Farmer Field School for Improved Animal Management

Case Study and Facilitator’s Manual

Heifer International Case Study Series, No. 1
HEIFER INTERNATIONAL is a nonprofit, humanitarian organization dedicated to ending world hunger and poverty and caring for the Earth. Heifer pursues this mission by providing livestock, trees, training and other resources to help struggling families move toward greater self-reliance and build sustainable futures. Heifer’s gifts of livestock offer milk, eggs, meat, wool, draft power and other benefits that provide improved nutrition, health, education and income for resource-poor families.

Heifer partners with groups to create a development plan with specific goals based on the values of their community. Partners learn to care for animals and grow crops in ways that can be sustained for future generations. Heifer adds expertise in animal health and husbandry, water quality, gender equity, agroecology and community development.

Over the years, Heifer has developed a set of guiding principles called the 12 Cornerstones for Just and Sustainable Development. The Cornerstones form the acronym “PASSING GIFTS,” an essential element of our sustainable approach.

Heifer requires that livestock recipients Pass on the Gift of one or more of their animal’s offspring and training in environmentally sound agriculture.

In this manner, an endless cycle of transformation is set in motion as recipients become equal partners in ending poverty and hunger. Since 1944, this common sense approach to sustainable development has enabled Heifer to partner with millions of families in more than 125 countries to improve their quality of life.
Heifer International has a long history of finding innovative ways to increase the impact of our programs. In continuing with that tradition, Heifer Nepal recently sought to find new ways to help small-holder farmers maximize the impact of the animals they receive from Heifer. To achieve this, the Nepal team innovatively adapted Farmer Field School (FFS) in its goat project, a widely used approach in agriculture, to the context of animal raising. Using the improved practice, average growth rate of goats was almost double as compared to traditional practices, and the average time from birth to mating was reduced by more than 100 days. This means more generations and larger goats in less time, which translates into higher profits for the farmers.

As revealed by the results of the pilot, Heifer Nepal has developed a method that can significantly help increase production and productivity of Heifer’s animal inputs. This case study and manual outlines the details for conducting Farmer Field School including principles, methodologies and additional materials for effective implementation.

It is prepared with the purpose of sharing best practices for conducting FFS in any animal species using the example of goats. Use of this method will greatly benefit Heifer country program offices and project participants, as well as academics, livestock extension agents, animal scientists and technical trainers.

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Farmer Field School (FFS) is a widely used extension approach in the field of agriculture. Farmers participate in an FFS to learn the details of management in producing a crop or in a stage of the production cycle. It gives the farmer an opportunity to compare his existing management practices with new or modified practices in order to make decisions over the whole production process. The approach has been successfully used for integrated pest management in agricultural crops. The participating farmers learned and discovered new practices with little facilitation. This approach creates an environment for weighing existing traditional practices against new practices, allowing farmers to come up with a new set of decisions.
practices. This unique extension approach keeps farmers in the center of the practice and allows farmers to become experts after they participate in an FFS.

The unique approach of FFS has also been applied to animal production in a few countries on a few occasions. However, the approach has not gained the same level of popularity as in the production of agriculture crops. Reasons for not using this approach in animal production include a longer production cycle in comparison to crops, more costs to manage larger numbers of observation units in comparison to agricultural crops, and a lack of literature and guidelines available on implementing FFS for animal production. Animal farming, like crop farming, has been in practice in rural areas in many parts of the world since ancient times. Knowledge, skills and the art of animal farming are passed over generations. People in rural areas have their own practices for raising animals. They are able to maintain their animals to a certain level of productivity whereas new developments in technology result in higher levels of productivity stemming from modifying existing practices of feeding, breeding, housing, animal health care and marketing. There is a huge effort all over the world to disseminate such proven technologies from research stations to the farmer’s field for adoption. Different extension approaches are in practice with varying degrees of success, measured by the adoption rate of technology by farmers. There are technologies that can increase the productivity of an animal. Yet there are still poor animal keepers raising low-producing animals in rural areas in almost all parts of the world. This is the case in Nepal.

Heifer International has worked to end hunger and poverty with poor communities in rural areas of Nepal for more than a decade. Livestock is the major input gifted by Heifer International to poor families to help them lift themselves out of hunger and poverty. The participating families learn about new technologies related to animal production through training. Adoptions of such technologies vary, and the potential to increase animal production is not fully realized. Heifer Nepal piloted a unique Improved Goat Management Farmer Field School (IGM FFS) in one of its project areas in 2010. A group of goat keepers in the Heifer Nepal project area participated in a yearlong IGM FFS and discovered a set of practices for goat raising that resulted in tangible improvement in goat productivity. They were able to produce marketable and breeding age goats in remarkably less time compared to traditional practices. They discovered the right age to sell their goat for meat. The set of goat raising practices they discovered during the IGM FFS is now practiced by the whole group, as well as other nearby groups.

Objectives

The Farmer Field School aims to give the farmers the necessary skills to actively evaluate the information that they gathered through observation, exchanging of experiences, experimentation and other information that has been offered to them by extension workers and others. The school gives the farmers the skills to test the usefulness of existing practices and develop new practices. As the manager of his own field and livestock, it is up to the farmer to make decisions based on this information. The Field School provides farmers with tools to make these decisions.

The objectives of the IGM FFS were:

- To empower participants to take more control of the process of improving goat production practices.
- To improve the decision-making skills of farmers.
Activities

A Farmer Field School on improved goat management was conducted at Shaktikhor village in Chitwan District of Nepal to cover the kid-to-kid production cycle of goat rearing. Twenty-seven members of one self-help group (SHG) participated in Improved Goat Management Farmer Field School (IGM FFS) from February 2010 to January 2011. The SHG members divided themselves into five sub-groups, started with a pair of kids of the same age, and organized a monthly meeting for sharing observations and making decisions. A local Community Animal Health Worker (CAHW), with support from a veterinarian, facilitated the school to empower SHG members to enhance their decision-making skills on goat production practices.

