livestock species

Background

When the livestock species to focus on in PFS learning activities has been identified, it is important to analyse the problems and underlying causes in the production and management of this species. This in order to ensure that the PSF activities will address the underlying causes of a problem rather than its symptoms.

Objective

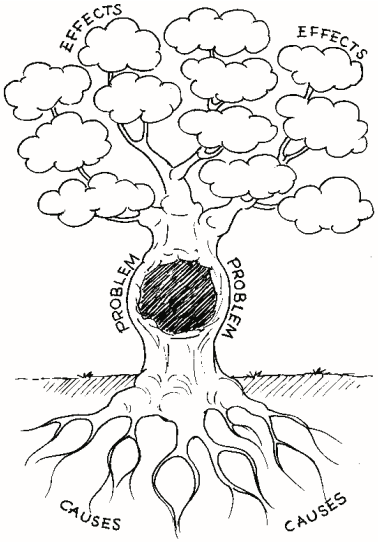
- to learn to relate problems to their underlying causes.

Time

2 hours

Steps

1. The facilitator asks the participants to describe the features of a tree – these are captured by a volunteer as a drawing on a sheet of flipchart paper, or simply drawn on the ground.
2. The drawing of the tree – which should include roots, a trunk and branches with leaves and fruits/seeds – is then used as a guide for linking problems with causes; the factors causing the problem can be thought of as the roots; the problem as the trunk; and the effects of the problem as the branches.
3. Focusing on the livestock species that has previously been prioritized, ask the group what problems they have encountered? For each problem guide the group to identify the impacts the problem has and the factors that may have caused the problem.
4. Having identified the possible causes of the problem, ask the group to consider what can be done to address them?



3. Developing the learning curriculum

Background

Whatever the participants perceive as a priority or of importance to them should be the subject of a follow-up activity, such as a field comparative experiment, participatory learning exercise or special topic in PFS. The learning curriculum should link activities to objectives and put them in a logical order that works towards addressing priority problems in the field. To ensure that all key topics are dealt with in the PFS cycle, the topics for learning derive logically from the participatory planning activities. To assist the development of a learning programme, logical steps and guidelines are provided below.

Objectives

- ensure that the PFS learning programme tackles priority learning topics at the right time in the PFS cycle
- facilitate the selection of activities/strategies to enhance learning (e.g. AESA, field comparative experiments, special topics, exchange visits, etc.).

Materials

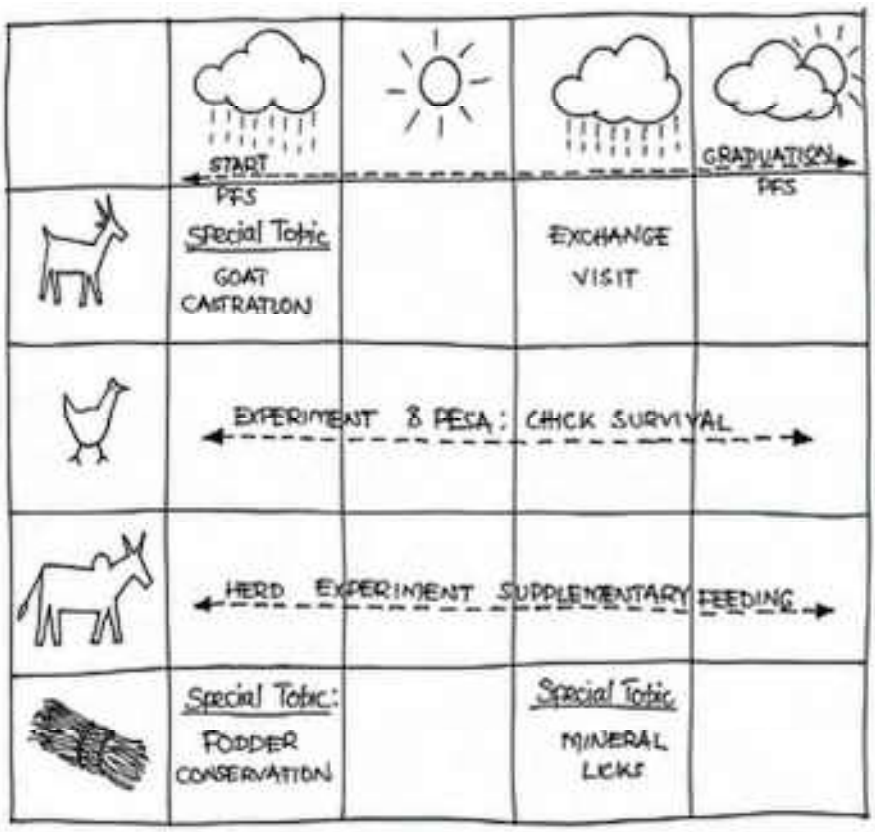
Flip charts, markers.

Time

Two hours.

Steps

1. Display the list of priority problems identified or discussed in previous learning sessions, and prepare drawings representing the problems.
2. Prepare a seasonal calendar on a large sheet of paper with the main seasons as headings on top of the paper, covering in total one year. Place the problem drawings as rows down the left side of the paper to form a matrix.
3. Each priority problem is discussed in order. The PFS group in collaboration with the facilitator decides what types of activities need to be undertaken to further explore the problem and test the solutions.
4. Each PFS core activity is discussed and the PFS group decides which is most appropriate for each problem. Sometimes a series of different activities can be planned, e.g. the implementation of a comparative experiment or, consulting the calendar, plan in which sessions livestock topics (topic of the day) and non-livestock topics (special topics) need to be addressed. Field days, field exchange trips, invitation of innovators/experts, etc. can also be planned.
5. After this, finalise the learning curriculum by putting in the various activities on the relevant rows in the matrix at the agreed point in time. Prepare the matrix as much as possible through illustrations. The programme is not fixed but should be regarded as a flexible guideline that tracks the progress of the PFS and enhances learning and participation.
6. The curriculum should also cover topics such as when the PFS will start and when the graduation will take place. The group should also discuss when sessions will begin and end (morning sessions of around four hours are recommended); which dates (weekly sessions are recommended); and when each host team is on duty?



An example of a PFS learning curriculum structured according to seasons

4. Dream visioning – the entry point for M&E

Background

This exercise helps people to think in terms of a long-term vision, beyond the immediate daily problems. It provides a good basis for planning as it builds on people's own dreams, and it also provides a basis for monitoring and evaluation of impact. Working from a vision helps to open up people's minds to other ways of overcoming problems.

Objectives

- articulate people's dreams and visions for the future
- identify potential indicators for monitoring and evaluation of impact.

Timing

This exercise should be carried out as one of the first activities of the PFS and then repeated every 6-12 months, or however often the pastoralists think that changes are likely to have occurred.

Materials

Flip chart and pens

Time

1.5 hours

Steps

1. Explain to the group members that they will be required to describe how they would like things to be in three years time from now. The dream vision should relate to the person's life as a pastoralist.
2. Allow 15 minutes for personal reflection before sharing in sub-groups or directly in plenary until a single common future is created from the individual reflections. Guiding questions might be; "What are the characteristics of the ideal situation we wish to achieve here in the long term?" or ask them to complete the sentence; "I know that my vision for this situation has been achieved when I see....." It is also possible to generate the discussion by asking the group to imagine they are presenting to a visiting community describing why their PFS has been successful. Ask the pastoralists what they would present as the successfully achieved future?
3. Ask the participants to make a drawing of their dream, and then discuss the dreams in the larger group. In the discussion the dreams can be specified further with clear timeframes for achievements.
4. Once expressed and discussed the dreams can help to identify indicators to be monitored to see if the dreams are being realised.
5. Except if the exercise is done for the 1st time, the discussion should include a comparison of the current dreams with those articulated during a prior monitoring event. It is essential to also discuss why these changes occurred and to what extent they were caused by project activities or by other, external factors.

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5. Developing a PFS budget

Background

Having defined which activities the PFS will perform, the group should establish a detailed budget. Participants will have to investigate what is available locally and at what price. Alternatives using local materials and affordable solutions should be promoted by the facilitator. Equipment and materials are best purchased by the group without external help. This is to ensure that participants realise they can reproduce whatever the group achieves. Purchases should benefit the PFS group as whole, not just a few individuals. Facilitation costs should not exceed 50% of the total budget. Cost of external facilitators invited for a special topic session should also be included. (Annex 1 illustrates an example of a grant proposal form.)

Table 2. Example of a detailed budget

Requirements	*Cost (in local currency)*
Field inputs Young stock etc.	
Stationery (give all details) Flip charts, felt pens, masking tapes, manila papers, registers, etc.	
General tools used across all activities Weigh bands, castration tool, vaccine carrier bag, scale, thermometer, etc.	
Field comparative experiments For each experiment separately detail all equipment and materials needed: Exp 1: Exp 2: Exp 3: etc.	
Field days Minimum one field day. Give date and costs	
Graduation Invitation, certificates, transport, food/drinks, stationery, etc.	
Exchange visits Transport, although if possible this should be financed from members' contributions or other funds.	
Facilitation Number of PFS sessions and facilitation cost per session. Amounts and type of *motivation* (i.e. cash, gifts, in-kind payment etc.) for the facilitator need to be agreed upon by the group and facilitator. Total costs for facilitation should not exceed 50% of the total group budget. Costs for external guest facilitators and visiting experts should also be included in the budget	
PFS participant contribution and commitment This can be in cash (amount per session) or in kind (material, field, animal, litre of milk per week, etc.)	
Total	
Total requested for grant or loan	

6. PFS IMPLEMENTATION

All PFS follow the same systematic training process, which is based on the PFS concepts and core activities. The key steps followed in the learning process are observation, group discussion (sharing of experiences), analysis, decision making and action. Once the PFS is established, the systematic training process is implemented in regular sessions of approximately four hours each. Past experience has shown that the best results are achieved with weekly meetings. Longer gaps can slow down the learning process. The length of the PFS cycle depends on the focal activity. However, the core of each PFS is similar and for this reason this section provides the guidelines for the main PFS core activities.

Understanding underlying concepts of PFS

Principles of integrated herd management

Background

Integrated herd management takes account of the interrelations between the health of animals and other production factors. Good animal husbandry practices include controlling disease, improving nutrition and having a good understanding of the effects of external factors on herd productivity. Good livestock management needs an integrated approach, since single management practices (e.g. vaccination) are seldom effective on their own. The following exercise elaborates on the principles of integrated herd management.

Objectives

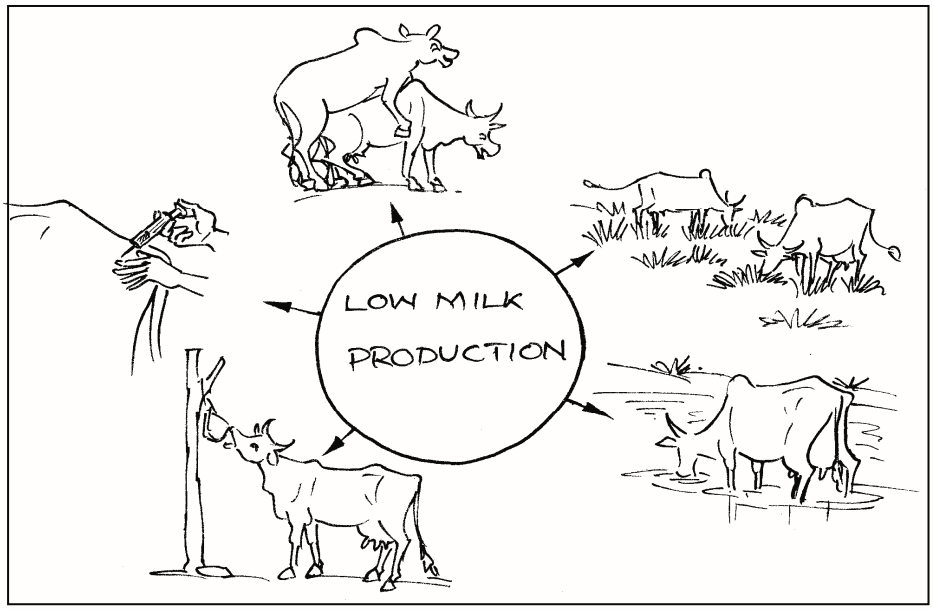
- help pastoralists understand the critical importance of proper herd management and the principles of an integrated management
- enable them to identify a range of elements that influence animal well-being and productivity.

Materials

Notebooks, pens/pencils, markers, flip chart.

Steps

1. Ask the PFS participants to come up with a relevant problem regarding herd management.
2. Draw an illustration of the problem in the middle of the flip chart.
3. Ask the participants to think of ways to solve the problem.
4. Draw each solution around the problem on the flip chart and discuss the fact that there are many ways to solve a single problem. Are the solutions effective on their own or is it more effective to use multiple solutions (thus to integrate management practices)? Initiate a discussion on the benefits of an ILM approach and the need to maybe compare several solutions to a problem.



Concept of discovery-based learning – What is this? What is that?

Background

The goal of discovery-based learning is to provide an opportunity for participants to learn through curiosity and by discovering, rather than by memorising facts. One way of stimulating critical thinking is to ask questions that allow the participants to develop their own analysis and understanding of an issue. When a participant asks a question, instead of answering the question directly, the facilitator or expert directs the participant towards the answer by asking probing questions. In this way, participants are given the opportunity to learn by themselves and come up with their own solutions.

Objectives

- help participants learn through discovery and curiosity
- guide them to critically analyse an issue and make their own decisions on a given problem.

Materials

Field, plastic bags, notebook and pen/pencil.

Time

One hour.

Steps

1. This is a role play. Assign the following roles to the different participants: pastoralist and facilitator.
2. The 'pastoralists' should focus on something in the herd-grazing system (parasite, disease, plant etc.) and ask: "What is this?"
3. The 'facilitators' should instead of supplying a direct answer, respond with one of the following type of probing responses: "Where did you find it?", "Have you

seen it before?", "What do you think it is?", What do you normally do when you see this?", "What do others do?" (Keep asking questions).

4. NEVER PROVIDE THE DIRECT ANSWER TO A QUESTION – THAT KILLS CURIOSITY. THE QUESTION IS A VALUABLE CHANCE TO LEARN!
5. After the members have taken their turns in each role, process experiences and lessons learned through a plenary discussion.

The concept of an ecosystem

Background

It is important for PFS participants to understand the concept of an ecosystem since this is the basis for the PESA. An ecosystem consists of living and non-living things that all interact. Examples of living things include cows, ticks, mosquitoes, grass and trees. Examples of non-living things include stones, wooden posts, farm structures, etc. An ecosystem functions within the physical environment that includes air, water, soil, wind, etc. At all levels and especially between the levels, there are multiple interactions and the absence of some of these actors will greatly affect the balance of the ecosystem.

Objectives

- introduce the concept of an ecosystem
- facilitate understanding of how things interact in the pastoral system, both useful and harmful interactions and living and non-living elements.

Materials

A ball of string, cards, masking tape, marker pens.

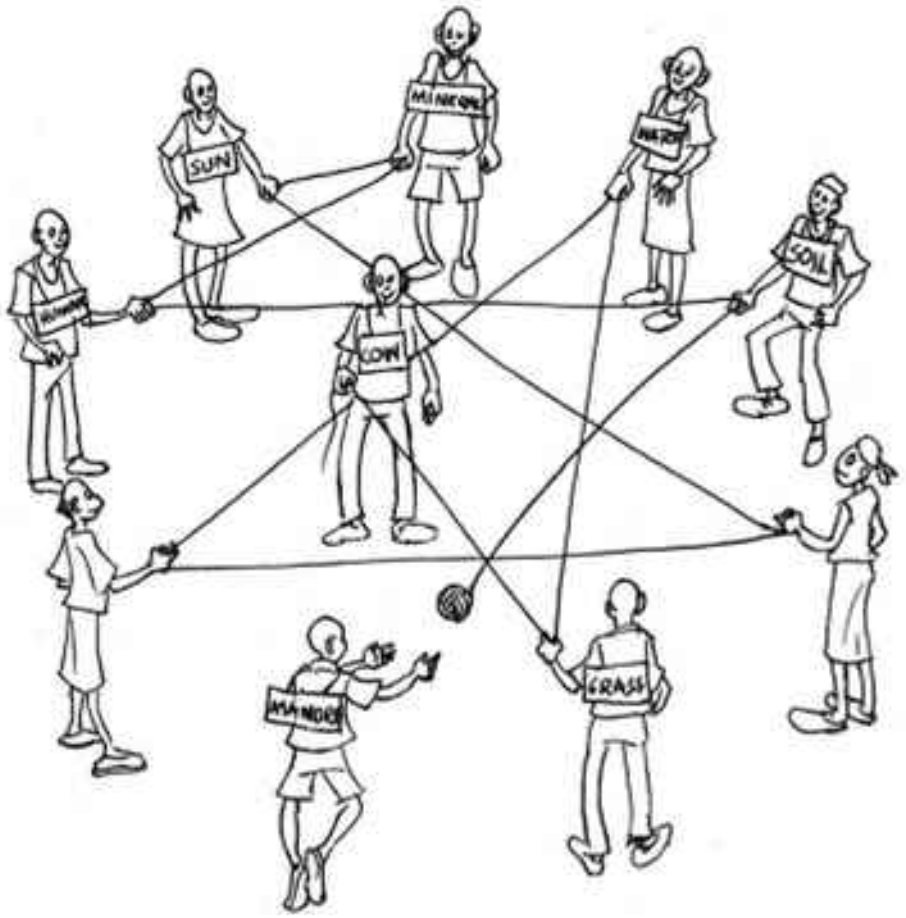
Time

Forty-five minutes.

Steps

1. The facilitator should prepare the exercise by taking the same number of cards as there are participants and both write and draw the name of a component of the ecosystem on each card (e.g. cow, goat, grass, water, acacia pods, trees, flies, birds, ticks, snake etc.).
2. The PFS participants form a circle and pick one card each. Each participant fixes the card on his/her body so all can see it.
3. The participant who picked the card showing 'cow' stands in the middle of the circle holding the ball of string.
4. The participant who represents the cow says: "I am a cow and I relate to X because of Y" (e.g. "I relate to grass because I eat it and it gives me energy"). The 'cow', keeping hold of the end of the string, then throws the ball to the person with the 'grass' card.
5. The person receiving the ball does the same and this is repeated until all participants are connected. Each card or person can be visited more than once.

6. The participants are asked why they are connected, what they can learn from the exercise and how this exercise relates to their knowledge of their pastoral livelihood system.
7. The facilitator now takes a few examples of elements in the system and asks what happens if that element disappears or is destroyed, in what ways does that affect other parts of the ecosystem?



Variations to the exercise

1. The facilitators asks all participants with cards fixed on them to stand and try to move close to the element that they feel their element (card) relates most closely. When the "system" stabilizes the facilitators grabs one person (element) and move it to a different position, symbolizing a human intervention that change something in the system and then asks; "What happens now in the system?", "How did this change affect the other components of the system?" etc.
2. The participants are divided in subgroups that are asked to walk out to a place in the landscape where they have a wide view, and then look as far, and as close, as the eye can see, and take notice of all the living and non-living things seen. Thereafter each group makes a sketch showing all things observed and draws lines showing how things are connected and how they affect each other. The groups then present and explain their drawings in plenary.

The need for good observation skills

Background

The PFS aims to enhance pastoralists' observational, analytical and decision-making skills. Unfortunately, by nature, most human beings are not good observers. However, it is important to improve our skills of observation if we are to become fully aware of livestock and herd production dynamics and avoid overlooking elements that can negatively affect animals.

Objectives

- learn the value of being a good observer
- become aware of how observation relates to herd-grazing management
- introduce the concept behind the PESA exercise.

Materials

Flip charts, markers (many colours).

Time

Thirty minutes.

Steps

1. The facilitator asks for a volunteer to leave the PFS learning site and hide for 10 minutes.
2. After the volunteer has left, the facilitator asks whether the group is able to describe the volunteer in detail, i.e. the clothes and accessories he/she is wearing, whether he/she is tall or small, style of hair, etc.
3. Instructed by the rest of the group, two group members make a drawing of the absent person.
4. After completing the drawing, the volunteer returns and has a look at the drawing. Can he/she recognise him/herself?
5. The group then discusses the drawing guided by the questions: "What are the similarities and differences between the drawing and the person?", "Did the group manage to capture all their features?" and "What did the group miss?"
6. In a plenary session, discuss the conclusions of this exercise: Are human beings good observers? Do we need to train ourselves to be more observant so we don't miss things? Why is it important to be good observers with our livestock / herd?

Principles of experimentation

Background

Pastoralists are continuously experimenting and trying out new things. They may test and experiment with new practices introduced to them by external people, but they also test their own or their neighbours' ideas. However, they may not consider they are doing

experiments and they may not plan in the same way as a scientist. Experiments do not need to be complicated or risky to be helpful and pastoralists do not need a scientific education to carry them out. It is important to remember that PFS experiments are tools for learning and an opportunity for pastoralists to test different options for themselves. Nevertheless, some basic principles of experimentation are important to avoid making wrong conclusions or decisions for future management.