A survey was carried out before starting IGM FFS to know existing practices of goat rearing in the community. The survey revealed that 18 months is required to produce a goat weighing 25-35kg.

Approaches

Participating farmers in this exercise adopted improved practices in goat rearing, including:

- Improvement in goat pens: Farmers used locally available materials for improving the goat sheds to protect animals from extreme weather, rain and predators. That included reconstruction or modification of goat pens to assure cross ventilation, appropriate gapping on the floor of the pen, leak-proof roofs, regular cleaning of goat pens and smoking out goat pens for a few hours in the evening to protect the goats from mosquitoes.

- Supplementing fodder and forage with concentrated feed: Goats were provided leguminous and non-leguminous grass, clean water and access to mineral blocks. In addition to normal feeding practices, farmers provided 200 grams of concentrated feed, which was formulated locally using ingredients listed below.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Amount (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oat</td>
<td>16</td>
</tr>
<tr>
<td>Soybean cake</td>
<td>10</td>
</tr>
<tr>
<td>Wheat bran</td>
<td>7</td>
</tr>
<tr>
<td>Maize</td>
<td>16</td>
</tr>
<tr>
<td>Agrimin Forte (Mineral mixture)</td>
<td>0.5</td>
</tr>
<tr>
<td>Salt</td>
<td>0.5</td>
</tr>
</tbody>
</table>

- Breeding intervention: Improved breeding practices included in the experiment were the castration of all male goats at two months of age except for the breeding buck, keeping the breeding buck in a separate pen, weaning kids, flushing of breeding goats and breeding only with selected goats.

- Timely vaccination against diseases: Goats were vaccinated against peste des petits ruminants (PPR).

Limitations

Despite the effort to find goats of similar age and weight, there were some deviations in the weight of goats used for the experiment. This situation gave us a chance to compare the average weight gain in each group of goats, rather than comparing gross weight at the time of marketing.

Concentrated feed given to the practice group of goats was more expensive than the concentrated feed available at the market. This cost difference hindered the participating farmers in estimating the economic gain.
Results/Learning

1. A visible difference was observed in the following parameters:

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Improved practice</th>
<th>Traditional practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of first mating (Average of three female goats)</td>
<td>176 days</td>
<td>283 days</td>
</tr>
<tr>
<td>Age of kidding (Average of three female goats)</td>
<td>322 days</td>
<td>433 days</td>
</tr>
<tr>
<td>Mean body weight gain/month</td>
<td>3.09 kilograms</td>
<td>1.20 kilograms</td>
</tr>
<tr>
<td>(Average of five goats)*</td>
<td>(6.80 pounds)</td>
<td>(2.64 pounds)</td>
</tr>
</tbody>
</table>

*Data of five goats for eight consecutive months

Figure 1: Growth trend of goats (five goats) under improved vs. traditional practices

Figure 2: Growth trend of male goats (two goats) under improved vs. traditional practices
2. Project participants in the IGM FFS have started adopting the improved goat production technology.

3. Other adjoining community members also learned about the results of the IGM FFS and have started adopting the improved goat production technologies.

4. IGM FFS participants learned basic clinical examination of goats and are able to identify causes of poor performance of their goats.

5. IGM FFS participants realized the importance of vaccinating goats against the different diseases prevalent in that area.

6. IGM FFS participants realized the importance of fecal examinations every month to make decisions for treating against internal parasites.

7. A local CAHW who participated in the facilitation of the IGM FFS developed confidence in goat raising and established a goat farm of about 100 goats.

8. The project site is now turning into a local resource for goat farming. People from nearby visit the site to buy high-quality goats for the purpose of goat rearing and meat.

**Looking Forward**

As indicated in the outcomes, FFS is improving goat raising and looks very promising to the beneficiaries. The already proven practices from this school will be used for other projects implemented by Heifer International, not only in Nepal but also in countries where goat is a major livestock species.

In addition, FFS techniques will be used for other animal species and crops. Heifer country offices in China, India, Bangladesh, the Philippines, Thailand, Cambodia and Vietnam have started adopting FFS in their projects based on the interest of the communities in livestock and crops.

Sharing lessons learned and building capacity to run FFS in Heifer country offices are crucial next steps toward achieving greater success. Initial results of the FFS along with the course outline, including the reference guide, have already been shared with country office staff. Each country
Farmer Field School (FFS)

FFS is a group-based approach of adult learning that operates in the field to empower participating farmers to enhance their skills, and to make critical decisions based on available information and knowledge through a process of sharing experiences and testing ideas for adoption. Some information and practices that farmers come across may be useful for their crop or animal production. FFS equips farmers with the appropriate tools to evaluate the usefulness of such information or practice and to adopt it in their crop and animal production system. Participants of FFS gather regularly in a crop field or animal shed to make observations. They share their observations or experiences with other participants attending FFS. Discussion among experienced participants leads to the next level of brainstorming, testing of some ideas and practices in
their crop field or animal farm as and when required, and critical decision making to increase profits from their farm in the long run. They share good farm practices and problems as a group and actively seek, evaluate and test information to improve existing farm practices. In a typical FFS, 20-25 farmers gather once a month to share observations and experiences on the process of raising and managing their crops or animals. The center of the whole FFS is the crop field or animal farm where participating farmers acquire information and knowledge, test new ideas, draw conclusions and test again to verify their results. Such repeated exercises in the field by farmers themselves lead to the discovery of new ideas and practices for their crop or animal farming. The process empowers them by building confidence to make critical and informed decisions. The entire process revolves around building on the existing knowledge of the participants and is conducted by the participants themselves with little facilitation.

An FFS either covers the whole production cycle or an important stage in it based on local need and the objective of the school. The content of the school is decided based on need and the objective sought, yet the content and curriculum decided in the beginning can be modified during the FFS. This group-based approach of adult learning operates in an open field to empower participating farmers to enhance their decision-making skills based on shared knowledge and experiences and testing ideas for adoption. It is a practical education, where there is no distance between words and action, dialogue and cooperation, theory and action, or action and reflection. In short, the FFS is a research activity in action.

The term Farmer Field School (FFS) came from the Indonesian expression Sekolah Lapangan, which means “field school.” The first field schools were established in 1989 in Central Java during a pilot season by 50 plant protection officers to test and develop field training methods as part of their integrated pest management training by the Food and Agricultural Organization of the United Nations. The name Sekolah Lapangan was created to reflect the educational goals; the course took place in the field, and the field conditions defined most of the curriculum in which real field problems were observed and analyzed, from planting the crop to harvest. The field school was a school without walls that taught basic agroecology and management skills.

Adult Learning Process: Basis of Farmer Field School

Adults differ from children in the way they learn. For learning to be effective, it has to be relevant to the daily lives of community members. The participants need to see immediate results to validate the information based on their experiences and, because of their numerous experiences, it sometimes becomes difficult to present new ideas and viewpoints. Adult learners normally go through several phases of a learning cycle:

1. Observing/Experiencing: Learning something new is not achieved in an instant; adult learners will have to go back to evaluate their old knowledge and skills.

2. Analyzing: It may sometimes be necessary to break apart and review existing knowledge and skills, as well as to test the new ideas.

3. Concluding/Processing: New learning will have to be internalized by making it relevant to one’s self.

4. Implementing/Generalizing: New knowledge may have to be shared with other people as part of the process. Only then is the new learning validated when confronted with a similar situation.

5. Questioning/Reflecting: It can happen in any stage of the learning cycle.

The whole FFS approach is based on the following principles of adult learning:

- Learning is an experience which occurs inside the learner and is activated by the learner.
- Learning is the discovery of the personal meaning and relevance of ideas.
- Learning is a cooperative and collaborative process.
- Learning is an evolutionary process.
- Learning is sometimes a painful process.
- One of the richest resources for learning is the learner himself.
- The process of problem solving and learning is highly unique and individual.
The FFS approach, an adult learning process, believes and practices the following training approaches:

- Doing is better than hearing or seeing.
- Experiences are the start of all learning.
- The field is the classroom.
- The topics in the FFS should be linked to the actual field situation and should be relevant to the local needs and conditions.
- The farmers become experts.

### Elements of an FFS

#### 1. The Field

FFS is about practical, hands-on topics. In the FFS, the field is the teacher, and it provides most of the training materials like animals, crops and real problems. Any new "language" learned in the course of study can be applied directly to real objects, and local names can be used and agreed on. Participants are usually much more comfortable in field situations working with the real objects than in classrooms. In most cases, communities can provide a study site in a shaded area for follow-up discussions.

#### 2. The Facilitators

Each FFS needs a technically competent facilitator to lead members through the hands-on exercises. There is no lecturing involved, so the facilitator can be an extension officer or an FFS graduate. Extension officers with different organizational backgrounds, such as government, nongovernmental organizations and private companies, have all been involved in FFS. In most programs, the key objective is to move toward farmer facilitators, because they are often better facilitators than outside extension staff. They know the community and its members, speak the same language, are recognized by members as colleagues and know the area well.

The facilitator’s role* and attitude are key factors in determining the success of an FFS. His or her duties include serving as a catalyst, encouraging analysis, setting standards, posing questions and concerns, paying attention to group dynamics, serving as mediator, and encouraging participants to ask questions and come to their own conclusions.

Capable SHG members can also be used as facilitators, which enhances learning and sharing among the members as farmers appreciate learning from peers with similar experiences.

* For details, refer to the Facilitator’s Role section in *A Guidebook to Values-Based Holistic Community Development Training* (September 2010, second edition), pp. 90-111, Heifer International.

#### 3. The Curriculum

The FFS curriculum follows the natural cycle of its subject: crop, animal, soil or handicrafts. For example, the cycle may be “kid to kid” or “egg to egg” or “seed to seed.” This approach allows all aspects of the subject to be covered in parallel with what is happening in the FFS member’s field. For example, rice transplanting in the FFS takes place at the same time as farmers are transplanting their own crops, and the lessons learned can be applied directly.

One key factor in the success of the FFS has been that there are no lectures. All activities are based on experiential (learning by doing), participatory, hands-on work. This model builds on adult learning theory and practice. Each activity has a procedure for action, observation, analysis and decision making. The emphasis is not only on “how,” but also on “why.” Experience has shown that structured, hands-on activities provide a sound basis for continued innovation and local adaptation, after the FFS itself has been completed. It is also one of the main reasons that farmer facilitators can easily run FFS. Once they know how to facilitate an activity, the outcomes become obvious from the exercise itself.

Activities are sometimes seasonal to yearlong experiments, especially those related to soils or animals (for example, from kid to kid in the case of goats). Other activities in the curriculum include 30 to 120 minutes for specific topics. Icebreakers, energizers and team/organization-building exercises are also included in each session. Often, the curriculum of an FFS is combined with other topics.
4. The Finances
An FFS can be expensive or low-cost, depending on who implements it and how it is conducted. When carried out within a Heifer-type program, the FFS is usually very inexpensive, due to Community Facilitators and Community Animal Health Workers (CAHWs) coming from the communities and being supervised by program officers and regional program managers stationed nearby. Sometimes, a local veterinarian can be hired if Heifer does not have such expertise on the staff, although this will increase the cost.

Obviously, the greater the distance facilitators need to travel to get to the field, the higher the cost of transport. Transport is one of the biggest costs in a field program like this. When the FFS is carried out by local organizations and farmer facilitators, initial startup costs may be moderate, but the running costs will be much lower (about $1 to $20 per farmer).