Objectives

- learn the importance of some basic principles of experimentation
- acquire basic techniques to use to improve skills of planning, designing, implementing, monitoring and evaluating comparative trials.

Materials

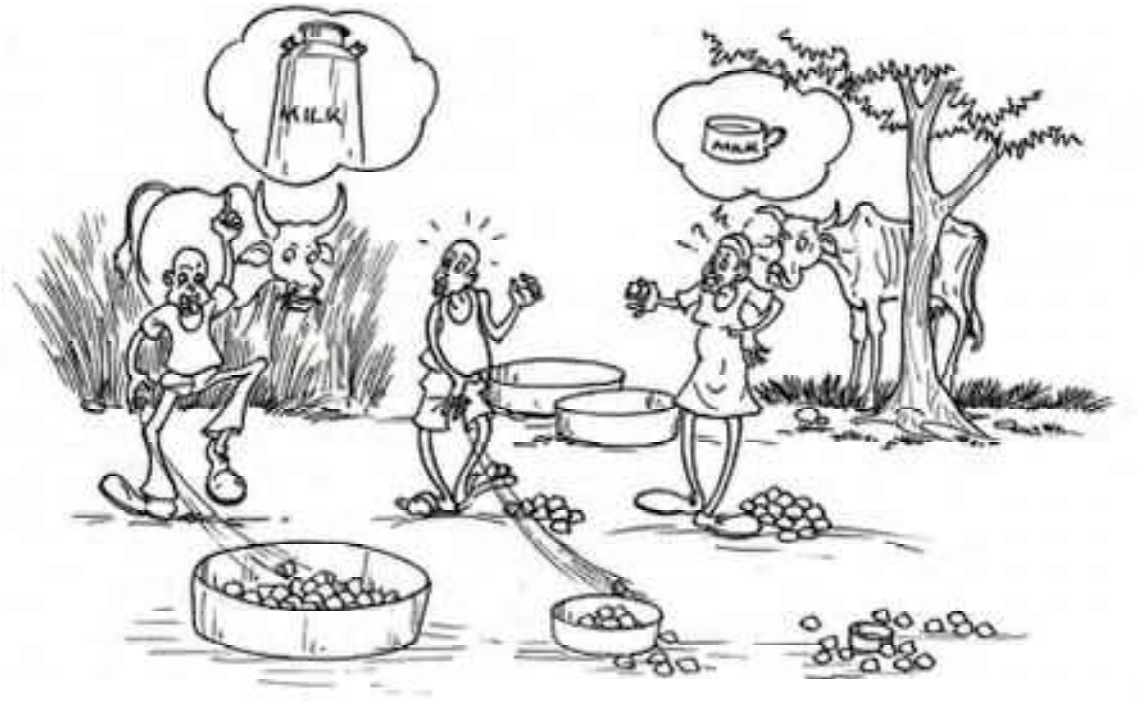
Five buckets (three of the same size, two of different sizes), 30 stones, flip charts and markers.

Time

One and a half hours.

Steps

1. Start by asking the participants to do something silly, such as try to stand on their head or hang a spoon on their nose (this is a nice ice-breaker!). Then ask if they experiment and ask them to give examples. If they say no, tell them they were all just experimenting with the spoons! Ask again in a different way, e.g. "Is there anything you do now that is different to your neighbours' practices or to what you did before?" Discuss the examples people give (but keep one of your own in case they cannot think of any).
2. Ask for three volunteers and explain that these people represent three things you want to compare (see Table 3 for the corresponding key steps in experimentation and PFS examples). Explain to the group that the objective is to find out who is the best at throwing stones into a bucket. Each person is given 10 stones and the one who gets the most stones in the bucket will be the winner.
3. Ask the rest of the group to vote on who do they think is going to win.
4. Place the three different sized buckets, one in front of each volunteer so that they are all the same distance from the buckets, and give them each 10 stones. Ask them to throw as many stones as they can into their bucket. Count the number of stones in each bucket. Give participants the 'results' and ask them who they think is the winner. Then ask: "Was this a fair competition?" Of course it wasn't fair, because it is much easier to get the stones into the biggest bucket. Ask how the game can be made fairer. It can be made fairer to provide a uniform situation i.e. everybody has the same size bucket.



5. Play the game again, give the results and ask again who the winner is. This time the results seem fair – but now ask the participants whether they think the same person will win if they play more times? Play the game once or twice more – enough times to show that people don't always have the same scores. This demonstrates the importance of repeating treatments to make sure your results are reliable. Work out the average score for each person and then declare the winner.
6. Ask the three volunteers to pick the bucket and stones of their choice and explain how they made that choice. People are not always objective and may be biased without knowing. This can influence the results; therefore it is important to give the treatments and the location of the experiment an equal chance of being chosen (randomisation).
7. Ask some of the participants who did not play the game: "Did they vote for the right person?" Ask if it was difficult to guess who would win, since they had never seen these people throwing stones before. Then ask the same participants: "Do they consider themselves better or worse at throwing stones?" Everybody must have an idea on how to scale themselves or maybe a good friend. If you have someone participating in the game of which you know his/her capacity of throwing stones you have a point of reference (also called control) to value the scores of the others.
8. You can stop the game here and go straight to step 10, or continue through 9 to increase understanding.
9. Take away the two similar buckets and return the two of different sizes. Ask the participants to now imagine that they do not have buckets in all the same sizes. How else can they make the game fair? One option is that the volunteers play the game three times, changing buckets each time so that they throw into each of the three sizes.

10. Explain that to set up a good experiment you need to think about: the objective, uniformity, replication, randomisation and pastoralists practice/control to make sure you have a good quality experiment. Every field comparative experiment should consider these elements. Furthermore, keep the following principles in mind:

    - experiments should be based on the community priority problems
    - experiments should be developed with the participation of the whole group. The process has to be owned by the participants, so they should design and implement the experiment, keep the records, perform the analysis and draw their own conclusions
    - use locally available materials
    - the experiment should not be complicated
    - it should be cost effective.

Table 3. Principles of experimentation: how the throwing game relates to PFS examples

Key steps in experimentation	**'Throwing stones' exercise**	**PFS examples**
Subject	Three volunteers	Types of supplementary feeding given to goats
Objective	To find out which of the three volunteers is the best at throwing stones	To find out which type of supplementary feeding that gives the best result
Uniform situation	Buckets are of the same size	The goats compared should be of the same age, same breed and body condition when the experiment starts
	Distances from the volunteers to the buckets are similar	The supplementation should start and stop at the same point in time for all the goats.
	(If there are not three buckets of the same size, the volunteers can play the game three times, changing buckets each time so that they throw into each of the three sizes)	If the goats are all very different, give each goat all three types of supplementary feeding (one after the other). See 'stop and go' method on page 85)
Replication	Repeat game to give the volunteers another chance to win because the volunteers did not always have the same score	Give each type of supplementary feed to more than one goat Results are then the average result among the goats
Randomisation	Account for bias (the volunteers did not decide on the bucket but were given a bucket randomly)	To select which goat is given which supplementation, write the treatments and the goats on separate cards. Put the cards with the treatments in a bag and the cards with the goats in another bag. Pick a treatment card from the bag and then pick a card with a goat. This is a match. Continue until all treatments are allocated. This determines your design
Point of reference: i.e. control or normal local practice	Ensure participation of yourself or someone whose skills in throwing stones you know	Compare regular fodder crop to new crops grown under the same conditions Compare normal feeding practice to feeding with different amounts of concentrates

The Pastoral-ecosystem analysis (PESA)

Background

The PESA is one of the core activities of the PFS and aims to enhance pastoralists' observational, analytical and decision-making skills. It's a tool for gathering information about the components of a particular ecosystem and for understanding interactions. The purpose of using PESA is for pastoralists to learn to make regular observation of the livestock-herd-pasture–ecosystem, analyze problems and opportunities encountered and to improve decision making skills regarding land or herd management. By carrying out PESA regularly in the PFS, participants develop a mental checklist of indicators to be observed when monitoring their land or herd practices. The PESA is usually carried out at every PFS session and linked to an on-going comparative experiment. Some of the main steps in PESA include;

1. **Making observations:** In sub-groups, pastoralists make observation in the field based on a range of predetermined monitoring indicators related to the specific theme of study. The sub-groups are usually formed so that each of them can be assigned one unit of a comparative trial or experiment.
2. **Analysis of data:** Each sub-group prepares a brief of their findings in a structured recording format comprising summary data, pictures and drawings of the field situation and decisions and recommendations of the sub-group.
3. **Group presentations:** Following the discussion in sub-groups a group plenary session is held where the sub-groups present their results and conclusions. The presentations by participants strengthen communication skills since the sub-group members are required to defend their decisions.
4. **Discussion and decision making:** The plenary analysis and presentations followed by discussion contribute to making decisions on management actions required to address constraints observed in the field. All the ideas emerging from the different sub-groups are synthesized in a process of consensus building and making agreements on the next course of action to take regarding management practices.

Objectives

- improve decision-making skills through analysis of a field situation by observation, analysis, discussion and decision making
- improve critical thinking and presentation skills by presenting small group decisions for critique in the large group.

***** THE ACTUAL PARAMETERS FOR OBSERVATON AND ANALYSIS IN PESA VARY DEPENDING ON THE STUDY TOPIC. In the following exercises two examples of PESA formats are presented, one for study of animal health/feeding and one on grazing land management. The actual PESA format for a PFS group needs to be adjusted according to the learning topic and the comparative trials undertaken by the group.

Initial development of the PESA format

Materials

Pen/pencils, markers, flip charts.

Time

One hour.

Steps

1. In a plenary session, the facilitator reminds the group about the defined focal topic of the PFS, and planned comparative trials.
2. The group is asked what needs to be observed and what kind of information needs to be collected for the particular ecosystem.
3. Based on this information, the PESA format is developed by the group asking participants what they need to know to enable appropriate management decisions to be taken.
4. The parameters identified should be categorised into those that need to be captured only once (e.g. date of birth of the animal), those that need periodic updating (e.g. pregnancy status) and those that need frequent measurements (e.g. body weight, health status).
5. A PESA format is then developed on a flipchart including the defined information and including a drawing of the study subject.

PESA number.....
Sub-group name.....
Date.....
Time of observation……

Weekly recording:
Parameters
Body weight……
Body measurements…….
Daily milk yield……
Feeding routine…….

Observations
Hair/coat condition…….
Body condition……
Movement……
Presence of parasites/insects…….
Injuries…….
Activity level……
General health condition……..

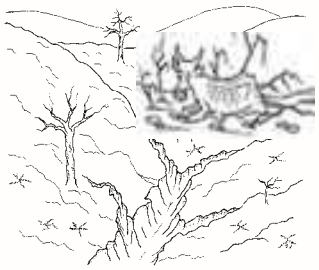
General information
Weather conditions……
Breed……
Name……
Birth date and age…….
Date of last mating……
Pregnancy status ……..
Number of offsprings…….

Type of treatment given (drug, feed, grazing, supplement etc.)……
……

Recommendations
……..
……..
……..
……..

Example of a PESA format for goat management

PESA number.....
Sub-group name.....
Date.....
Time of observation……...



Monthly recording:
Parameters
Soil cover……
Soil compaction…….
Signs of erosion……
Plant diversity……
Availability of water……..
No. and type of animals……..

General information
Land use……..
Resident livestock, approx no…..
Type of ground vegetation……...
Type of trees/shrubs……..……
Wildlife present……
Water sources…….
Weather conditions…….

Observations
Pasture condition ……
Condition of trees/shrubs……
Body condition of livestock herds….
Health condition of livestock herds..
Health condition of humans……..

Recommendations
……..
……..
……..
……..

Type of treatment (grazing scheme, erosion control etc.)……..
……..

Example of a PESA format for pastoral rangeland management

Regular implementation of PESA

Materials

Pen/pencils, markers, flip charts.

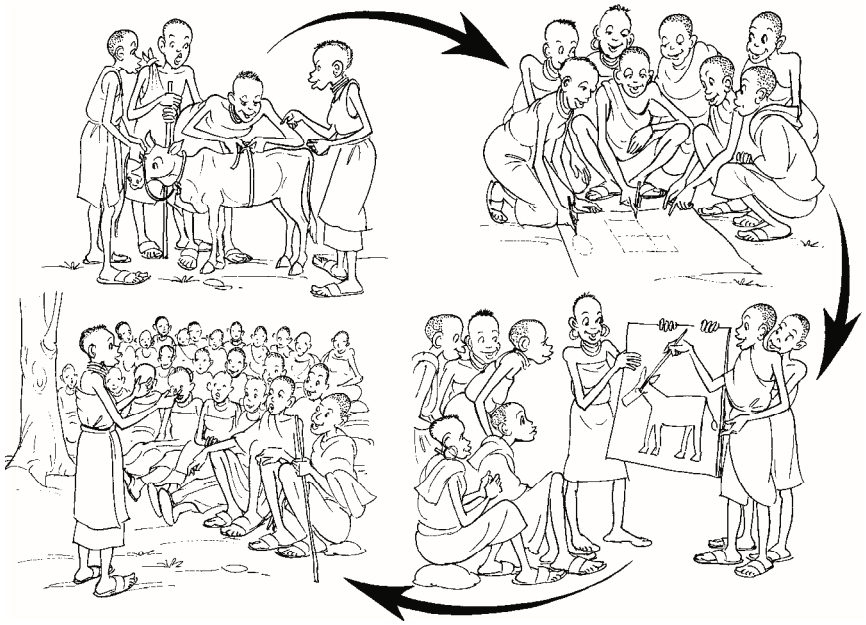
Time

One and a half hours.

Steps

1. The group is divided into smaller groups (usually the same groupings as for host teams). Each sub-group goes to a (or their) unit under study (i.e. a goat, a cow, a poultry unit, a landscape view point etc.) for 30 minutes to collect data according to the agreed PESA format, and then returns to the learning site.
2. Each sub-group then analyses the data collected and prepares the PESA format (see examples on page 69) on a flip chart (allow 20–30 minutes). A major drawing in the middle of the sheet should be included illustrating the unit of study. In the case of many illiterate participants the PESA parameters should also be noted down in the form of drawings rather than text. All drawings should be simple and reflect the field conditions/observations.

3. Each sub-group presents its results in a plenary session and receives feedback from the other sub-groups. Make sure that the task of presenting rotates among the various sub-group members each occasion the exercise is done.
4. The results of the various sub-groups are then compared and the whole group comes up with a consensus that forms the basis for future management decisions. The facilitator can probe the discussion though questions such as; "What changes can be observed since the last PESA monitoring?", "What management implications do these observations imply?" etc.



The PESA cycle; observation, sub-group analysis, group presentations and final plenary discussion

Comparative experiments in PFS

Background

Comparative experiments or trials include a process of collective investigation with the purpose of initiating activities or testing solutions to solve local problems. The main basis for experimentation in PFS is to create a learning process through which pastoralists test, monitor and evaluate new ideas, technologies or innovations for improving productivity or sustainability of the pastoral livelihood systems. Field comparative experiments within PFS are implemented to empower participants with observational and analytical skills to investigate the cause and effect of major production problems. Common practices are tested and compared with other available solutions to solve an identified problem. Analysing the results allows participants to decide which solution (technology and/or practice) is best suited to his/her situation. Experiments are also used to demonstrate new production opportunities and to help pastoralists diversify.

Objectives

- help the pastoralist become an expert and design good quality experiments; the principle of 'learning how to learn' rather than learning about one technology

- enhance PFS participants' observational and analytical skills and empower them to produce meaningful results
- help pastoralists acquire the skills needed to learn about new technology options and practices and to decide which solutions are most appropriate.

Steps

Field comparative experiments in PFS should combine local knowledge and skills with conventional methods and/or new technologies to develop solutions suited to a specific situation. Good planning is the basis for systematic experimentation, which involves a range of steps (outlined below).

1. Prioritising field problems: A clear understanding of the problem to be solved is the basis for setting the learning and experimentation theme. Whatever the pastoralists perceive as a priority problem must be the subject of a follow-up activity like an AESA, a comparative experiment, a participatory learning exercise or a special topic. A comparative experiment is a good option to select when one wants to test new technologies or practices and compare these with current technologies/practices. It also provides the opportunity to innovate. Setting up an experiment with pastoralists gives them the opportunity to evaluate different possibilities and take decisions on the options that are best suited to their needs.

2. Discuss the principles of experimentation: To ensure that all PFS participants have a good understanding of the basic principles of experimentation and to provide them with the tools they need to design their own experiments. The throwing game (page 64) can be used to guide this process.

3. Plan and design experiments: Each experimental plan should incorporate the basic principles of experimentation (page 64). While it is relatively easy to design a comparative experiment for crops, the high economic value of animals does not allow any experiment involving risk or even medium-term loss of productivity. This is why we apply the principles of a 'no risk zone' when dealing with livestock experiments in PFS (see box 3).

Box 3. Principles of a 'no risk zone':

- Animals involved in the experiments should at no time be under any health risk. This precludes the use of control groups if control conditions will put animals at risk.
- Always consult with a local veterinarian or livestock expert in the design of animal health related experiments.

The experimental plan includes the following steps:

- Define the objective of the experiment, which should be linked to the previously identified local priority problem.
- List the different treatments/options, which should include a mixture of local practices and 'new' options (e.g. practices introduced by research/extension staff).
- Do not have more than five treatments/options as it makes the experiment too complex (three is recommended). The treatments should be kept as simple as possible by having only one factor under study.
- If the experiment has too many variables it will be very difficult to evaluate which one is responsible for the results. Similarly, if the treatments are very similar it will not be possible to see any difference. There are two ways of ensuring that various

treatments can be compared with each other: i) aim for uniform situation/factors (e.g. soil type, breed and age of cow); and ii) replicate the treatments. The more replications, the surer one can be that the final results are valid and that correct conclusions can be drawn. However, too many replications make the experimental design complicated and difficult to implement in the field (two or three are recommended).

- When deciding where to locate the trial or whose animals to use, do not be influenced by personal bias. Instead, try to allocate the treatments randomly. An exercise to facilitate randomisation is to put cards with all the treatments in a bag or a hat and pick the treatments one by one; this will dictate the order of the set up.

Generally there are two ways of designing experiments; as single factor trials or in a step-wise manner. In a single factor trial different options/solutions are tried in relation to a specific study objective, for example different types of feed, various ways of conserving fodder, ways of managing pasture land etc. In such type of trials all the treatments can be compared to the control since there is only one variable varying between the treatments. See example below.

Table 4. Example of a single factor trial on de-worming in goats

Control	*Treatment 1*	*Treatment 2*
Goat No. 1 is not given any de-worming treatment 	Goat No. 2 is given local herbs used for treatment of worms according to traditional knowledge 	Goat No. 3 is given commercial de-worming treatment according to veterinary recommendations 
All other management aspects of the three goats remain the same, i.e. feeding, grazing, housing, treatment of disease etc.		

Sometimes treatments complement each other or work best hand in hand, i.e. to see the full effect of one treatment; another complementary treatment is also needed. In such cases trials can be designed in a stepwise manner, where one gradually adds on variables to be tested. See example below. In this case not all treatment groups can be compared to each other. For example in the example below one cannot compare the control with Treatment 2 since there are two variables that vary. However, one can compare the control with treatment 1 and treatment 1 with treatment 2.

Table 5. Example of a stepwise trial on supplementary feeding of goats

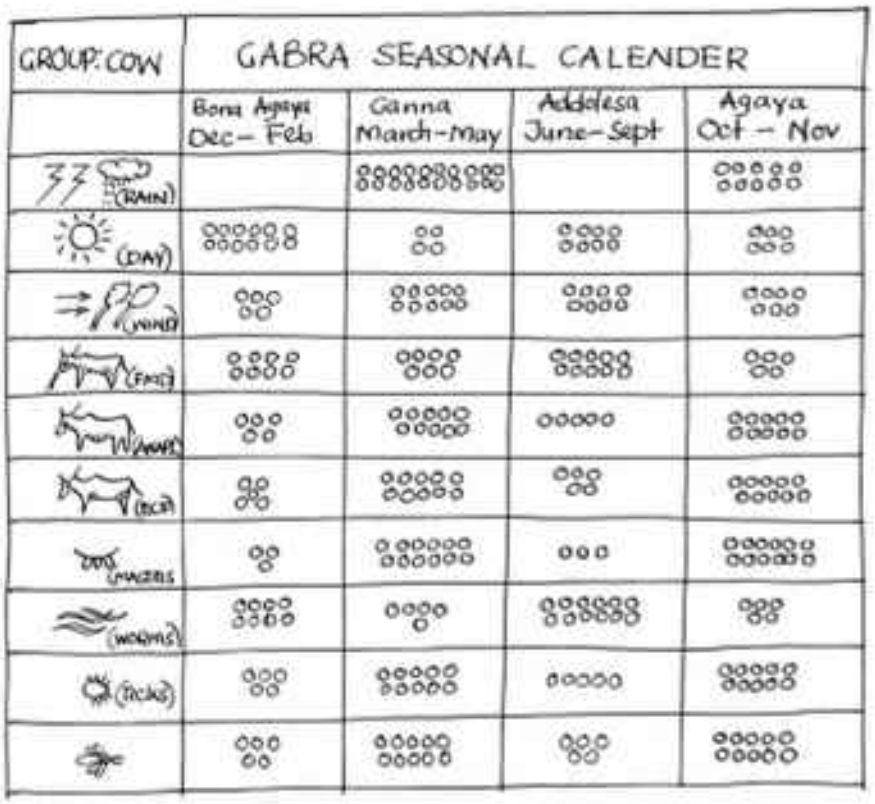
Control	*Treatment 1*	*Treatment 2*
Goat No. 1 is kept with the herd according to normal customs 	Goat No. 2 is kept with the herd according to normal customs, **(1)** + also receives supplementary feeding of acacia pods and grass in the evenings. 	Goat No. 3 is kept with the herd according to normal customs, **(1)** + also receives supplementary feeding of acacia pods and grass in the evenings.  **(2)** + is also given commercial feeding concentrates (minerals & vitamins)
All other management aspects of the three goats remain the same, i.e. grazing, housing, treatment of disease etc.		