4. FFS for Improved Animal Management
FFS has been extensively used in agriculture for managing pests in an integrated way. There are some examples of using the concept of FFS in the field of animal management. Animal management differs from crop management in many ways, and the FFS concept developed for crops cannot be used as it is for livestock production. A new set of tools and techniques needs to be developed. It is easy to manage large numbers of experimental units in crops, but is costlier and more time consuming in animal management. The production cycle of crops is relatively shorter in comparison to an animal production cycle. The effect of any component of management, like a new variety of seed, fertilizer or micronutrient, can easily be demonstrated in the crop field. The effect of feeding an animal in a new way or keeping an animal in improved housing is difficult to demonstrate in a tangible way. The effect of environmental components like sunlight, wind or precipitation is not easily demonstrated. Thoughtful planning is needed to make an FFS for improved animal management successful. Farmers will learn if they can see tangible effects from any management practice. Planners of an FFS for improved animal management should be creative and thoughtful in designing such a school. There cannot be a set procedure for designing and running such a school. The following steps can be taken as a guideline in planning and running an FFS for improved animal management. These steps are based on the experience gained from running the IGM FFS in Nepal.

Select Animal Species of FFS
What species of animal should be used in an FFS is the first and most important question to answer before starting any planning. An FFS for goat management needs an area appropriate for goats with goat raising farmers. Likewise, planning an FFS for buffalo raising needs an area appropriate for raising buffalo with many buffalo farmers. Deciding on the species of an animal for an FFS guides the whole planning process. Farm animals have different habits and habitats; they need different natural resources to live on, suffer from different parasites and diseases, and have different economic potential. Moreover, different communities have preferences for raising different species of animals. Deciding on the type of animal species for an FFS has applications in the rest of the FFS steps. In Nepal, the Shaktikhor village in Chitwan was selected to run an FFS on goat production because the area is a dry foothill area and is suitable for goat farming. Families, mostly ethnic and Dalit (untouchable) people, have been raising goats for generations. The small hills of that area are best suited for fodder and forage production to raise goats. These factors led to the selection of goat production for that village’s FFS.

Select Village for FFS
FFS aims to enhance the decision-making skills of farmers by allowing them the opportunity to interact in a group, conduct small trials, make decisions to implement, re-evaluate the decisions applied, make conclusions and decide what to practice. This is an approach meant to build on the existing experiences of raising and managing a particular crop or animal. FFS needs a group of farmers with prior experience in raising and managing the crop or animal for which the school is intended. An FFS may not be effective with a naïve group of people. A suitable village with suitable agricultural commodity of farming is needed to run an FFS. For example, a rice growing area is needed to run an FFS on rice cultivation. Heifer Nepal conducted IGM FFS in a village where goat raising is a traditional practice. Thorough consideration should be given to selecting a village for a particular type of FFS. Based on the experience of IGM FFS in Nepal and other available recommendations, the following points can be considered while selecting the village for an FFS:

- Potential for the FFS intended crop or animal species in the village.
- Interest in the FFS intended crop or animal species in the village.
- Availability of inputs like fertilizer, seed, fodder, pasture, etc. proposed to be tested during FFS.
- Supportive community and local leaders.
Discuss with Local Leaders

Group participation in an FFS starts new interactions, both within and outside the group in the village. The group makes many decisions that may affect the existing power equilibrium in the village at varying levels; therefore, there is every possibility of creating a conflict that may threaten the FFS in one way or another. People in leadership roles in the village should be involved from the beginning to help ensure the objective and outcome of the FFS. A convinced local leader may support the program morally as well as financially. He/she can help the school in motivating farmers to join. The IGM FFS in Nepal started one year after Heifer Nepal launched a specific project in Chitwan, Nepal, and local leaders had already been exposed to the activity of the projects. They were supportive of IGM FFS at every step. They attended the concluding ceremony and farmer field day, and came to witness the impact of IGM FFS.

Organize a Village-Level Meeting

Organizing a village-level meeting with farmers and local leaders is important. The meeting is used to explain the objective of the FFS to create interest in farmers and to learn existing issues with their current farming system. This meeting provides an opportunity to learn the feasibility of running a specific FFS in the village. It helps to identify farmers interested in joining FFS. An informal meeting letting everybody share their ideas fulfills the objective of the meeting. The following topics can be discussed during the meeting:

- General information about the community and households.
- Farm management issues, such as: What problems do farmers often encounter? What are the constraints in farming? What would they like to improve?
- Objectives of the FFS.
- Who is interested in attending the FFS?
- Participatory approach of the FFS.
- Role of the facilitators.
- Farmers’ expectations from the FFS.

- Accessibility for outside observers and nearby communities.
- At least 20 families practicing the FFS intended crop or animal production.
- A rural setup with agriculture and animal production as a priority business.
- Not many active projects in the village to avoid conflict of time and attention.
Select Participants of FFS

The success of any FFS is dependent on the selection of the right farmers. The selected farmers must have some experience in the FFS subject like rice farming, vegetable farming, goat farming, etc. Experience creates farmers’ interest in subject matter of an FFS. They share their experiences on the topic, which creates discussion during the FFS. Sharing experiences and having live discussions create an environment of participatory learning, which is the heart of any FFS. Mistakes in selecting the right farmers to participate in an FFS may result in apathy during discussions and may spoil the cooperative learning environment. A gender matrix may be prepared to best appreciate farm activities performed by men and women in a family. Such a matrix may help determine whether to select a man or a woman member of a family to participate in an FFS. The following guidelines can be considered during the selection of the farmers:

- Willingness to attend all FFS meetings throughout the season.
- Full-time farmers.
- Energetic and fit.
- A balance of young and old.
- A mix of men and women.

A farmer’s educational background is not a criterion for selection of FFS farmers; whether literate or illiterate, all farmers can learn in the FFS.

IGM FFS selected all 27 members of the Laligurans women’s group to participate because they all had experience in goat raising and were all female. Females of the family in the area take care of farm animals including goats. The members were already in a group and participating in the Heifer Nepal program. It was clearly noted during FFS that members taking care of their goats themselves were participating thoughtfully. Some members had other family members take care of the goats and they were found to participate less. Most of the members were illiterate and were attending literacy class, but their participation was not less than that of a literate member. The experience of participants is most important as it shows the level of involvement in the FFS.