4. Plan record keeping and evaluation: Evaluating the performances of the different treatments/options under study involves keeping track of changes and assessing progress towards achieving the goal of the experiment. It also helps learning and enables

participants to make a well-informed decision about new technologies. The PFS participants should therefore be responsible for collecting data on the experiment, systematically recording the data and interpreting all results. To be able to evaluate comparative treatments/options, indicators need to be developed with the participants. Drawing reliable conclusions from the results of experiments depends on keeping good quality records. PESA is one way of keeping records but evaluation methods can also be used to assess the changes (see Section 6, page 90).

5. Implementation and organisation of the experiment: When the design of the experiment is clear to all participants, the experiment can be implemented in the field. First, discuss the time frame of the experiment, then identify a suitable site, materials and local providers and develop a precise budget. It is also important to identify participants' roles and responsibilities: Who should do what? It is important that everybody has a chance to participate in every activity taking place. As the participants carry out, measure and assess experiments, they simultaneously build up experimental skills and strengthen their capacity to conduct and monitor their own experiments. When a PFS carries out an experiment with several treatments it is recommended that each treatment be allocated to sub-groups who will be responsible for the implementation, record keeping and analysis. Each sub-group will inform the other participants about the progress of their experiment during the regular PESA presentation.

6. Analysis of results: The main objective is to allow PFS participants to test new practices and determine their applicability. The different practices need to be compared using indicators that the participants have identified themselves. In this phase of the experiment, all the data collected in the record-keeping format should be analysed. An important tool is the cost–benefit analysis (see page 87) but for less tangible indicators, e.g. the taste of the milk, the participants have to come up with criteria to quantify the outcomes (e.g. very good taste – average taste – poor taste). The resulting analysis can be presented according to different formats.



Using illustrations and/or drawings to evaluate treatments in a trial

Using PM&E methods (Section 6, page 90), the facilitator can evaluate PFS participants' perceptions and level of adoption of new practices on their own farms. In addition, the knowledge they gain from the experiments can be assessed. Benefits, constraints and barriers to adoption can be identified and discussed in plenary sessions. New experiments or other activities can be designed to solve such anticipated problems. Results of experiments should be shared with the wider community and neighbours during field days and with other resource persons – with a view to improve overall production and extending lessons and benefits beyond the PFS.

Experimentation trials

Trial on solutions for controlled breeding of goats

Background

Many pastoralist communities do not usually employ deliberate breeding management practices for their livestock; males are usually allowed to freely mate with females and there are often too many breeding males in comparison to the number of females. This approach can result in inbreeding and production of poor quality offspring, and fighting between the males.

Objectives

- to compare different systems for managing mating of goats

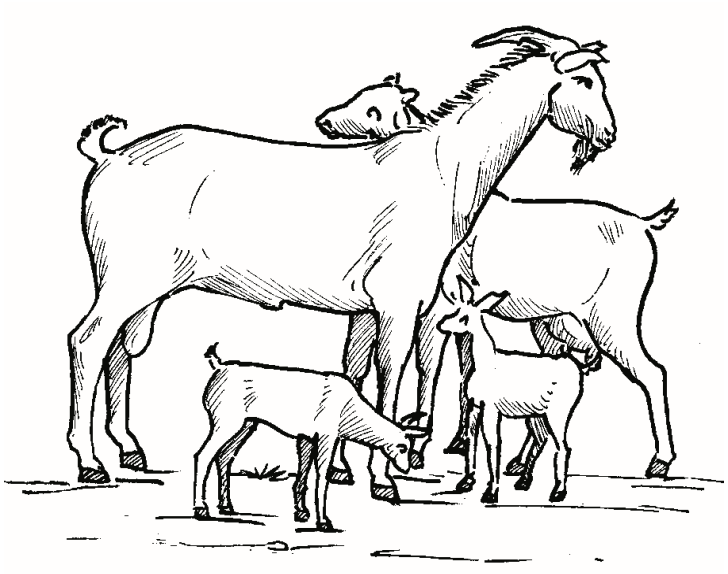
- to arouse interest in the subject of improved breeding.

Materials

Three groups of goats that do not mix. A burdizzo – a special tool for castrating male animals, and aprons that prevent bucks from mating. Paper and pens.

Steps

1. The facilitator asks the group to suggest different ways that breeding can be managed and controlled in a goat flock. Ideally this will be done after a 'special topic' has covered this information in a previous session.
2. What might be the advantages of controlling which male goats breed? Is it a good idea to breed from some males only? How would animal owners go about choosing which males to breed from?
3. Remembering the principles of good experimental design, the group then design a trial to compare different ways of managing goat breeding: three options might be: free mating system; controlled mating system in which a few bucks with desirable characteristics are selected for breeding and all other males are castrated; controlled mating system similar to this but using aprons to prevent unwanted bucks from mating.
4. Each of the three treatments is assigned to one flock of goats. The flocks should be as similar as possible in terms of size, management etc, other than the breeding systems under test. Castration should be performed by a trained and experienced individual, such as a community animal health worker.
5. The group next decides which parameters they will monitor during the trial, and at what intervals these will be monitored. This could include number of kids born, survival rates and growth rates, among others.
6. The trial will be relatively long-term; it will need to run long enough for mating to occur, kids to be born and to grow for a number of months.
7. During the trial, the PFS group should regularly visit the flocks to observe the treatments and monitor the progress.
8. At the end of the trial the facilitator guides the group in analysing the results achieved; "What were the advantages and disadvantages of each option?", "Were there differences between the groups in terms of kids survival, growth or other parameters?", "Which option appeared to give the best results?", "Was this a fair comparison – could other factors have given the results observed?", "What lessons can we learn from the trial?", "What should we do differently in the future?"



Problems of uncontrolled breeding

Note: if the local situation does not permit different breeding systems to be compared, for example because all goats in the locality mix freely, then an alternative approach would be to chose one option, such as use of aprons, and run a trial using this approach, comparing it to the system previously used, which is likely to have been free mating.

Trial on the use of acaricides to control ticks in calves

Background

Control of ticks in calves can save animals from tick bone infections and therefore reduce the need and cost for treatment of diseases. Nevertheless tick control is seldom practiced among pastoralists.

Objectives

- To compare different tick control options
- To demonstrate how to use acaricides safely.

Materials

Two groups of calves, acaricide, hand sprayer, protective clothing (gloves, mask, overall, boots), soap, notebooks and pens, weigh band or scale.

Steps

1. Select two similar groups of calves, group A and B – similar age (ideally about 3 months), breed and management – from two separate herds. From each group of calves select around 10 to be included in the trial: the facilitator asks the group how this could be done, remembering the lessons learnt previously about good experimental design (Tip: the calves should be selected at random).

2. One group will be managed in the normal way; this might include handpicking of ticks. The other will be sprayed weekly with acaricide as well as being managed in the usual way. The facilitator asks the group how the two treatments should be allocated to the two groups (Tip: the treatments should be allocated at random.

This could be done by tossing a coin - for example, if heads corresponds to normal management and tails corresponds to spraying, a coin is tossed and, depending on the outcome, that treatment is allocated to herd A; herd B would then receive the other treatment).

3. The manufacturers' recommendations will be carefully followed in terms of preparing the acaricide for spraying, use of protective clothing, application of the spray, safe disposal of empty containers, washing hands after spraying etc. This is a useful opportunity to discuss safe use and storage of agro-chemicals and drugs, use of correct doses of drugs, correct route of administration, withdrawal periods and other examples of good practice.
4. The facilitator asks the groups to suggest parameters which should be monitored during the trial. Tip: this could include survival, general health, and growth rate (measured using a weigh band or, if available, a weigh scale).
5. The trial should be run for 3 months.
6. At the end of the trial the facilitator guides the group in analysing the results: was the use of acaricide beneficial – if so how? What were the advantages and disadvantages of using acaricide?

What did it cost to use acaricide? The facilitator can use this as an opportunity to introduce a simple cost-benefit chart. Was the use of acaricide cost effective? Will the pastoralists change the way they control ticks on calves in the future, or will they stick with the traditional method?

Trial on deworming of sheep and goats

Background

Livestock keepers are aware that worms affect their animals. Worm infections can cause loss of body conditions and even death of young animals as their immune system becomes weaker, and meat of infected animals is not suitable for consumption or sale. Sometimes ethno-veterinary remedies are used by pastoralists, but seldom commercial dewormers. This trial compares methods of control of worms in sheep/goats.

Objectives

- to compare different worm control options for sheep and goat
- to demonstrate how to use dewormers correctly.

Materials

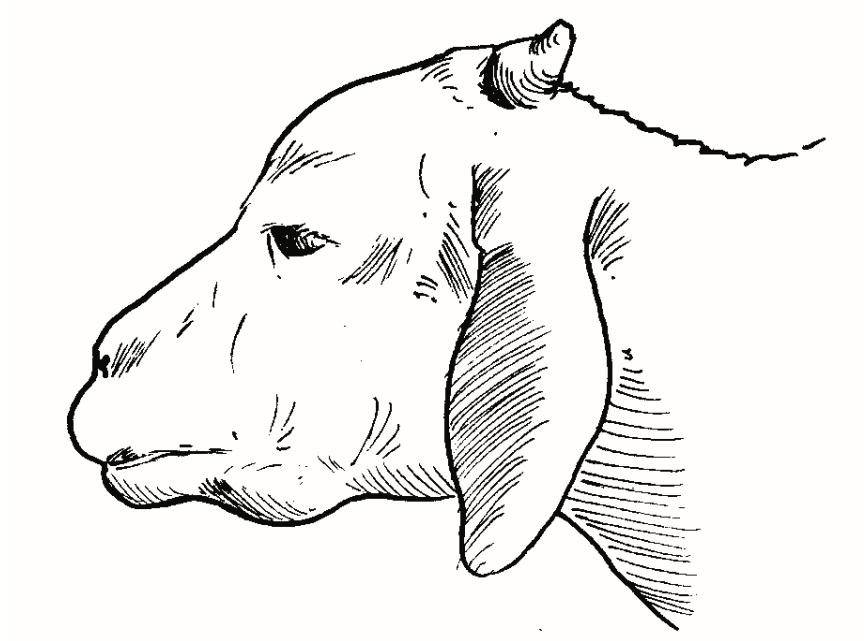
3 groups of sheep/goats, drenching gun, dewormer (commercial and ethno-veterinary remedy, see box4)[1], note books and pens, weigh bands or scale.

Box 4[1]. An example of a ethno-veterinary remedy used in Karamoja, Northern Uganda is the use of Ekapangiteng bark: Pound a 12 inch piece of Ekapangiteng bark or grind it into powder. Add 4 spoons of this to 1 litre of water and soak for 2-3 hours. Give orally, 1liter for a cow, and I mug for sheep, or goat. Repeat the next day then again in 3 weeks. It works best when given to animal before grazing.

Steps

1. The facilitator first leads a discussion on the problem of worms and the use of dewormers: do the pastoralists use dewormers – if so which dewormers, on which types of livestock at what times of the year? If not, why not?
2. For sheep/goats, what type of dewormer should be used? Expert advice should be obtained before the final choice of dewormer is made – this could be obtained by having deworming as a special topic at an earlier session and inviting an expert such as a researcher, local vet or animal health assistant to attend.
3. The trial includes a comparison of a group of sheep/goats which is treated with a commercial dewormer, carefully following the manufacturers recommendations, with a group that is treated with a local ethno-veterinary remedy and a control group that is not treated.
4. The facilitator leads the group to design the trial, applying the lessons previously learned about good experimental design. Tip: the groups of sheep/goats should be as similar as possible (age, breed, condition etc.). The animals included in the trial should be selected at random; the treatments should be allocated to the groups at random; each treatment group should consist of around 10 sheep/goats. The trial should last for about 16 weeks (8 weeks in the wet and 8 weeks in the dry season).
5. The facilitator asks the group what parameters they want to monitor during the trial. Tip: these could include survival, general health, appearance of faeces, growth rate – measured every two weeks using a weigh band or weigh scale, presence of worms in the faeces, presence of bottle jaw (see illustration below) amongst others.

At the end of the trial the facilitator guides the group to analyse the results: did one of the groups perform better than the others; which treatment gave the best results; what were the advantages and disadvantages of the different treatments; how much did it cost to treat a calf with either the dewormer or the traditional remedy – was it worthwhile spending this money; will the pastoralists change the way they treat animals for worms in the future or will they stick to their traditional ways – why?



Jaw as symptom of worm infestation

Trial on the use of the basket system for improved chick survival

Background

Poultry can provide a valuable source of protein in human nutrition and provide for income generation. Few pastoralists, however, keep poultry and among the birds kept chick survival rates are very low. On average only less than half of the chicks hatched will reach maturity. This experiment will compare the survival rate of chicks in a free-range versus basket system.

Objective

To compare methods for increasing survival rate of chicks.

Materials

Two broody hens. 20 fertilised eggs not older than 10 days, New Castle Vaccine, availability of about 1-2 cups of poultry feed (grain, vegetables, meat (slaughter left over, insects, termites etc.) crushed bones or egg shells and a little salt) per day for six weeks duration.

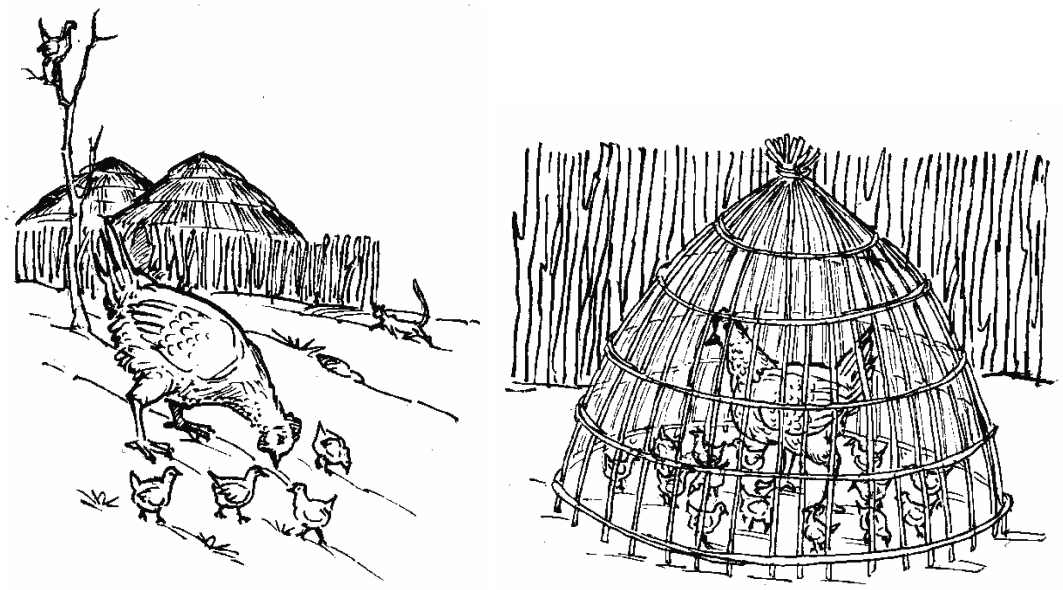
Steps

1. Prepare nests in a quiet, safe and protected place for the two broody hens and provide them with 10 eggs each to sit on (incubate). Provide food and water close to the nests for the hens. After 21 days the eggs will hatch.
2. If the number of hatched eggs for each hen is not equal move some of the chicks from one hen to another directly after hatching to ensure that both hens have equal number of chicks to care for.
3. Manage the two hens and their chicks as described in table 6.

Table 6. Overview of poultry free range versus basket system

Hen No. 1: Free range	Hen No. 2: Basket system
Let the hen move freely outdoors with her chicks, to scavenge and find food in the wild.	Use the basket system (see illustration below) to protect the chicks from predators and to ensure adequate food intake. Week 0-2: Keep the hen and then chicks together inside the basket and provide food and water inside the basket. Week 2-6: Let the hen outside of the basket during the day but keep the chicks inside at all times. In the night let the hen in again with the chicks. After 6 weeks the chickens are left out of the basket to move freely with the hen.
• Vaccinate both hens and all the chicks against NCD according to veterinary recommendations. • Provide both hens with shelter from rain, i.e. let hen No. 1 take shelter in the hut or under some kind of roof and cover the basket for hen No. 2 with rain protective cover when it is raining.	

4. Observe and measure weekly through the PESA exercise the 1) number of chicks survived, 2) the growth rate of chicks, 3) general health and body condition of chicks.
5. After six weeks make a final evaluation and comparison of the two systems. Compare the parameters mentioned above but also discuss considerations such as labour requirements and food availability for the basket system before making a final conclusion of the trial.



Chick management by free range versus basket system

Alternative experimentation

It is not always possible to design a classic comparative experiment with a control group. The principle of 'no risk zone' also precludes ethically unacceptable experiments. In such situations, alternative ways of conducting experiments are needed.

1. Comparing ongoing pastoralists practices

Pastoralists are already carrying out a range of different practices in relation to their animal-herd-pasture management and these can be identified, observed and evaluated without having any responsibility for trial design. This is particularly useful for experiments that have high risk or cost implications or for an aspect for which wrong perceptions have been held for a long time. For example:

- tick control: comparing efficacy of different acaricides and/or different application regimens
- vaccination efficacy: comparing incidence of disease in immunised and non-immunised herds using participatory methodology
- overstocking/underfeeding: establishing incidences of inadequate feed supply among herds with the same availability of land but under different pasture land management practices.

Observation and analysis of such experiments can be done by PFS participants visiting other communities within and outside the PFS group to observe and evaluate existing and new animal-herd management practices.

Comparison of livestock housing options

Background

Providing housing or shelter for livestock is not a high priority among pastoralist communities. As a result, housing that does exist is often small, overcrowded, poorly ventilated and unhygienic. This can result in high mortality rates in young stock due to disease, trampling by larger animals, or exposure to adverse weather conditions.

Objectives

- to identify effects of poor or no housing on young stock
- to identify solutions for improved housing.

Steps

1. Divide the PFS group into subgroups and ask them to walk through the *manyatta*, or visit neighbouring *manyattas,* noting as they walk the different approaches that are being used for providing shelter or housing for young stock – focusing mainly on the livestock species that the PFS previously prioritized.
2. The groups should be encouraged to talk to the owners of the animals so as to find out why different approaches to shelter/housing have been used and what the advantages and disadvantages associated with them are. They should also be

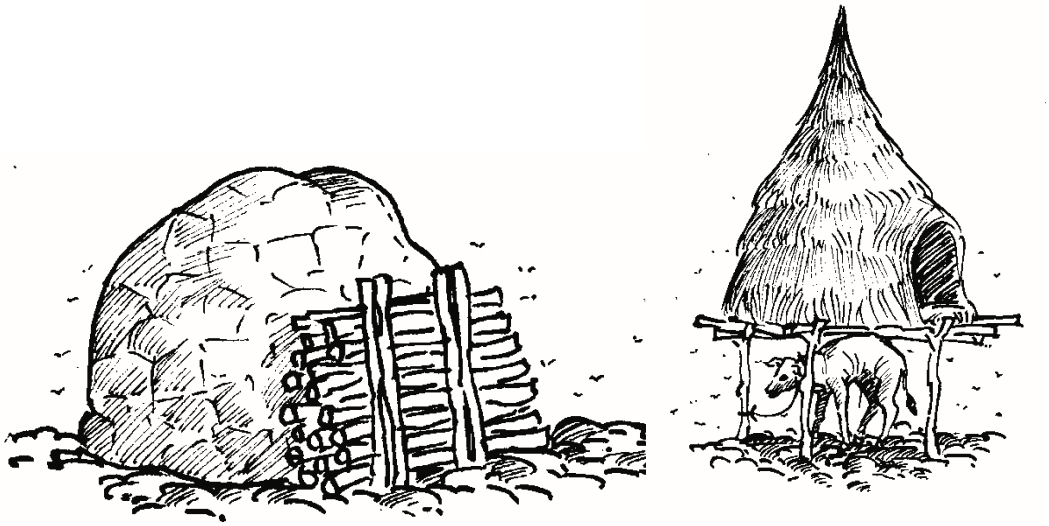
encouraged to identify opportunities for improvements using locally available materials.

3. The subgroups should then return to the host *manyatta* and the facilitator guides them in a discussion; "What did they observe?", "Did all the shelter/housing options seen meet the basic requirements of the young stock?", "What simple improvements could be made to the shelter/housing in terms of construction or management?".

Tip for the facilitator

Features of good housing for young stock include:

- Adequate space for the number of animals
- Good ventilation
- Slanting floor to allow drainage
- Sloping roof to channel water away and prevent leaks
- Hygiene achieved by regular cleaning.



Common types of shelters for calves

Comparing non-PFS or past experience

PFS practices can be compared with past experience or with non-PFS members practices. In these experiments, all PFS members' animals receive a positive treatment (e.g. vaccination or treatment for a disease) with the objective of improving the overall health status of the herd. Pastoralists then compare the results with their own past record (written or in memory) or with non-PFS communities in the same area who are not using the treatment. Participatory exercises can be used to evaluate the peoples' perception of the impact of the treatment.

Comparison of vaccination practice

Background

Pastoralists' limited response to vaccination campaigns suggests that they are not fully convinced of the benefits of vaccination. The veterinary services of each country

undertake disease surveillance to predict outbreaks or check the spread of diseases so as to minimise losses from disease. Diseases such as rinderpest, foot and mouth disease (FMD) and lumpy skin disease are some of the ones classified as common diseases. As an intervention the government then asks pastoralists to get their animals covered by vaccination.

The experiment is undertaken as a rapid appraisal of disease incidence before and after the PFS using PRA exercises such as seasonal calendars and proportional piling (see Section 4, page 37). All PFS members' animals are subjected to a positive treatment (e.g. vaccination against FMD or lumpy skin disease) as communicated by the veterinary department. Because of the trans-boundary character of some of these diseases this learning exercise can be jointly undertaken by all the PFS in an area, or other pastoralist groups can be encouraged to participate. A seasonal disease calendar or proportional piling developed at the start of the PFS can give a picture of the disease situation before the intervention. In addition, the local veterinary officer can be invited to give feedback on disease incidences in the past two or three years.

Objective

- learn by reflecting on the effect of the response to vaccination campaigns.

Treatment

Adherence to the veterinary services vaccination programme for that particular area for all the PFS members' animals.

Uniform situation

- All the PFS members involved.
- Entire herd covered against the most common diseases.
- Each PFS member keeps records of incidence of diseases and costs of treatment.

Replication

Neighbouring PFS act as replications for this experiment.

Randomisation

Randomly select pastoralists for weekly visit during PFS day. All participants are however encouraged to keep individual PESA records of health monitoring and cost of diseases that were experienced.

Materials

Animals, vaccines, vaccination cards, pens.

Observations and record keeping

- On PFS herds: PESA format sheet adapted for health monitoring.
- On non-PFS herds: reports of outbreaks are carefully traced by PFS members and by reports from the local veterinary staff.

The results of each PFS group can be synthesised using the proportional piling matrix (see page 37)

Stop and go trials

In the 'stop and go' method, a positive treatment is applied, then stopped, then re-introduced. This is repeated several times. The effect of the treatment will be demonstrated by what happens when the treatment is stopped. Thus each animal is alternatively the treatment and the control. This method cannot be used to compare multiple treatments, but it is useful to demonstrate the effect of a single treatment (e.g. the impact of supplementary feeding, see p 91).

Trial on the feeding of concentrates

Background

When there is a lack of quality pasture, milking animals may benefit from concentrated feed to ensure they obtain sufficient nutrients for maintenance and production.

Objective

- to demonstrate the cost effectiveness of supplementary feeding on milk production.

Treatments/options

Feeding the same quantities of concentrates.

Uniform situation

Only one animal required.

Replication

2–3 times.

Randomisation

Not needed.

Materials

Cow, or goat who recently had an offspring and that still is producing milk, quality concentrate (commercial or from own harvest/collection) feed, recording materials, weighing balance or scales.

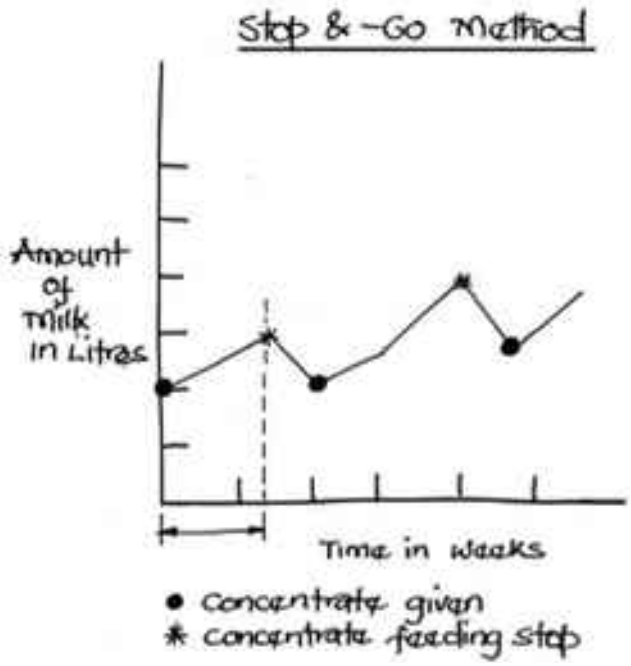
Budget

Depends on the type of ingredients in the concentrate. Use of locally available ingredients is recommended.

Observation and record keeping

Time frame: 1 month. Record the milk production for a week before starting the concentrates. Feed the concentrates for one week and record milk production. Stop feeding concentrates for one week and continue recording milk production. Resume feeding with concentrates for another week repeating the above procedure. Present results of milk production in a graph (see illustration below). Calculate the cost of each extra litre of milk produced. Discuss results with other pastoralists. What are the likely effects of supplementary feeding other than an increase in milk production?

Analysis of results



Graph of change in milk production using the stop and go experimentation method

Recommendations

The stop and go method demonstrates the principles rather than the real effect of the treatment. Nevertheless, you can calculate the value of concentrate used compared with the milk production lost when supplementary feeding is stopped. In addition to the milk lost, the general condition of the animal and its immunity status should also be taken into consideration.

Trial on the effect of mineral licks on milk yield

Background

Livestock need access to various minerals to ensure they remain healthy and productive. Pastoralists know where their animals can access natural resources such as salty grasses, salty water and areas where the soils are naturally high in minerals. However, milking animals that remain at the *manyatta* may not have access to all the minerals they require. The following exercises compare the performance of cows with and without access to homemade licks.

Objective

- to explore the effect of mineral licks on milk yield in cows.

Materials

Milking cows, mineral licks, measuring containers.

Steps

1. Select several milking cows that recently had a calf, and that are similar in terms of body condition, age, breed etc.
2. Manage the cows exactly as normal. For a period of three weeks measure the daily milk yields and once a week assess the health and general condition of the cows and calves (i.e. body condition, feeding habits, presence of worms in the faeces etc.). This is complicated by the need to enable the calf to suckle and also to milk the cow for household consumption or sale. One way to do this is to keep the calf apart from the cow. Two or three teats are completely milked out for household consumption and the milk can then be measured, and one or two teats left for the calf to suckle – this will depend on how much milk the cow is giving and the age of the calf. For each cow, the same teats should be milked or suckled throughout the trial. After the cow has been milked for household use, the calf can be left with the cow for one hour to suckle, after which time it should be removed and kept apart until after the next milking.
3. After three weeks, half the cows continue under normal management and half are managed normally but in addition are given daily access to the homemade mineral licks for at least two hours a day. The individual cows which are allocated to each treatment group should be selected at random. The daily milk yields are measured and the cow and calf health, and general condition recorded for the next three weeks, exactly as they had been during the previous three weeks.
4. After a further three weeks, the trial continues except that the treatment are reversed: those cows that were given access to the mineral lick previously now have these removed; those cows that didn't get the mineral licks now have access to them. The daily milk yields are measured and recorded for the next three weeks, exactly as they had been during the previous two weeks.
5. Finally, the treatments are switched once again and the yields measured and cows and calves assessed for a further period of three weeks.

At the end of the trial the facilitator leads the group to analyse the results: what did the results show – was there any benefit from feeding the mineral lick, and if so what; what are the advantages and disadvantages of feeding mineral licks? Were the benefits experienced worth the cost, time and trouble involved in making and feeding the lick? Would pastoralists adopt the use of homemade mineral licks – if so, in what situations and why? Are there any adaptations or improvements that they would like to try; how would they go about testing these?

Cost–benefit analysis

Background

Many pastoralists do not record their expenses and therefore do not know how their expenditure relates to their income. In some cases, they may not realise that they are earning little money or even making a loss on their herding system. Systematic record

keeping of all costs and benefits (e.g. sales of animals and animal products i.e. milk, meat, hides etc.) is crucial to performing cost–benefit analysis which, in turn, will help pastoralists to understand the factors determining their income and find ways to improve their profits.

Objectives

- make pastoralists aware of the importance of record keeping
- make pastoralists critically analyse the economic value of their enterprises undertaken.

Materials

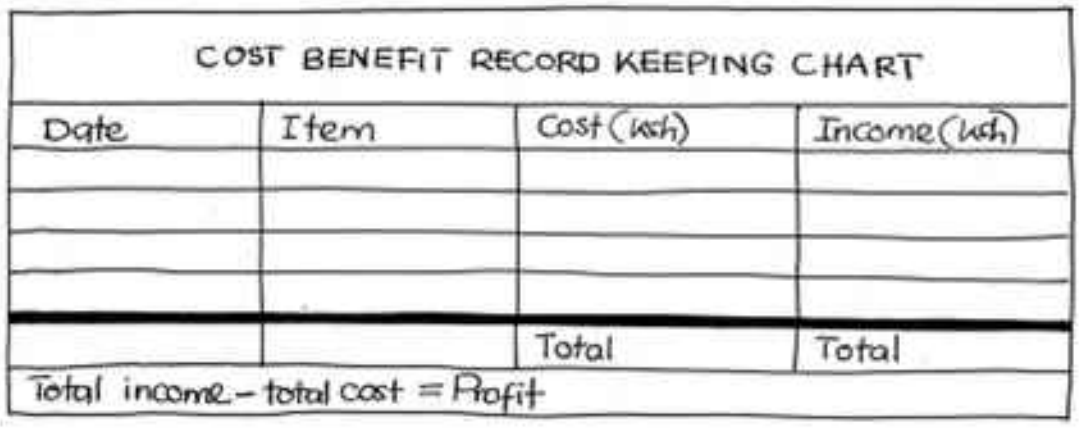
Flip charts, markers, ruler and calculator (optional).

Time

One hour.

Steps

1. The facilitator initiates the activity by asking the participants in what way and how much profit they have made from their herd of livestock cow in the last six month. The profits mentioned by each participant (from the top of his/her head) are written down (or drawn) on a flip chart.
2. A discussion is initiated on how they were able to come up with the profits specified. What are the reasons for the different profits obtained by different pastoralists?
3. The participants are divided into sub-groups and asked to note down all expenses related to the livestock herd for one PFS participant for the last six month (household labour should be converted into wages). They also list the income generated in that particular period of time. The net income is calculated by subtracting the total expenditures from the gross income.
4. Compare the profit the specific pastoralist mentioned from the top of his/his head and the profit calculated by the group. Why are the figures different? Is it important to have exact figures?
5. From here, the facilitator can start a discussion on the most important factors that determine the net income. What should we include in our calculations and which factors determine our expenses/benefits? How long should we keep records? Which expenditures can be reduced and how?
6. The facilitator distributes the record keeping chart to the participants and explains how the chart can be used. To test the chart, all PFS participants are asked to record (in drawings if necessary) all costs and revenues from their herd for a minimum of six months. Every month, one participant presents to the group his/her chart and discusses the difficulties he/she has in completing it. Another way of testing the chart is to ask five volunteers to keep a record of their expenses throughout the period of the PFS.
7. A record-keeping chart should also be used for each PFS experiment and the net incomes should be calculated at the end of each experiment (see illustration).



COST BENEFIT RECORD KEEPING CHART

Date	Item	Cost (ksh)	Income (ksh)
		Total	Total
Total income – total cost = Profit			

Facilitation of special topics in PFS

Background

It is increasingly recognised that adult learning is best achieved through a 'learning by doing' approach, where new knowledge is acquired through hands-on experience. However, basic information is usually needed before any hands-on learning activity can be implemented to help people understand what they have to do and to avoid risk. In PFS the special topics or topic of the day is normally about the livestock or the herd but it can also be about any other relevant subject. This gives participants the chance to learn about anything they feel is important to their lives (e.g. family planning, HIV/AIDS, etc.).

Objectives

- provide an opportunity for the facilitator (or his/her invitee) to give input needed for a general understanding of the subject before any activities are carried out
- ensure pastoralists have access to the information they need at the required time
- ensure a demand-driven learning process since the special topic is provided on request
- create common knowledge on key issues among the entire group.

Two different participatory approaches are commonly used to facilitate special topics in the PFS:

1. Focus-group discussions, where sub-groups of PFS participants are asked to answer questions followed by a plenary discussion.
2. Participatory learning exercises of short- and medium-term duration (which can include simple demonstrations) to introduce technical topics and lead the group in discussing their experiences.

Example: Focus-group discussion and plenary session

An example of the use of focus-group discussion to facilitate livestock topics is presented below (for more guidelines on focus-group discussion see page 30).

Topic of the day: Foot and mouth disease

Objectives

- share knowledge and skills for identifying and controlling foot and mouth disease in livestock
- identify knowledge gaps in relation to the prevention and treatment of foot and mouth disease.

Materials

Flip chart, markers, cards.

Time

Forty minutes: 10 minutes to discuss and answer the questions in sub-groups; 10 minutes per question for each presentation; 20 minutes for feedback and final comments.

Steps

1. Prepare one set of questions. For example, if foot and mouth disease is the topic of the day: "What is foot and mouth disease?", "What are the causes of it?", "How do you recognize the disease?", "How does it spread?" and "How do you control/treat it?"
2. Form sub-groups of 4–5 people and allocate one or several question per group. Groups answer their question within the allocated time.
3. Each sub-group presents their discussion/answer to the other groups, perhaps using the flip chart. Comments and feedback with all participants/members follows. The facilitator makes the final comments (wrap-up).

Participatory learning exercises

Examples on how to use short- and medium-term exercises to facilitate capacity building in technical livestock topics are given on page 99.

Participatory monitoring and evaluation[2]

Background

A PFS groups should be encouraged to regularly review their experiences and achievements and critically analyse what worked well, what worked less well and why. This will enable the PFS to consider how they could improve their decision-making processes and actions. Certain aspects can be monitored continuously, such as group dynamics, the learning process, as well as animal health, access to water, food security. Other aspects need to be evaluated at specific moments in time, for example, after sale of produce in the case of an income generating activity. Reflection and interpretation of experiences and achievements creates new insights and allows the PFS group to mature and to ensure that actions achieve the desired results.

[2] *Adapted from: Discovery-based Learning on Land and Water Management: Practical Guide for Farmer Field Schools (F AO and IIRR, 2006)*

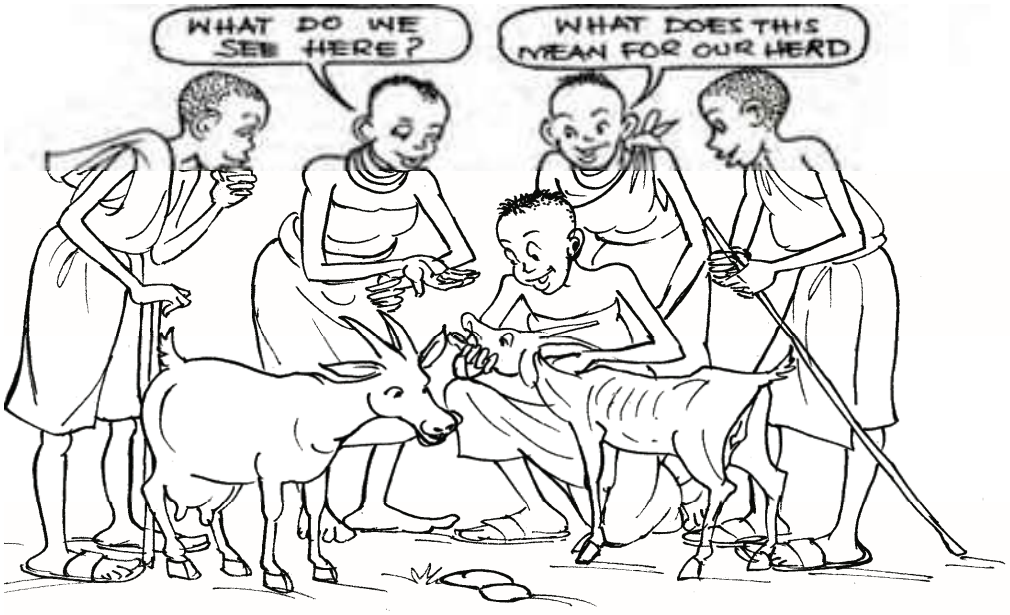
This chapter provides a guide for PFS groups on how to plan and implement simple exercises for assessment of impact and achievements and how to learn from their experiences.

Objectives

- monitor and evaluate the PFS (performance), PFS sessions (process) and the comparative experiments
- learn to assess experiences and reflect upon lessons learned for improvement of future activities
- be able to develop and implement a simple monitoring plan for assessing both process (activities conducted) and impacts (the results achieved).

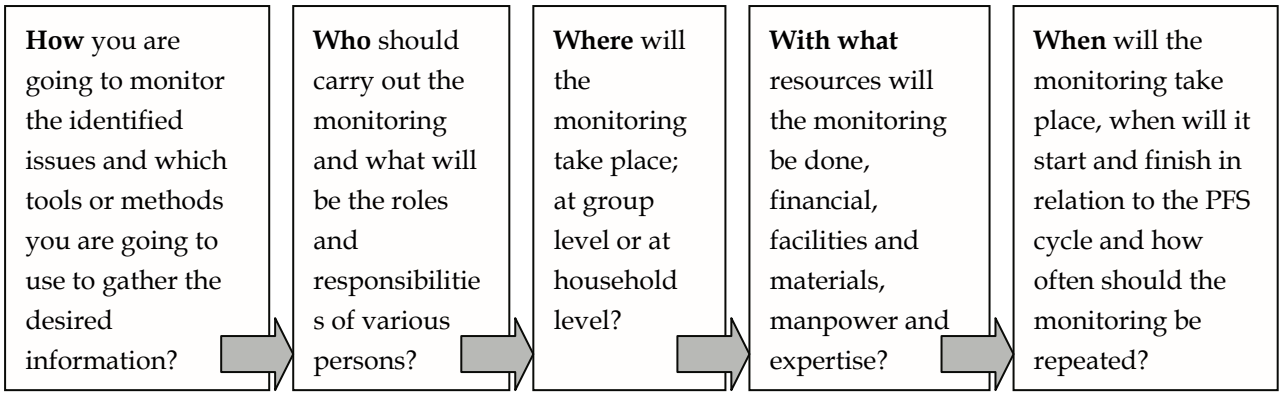
Learning from experiences

Data gathered by the PFS is of no use unless you analyse and reflect critically on the results and experiences and use this as a basis for planning future goals and activities. This requires an attitude of curiosity and questioning: "Why is it happening?", "So what are the implications for the community?", "Now what do we do next?" Without such reflection it is difficult to evaluate the changes that have occurred as a result of the PFS or related initiatives. When planning, action, observation and reflection are carried out by everybody in the group; it provides a sense of ownership and strengthens the group.



Developing a monitoring plan

A PFS monitoring plan is created based on the strategy participants identified to reach their goals and it will give an overview of how the monitoring and evaluation is going to de done. In making the plan you/your group need to be as clear as possible about what you are trying to achieve and how it will be achieved. The first step in designing a monitoring system is to identify what you need to know in order to establish if you are achieving your objectives and how you will measure change. Indicators can then be selected for each issue identified to be observed and methods agreed upon regarding who, how, where and when to monitor progress. This will build up the monitoring plan which will guide the PM&E activities (implementation) and provide you with information and guidance on the aspects listed below.



Selecting what to monitor

To be able to identify what should be monitored and evaluated everybody should share a clear vision of where the group is heading, since this will allow the group to decide what should be observed and analysed (see visioning page 57).

The next step is to identify what information is needed to answer the questions the group have related to their performance and impact. You are now looking for and selecting indicators. Indicators provide a standard against which one can measure, or show progress. Some of the indicators to be monitored in relation to group comparative experiments might include milk yield, animal growth rate, grass harvest, pasture quality etc. Indicators related to improved living conditions might include type of housing, family assets and income levels. Pastoralists often have their own indicators assessing changes that are relevant to them and these should be included.