Prepare Baseline Survey, Existing Animal Raising Practices and Seasonal Calendar

FFS builds on existing knowledge and practice of raising a particular crop or animal. A baseline survey will give trainers background information about the socioeconomic situation of the farmers. The facilitators must know the existing knowledge and practice of raising a particular species of animal in the proposed village to plan the FFS. Knowledge and practice of the whole production cycle are required to plan an FFS covering the entire production cycle like kid to kid in goats, calf to calf in cattle, or lamb to lamb in sheep. Other types of FFS covering periods of lactation, gestation, growing, fattening and puberty can also be planned. These types may only need knowledge and practice related to the particular physiological stage of the animal species in question. It will be a wise decision to record details of knowledge and practice covering the whole production cycles even for an FFS covering a part of the production cycle. Practice in one stage has implications on other stages. Any special management practice during a particular season should also be noted, besides the regular management practice covering the entire production cycle.

Animal raising practices are established in a particular community after years of trials and testing over generations. Such practices are socially accepted, and farmers practice from their perspective. Animal raising practices like taking animals to faith healers to cure diseases and inhumane treatment do exist in some communities. A skilled facilitator should always be careful while making comments on existing animal raising practices. The communities may not cooperate in telling their way of managing animals if they feel ashamed. Usually, an animal raising calendar gathers information on the following:
Housing.

Feeding practices.

Sanitation and cleanliness.

Parasite and disease management practices, including indigenous practices.

Seasonal management practices.

Routine operations.

A facilitator needs to gather all of the information above to have a final list of animal raising practices in a community. The facilitator must have a good understanding of general husbandry practices about the animal species in question. A facilitator preparing a pig raising practice and a seasonal calendar must have a good understanding of general pig husbandry. Facilitation skills to motivate participating animal owners to speak out are a must. The process of getting information from animal owners may vary from community to community, but the following steps can be considered as a guideline:

1. Call a meeting of all selected participants
   Decide a venue, date and time before calling a meeting of selected participants. Give thorough consideration for the ease of participants while deciding the date and time. Farmers are busy in some months and particular times of the day. Women participants may be busy with their household job during morning hours. Avoid calling such meetings in peak farming seasons like rice planting season. Farmers can yield much information when they are mentally attentive during the meeting. Venues of such meetings should not be very close to their homes to avoid unnecessary interruption by kids.

   Inform the selected participants about the date, time and venue of the meeting well ahead of time. Make necessary arrangements for seating, food and drink, if required at the venue. A shaded area with enough space or open space under a tree can be an appropriate place to hold such a meeting. Prepare a schedule a day ahead of the meeting. The schedule must include the activities to be carried out during the meeting and what facilitators are responsible for. A group of three facilitators can facilitate such a meeting with ease. One facilitator will facilitate the meeting while another one will record and a third one will observe and give feedback when required. The participating facilitators must know their roles one day before to prepare for the meeting. Necessary stationery and supplies should also be planned and brought to the meeting. The following is a sample list of such supplies:

   - Brown or white paper.
   - Permanent marker.
   - Tape and glue.
   - Long scale.
   - Photograph of a baby, goat kid, calf, or small chicken.
   - Different color sign pens.
   - Scissors.
   - Pins.
   - Poster of animal species FFS planned for (i.e., For an FFS on goat raising, use posters of goats).

2. On the meeting day
   The outcome of the meeting depends on the level of comfort participants feel in sharing their ideas and knowledge. Facilitators and participants should know each other. The meeting can begin by greeting and introducing themselves to each other. A facilitator can greet and introduce himself or herself first and can ask participating farmers to introduce themselves. A
group dynamic exercise (Annex VIII) can be carried out in the beginning to get the attention of participants. The facilitator should explain what FFS is once again to the group.

3. Form small groups of four to five participants for entire FFS period

Generally, a group of 20-25 members participates in an FFS. This big group is divided into small groups of four to five members in each group. It is easier to interact in small groups than in a large group. Such small group formation is either for preparing a seasonal calendar or for the entire FFS period. It may be a wise decision to form small groups of four to five participants for the entire FFS period. If so, some considerations for the operation of the FFS should be made. These groups have to sit and interact every month on the day of FFS. They need to observe, interact to draw conclusions and record in a presentable format. A group consisting of some literate and experienced members is helpful for running FFS. It is convenient for them to meet frequently if they are in a close neighborhood. If FFS participants are men and women, they should be mixed into each group. The newly formed groups should be told that they are going to be together for the whole FFS. Some provision of rewards for the groups doing good observation, recording and presentation should also be announced.

4. Explain to the groups the importance of animal raising practices and seasonal calendar

The facilitator should explain to the groups the importance of preparing animal raising practices and a seasonal calendar. The importance of such a calendar can be simply explained by linking occurrences of problems, like disease or parasites, in a particular season. Participants may be motivated to speak on what change in animal raising practices can be implemented in a particular season to control a particular disease. Animal keepers know of many such examples they have practiced in the past. They can further be motivated by explaining “if we know all animal raising practices by season, we can plan and change many such practices to control many problems.”

5. Motivate groups by baby care exercise

Get a photo or sketch of a baby and place that on the wall. Ask everybody to observe and reflect on what they see. Ask what is done by the mother and family of such a baby to make him or her grow. They may obviously answer that his or her parents and family feed the baby on time every day, bathe the baby every day, comb his or her hair every day, and so on. Now hang a photo of a young animal on the wall and ask what you do to raise it to a big animal or what you do that is special in a different season. For an FFS on goat raising, ask them to think about what they do every day, in different stages of life of that animal species, and anything special during different seasons to grow a marketable or productive animal. Ask them to think and share their experiences during separate meetings of their groups. We found this exercise very helpful in encouraging thinking in participants. All the groups sit together through this exercise. After, they sit separately to prepare an animal raising and seasonal calendar with their own group. They are informed at this point that their group must prepare an animal raising calendar and they have to present it in front of all groups. Groups doing a good job in preparing a seasonal calendar and presentation can be rewarded. This should be announced before groups start working in their small groups. All groups should be asked what stationery they need, and it should be made available. Also assign the facilitator for each group. The groups can be told about the easiest way to prepare such a calendar. One way of preparing such a calendar could be to record all activities done from morning to evening in the animal shed. All practices are recorded from kid to kid, calf to calf, lamb to lamb, or egg to egg. Record special practices in different seasons. Participants of all groups can be asked to prepare a typical day’s operations, and to record management practices at different physiological stages and any special management during a particular season.
6. **Facilitate each group separately to prepare animal raising practices and seasonal calendar**