The following questions will help you to think of possible indicators:

- If the PFS is heading for failure, how will you know? Translate these failure indicators in the positive and you will know what you want to see change.
- What exactly do you mean when you say "improved livelihood conditions"?
- How do you notice when an impact has occurred? Can you give a concrete example of how you observe an impact?

Choosing methods for collection of information

There are many kinds of methods and tools that you can use for gathering information. Which method to choose depends on many factors such as availability of time, skills and financial resources. The same participatory methods and tools used for the participatory planning can be adapted and applied to M&E. The section below describes some examples of participatory methods for PM&E suitable for PFS.

Introduction to PM&E- How good are we at observing?

Objectives

- to learn the value of being a good observer
- to become aware how good observation is an essential element of good herd management.

Materials

Flipchart and marker pens.

Steps

1. One volunteer is asked to leave the group and remain out of sight for 10 minutes.
2. The remaining participants form into small subgroups of about 6 people each.
3. Each group discusses amongst themselves exactly what the missing person looked like: what was he/she wearing, how tall was he/she, what did the hair look like etc.
4. After discussing this for a few minutes, each group selects a volunteer to draw an image of the missing person, including as much detail as possible.
5. The missing person is then invited back and each group in turn compares their drawings with him/her. How accurate were the drawings? Did each group remember the same details? How good were the groups at observing?
6. The facilitator then broadens the discussion: how important is it to carefully observe our animals and herds? How can we improve our observational skills?

Sketching and mapping

Background

Pictures can be understood by all, including the illiterate, and can be used to visualise the types of changes in the area. Sketches (and maps) can be made by the PFS participants at the beginning of the PFS season (for assessment and planning purposes), during the PFS (for monitoring purposes) and at the end of the PFS (for evaluation purposes) in order to locate changes taken place and to analyse their causes and effects.

Objective

- provide an example of how a map or sketch can be used to measure change. The example given is to measure improved animal health condition.

Materials

Flip charts, paper, markers of different colours.

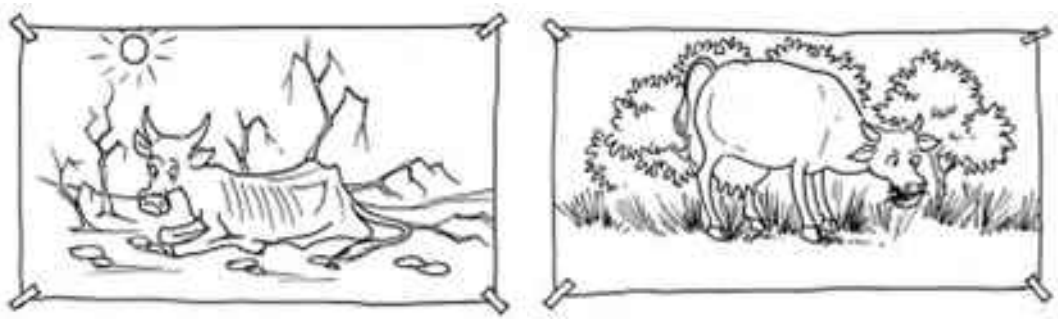
Time

Allow one hour per sketch.

Steps

1. The facilitator divides the participants into two groups.
2. One group is asked to make a sketch (map) of the technologies, practices and treatments used to keep their animals healthy. The other group makes a sketch (map) of the improved practices they think are needed to better tackle the priority problems in animal health.
3. Paper and markers and, even better, local materials can be used to indicate particular technologies/practices.

4. After the groups have finished, the two sketches/maps need to be analysed and compared to provide information on how PFS participants perceive the technologies and practices present and what they think are needed to tackle their problems. This information forms a good basis for the development of the PFS learning programme.
5. To monitor change in the pastoralists' practices, this exercise can be repeated halfway through the PFS cycle. The group can then be asked to sketch the new practices learned and see if any are already being used.
6. At the end of the PFS season, or some months after graduation, another sketch/map can be made to evaluate the new practices and technologies in the area.
7. By comparing the differences in the sketches/maps made at different times in the PFS cycle, we can see what has changed and thus 'witness' the uptake of new technologies or practices.



Examples of sketches drawn to monitor and evaluate the PFS

The most significant change[3]

Background

This exercise aims at identifying cases of significant changes that have occurred. It looks at the extremes rather than looking for general trends. It is especially useful to track stories of changes related to less easily tangible issues such as "capacity strengthening".

Objectives

- to identify cases of significant/critical changes –both positive and negative – relating to key objectives
- to share information among participants in relation to changes occurred among PFS members as a result of PFS activities.

[3] *Adapted from: Discovery-based Learning on Land and Water Management: Practical Guide for Farmer Field Schools (F AO and IIRR, 2006)*

Timing

The initial session should be held at the start of the PFS cycle, with sub-sequent sessions depending on the decided frequency of discussion.

Time

1 hour

Materials

Newsprints, paper, Pens.

Steps

1. Ask the pastoralists to identify what aspects and types of changes they need to track. This first step is important as the group is stimulated to think of issues they consider critically important for them to achieve, and therefore require clarity and consensus. These changes can relate directly to the goal and objective of the group but may also be cross-cutting issues, such as "equal rights for men and women". Some examples of domains are:
    - changes in involvement in income generating activities
    - changes in effective management of the PFS groups
    - changes in pastoralists application of animal health knowledge.
2. Decide on the frequency of discussion for each of the domains. The frequency will depend on the likely rate of change in meeting the objectives. Some changes will take longer to occur while others may occur on weekly basis. A simple question is then developed, such as "since last month, what has been the most significant change related to effective management of the PFS group?" or "During the last half year, what do we think was the most significant change in pastoralists application of animal health knowledge?"
3. Ensure that the group reach consensus on choosing a change since that will provoke a rich and detailed review of the experiences of the group members over the past period, and much debate about why one change is more significant than another.
4. Ask the group to document; 1) a description of what happened, with sufficient detail to allow another person to verify it, if necessary and 2) an explanation of why that particular change has been selected out of all the others.
5. The findings will relate to positive or negative changes or events that occur as a result of PFS activities. It is possible to explicitly include both types of change – negative and positive – per domain. Where negative changes are identified, action can be decided on to prevent the problem. If a positive change is selected, then actions can be agreed to strengthen or expand these.

The evaluation wheel

Background

This exercise allows participants to reflect on their knowledge gaps and display the result in a visual manner, and to measure changes over time. The facilitator can thereby ensure that the training curriculum is adjusted according to pastoralists' preferences.

Objective

- determine the knowledge levels or opinions of PFS participants on particular issues determined by the participants.

Materials

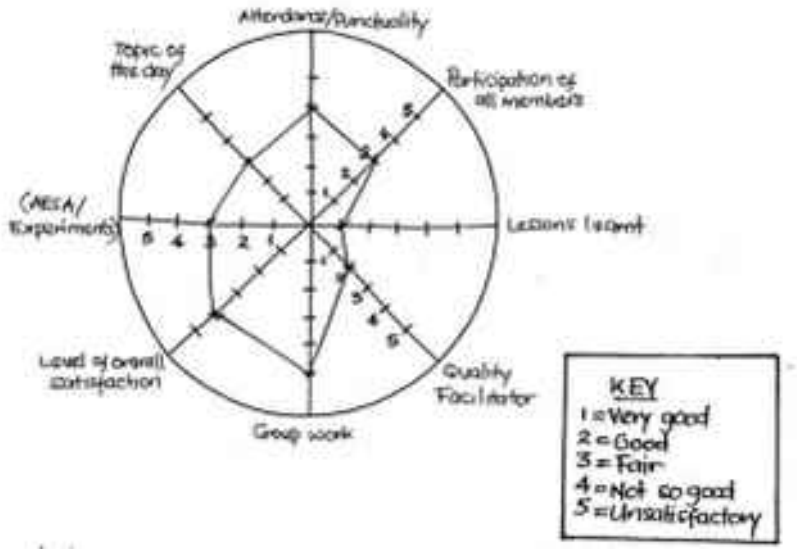
A flip chart with an empty evaluation wheel drawn on (see illustration) and markers of different colours.

Time

Thirty minutes to introduce the wheel, and after that 15 minutes to use.

Steps

1. The facilitator (or the host team) prepares and displays the wheel on a flip chart.
2. Each spoke in the wheel represents an indicator to evaluate the PFS sessions. The indicators should be identified by the PFS group. For example, attendance, appreciation of the specific content of the session, performance of the facilitator, etc.
3. The PFS group then decides on the score to give to the indicator and chooses a location for the dot (the value marked with a pen or marker) to be placed on the spoke (close to the centre indicates positive, while close to the border is negative or a ranking of 1–5 can be applied).
4. The PFS group then decides the score for each indicator and discusses the reasons behind the scoring.
5. If a low (or negative) score is recorded, solutions to improve the situation need to be sought collectively.
6. The evaluation wheel could be repeated at the end of every session.
7. Evaluation wheels can be compared week to week to monitor how the PFS is going and to assess progress.



Example of an evaluation wheel used to evaluate a PFS session

How full is the glass of water?

Materials

A box or bag, paper, flip chart and markers of different colours, three glasses and water.

Time

Ten minutes.

Steps

1. The designated host team should be responsible for this exercise. Before the session, they prepare three glasses of water: one almost empty, one half-full and the other full. The almost empty glass represents a low level of satisfaction, the half empty glass means that one is partially satisfied and the full glass represents a completely fulfilled person.
2. Each participant has a small slip of blank paper.
3. At the end of the PFS session, the participants decide which glass represents their feelings.
4. The participants put their piece of paper next to their chosen glass. Give people privacy when they are selecting, otherwise they might be intimidated to make a socially accepted choice instead of their own.
5. The host team counts how many 'votes' there are for each glass.
6. The host team then asks: "Why is the score as it is?" and "Why did people decide to pick that specific glass?" The analysis should be aimed towards finding out how people feel and what can be done to tackle dissatisfaction.

Full glass of water = very satisfied; half-full glass = not completely satisfied; almost empty glass = not satisfied

Monitoring of comparative experiments

Background

Experimentation is an important learning tool in the PFS and enhances pastoralists' skills of observation, analysis and decision making. Learning how to evaluate the relative performance of different experimental treatments allows participants to make well-informed decisions on new technologies or practices.

Objectives

- enhance pastoralists' skills of observation, analysis and decision making
- enhance pastoralists' experimentation skills.

Materials

Flip charts and markers.

Time

Introduction of tools takes 45 minutes.

Steps

1. Review the design of the PFS comparative experiment in place and have a special look at the objective of the experiment. What does the experiment aim to demonstrate?
2. Discuss with the PFS participants what needs to measured in order to evaluate the performance of the different treatments. In other words, identify the indicators for evaluation. For example, the objective of the experiment is to compare the performance of three types of de-worming treatment among calves. The facilitator asks the group: "What do we need to measure to find out which treatment is the best?" In this case the indicators may be body condition, coat condition, growth rate, appetite, etc.
3. The indicators identified need to be evaluated throughout the experiment and recorded.
4. The evaluation of the experiment should be done during the PESA.

5. To facilitate the evaluation of the indicators, the PFS participants need to keep adequate records (in the PESA sheet and the members' notebooks).
6. Because every experiment is different, the group and facilitator should design a basic trial record-keeping format.

PFS learning activities

How to recognise a healthy animal[4]

Objectives

- to know the normal features of a healthy animal
- to recognize the signs of a sick animal.

Time

One and a half hour, and half hour during the next session.

Materials

Flip charts, markers.

Steps

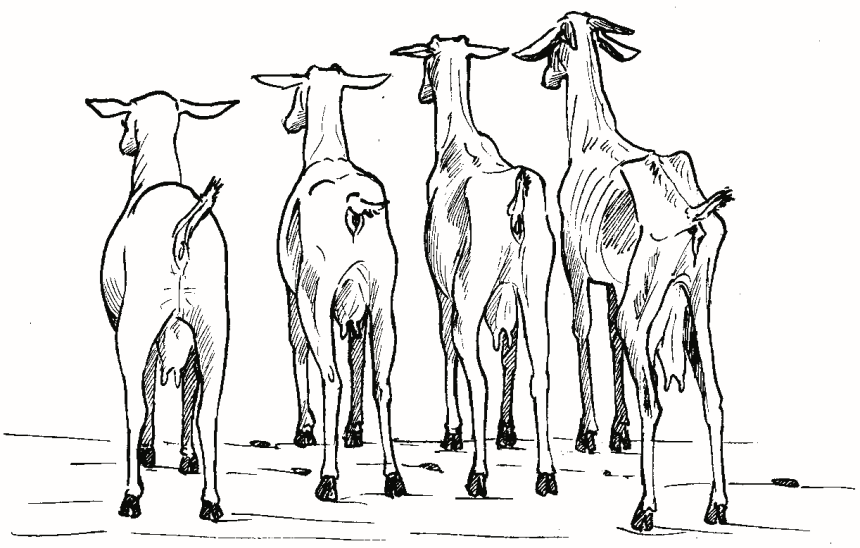
1. Read out the story in the box below loud for the participants.

> ***The man who bought a sick animal***
>
> *A man went to the Iriiri market to purchase an animal for a certain ceremony. The market was far from his home, so he travelled the day before and slept over near the market place. Early the next morning he went to the market and saw many animals being sold. He chose a red and white spotted bull and bargained for a good price. Afterwards, he began the long trip home. After a few hours, the bull began to limp badly and breathe heavily. Just as they reached home, the bull collapsed and died.*

2. Debrief the story with the participants, asking the following questions:
    - Was this man successful in getting a good animal?
    - What problem did he have?
    - Why did he have a problem?
    - How could he prevent these problems in the future?
    - Has this happened to you?
3. One way to prevent these problems is by knowing how to recognise a healthy animal. Together with the participants, brainstorm on characteristics of a healthy animal. Make a drawing of a healthy bull, indicating the characteristics mentioned.
4. Now, brainstorm on the warning signs for a sick animal, and make a drawing of a sick bull indicating the symptoms of sickness mentioned.

[4] *Adapted from: CAHW Trainers' Guide for Karamoja (Shean, 2008)*

5. Ask the following questions: "Are there some health problems that one might not easily be able to detect?" "How can one go about that?", "How can you establish the temperature of the animal?"
6. Ask the participants to during the coming week carefully observe their animals with the developed checklist in mind. During the next PFS session participants will report any symptoms of sickness observed in their herd.



The body condition is one way of assessing the health of an animal

For the facilitator: the list below includes signs of a healthy and a sick animal. If in the brainstorming session some of these aspects do not come up try to probe the discussion to bring them up.

Signs of a healthy animal

- Strong
- Straight legs
- Ears up, tail moving , alert
- No apparent sicknesses
- Normal eyes, no ocular discharge, colour change or blindness
- No nasal or oral discharge
- Normal colour to gums and conjunctiva
- Normal lymph nodes
- Normal breathing
- Normal heart rate and rhythm
- Good hair coat (shiny, good colour, length, lying down properly)
- No visible parasites
- Eating well
- Normal temperature
- No diarrhoea
- No discharges from vulva or prepuce
- Normal urine

Signs of a sick animal

- Weak
- Bent or abnormal legs
- Lameness
- Ears down, tail flaccid, dull
- Sicknesses seen
- Eyes cloudy or reddened with an ocular discharge and blindness
- Nasal or oral discharge
- Gums and conjunctiva pale or dry
- Lymph nodes swollen or painful
- Rapid, shallow or laboured breathing
- Rapid or irregular heart rate or rhythm
- Dry, standing, long hair coat with abnormal colour
- Many parasites seen
- Not eating
- Abnormal temperature
- Diarrhoea with blood, mucous, pus or intestinal lining tissues
- Pus or mucous discharges from vulva or prepuce
- Dark, cloudy, bloody or brown urine

Common diseases of animals and their causes[5]

Objectives

- to recognise most of the diseases affecting animals in the area
- to understand the options available for treatment and prevention of the various diseases
- to understand the causes of the most common diseases.

Time

Two hours.

Materials

Required: Flip charts, markers, tape, cards (about 40).

Recommended: a CAHW manual with drawings of disease symptoms, samples (such as empty bottles/packages) of commercial treatments.

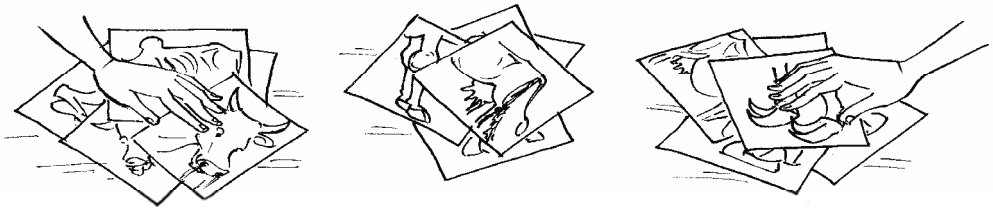
Steps

1. Divide the participants into groups of about fours persons each.
2. Ask the groups to list all the diseases of cattle, sheep and goats that they have seen or heard about.
3. Discuss the list of diseases in plenary. If important diseases are missing on the list, try to hint at them to inquire if they are also present in the area. Ask what sex, age-class and breed that seems most affected by diseases, and if certain diseases tend to coincide with other events such as drought, flood, migration, mixing with other animals etc.
4. Assign participants to write the local name of each disease on a card and/or make a rough sketch symbolizing the disease.
5. Through discussion in the large group sort the cards into three piles; 1) the most common-, 2) somehow common and 3) rare diseases.
6. Introduce the various types of causes of diseases (see box below). Try to describe the various causes in simple terms (see 'description' column in table 7).
7. In plenary discuss the cause of the diseases indicated on the cards and divide up the disease cards according to its cause (see 'cause of disease' column in table 7).
8. For each group of causes of diseases discuss the treatments applied or available, both commercial and traditional/local treatments.
9. Thereafter, discuss prevention strategies for each of the disease causes.

[5] *Adapted from: CAHW Trainers' Guide for Karamoja (Shean, 2008)*

For the facilitator:

- Use table 7 as a technical guide and as an example of how the final output of the exercise might look like.
- This exercise requires the presence of an animal health resource person, such as a CAHW or a veterinary officer.



The cards with diseases on are divided up according to the cause of the diseases

Table 7. Common diseases of animals and their causes: technical guide and exercise example

Cause of Disease	Description	Examples of diseases	Treatments available		Prevention Options
			Commercial	Local/ traditional	
Bacteria	Tiny one celled organisms that infect the animals	Abscesses, Foot rot, Pneumonia, wound/eye infections, Anthrax, Brucellosis, Mastitis, infectious diarrhoea, Black quarter, Pink eye,	Antibiotics		Cleanliness, separation, some vaccines
Virus	Very tiny living particles that infect the animals	Rinderpest, Orf, FMD, Pox, Lumpy skin, Rabies, New castle	Few good treatments		Vector control
Protozoa	Small animals that often are spread by biting insects	Anaplasmosis, ECF, Coccidiosis, Besnoitiosis, Babesiosis, Heartwater	Tetracyclines, sulfas or special anti-protozoal meds		Strategic deworming
Internal parasites	Worm like	Intestinal parasites, Nasal bots, Myaisis, Bottlejaw, Lungworms, Liver flukes, leeches, hydadid cysts, Thelazia eye worms	Dewormers, fly spray		Periodic acaracides
External parasites	Insects and ticks	Lice, fleas, flies, ticks, mites, mosquitoes	Antifungals		Good nutrition and shelter
Fungus	Mold like	Ringworm, Dermatophilosis			
Nutritional causes	Food related	Protein deficiency, weight loss, mineral deficiency, plant poisons, grass tetany	Improved nutrition		Good nutrition
Environmental	Hazards	Broken bones, Kavera disease, heat stroke, lightning strike, injuries, poisoning, photosensitivity	Various		Improved environment
Genetic	Passed from mother to child	Deformed calves, poor milk production, hernia	None		Good breeding

Disease transmission and spread[6]

Background

Animal diseases can spread in many different ways. Understanding the various ways that diseases spread is important in order to understand disease prevention strategies.

Objectives

- to understand seven ways that diseases are spread in animals
- to understand the major ways to prevent the spread of diseases.

Time

45 minutes.

Materials

Flip charts, markers, tape, cards, disease cards prepared in earlier exercise (see page 101).

Steps

1. Ask the participants to brainstorm on all the ways that diseases can be passed from one animal to another.
2. Discuss the seven common ways that diseases are spread.
3. Using the disease cards (prepared in a previous session), have the participants allocate the disease cards according to its primary means of spread, by making piles on the ground with the cards. If a disease is mentioned in several categories of spread, duplicate the disease card.
4. Discuss the prevention options for each of the seven categories of disease spread.

Use table 8 as a technical guide for the exercise.