The groups sit separately with their necessary stationery. Facilitators for the group may need to facilitate in the beginning. Once the group starts sharing and recording their experiences, the facilitator needs to watch attentively without interfering much in their discussion. Facilitators may add some clarifying questions at this point or keep them for the presentation session. The group needs facilitation on flow and direction of recording practices. It can be a lengthy exercise for groups if only a few members can write clearly. Facilitators may help the group by writing for them. Once all the recordings are done, groups will select one member to present their calendar in front of all the groups. It should be made clear that one member will present, but it is the responsibility of all members to answer any concerns or questions raised by members of other groups.

7. **Presentation by each group in front of all groups and discussion**

The main objective of asking each group to present in front of all the groups is to prepare commonly agreed upon animal raising practices and a seasonal calendar by the FFS participants themselves. They discuss and prepare calendars in small groups and present in front of all groups for rectification, modification and addition of missing points. Facilitators can prepare a blank format to record the agreed upon practices in front of all the groups. Final animal raising practices and a seasonal calendar will be ready by the time the last group presents.

   All the groups should gather in one place, different from where they departed for their group work, after they prepare the animal raising practices and seasonal calendar. The groups are usually proud of themselves as they were able to complete the given assignment. Facilitators may take this opportunity to recognize their efforts and can make the environment pleasant by inviting them to present their talents like singing or dancing. Facilitators may also decide to do a group dynamic exercise before starting the actual presentation. They can motivate everybody to ask questions after the presentations if they have any concerns or objections. Facilitators should explain to them that questioning is good to improve the calendar, and nobody should take it personally to ensure critical questioning. Ask all groups to decide on a time schedule for the presentations and a question and answer session. Ask all groups to finish their presentations and question and answer session within the decided time schedule. The facilitator can motivate groups for presentation by doing a mock presentation himself or herself. Facilitators record the finally agreed upon points in a blank format during the presentations to get the animal raising practices and the seasonal calendar ready.

8. **Preparation of final version of animal raising practices and seasonal calendar**

A final version of animal raising practices and a seasonal calendar should be ready by the time the last group presents. Presentation and preparation of a final version can go side by side. This is the best practice as the calendar is prepared in front of FFS participants. Another way could be compiling the presentation of the groups by a facilitator and taking it back to the groups for approval. The prepared animal raising practices and seasonal calendar are used as references during FFS and should be displayed at the meeting venue of FFS. The prepared version should also be noted in a notebook for official records.

The existing animal raising practices and seasonal calendar actually represent the traditional practice of raising and managing animals. Such practice is also known as traditional practice in FFS. The traditional practice is challenged and tested on many occasions during an FFS. A format of the traditional practice of goat raising and a seasonal calendar prepared during IGM FFS in Nepal are placed in Annex III and IV.

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**Decide Critical Animal Raising Practices and Organize a Workshop**

There are many traditional practices that are critical for production and productivity of animal species selected for FFS. Still, changing or improving such critical practices can yield more production from an animal. Such practices should be identified. An expert of animal health and management can suggest many improved practices to replace or modify the existing ones after looking at the existing animal raising practices and seasonal calendar developed by the
FFS or the traditional practice. They may have different suggestions in light of recent findings in laboratories or published articles in journals. It is a wise decision to see experts before finalizing lists of management practices, so FFS participants can be advised in making decisions. Experts can be called to a workshop. Before calling experts, there needs to be a list of probable areas of intervention, about which farmers would need to be advised. Probable areas of intervention can be prepared by closely looking at the traditional practice of animal raising. An expert with a good understanding of management and health of a particular species of animal can easily pick up areas of improvement in the traditional practice. Such areas may be related to animal housing and sanitation, nutrition or health. Once the area of intervention is decided, the FFS must make a list of local experts or scientists to be invited for a workshop. The scientists or experts should be given the traditional practice so that they can prepare and bring relevant information to the workshop. The workshop should be organized to capture the latest information and technologies from experts. Such a workshop may be required when an FFS on a particular species of animal is taking place for the first time. It may not be required the next time if FFS organizers are aware of information and available technologies for the management and health of a particular species of animal. While organizers of an FFS may encounter information and technologies for the management and health of a particular species of animal, they must be aware that it is the farmers who develop practices out of available information. A ready-made technology is not taken to the farmers for adoption. FFS organizers need to find out useful and practical information that can attract farmers to work for higher production and productivity. Such information should be listed as an outcome of the workshop.

Set Objectives of FFS

Information on location, animal species, animal farmers, the traditional way of raising the animal species and ways to improve these practices is available for the FFS by this stage. Looking at the available information, an animal health and management expert may think of many ways to get the best practices out in that agroecology system. Information available for goat raising may compel an expert to think in some of the following ways:

- Improve existing breeding practice to produce a certain breed of goat.
- Cross-breed to get more meat or milk producing goats.
- Select particular type of goat best adapted to local conditions.
- Improve housing system for better production.
- Improve sanitation to control certain diseases.
- Modify grazing system to control parasites.
- Modify feeding system with concentrate to add more kilograms in a few months.
- Deworm against parasites in a particular month.
- Vaccinate against certain diseases at a particular age and in a certain month of the year.

The organizers and planners of an FFS think from a farmer’s perspective. They need to think: What would most likely satisfy the aspiration of the farmers participating in the FFS? If farmers are keeping goats for meat production, they may want to develop practices to add more kilos in fewer months at low cost feeding. If farmers are keeping cattle for milk production and foot-and-mouth disease and mastitis are limiting factors for milk production, they might develop practices to get rid of such problems. If liver fluke is the limiting factor for goat production, farmers will be more interested in developing ways to solve it. Similarly, the management of some physiological stages in an animal species may be critical for the entire production cycle and farmers may be interested in learning how to best manage them. Based on the need of the farmers, the objective of the FFS is set. The FFS may aim to improve the entire production cycle, a stage in the production cycle, a seasonal animal health problem or feeding practice based on local need. Local need is appreciated best during the village-level meeting, while interacting with the group as they prepare the animal raising practices and a seasonal calendar.