Table 8. Disease transmission and spread: technical guide

Spread	Disease examples	Prevention
Vector borne (by organisms such as ticks, flies etc.)	Anaplasmosis, ECF, Coccidiosis, Besnoitiosis, Babesiosis, Heartwater, Trypoanosomiasis, LSD, Sweating sickness	Acaracide use, sprays, Tsetse fly trap
Water borne	FMD, Pneumonia	Provide clean, separate water
Fecal/soil spread	Diarrhoea, Worms, Foot rot	Clean environment, dispose of carcasses properly (burying or burning)
Air borne	FMD, Pneumonia	Isolation of sick animals
Contact spread (by a sick animal touching another)	Pox, Orf, mites, Ringworm, FMD, Rabies	Isolation of sick animals, avoid overcrowding
Milk spread	Brucellosis, TB, mastitis	Clean hands before milking, boil milk for

[6] *Adapted from: CAHW Trainers' Guide for Karamoja (Shean, 2008)*

		human consumption, milk sick animals last
Venereal spread	Abortions, poor fertility	Provide new young bulls, castrate old bulls

Mapping of disease hot-spot areas

Background

The pastoralists generally rely on an extensive grazing system: animals move to take advantage of seasonal pastures, browse and water supplies. Animals are also moved when they are sold or bought. However, movement of animals can expose them to various infectious diseases.

Objectives

- to identify where livestock disease problems are likely to occur during the migration
- to identify strategies to minimize exposure to these diseases and/or minimize any losses
- to introduce the group to participatory mapping as a tool for analysis and planning.

Time

One hour.

Materials

Locally available materials, such as stones of different colors and sizes, sticks, bones, leaves and ash.

Steps

1. The group starts by clearing an area of ground on which they will draw their map.
2. A selection of locally available materials (see above) are collected for use as symbols on the map; lines representing borders, routes etc are marked directly into the soil.
3. First the group marks the location of the host village (*manyatta)* and any other villages, before moving on to mark migration routes, wet and dry season grazing areas, key resources such as water points, salty grasses, livestock markets, as well as borders with other clans and any other important landmarks.
4. When the map is complete, the facilitator asks the group where in the past they have encountered disease outbreaks: these are also marked on the map, using symbols to distinguish one disease from another. Any other sites where major problems have been encountered are also marked – such as cattle raiding or predation by wild animals.
5. The facilitator then guides a discussion: "What does the map tell us; how could it be used to plan better migrations in the future; are there areas which should be avoided to minimize risk – are alternatives available and are there any disadvantages associated with them? Are there are measures that could be taken ahead of the

migration to help avoid risks and problems – such as vaccination of animals, holding discussions with neighbouring clans or authorities, or ensuring that all animals are clearly branded?"

The life cycle of ticks

Background

Although pastoralists are aware of ticks – they see them on their animals – they do not always perceive them as a serious health threat, nor do they usually understand their basic biology and their life cycle. This exercise encourages them to take a closer look at ticks and also demonstrates how they breed.

Objectives

- to demonstrate the life cycle of ticks
- to stimulate interest in tick control.

Time

One hour.

Materials

Some animals with ticks (cattle, goats or sheep), a plate, hand-lens and tick identification key. For 2nd stage; 3 clean empty glass bottles, a box or container, sand, paper, sheep (or cotton) wool.

Steps
1st stage: tick collection and analysis

1. Divide the group into subgroups and allocate one animal to each group.
2. Each subgroup carefully examines their animal: what type, breed, sex and age of animal is it; does it have any ticks – if so where are they? The group makes a drawing of their animal showing where the ticks are located on the body.
3. Next the subgroup members carefully handpick as many ticks from the animal as possible, noting which ticks came from where.
4. Having collected the ticks and placed them on a plate, they are sorted into groups that are similar in size, shape, colour etc. The groups mark on their drawing which types of ticks were found where on the body.
5. The facilitator (or a visiting expert) then helps the group identify the tick species (using a tick identification guide and the hand-lens, if available). Do the pastoralists have local names for different types of ticks; do they associate them with any particular diseases? The facilitator or expert also points out the difference between

male and female ticks, the different stages of the tick life-cycle and explains that only female ticks engorge.

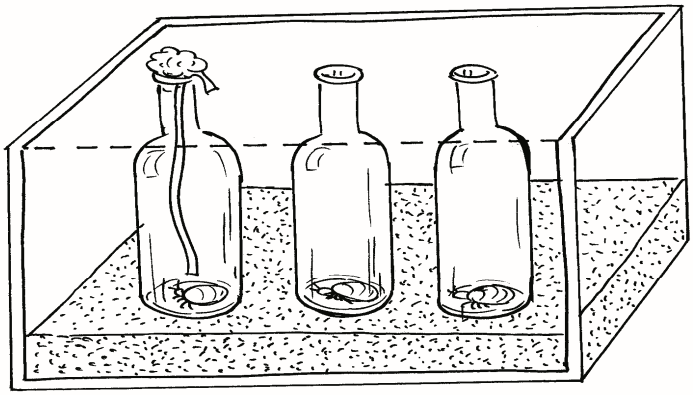
2nd stage: tick breeding experiment

6. The next optional stage is a demonstration of the enormous number of offspring a single engorged tick can produce. Special equipment is required (see *Materials*, above).

7. Collect engorged female ticks. Cut a band of paper 1 cm wide and 2 cm longer than the bottle, and wet it. In each bottle place a wet strip of paper such that it sticks out a little at the top. In each bottle place one engorged female tick and use sheep wool to plug the tube. Place wet sand to a depth of 5 cm in the box or container and place all the bottles upright in the sand. Place a lid on the box/container and place it in a safe and shady place.

8. Check the bottles every day, making sure that the sand and paper remain damp. Within a week the ticks should lay their eggs – between 1,000 and 12,000 depending on the species. After laying their eggs the female will die and should be removed. Within 20-50 days the eggs will hatch and thousands of tiny larvae will be seen crawling on the glass.

9. Empty one tube onto a tray and try to count the larvae, taking care they do not escape. Capture them on cotton wool and destroy all the larvae by burning or placing them in a jar of acaricide.



Observational experiment over time with egg-lying ticks

Animal feed and nutrition – what is available?[7]

Background

Proper feeding is essential to ensure that animals receive adequate nutrients for maintenance of production, and remain healthy in good body condition. Healthy pasture land provides all the required items for good nutrition of livestock. However, sometimes pasture land is degraded, or grazing is restricted to certain areas and livestock might therefore be missing out on some valuable food items.

Objectives

- to know local examples of the 5 different food groups and the benefit of each
- to realize the need to provide a balanced diet to animals, especially those that are sick, pregnant or injured.

Time

One hour.

Materials

Flip charts, markers, tape, pasture or area to collect feed samples.

Steps

1. Carry out a field sampling: group the participants into groups of 4-5 members. Have each group go out and collect as many types of livestock food as they can find, in a 20 minute time, and then come back to the learning site with the samples.
2. Each group then presents what they found to the others, describing the plant or food, where it grows and what benefit it provides to the livestock.
3. Ask the participants the following questions; "Why do some of these plants bring different benefits than others?", "Why do some animals at certain times seek after certain plants?", What would happen if we only gave animals one of these plants and never any other?", "Are there some plants not included in the collected samples that normally are important for your animals?"
4. Discuss the need for a balanced diet, where animals eat a variety of foods including items from all the main food groups listed below including;
    - Proteins – body building foods
    - Carbohydrates and fats – energy giving foods
    - Minerals – for healthy bones, blood and milk production
    - Vitamins – protective foods
    - Water – essential for life

[7] *Adapted from: CAHW Trainers' Guide for Karamoja (Shean, 2008)*

5. Ask participants for examples among the plants collected that provide good sources of each of the various food groups. Also discuss the specific nutritional requirements of pregnant or milk giving females or sick animals.

Analysis and discussion about the different types of animal feed collected

Demonstration of how to make mineral licks

Background

Milking or sick animals that remain at the homestead might not have access to the minerals they require the same way that animals taken for grazing with access to salty grasses and water have. This exercise demonstrates how a simple mineral lick can be made using locally available materials.

Objective

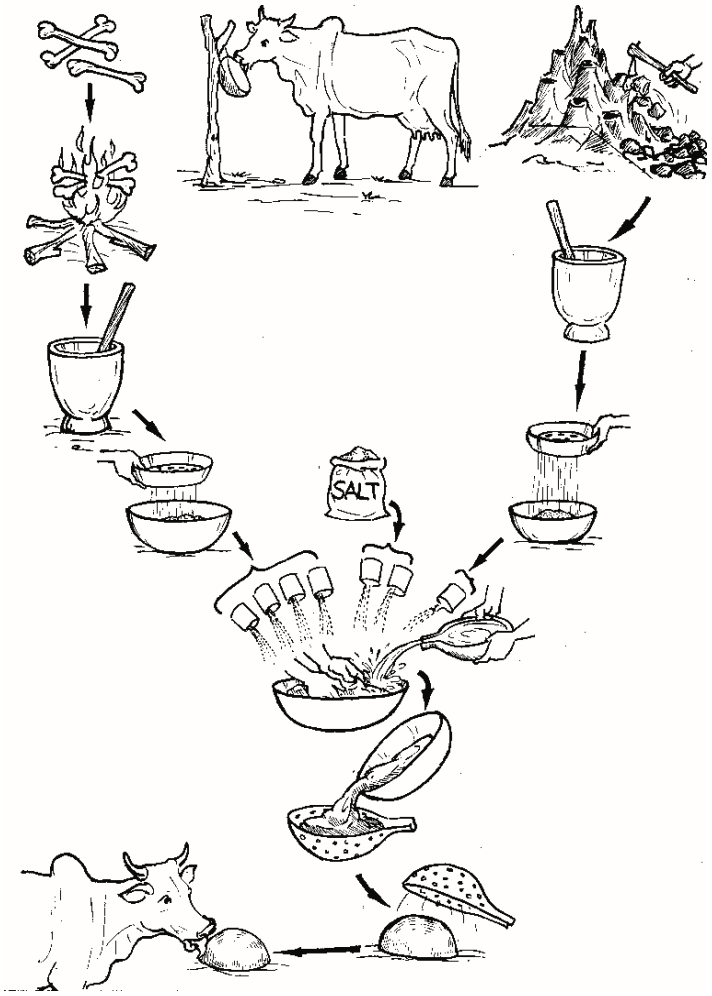
- to demonstrate the preparation of simple mineral licks.

Time

Two hours.

Materials

Old bones from livestock or wild animals, rock salt or table salt, soil collected from termite mounds, water, containers (old cooking fat tins or gourds), a sieve (a piece of wire mesh with small holes), pestle and mortar.



Steps taken in mineral lick making

Steps

1. First take the bones and burn them in a fire until they look like ash. Then cool the bones before crushing them into a powder and sieving out any lumps. Make sure the salt and soil is also finely crushed and free of lumps.

2. First assemble the materials listed above and measure out by volume:
    - Two measures of salt
    - Four measures of bone powder

- One measure of termite soil which has been made into a powder.

3. Mix the dry ingredients well and then add enough water to make a stiff paste.
4. Prepare the containers by making several small holes to allow excess water to drain away.
5. Pour the wet mineral mixture into the containers, insert a small stick in the centre, press the mixture down well and leave to dry for several days – if it is raining, keep them in a dry place.
6. At the next learning session, empty the mineral licks out of their containers. Carefully remove the sticks and thread a string through the hole that the stick leaves behind, long enough so the lick can be tied in a tree or other place where the cows can access it easily.

Demonstration of how to make hay bales

Background

During the wet season, grass growth is rapid and there tends to be surplus fodder for livestock herds. During the dry season, however, grass growth is very slow, and there tends to be a shortage of fodder. The following exercise introduces a way of collecting and packaging grass into hay bales, when fodder is in excess, which can be transported to and stored where it is needed – and fed to for example milking or sick cows remaining at the homestead. Since grasses and forages in the pasture loose nutritional value during the dry season and become too tough and too fibrous, it is better to cut and store the grass while it is still of high nutritional value.

Objective

- to demonstrate the preparation of simple mineral licks.

Time

Two hours.

Materials

dry grass – cut 3 days previously and turned once a day, strong sticks, panga, sisal twine.

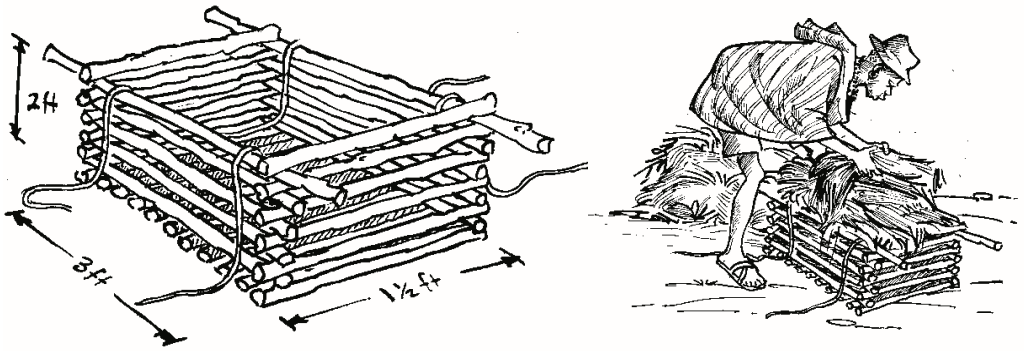
Steps

1. The facilitator explains that this demonstration shows an option for storing hay for use during the dry season: ideally this demonstration should be carried out when the grass is still growing – the best time to cut grass for hay making is when about 10-20% of the grass heads are flowering.
2. First build the hay box: this can be done with strong sticks – half of these needs to be about 120 cm long and half about 60 cm long. A frame is built from the sticks which is about 100 cm long by 50 cm wide x 40 cm deep (see illustration below). The sticks are

lashed together strongly using the sisal twine. Alternatively, if planks and nails are available, the box can be made from planks. In either case, the top is left open.

3. Once the box is completed, two long lengths of sisal are placed across the bottom of the box and draped over either side. Dry hay is packed firmly into the box – standing on top of the hay is a good way to compress it. Once the box is full and the hay well compacted, the two lengths of twine are tied very tightly around the bale. The bale can then be removed from the box using the twine and the next bale made. The rectangular bales are easy to transport and stack. To ensure the hay does not spoil, it should be stored under cover and off the ground: one option is to build a platform from poles and to cover the hay stack with plastic sheeting – this will protect it from rainwater and termites.

4. When several bales have been made the facilitator leads a discussion: is making hay bales with a hay box a good idea – what are the advantages and disadvantages of this method; why might the hay made this way be better than standing hay; in which situations would the hay bales be most useful; is it feasible to use this method under local conditions; could some members try the method out and report back to others on their experiences?



Poultry for livelihood diversification

Background

In pastoralist societies, poultry keeping is usually given a low priority. The following exercise is intended to encourage pastoralists to consider poultry rearing more seriously, and to view poultry and eggs as potentially useful supplementary foods and sources of income.

Objective

- to reflect on the potential benefits of poultry rearing and practical implications for improving local poultry production.

Time

45 minutes.

Steps

1. The facilitator asks the group how many of them keep poultry. For those that do, what benefits do they enjoy; for those that don't, why don't they: is it because they tried in the past and lost their birds?

2. Next the facilitator asks the group what are the challenges of keeping poultry in this environment. It is likely a list will emerge which will include predation of chicks and adult birds, disease, few eggs being laid and few chicks hatching, amongst others.

3. Having agreed which are the major problems associated with keeping poultry, the facilitator asks the group to suggest ways these could be tackled. For example if predation is the biggest problem, which predators attack which types of bird; when do they attack – what simple steps could be taken to help minimize these losses.

4. If disease emerges as a major problem, which disease is it (Tip: Newcastle disease is likely to be the biggest problem). Are the pastoralists aware of the existence of a vaccine that can prevent this disease; where would they go to get assistance in organizing a vaccination programme; would such a vaccination programme be a worthwhile activity for the PFS group?

5. Could the PFS group design and run a trial to look at the benefits of some alternative poultry management options? What would the trial focus on and how would it be designed and run – bearing in mind experiences with other trials and the previous session on good experimental design.

Being prepared for drought

Background

Droughts periodically afflict most pastoral areas. Pastoralists who live in the drylands used to cope quite well, and when a drought came they were prepared. But social, economic and environmental changes have taken place that sometimes disrupts communities' ability to cope with drought effectively. Droughts now have more devastating effects.

Objectives

- to reflect on the last drought experienced; warning signals, coping strategies and responses
- to develop ideas for how to better prepare and respond to future drought events.

Time

One hour.

Steps

1. Ask participants to think of when they last experienced a severe drought? Ask "Which year was that?", "How severe was the drought?"
2. Now divide the participants into three groups; 1) early warning, 2) preparation and coping strategies and 3) responding to drought.
3. Give the groups the following instructions, while emphasizing that they should keep in mind their situation at their last drought event:
    a) *Early Warning.* What warning signals were there that a drought might be coming? What traditional indicators are used to predict drought?
    b) *Preparation and coping strategies.* In what way did they prepare themselves for the last drought? What coping strategies did they have in place in order to survive the drought?
    c) *Responding to drought.* Once the drought was there what did they do? How did they respond to the situation? How well did they cope?

    Each group gets about 30 minutes to discuss 'their' topic and are asked to put down the outcome of the discussion in the forms of drawings on a large sheet of paper.
4. When all groups are finished each group presents their drawings in plenary and explains the outcome of their discussion.
5. Referring to the three drawings, probe a plenary discussion and try to ensure that the following aspects come up for discussion (if they have not already):

    a) *Early Warning.* Traditional indicators of drought (stars, wind, birds, trees, plants etc.), role of mass media and the Government.

    b) *Preparation and coping strategies:* herd maximization-keeping large herds, diversified herds, fodder collection/bulking, migration (seasonal movement,

'escape' movement), loaning of animals to friends/relatives, splitting of herds, control of diseases etc.

c) *Responding to drought.* Selling of animals, destocking and emergency slaughtering, feed supplementation and use of emergency pasture reserves.

6. Facilitate a concluding discussion by asking the following questions:
   - What mistakes do you think you did last time that made you suffer more than necessary from the drought?
   - What can you do to be better prepared for drought in the future?

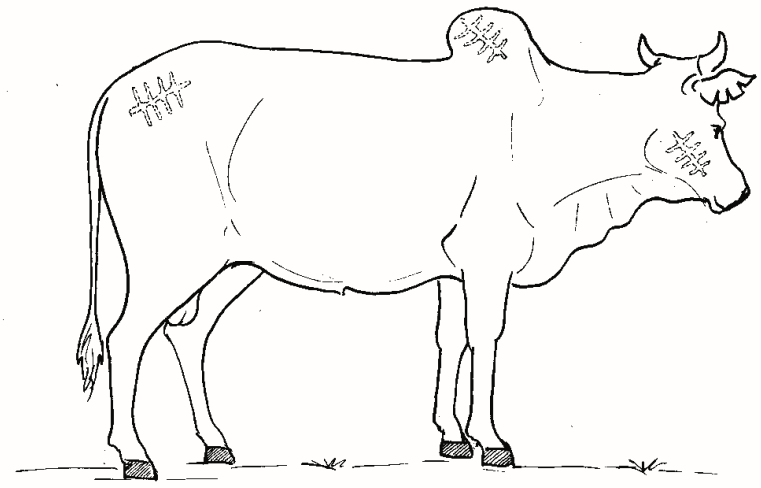
Herd migration: a solution to lack of pasture?[8]

Background

Migration of herds is commonly practiced among many pastoralist groups. However even though migration can save herds from starvation in times of drought, the practice also brings certain risks.

Objectives

- to understand the strategies of herd management including branding, rotational grazing and sustainable migratory patterns
- to appreciate the value of appropriate stocking density and selective culling.



- *A branded cow*

[8] *Adapted from: CAHW Trainers' Guide for Karamoja (Shean, 2008)*

Time

One hour.

Materials

Flip charts, markers, tape.

Steps

1. Read out the story in the box below loud for the participants.

> ***The animal herds of Logiel and his brother Loduk***
>
> *Logiel and his brother Loduk herded their cattle together. The animals had been multiplying well, and the two men were pleased with the large herds they had produced. Logiel planned to purchase a new piece of land for cultivation, when the rains come. The security had been bad for the last several months, so the two men were not able to graze the animals in the fertile pastures to the east. The weather had also been dry, and the grass was getting short from the large number of animals. As the cows became thinner and thinner, many of them began to get sick. A few died from Loduk. The two men sat under the tree to talk, and decided that it was best to migrate towards the swamps. Before they left, Logiel wanted to get his animals branded by the government when they came for vaccination, but Loduk feared the branding and vaccinating and convinced Logiel not to do it. After a ceremony with the local elders, Logiel and Loduk left for the long trip to the swamps. On the second day, at night, they were raided by enemies. Over 110 animals were taken, and two of the herdsmen injured trying to protect their livestock. Only four cows remained. Being far from the villages, there were no army men to help them track the animals. The men were annoyed that their best animals had been taken, leaving them with little hope. Two weeks later, the two men were in the market at a nearby town, and spotted two of the stolen animals. To their surprise, they had been branded with a different brand. They went to the police to report the matter, but were told there was nothing they could do.*

2. Ask the participants; "What happened in the story?", "Why do these problems happen?", "Does this also happen in our places?", "What can we do differently to prevent these things from happening?"
3. Lead the group in a discussion on the following points:
    - Is it best to brand animals when the opportunity comes?
    - How could we minimize the security risks involved in migration?
    - Should we work towards peace building to increase the grazing land available?
    - In what situations might it be suitable to reduce the herd sizes in order for animals to remain healthy? (for example; when grazing land is limited or overgrazed, at outbreaks of contagious diseases, at times of drought, in case of too many uncastrated male animals)

What is overgrazing?[9]

Background

Pastoralists often perceive the deterioration of their pastures due to overgrazing as if it affected the vegetation as a whole and not just one plant at a time and further as an effect simply of excessive numbers of animals. This exercise widens the perspective of what overgrazing entails.