While formulating the objectives of an FFS, the following points should be considered:

- The expectation of the farmer from a particular animal raising practice.
- Available agroecology to support the farmer’s expectation.
- Socioeconomic structure supportive for change to current practices.
In IGM FFS in Nepal, the following objectives were set. These objectives may serve as an example:

- Grow healthy goats.
- Understand and maintain the goat habitat.
- Monitor the goat regularly.
- Make farmers experts in decision-making ability for healthy goat production and marketing.

## Design Curriculum

FFS engages farmers in making decisions to attain the set objectives. They discuss critical health and management issues and decide what can be improved to achieve the objectives. It takes planning or curriculum for such facilitation to take place. There is no fixed curriculum for the FFS; every field school is different, and the curriculum is adapted to the local situation. However, there are some general elements of the field school upon which the curriculum is based, which are as follows:

- Goat Ecological System Analysis (GESA).
- Special topics.
- Field trials.
- Small experiments.
- Group dynamic exercises.

Classes can be organized on special topics to help farmers realize new developments in some areas of management. Discussions can be initiated and farmers may be challenged to test their existing practice with an improved one. Case studies may be presented to help the farmers compare new developments against existing practices or the Farmer Way. All of these activities need a planned curriculum and time schedule. The curriculum and schedule are prepared based on objectives. An FFS covering the entire production cycle, like kid to kid, develops a curriculum covering improvements in practices for a newborn, a growing kid, a pubescent kid, a pregnant doe and a lactating doe. The curriculum is synchronized with the physiological stage. The curriculum may include improvements in housing, feeding, breeding and animal health in each physiological stage. Some trials can also be planned and proposed in the curriculum, based on the data of traditional practice or seasonal calendar.

A list of interventions to be discussed during the FFS should be included in the curriculum. The intervention list is prepared and presented as an improved practice calendar. The components of an improved practice calendar are discussed as a special topic at an appropriate time during an FFS. IGM FFS included the following interventions when developing its improved practice calendar:

- Feeding concentrate ration as per body weight.
- Feeding mixed legume and non-legume forage and fodder.
- Improvement in goat housing to provide space and comfort.
- Making available clean drinking water round the clock.
- Different vaccines on schedule.
- Regular fecal examination and deworming against internal parasites.
- Regular supply of mineral block for goat.
- Weaning at three months of age.
- Castration at one month of age.
- Regular examination and weighing of animals.
- Flushing before breeding season.
- Care of pregnant goat.
- Measures to safeguard against extreme cold and hot weather.

The designed curriculum in an FFS is only a facilitating component. It just diffuses new findings and thoughts among farmers. It is the farmer who decides what to follow and what not to follow, based on discussion during the FFS. The main and sole component of an FFS is experiencing and sharing by farmers to decide what to practice and what not to practice. A venue for effective sharing of experiences and an efficient tool for making decisions must be planned and developed in an FFS. A venue for effective sharing of experiences can be an animal shed or crop field. In IGM FFS in Nepal, 10 goat sheds were used as a venue for sharing experiences by farmers, and an efficient Goat Ecological System Analysis (GESA) tool was used by farmers to make decisions.

### Decide Observation Unit

It is mandatory to set observation units before an actual FFS starts. There are generally two kinds of observation units in an FFS. The first observation units are managed in the traditional practice, using existing animal management practices. The second observation units are managed in the improved practice. For example, if a farmer finds lice on animals during observation, they will treat the animal against lice in an observation unit managed in the improved practice, and either leave the animal in the traditional practice or treat it in the traditional practice if there are some traditional practices. The number of observation units to be included in the FFS depends on the species of animal and the cost involved. If an FFS increases the number of observation units for goats from 10 to 100 and farmers decide during the FFS that sheds need to be modified, then all sheds in the improved practice are modified. That will cost a lot. Unlike with agriculture crops, the number of observation units for animals cannot be increased many fold because of time and cost constraints.

In IGM FFS in Nepal, participants were divided into five groups and each group had two observation units: one in the traditional practice and another in the improved practice. There was one goat in each observation unit so each group managed one goat in the traditional practice and another goat in the improved practice. Each group observed the goats managed in both the traditional and improved practice on the day of FFS. The goats were the same age and the farmers were able to appreciate the effect of the improved practice every month.

### Design Decision-Making Tool

Systematic observation encourages the farmers to actively participate. They relate their earlier experiences with current ones and share with the group. Some farmers may have strong experience in one field of management, while others in another. Sharing within the group followed by discussion creates a conducive environment for collaborative learning. Such collaborative learning is at the heart of FFS. Farmers continue learning from each other’s perspectives and gradually become more knowledgeable in the FFS subject matter. An effective and efficient tool for such observation and decision making is a must for any FFS.

Both animal raising and crop farming take place in particular ecosystems. Animals and crops are tiny parts of their existing ecosystems. The sun is the ultimate source of energy in all ecosystems, soil provides the bed for transformation of energy from one form to another, plants are the vehicles of transferring energy, animals are the ultimate users of energy, and energy finally disseminates in different forms into the ecosystem. A good understanding of the existing ecosystem within which the FFS will take place is necessary to develop good animal raising practices for sustainable and enhanced production. Considering the environment and ecosystem is an existing practice in rural areas when making decisions related to animal raising or crop farming. This process may be one of the prominent reasons why research station-tested technologies are not adapted or are adapted in modified form by farmers. FFS emphasizes holistic analysis of the agro-ecosystem while making observations in observation units. Farmers not only observe goats, cattle or rice in an observation unit but also observe the surrounding ecosystem, including the animal or crop. A systematic
observation tool includes variables of crop or animal characteristics, as well as the surrounding ecosystem. In crop FFS, such a tool is generally named Agriculture Ecological System Analysis (AESA). In animal FFS, a similar AESA can be developed keeping in mind the objective of the FFS.