Objectives

- for participants to be able to explain the process of overgrazing
- to understand concepts such as minimum resting time, maximum grazing time and overgrazing on a plant-by-plant basis
- to apprehend the process by which animals select priority species for herders to rehabilitate.

Time

1.5 hours.

Materials

Flip charts, markers, a selection of treats (at least three types and at least three pieces of each). Pre-prepared drawings of 1) luxuriant vegetation (before its deterioration) and 2) degraded environment .

Steps

Introductory "candy game"

1. Place in a dish, some candies or other treat that the participants enjoy to varying degrees (e.g. peanuts, sesame, biscuits, tamarinds, etc.).
2. Invite the participants, in turn, to choose and take a candy or treat, according to their preference.
3. Once most of the pieces have been picked up by the participants, stop the game and ask participants to describe what they observed:
    - Did all flavors of candy or types of treats disappear equally fast?
    - Which pieces disappeared first? Why?
    - Do animals display food preferences, as humans do?
4. Announce that they will now hear a story: "The story of the village of Oukaltine".
5. Place on the ground the two landscape drawings, and ask participants what they see.

[9] *Adapted from: WAPPP Outreach Manual for Pastoral Communities (Hall, 2002)*

6. Read out the story below as expressively as possible.

The story of the village of Oukaltine

Oukaltine was once a green village in the midst of a lush savanna landscape. This savanna was very dense, with tall trees, bushes and plants of various kinds of species and in very great numbers. There were also so many wild animals that the population could get all the meat it needed by hunting.

The community was good at using its village lands: its livestock was in good condition and produced enough milk and meat. This situation lasted until about thirty years ago, when the young people began to migrate towards the city, the herders' organization began to fall apart, and there was less control over the land management. For example, livestock was allowed to wander without supervision. Animals remained close to the village and its well and essentially grazed the same spots constantly.

Without any controls, the animals had plenty of time to choose the fodder plants they liked best. Of course, they began to seek out the most appetizing ones. After some time of grazing, these plants tried to regenerate by producing very tender shoots that were even more delicious than the older part of the plant, and to which the animals gravitated as soon as they emerged. Indeed, each time a plant is grazed, it tries to regenerate after a few days, but if the livestock is still there waiting for the most tender shoots, the plant ends up exhausting its reserves and disappears completely.

Once the most appetizing plant is gone, the animals are forced to settle for something a little less appetizing, just as we humans settle for bread when there is no more cake and we are still hungry. The same thing happened here: since the animals concentrated on this second type of plant, it suffered the same fate as the first, and ended up disappearing also.

Thus, one by one, the most appetizing species of plants disappeared, thus enabling the least appetizing plants to colonize the grazing area, until the only thing left on the grazing land were absolutely unpalatable plants that neither cattle nor wild animals would touch. The herd got thinner and thinner and the wild game began to disappear too. Monkeys that had previously come up to the huts to steal became scarce, and nobody remembered having seen any gazelles, which had been abundant in the old days, according to the village elders.

Since there was now nothing left to feed the livestock, the herders had to migrate to other regions in perch of pasturage, thus erasing the name of Oukaltine from the map.

7. Once finished telling the story, ask participants for questions or clarifications related to the story. Then have them discuss what happened in the story:
   - Does this story remind you of anything that you have observed around your land?
   - Does this story seem made-up to you, or do you think it's a true story?
   - When you bring animals to new grazing land, what plants do they start to graze on? Why?
   - Why do the animals return constantly to the same grazing spot?
   - In your view, is overgrazing the fault of an excessive number of animals? Why or why not?
   - What very practical lessons can one derive from this story, regarding the deeper causes of overgrazing and the degradation of pasture lands?
   - In your own tradition, is there a proverb that might illustrate the important ideas contained in this story?

8. Remind participants what happened to the vegetation in the story, and how one species after the other disappeared according to which one was the most appetizing plant for animals.
9. Make the following points;
   - The number of animals is not the issue: when the numbers are decreased, as in this story the environment is no better off.
   - The issue is the fact that the plants are grazed selectively, one after the other.
   - Insist also on the fact that the most tender parts of the plant (i.e., the new shoots) are most eagerly sought out by the animals, which are less interested in older vegetation that could tolerate grazing.
   - Overgrazing occurs on a plant-by-plant basis over time; given enough time, a single animal left continuously in a large pasture can cause overgrazing.

The water cycle[10]

Background

Often pastoralists are more concerned with the volume of rainfall than where the water goes, especially when it cannot penetrate the hard soil crust. However, even though one might have no power over the amount of rainfall, one can enhance the effectiveness of the rain that falls.

Objectives

- to be able to describe the water cycle and factors influencing it
- understand how to manage grazing lands in a way that enhance the effectiveness of rain.

Time

One hour.

Materials

Drawings of the components of the water cycle and arrows (see image below), each component on a separate piece of paper, water.

Steps

1. Introduce the session by asking questions such as; "Has the quantity of rain received by the village varied in recent years? Is it possible to change the quantity of rain?" If, not, what can one do to take better advantage of the rain that is available?"

[10] *Adapted from: WAPPP Outreach Manual for Pastoral Communities (Hall, 2002) and Discovery-based Learning on Land and Water Management: Practical Guide for Farmer Field Schools (F AO and IIRR, 2006)*

2. Put the selection of drawings on the ground, in the midst of the participants. Invite participants to study the series of images for a few minutes. Ask questions such as;
    - Of the three images (water soaking in, water running off, water evaporating) which one is more preferable?
    - When looking at the image of water rising up to the sky, what is really happening there?
    - How are clouds formed? What feeds them?
    - Do plants take advantage of all the rain that falls? If not, why?
3. Put all images, including the arrows back on the ground in no particular order, and then ask participants to arrange them, using the arrows, in a way that shows what actually happens in nature. Ask the following probing questions (see box below for technical information):
    - What relationship can one see among the images?
    - If the quantity of rain cannot be increased, can one do something to better utilize the water that actually does fall to the earth?
    - What happens to the water that soaks into the ground? (answer: it becomes available to plants, it replenishes the water table and, hence, the wells.)

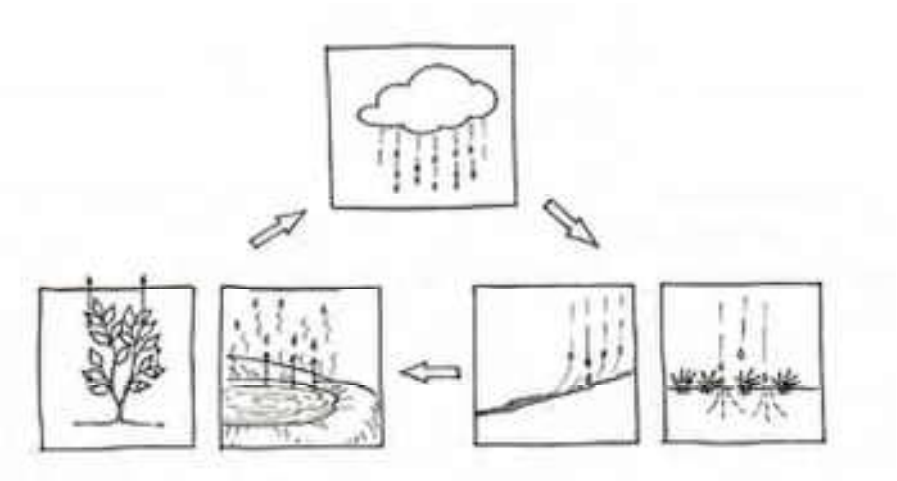
The water cycle
Water from the earth's surface rises back up to the sky and forms water vapor that cools and condenses to form clouds. When these clouds are saturated, they fall down to the earth as rain. This water can then be used by plants and animals on reaching the earth's surface, or it may collect in water bodies after runoff, or might enter the ground through infiltration to form groundwater. The rest of the water may be held by the soil and absorbed by plants and then lost through transpiration from the plants or evaporation directly from the earth's surface of the soil.

- Lead the group to a spot of ground previously selected for the participants and gather around it in a circle. The demonstration consists of showing that water behaves differently depending on whether the soil is loose (after having been worked with a tool, or trampled by cattle) or has a hard crust.
- Pour identical amounts of water on the two spots. The water poured onto loose soil obviously sinks in quickly, whereas the water poured onto the hard crust remains on the surface or trickles away.
- Ask participants to explain what they see and to comment on it.

Concluding discussion

4. Ask participants the following questions:
    - What happens on the grazing area when it rains? Does the water soak in, or does it run off?
    - What is the disadvantage of compacted soil covered by a hard crust?

- Has the level of the water table (as seen for example in wells) or in rivers varied in the past years? Can this be explained?
- Do you think that a faulty water cycle (i.e. one in which a large portion of rain is lost to run-off) can be just as serious a problem as drought?
- What can we do to capture or make better use of the water run-off when it rains?



The water cycle

Soil and the impact of animals[11]

Background

Sometimes there is a lack of awareness of the relationship between time and overgrazing. An understanding of concepts such as resting period (during which vegetation is protected from the livestock) and grazing period (the length of time animals' stay in a certain grazing area) is necessary, as well as an understating of the "time" factors.

Objectives

- to understand the relationship between overgrazing and the lack of control over time (leading to deterioration of vegetation)
- to understand that the impact of livestock on the land can be either positive or negative depending on the "time" factor.

Time

45 minutes.

[11] *Adapted from: WAPPP Outreach Manual for Pastoral Communities (Hall, 2002)*

Steps

1. Tell the story in the box below for the participants.

The donkey trails

An old woman lives all alone. Each day she takes her donkey to get water from the well. After a year, she notice that the donkey has worn a path between her hut and the well, on each side of which the vegetation has been totally destroyed, because the donkey has eaten everything and has worn away soil by passing over the same spot over again with his hooves.

One day, the old woman's friend decides to help her by bringing her enough water to last about one hundred days. They get organized to set out together with all the donkeys in the village, and bring back to her all the water she will need for three months. She is very happy.

But in the course of this one day, the hundreds of donkeys from the village have brought tremendous damage, not only along the path, but in the entire field. The grass has been trampled and the soil torn up! Once the hundred days have passed, however, the old woman and her friend are overjoyed to see that greenery has invaded the entire field as well as the trail, which has nearly disappeared.

2. Ask the participants the following questions:
    - What happened to the soil in the story?
    - What effect did the large numbers of animals stampeding over the ground have on the soil?
    - Can animals break the hardpan crust with their hooves?
    - How do the droppings of animals affect the soil?
    - How much time do the plants need to recuperate completely?
    - What happens if one does not give the plants a minimum resting period?
    - What happens if animals are kept too long in a single grazing spot? When is the ideal time to move them?
    - What conclusions can be drawn from this story?

Conflict prevention[12]

Background

Pastoral areas are often troubled by insecurity and conflicts, often related to raiding of livestock between tribes. Although communities are aware of the threat of potential conflicts, there are often no strategies in place for preventing them or for helping resolving conflicts when they do occur.

[12] *Adapted from: Drought Cycle Management, a toolkit for the drylands of the Greater Horn. (IIRR, Cordaid and Acacia Consultants, 2004)*

Objectives

- to identify potential conflicts and discuss in what way various groups in the community encourages or tries to avoid conflicts
- to devise appropriate conflict prevention strategies.

Time

45 minutes.

Steps

1. Ask participants what kind of conflicts they experience in their village?
2. Once the main conflicts have been identified, get participants to discuss the negative consequences of these conflicts. Ask the following probing questions:
    - What are the impacts of these conflicts? (in terms of atmosphere in the village, wasted time in resolving a conflict once it has occurred, long-term deterioration of relationships with neighbouring communities etc.)
    - Do you have strategies for preventing these conflicts? What in such case?
3. Inform the participants that you will now read out a true story. Read out loud for participants the story in the box below.

The Turkana-Pokot peace meeting
In November 2002 an alogita (a traditional women's peace march) was organized in Pokot areas near the border with Turkana in Kenya. A group of pastoralists travelled through the Pokot grazing area for about two weeks and held meeting on the way to discuss peace. Much of the discussion during the march focused on identifying who was responsible for causing conflicts. While most of the accusations were made against elders and youth, the role of women were not left out. A Pokot woman said:

"I place the blame for these raids on us women, the mothers. As one of them, I admit that we are the inciters and promoters of these raids. When our husbands or children go for raids, we encourage them by wailing, giving them milk fats, and promoting raiding heroes. This excites them and encourages them to raid more."

4. Ask the participants what they think of the story.
5. Probe a discussion by posing the following questions:
6. Who do you think is responsible for conflicts? In what way?
7. In what way do different groups (men, women, elders, youth) in your community initiate or encourage conflicts?
8. What traditional ways do you have for peace making?
9. Ask participants what they think they could do to reduce conflicts in their area, enhance trust between their communities, and enforce peace agreements. If the aspects mentioned in the box below are not mentioned in the discussion, try to bring them in by probing.

Possible ways to strengthen trust between communities:	Possible ways to enforce agreements:
• Intermarriage • Exchange of cattle through trade and marriage • Return of stolen cattle as act of goodwill • Commitment of raiders to bring an end to theft • Grazing animals together	• With Government support, punish thieves from their own community • Fines for stealing of animals • Create village-level peace committees • Create a joint security patrol • Women withhold the traditional blessings from sons and husbands who go on raids • Negotiate to share grazing area resources • Two groups bury the hatchet as a sign of their commitment to peace

Participatory evaluation of inter-clan relationships

Background

Conflicts over access to and use of natural resources are an unfortunately common feature of pastoralist life. The following exercise is intended to encourage the participants to prioritize peace building activities and to deal with relations with neighbouring clans in a rational, peaceful and business-like manner.

Objectives

- to critically analyse relationships with neighbouring clans
- to identify ways to overcome inter-clan conflicts and tensions.

Time

45 minutes.

Materials

Paper and pens.

Steps

1. The facilitator leads the group to construct a simple matrix which they will then use to analyse their relationships with neighbouring clans.
2. First the group brainstorms to suggest indicators of the quality of their relationships with the selected clan: the indicators should take the form of statements that can be scored from 1-4, with low scores indicating a problem and high scores indicating no problem: for example, 'we communicate well with clan XXX', or 'over the past 5 years we have enjoyed peaceful relations with clan XXX'.
3. When about six indicators have been agreed upon, a simple matrix is drawn on the ground with boxes for each of the indicators along one axis, and scores from 1 to 4 along the other. Symbols are used to depict each of the indicators, for example a

miniature spear could be used for the peaceful relations indicator, a mobile phone could be used for the communication indicator etc.

4. The facilitator then asks the group whether they wish to do the scoring exercise in public or in secret. A brief discussion is held to discuss the merits of the two approaches – when dealing with sensitive subjects, which method is likely to give the most truthful answer? If it was done in public would some people feel constrained in how they voted; if done secretly could the result be manipulated? How could the scoring for this exercise be done in secret? Tip: one option is to give each person a piece of paper on which they are asked to indicate their response to a statement; for example if the statement was 'we communicate well with clan XXX' they could put one x on their paper if they strongly disagreed, xx if they disagreed, xxx if they agreed and xxxx if they strongly agreed – if they didn't know they would leave their paper blank. It would be important to make sure that everyone understands the scoring system or there is a danger they will vote the opposite way to their true intentions. The marked papers would then be folded and placed in a container and, in front of the whole group, some volunteers would quickly check them totalling up how many votes were made for each score – this result could then be transferred to the matrix by using small stones to represent the votes cast. The process would then be repeated for the next statement, and so on.
5. When the matrix has been completed the facilitator leads a discussion: overall, does the matrix indicate that relations with clan XXX are good or bad; where are the main problem areas (low scores); how could the group improve the problem areas – what actions do they need to take and what help do they need to build better relationships; who can they turn to for assistance?

Making effective contracts

Background

Conflicts over access to and use of natural resources are an unfortunately common feature of pastoralist life. The following exercise is intended to encourage the participants to prioritize peace building activities and to deal with relations with neighbouring clans in a rational, peaceful and business-like manner.

Objectives

- to learn lessons in marketing from the experience of others
- to appreciate the potential value of sales contracts
- to devise creative solutions to overcome illiteracy as a constraint to use of contracts and other written records.

Time

30 minutes.

Steps

1. Read out the story below for the participants.

> ***Making livestock contracts***
> *The town of Shone in southern Ethiopia is an important regional commercial centre. A livestock market is held every week. Livestock owners trek their animals to the market; traders who supply animals to Addis Ababa and other towns come with lorries to buy and transport cattle, sheep and goats. Making and signing contracts of sale is integral to the effective functioning of the market. The contracts are a safety mechanism – they provide an assurance to the buyer that the animals belong to the person selling them and are healthy. The contract process involves:*
> - *A youth who has received some education and is literate draws up the contract for a small fee.*
> - *The contract describes the animals being sold – colour, sex, breed, price, identifying marks, place of origin, owner etc.*
> - *Three witnesses who know the owner of the animals sign the document, or add their thumbprints.*
> - *An elder who is trusted by both the buyer and seller acts as guarantor: in case of any problem, such as the animal being sold did not belong to the person selling it, he will ensure the culprit is brought to book.*
> - *After the contract is drawn up and signed, both parties celebrate by sharing some food and drink."*

2. After the story has been told, the facilitator leads a discussion: did the group think the idea of using a contract was a good one; in what circumstances might a contract be useful in the local environment; how would the contract look – would it be exactly as the one described in the story or would it be adapted; if so, how and why (see 3, below); in addition to covering commercial transactions, could contracts help improve relationships with neighbouring clans – if so, what might contracts be used for? Tip: this might include sharing of resources, access of other clans during drought periods, joint use of water resources, procedures for dealing with and returning stolen animals, amongst many other possibilities.

3. To adapt contracts to local conditions, the PFS group could be divided into subgroups and each subgroup challenged to come up with ideas that would make the use of contracts more accessible to everyone, including those who cannot read words or figures: how could symbols be used to supplement words and figures, and what other measures could be used to ensure that everyone could utilise and benefit from contracts?

4. **Tip**: Adding simple line drawings to the contract could be an effective way of capturing, for example, the number and identity of the animals being sold – the drawings could show the number, size, colour, sex, horns and distinctive marks, including brandings, of the animals. The amount of money could be shown using a simple table with drawings of different banknotes and next to each drawing the number of notes could be shown with the corresponding number of dots. The

identity of the people involved in the contract could also be shown through the use of symbols – this would require that everyone in the group selected a symbol that served to identify just them: in fact many political parties and companies use symbols to enable them to be easily identified. The symbols chosen would ideally have some relevance to the individual: for example if they were very tall, they may choose the image of a giraffe as their symbol; alternatively if their name has a specific meaning, the symbol could reflect this. Some information – such as dates – may be difficult to convey without using figures or words: one approach to deal with this would be to pair up everyone who was illiterate with a 'buddy' who could read – this could be an educated son or daughter, some other family member or a trusted friend.

Identifying business ideas

Background

PFS group members may decide they wish to jointly set up and run a new income generating enterprise, perhaps drawing on the lessons they learnt during the PFS cycle. The following exercise helps to identify possible new business ideas.

Objective

- to identify business ideas.

Time

45 minutes.

Steps

1. First each sub group lists any particular skills, hobbies or interest they have. For each skill, hobby or interest the group tries to think of a business idea to match; for example, if one member is skilled in handling bees, a business idea could be collecting, processing and selling honey and wax.
2. Next the group lists locally available materials that are currently considered as waste products. For each material a possible business idea to exploit that 'waste' is identified; for example animal horns could be made into craft items.
3. Finally, the group identifies local trends – situations which are changing and which may represent an opportunity: for each trend observed, a possible matching business idea is identified. For example, the price of goats drops during droughts and many eventually die. There may be an opportunity to buy goats during the early drought cycle and process them into dried meat for sale.
4. By working through various options in a structured way the group may be able to select the business idea which shows the most promise, which they can then develop further.

5. Tip: Good business ideas suitable for implementation by small groups tend to have a number of common characteristics, including:
    - do not require too much capital investment
    - the products have an accessible market outlet
    - have scope for growth, expansion and diversification
    - simple to manage
    - involves minimum risk
    - compatible with owners goals and interests
    - is not against expectations of society, or illegal
    - delivers returns quickly
    - the necessary inputs are locally available.

Milk processing and marketing – Making yoghurt

Background

Fresh milk cannot be kept for long; it soon turns sour owing to the rapid multiplication of bacteria. Other milk products have a longer shelf life, e.g. yoghurt can be kept for up to five days. Processing of yoghurt might not be feasible for all pastoral communities, but for some, especially those close to a town it might provide an income generating opportunity.

Objective

• preserve milk and add to its value, thus improving profitability.

Materials

Five litres of milk, milk can, burner/stove, large pot, water, thermometer, inoculants/culture, sugar, filtering cloth, stirrer, and spoon.

Time

One hour.

Steps

Filter the milk to remove any physical dirt.

1. Conduct a visual check of the milk and look for any abnormalities (colour or foreign particles) and an odour check. If the quality is good, it can be used.
2. Heat water in the large pot to 80–85°C. Put the milk in the milk can and add sugar (up to 6% depending on client). Put the milk can in the water for 30 minutes (see illustration).
3. Cool the milk to 42–45°C (put in a cold water basin or trough).
4. Inoculate the milk with a starter culture (4–5 grains of culture for 5 litres of milk). Take care to avoid contamination with other micro-organisms. If a starter culture is

not available, half a tablespoon of good quality live or bio yoghurt can be used as inoculants. Stir well for 2–3 minutes to ensure uniform distribution.

5. Incubate at 42–45°C for a period of 2–3 hours (or at 30°C overnight).
6. Check the surface of the fermented milk. It should be compact without cracks and whey on top.
7. Add flavour and colour, then stir well to homogenise the curd to a smooth consistency.

Milk can immersed in a hot water pot

Group dynamic exercises

Group dynamic exercises create a pleasant learning environment, facilitate learning and create space to reflect. They also enhance communication, problem solving and leadership skills. The games and exercises are lively and convey messages. They also break the ice and improve participation. Furthermore, people tend to remember the exercises and thus the message. Each exercise can serve multiple purposes. To apply group dynamics properly, the facilitator should keep the following in mind:

- be clear about what you want to achieve with the exercise
- be aware of the appropriate moment, e.g. do an exercise to energise people when they are feeling tired, or to tackle conflict if you see one arising
- plan and prepare the exercises (reserve time for them in the PFS programme) and always add a 'head' and a 'tail' (introduction and analysis)
- good exercises involve everyone in the group
- exercises should be adapted to local and cultural conditions and should not offend people or make them feel embarrassed

- vary the type and use of the exercises – don't only do exercises that energise
- treat group dynamic exercises as a toolbox – do not become trapped in a fixed formula. Remember that each PFS is unique and exercises should be modified for each specific PFS.

This section gives examples of group dynamic exercises which aim to facilitate various objectives of PFS.

Group dynamics to energise participants

These games and exercises enhance the participatory learning process by energising participants: making them laugh, relaxing and calming them and refreshing their minds. They also enhance concentration and attentiveness. Energisers are used during and after a long or difficult session, when the group has become tired or tense or when the pace of the session needs to be changed. Four examples are provided below, and there are many others in published books.

Claps

In the PFS, many different types of claps are used to energise the participants and also to welcome or thank a contributor.

Time

1–3 minutes.

Steps

1. The PFS clap: two rounds of three fast claps followed by one loud clap.
2. The OK clap: three fast stamps with one foot on the floor, three fast claps followed by the OK sign formed by the fingers.
3. The praise clap: three fast stamps on the floor, two fast claps followed by stretching the arms towards the person being welcomed or thanked.
4. The rain clap: the arms are raised above the head and the fingers are moving fast (like rain coming down), slowly the arms are lowered in a wide circle until they are down, followed by a loud clap with the hands.
5. The energy clap: the right arm is spinning around next to the body (like the wings of a helicopter) first slowly then faster. When the speed is at its fastest, a loud clap with the hands follows.

Coconut

Time

Five minutes.

Steps

The participants stand up and write the word C-O-C-O-N-U-T with their bodies (of course, any other word can be used)

Fruits and animals

Time

5–10 minutes.

Steps

1. The facilitator asks the group to form a circle standing up.
2. The group claps three times then the facilitator says the name of a fruit.
3. After three more claps, the person next to the facilitator says the name of an animal.
4. After three more claps the next person says the name of a fruit and so on around the circle.
5. If someone says the name of a fruit when an animal is required, or cannot think of a fruit or animal, or repeats the name of a fruit or an animal that has been said already, they must sit down.
6. Continue until only one participant is left standing.

Inside the field – outside the field

Time

5–10 minutes.

Steps

1. Draw two parallel lines on the ground with a distance of approx.2 m between them.
2. Divide the group into two. Each group stands behind a line, so that the two groups are facing each other.

3. The facilitator explains that the area between the lines is the field.
4. When the facilitator says "Inside the field", all participants have to step over the line into the field area. When the facilitator says "Outside the field", the participants have to stand on the other side of the line.
5. The facilitator will gradually increase the speed of the commands to enhance the participants' alertness.
6. Each participant that reacts too late, or does not follow the command correctly is out.

Group dynamics to enhance participation

Since the PFS participants are the key focus of the programme and their skills and experiences are the main resources, it is important to create an atmosphere where people feel free to share and exchange experiences and discuss views. Exercises to enhance participation should be included from the beginning of the PFS to break the ice and create a pleasant learning environment where participants respect each other's opinions and contributions.

Talking object

Objective

- encourage participation and discourage dominance.

Time

Fifteen minutes.

Steps

1. Participants sit in a circle.
2. An object is passed around the circle and the group decides on the subject of discussion.
3. The person who receives the object has to talk continuously until his/her neighbour decides to take the object and takes over.
4. This continues until all participants have spoken.
5. To reflect upon the exercise, the facilitator asks the participants to express how they felt when they were talking, when they had to wait for the object, and when they were interrupted.
6. Discuss that in a group it is important to share (talk), listen and respect other participants.

Knotty problem

Objectives

- demonstrate that groups empowered to solve their own problems are much more successful than those instructed by outsiders
- strengthen participants' confidence in their ability to solve problems themselves.

Time

10–15 minutes.

Steps

1. Select one, two or three participants to act as PFS facilitators. They are asked to leave the room while the facilitator instructs the rest of the group.
2. Ask the remaining participants to hold hands in a circle and tie themselves into an entangled knot. They must not let go of each other's hands.
3. Once the knot is complete, the 'facilitators' who left the room return and are asked to unravel this knotty problem within three minutes, using verbal instructions only. They should hold their hands behind their backs so they are not tempted to touch the others.
4. The participants entangled in the knot are asked to follow the facilitators' instructions literally and not make it easier for them by doing anything they have not been told to do.
5. The attempt is generally not very successful and sometimes even produces a more complex knot. Now repeat the exercise with the facilitators participating in the knot. When the knot is ready, simply ask the participants to get out of the knot themselves. This untying process is usually much quicker.

6. Ask the participants to comment on the differences between the first and the second time the knot was unravelled and why these differences occur. "What does the game tell us about the role of outsiders/facilitators and insiders (in the knot and in other problems in general)?" "What does the exercise tell us about the effectiveness of outsiders and managers in organising people?" "Who were the most successful in solving problems and why?"

Folding paper game

Objectives

- demonstrate that even simple instructions can be misinterpreted
- raise awareness of misinterpretation of instructions and facts through non-participation, absenteeism and not asking for clarification
- develop ways to avoid/resolve situations of misinterpretation.

Materials

Several sheets of paper (square sheets are most interesting, as ingenious participants could choose to fold them from corner to corner, thus getting a triangle).

Time

Five minutes.

Steps

1. Select four participants (or ask for volunteers) and ask them to stand in front, facing the rest of the group.

2. Give each a sheet of paper. They must keep their eyes closed and must not ask questions.
3. Instruct them to fold their paper in half and then tear off the bottom right-hand corner of the paper. Tell them to fold the paper in half again and then tear off the top right-hand corner. Tell them to fold the paper again and tear off the bottom left-hand corner.
4. Ask them to open their eyes and display the unfolded paper to each other and the audience.
5. It is quite likely that the pieces of paper will look different. "What words in the instructions could be interpreted in different ways?" "How could the directions have been clearer to reduce the ambiguity?" "How can we encourage people to ask for clarification when they do not understand something?"

Puzzle

Objective

- increase understanding of teamwork.

Materials

Puzzles made out of a piece of paper cut into pieces (better when the paper has a picture or drawing). Use a different puzzle for each sub-group.

Time

Fifteen minutes.

Steps

1. Make or use existing sub-groups.
2. Give each sub-group a puzzle and ask them to solve it in three minutes.
3. Discuss which group managed to solve the puzzle? "How did they do it?" "What were the roles of the different members of the group (e.g. who took the lead, who put the pieces together and who stood back)?" "What makes a good team?" "What kind of people should a team have?"

Group dynamics to strengthen a learning topic

PFS facilitators should convert technical information into practical exercises and field activities and avoid lecturing or conventional forms of training. The aim is to ensure participation by all and to make the learning situation entertaining and effective. For example, instead of describing local fodder grasses in front of the group, the facilitator should ask the pastoralists to walk around in the field, observing and discussing the local fodder species where they grow. This Field Guide gives many examples of how technical topics can be delivered through exercises such as scarecrow and tug of war (tools to

introduce PM&E, page 90), the concept of an ecosystem (page 62), the concept of PESA (page 68), etc.

In addition, the special topics (learning activities) demonstrate how group dynamic exercises can be used to introduce and enhance understanding. However, since the PFS programme is guided by the PFS participants, it is not possible to provide a list of all the technical exercises to be carried out. The facilitator needs to be very innovative and to develop different ways to deliver the technical content requested by participants. Some guiding principles:

- Avoid situations where the facilitator stands in front of the group and explains technical aspects away from the location of the topic of study.
- The participants should always talk more than the facilitator in any given learning session.
- Physical activity should be encouraged in all learning sessions, e.g. pastoralists digging in the soil to look at root development or searching the chicken for fleas.
- Entertaining aspects should be encouraged when delivering technical topics, e.g. a simple song or drama rather than a presentation on a flip chart. Folk media (role plays, drama, poems, songs, story telling, dances and legends) are particularly useful.

Group dynamics to strengthen group work and cohesion

Good group work enhances exchange of information, reflection and learning. In participatory processes, the different capabilities of different people complement one another. A group can only become a team when all the members are interdependent. With constructive interaction, dialogue and consensus, aspects such as cooperation and team work increase. Group dynamic exercises to strengthen group work and cohesion are designed to encourage such dialogue and to reflect on the nature and process of teamwork. Guidelines for dynamics on the formation of sub-groups, support of groups and strengthening of groups are presented in the following section.

The goats and the lion

Objective

- form sub-groups and make sure that the groups are mixed.

Time

Five minutes.

Steps

1. Participants are requested to roam around the room as if they were goats grazing.
2. The facilitator explains that a lion is approaching and that only the goats that are in groups of a certain number (e.g. groups of eight, but can be any number) will be safe.
3. The participants have to react quickly and hold each other's hands or shoulders.

4. This is repeated until the desired numbers of sub-groups are formed. With a group of 25–30, sub-groups of around 5–6 are most effective for learning.

Gun, rabbit, wall

Objectives

- enhance understanding of strengths and weaknesses, and learn importance of identifying strengths of each individual to help one another overcome weaknesses
- recognise importance of group work and consensus, since all members of a team need to be going in the same direction
- understand that a group needs to be organised to function well.

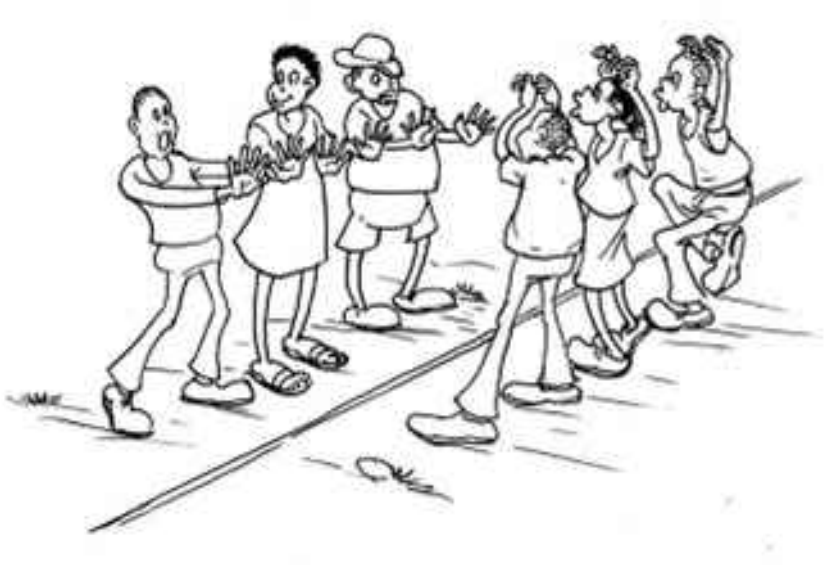
Time

10–15 minutes.

Steps

1. Split the group into two.
2. The facilitator explains that there are three characters: a gun, a rabbit and a wall, each having its specific strengths and weaknesses. The gun can beat the rabbit since the rabbit can be shot. The wall beats the gun as it can stop the bullet, and the rabbit beats the wall as it can jump over it.

3. Each group has to decide whether it is a rabbit (by placing the hands on the head), a gun (by placing the hands like a gun) or a wall (by stretching the arms out wide).
4. The two groups form a line facing each other. The facilitator counts to three, then the groups show which they are by making the movements. The team with the most 'winning' moves is declared the winner.
5. What can be learned from this exercise? Each creature has its strengths and weaknesses. Also, a group needs to be organised and must communicate well, and a good leader can bring the group together.
6. In addition, the group has to pull together and will lose out if one person does something different from the others.
7. Ask the participants to comment on what can be learned from the exercise (each creature has its strengths and weaknesses and that the group needs to be organised and communicate and reach a consensus to be able to win the game).



Digging exercise

Objective

- enhance group cohesion and facilitate work through proper planning.

Materials

A hoe.

Time

10–15 minutes.

Steps

1. The facilitator asks for three volunteers.
2. The participants are asked to dig together using the hoe.
3. In most cases, the participants struggle and the digging does not go very well.
4. The facilitator asks them to stop and asks the group what they just witnessed. What can we say about the digging? What can they do to improve the digging?
5. The three volunteers discuss amongst themselves and make another digging attempt.
6. When they have stopped digging, the facilitator asks what the group could observe comparing the two digging attempts. The first attempt was uncoordinated digging, whereas before the second attempt, the three participants coordinated the activity and agreed how to dig together.
7. One can learn from this exercise that group work needs coordination and communication (agreements amongst all members) to be able to successfully conduct activities. This is what the sub-groups in the PFS need to keep in mind whenever they undertake an activity.

This exercise can also be done using a pen (for literate participants) to draw an object of their choice on a flip chart, using the same procedure.

Group dynamics to solve conflicts

Where there are people, conflict can occur. Conflicts arise out of different perceptions, varying views, intolerance and prejudice. Conflicts hamper learning and should be tackled before they break up a group. A well-facilitated PFS creates dialogue and encourages understanding and should not fear the management of conflicts. The group dynamics provided assist discussion on the causes and effects of conflicts and provide a start for problem solving.

Different sites

Objectives

- provide insight into cause and effect of conflict
- provide ways and means of addressing conflict.

Materials

Several objects representing resources, such as books, pens and stones.

Time

Ten minutes.

Steps

1. The facilitator asks for four volunteers to leave the PFS learning site.

2. Objects (resources) are put in the middle of the remaining group of participants.
3. The facilitator gives instructions to the four volunteers separately. Each volunteer receives instructions to take all the objects to a location. However, the location given is different for each volunteer.
4. The volunteers are asked to come back, have a look at the objects and follow up their specific instructions.
5. Each volunteer will move the objects according the instructions given. Most probably a conflict occurs as none of the volunteers will manage to take all the objects to the place they were instructed, because the other volunteer will take the objects away again.
6. If the volunteers do not come up with a solution themselves, the facilitator needs to stimulate the volunteers to discuss how they can solve the problem. After discussing among themselves, the volunteers agree on a way to carry out the various instructions in a systematic way to the satisfaction of each of them.
7. The facilitator initiates the analysis of the exercise using questions like: "Has this exercise revealed general difficulties experienced in real life? If so, what kind?", "What was the solution of the volunteers?", "Is the solution applicable to conflict in real life?" and "What tool/mechanism was used?" (After discussion they understood each others' instructions and could then decide to follow up the instructions, one by one.) "What can we learn from this exercise?" (That communication and understanding of each person's needs and aims is crucial in conflict solving.)

Come on over

Objective

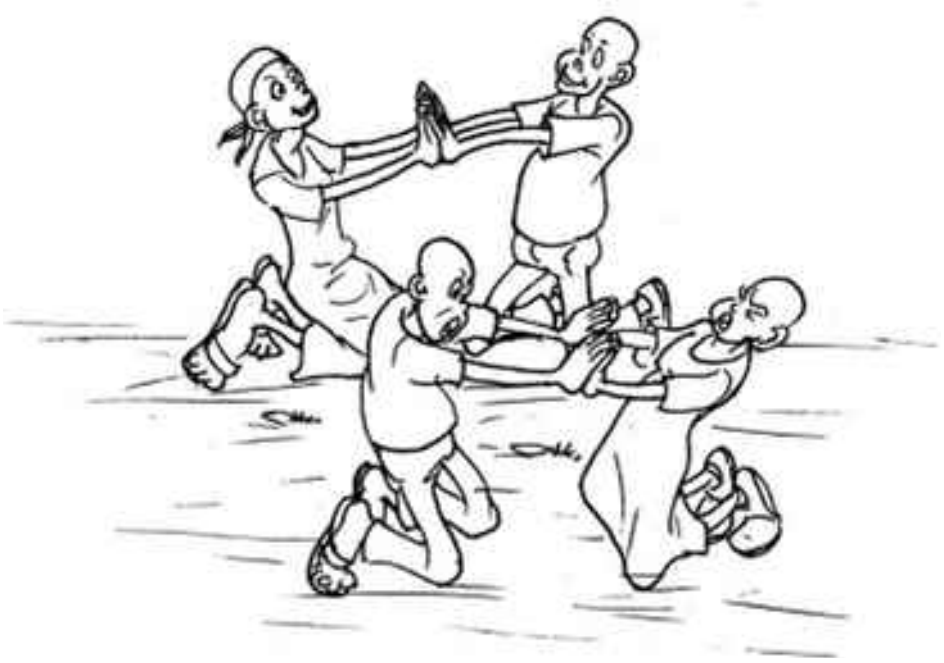
- demonstrate that non-resistance may actually work in your favour.

Time

5–10 minutes.

Steps

1. The facilitator asks participants to form pairs and face each other while kneeling.
2. Designate one person 'A' and the other 'B'. Partners place their hands against each other with palms open and forward.
3. Ask each person to push their hands against their partners' with firm pressure. Tell A to give in (stop pushing) at any time without warning B.
4. Reverse the roles and repeat the exercise.
5. The facilitator asks the following questions: "How did it feel when you stopped resisting?" and "How did it feel when you exerted continued pressure?" Unnecessary strength or pressure can sometimes be counterproductive. "Can you think of some examples in daily life when this has happened?", "Can you think of examples in the PFS when this happened?"



Confronting the lion

Objectives

- show that people have different reactions to the same problem/obstacle
- encourage self-analysis
- show that obstacles can be overcome.

Materials

Flip charts and markers.

Time

Twenty minutes.

Steps

1. Vividly describe a scene of walking alone and meeting a lion.
2. Ask participants to describe in one word what they would do in that situation.
3. The facilitator records these responses on a flip chart.
4. Why are the responses different? Discuss ways in which the responses may be similar to daily situations in which we meet 'lions' or problems and barriers.

ANNEX 1: PFS Grant Proposal (example)

PFS Grant Proposal Form

Please discuss the following items among group members (and PFS facilitator) and fill in as completely as possible. Submit to your supervisor. Attach extra pages if necessary. Thank you.

Proposal title: .....

Group name: .....

Address/location: .....

Account information[1]: .....

Group introduction[2]: .....

.....

.....

.....

PFS proposed activities[3]: .....

.....

.....

.....

.....

Workplan[4]: .....

.....

.....

.....

.....

Detailed budget[5]:

Field inputs: .....
…….. .....
.....
…… .....
... .

Stationery and supplies:
.....
.....
…… .....

Motivation for facilitator: (amount per week with x number of meetings)
.....

.....
.....
……..
Field day:
.....
.....
.....
.....
.....
.....

Group contribution[6]: .....

Snacks: .....

Total grant requested: .....

Signatures (name, signature and date):

Group chairperson: .....

Facilitator: .....

District/Project official: .....

[1] Include bank/savings association, branch, account name and account number.

[2] Explain the activities of your group and community activities in general including group objectives and membership.

[3] Describe the enterprise/topic to be studied, including analysis of economic benefits expected as a result of this PFS activity.

[4] Provide commencement date, meeting days, and field day date. Also attach a list of members to be enrolled in the PFS including name, gender and age.

[5] Provide list of materials, supplies and other items to be purchased here or on a separate sheet.

[6] Describe contributions from the group.

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