In Nepal, a similar observation tool for analysis of goat ecosystems was developed, tested and modified during a yearlong IGM FFS. The developed observation tool was named Goat Ecological System Analysis (GESA) (Annex VI). GESA includes systematic observation of goat housing, feeding, breeding, health and surrounding goat habitat. It also provides farmers an opportunity to compare traditional practices and improved practices to better appreciate the effect of the improved practice over the traditional practice. Farmers can make decisions and record them in the last part of GESA. An important feature of the GESA was that it was produced on durable material for writing and erasing many times. One GESA printed on flex was durable enough for the IGM FFS that met 12 times in one year.

GESA can be used as guidelines to develop new observation tools for other species and other types of FFSs. The following guidelines could be used while developing a new kind of observation tool like GESA:

- It should be farmer friendly. Most farmers cannot write well or long. A checklist could be easier to use.
- It should be durable and water resistant.
- It should be easily foldable for carrying and keeping.
- The font size should be big enough to read from a distance at the time of presentation.
- Using less text and more elaboration could be a good choice.
- It should have clear and easily understandable language.
- It should be attractive.
- Content of a new type of observation tool is guided by the objective of the proposed FFS. It requires thoughtfulness from the farmer’s perspective to develop a new observation tool.

Prepare List of Materials and Equipment

Some materials and equipment are needed for systematic observation and recording in GESA. The FFS plan organizer should acquire such materials and equipment before starting the FFS. Each group in the FFS may need one set of such materials and equipment before the school starts. They may also need to be taught how to handle such equipment. The organizer should be careful in choosing equipment and materials that can easily be handled and operated by farmers. The selected materials and equipment should also be durable and good for rough handling in the field. A facilitator or organizer of the FFS can easily figure out the list of materials and equipment looking at the observation tools and considering the entire FFS. A list of materials and equipment used in IGM FFS is included in Annex V.

It is a good idea to buy and pack the required materials and equipment before going to FFS orientation. Such packs can be distributed to groups on the day of orientation. Each group should receive an explanation about use, storage and handling of materials and equipment on orientation day.

Decide Facilitators

A well-planned FFS does not need highly educated facilitators. A Community Animal Health Worker (CAHW) or a junior-level veterinary technician with backstopping support from a veterinarian can easily run an FFS on animal raising. Some of the routine examinations, like fecal examinations, need a CAHW. It is hard for one CAHW to facilitate an FFS and examine animals or perform fecal examinations on FFS day. It can be a good idea to have at least two such technicians available on FFS day. Alternatively, one CAHW can perform examinations one day ahead of the actual FFS and facilitate the next day. There are many benefits to having a veterinarian with a CAHW on the day of the FFS, especially if issues arise related to animal health and management that need to be mainstreamed into discussion. A CAHW who has attended one FFS can easily facilitate the next or a similar FFS. An FFS can also be used to train the next batch of CAHWS for the next FFS. The required skill in CAHWS is the skill of facilitation. They must have a good understanding of different management and health aspects. A good rapport with FFS participants helps them in making the school effective.

Facilitators should be decided long before planning for the FFS. Facilitators can be trained on skillful conducting by involving them in another FFS. They should be involved in all stages of planning and curriculum development of the FFS. Selected facilitators should also be given a general orientation about the FFS. Moreover, it is always good to have a facilitator who has managed the intended species of animal of the FFS by himself or herself.
Decide Meeting Place

A field site suitable for FFS should be representative of the fields in that village. The site should be reached easily by the farmers and be close to the village so other farmers can see what is happening. The meeting site for an FFS should be a shady area or covered area nearby the field site where the farmers can meet at the start of the FFS and after the field work.

Orientation Meeting

Once an FFS is ready to start, a meeting of participants can be called. The main objective of calling an orientation meeting before the FFS is to make participants clear about the process of an FFS. Participants can meet at the designated meeting place for the FFS. The main objective of the meeting is to prepare participants for the entire FFS period by making them aware of the process and to also hand over necessary equipment. Participants should receive an explanation of the decided objectives, time schedule and other processes. Groups formed on the day of preparing the animal raising practices and seasonal calendar can be reviewed again for the rest of the FFS process. Members can be rearranged again for the rest of the FFS if necessary. They should be briefed about the frequency of meetings and also have a tentative calendar for the entire FFS. A typical FFS day schedule should also be decided. While preparing a tentative calendar and typical day schedule, the season, workload and local festivals should be considered. Required materials and equipment should be distributed to groups. Use, handling and care of each material and piece of equipment should be explained. Groups may be assigned tasks like taking responsibility for managing the meeting place, organizing entertainment activities, managing snacks and conducting activities on the day of the FFS to make the school livelier. Groups can also be facilitated to make a general rule and regulation to be followed by participants as well as facilitators during FFS.

Final Preparation

FFS activities should be planned, well prepared and rehearsed before a facilitator leaves to conduct an actual school. The schedule for the day of the FFS should be prepared well ahead of time and the person responsible for facilitating particular activities should be assigned. Methods of carrying out activities should also be planned. A typical lesson plan should be prepared, and should include time of departure and arrival at the FFS site, details of the activity plan including time for breaks, time for concluding remarks and the time of departure from the school site. Such a plan can be prepared on brown paper and displayed at the FFS meeting site. A sample lesson plan used during IGM FFS is listed in Annex VII.

Planning and acquiring facilitation materials like posters, drawings, models, objects, etc. for special topics should be done before conducting an FFS. Make sure that groups have already received the necessary materials like the GESA format, stationery and observation equipment. Any supply for conducting trials such as feed, vaccines, anthelmintic, and fodder and forage seed should also be purchased at least a day before the FFS. Provisions for carrying out special routine examinations, like fecal examinations, should also be planned in detail.

The facilitator’s role during an FFS should also be thoroughly discussed to avoid any confusion during the school. The facilitator should also find relevant materials about any issue raised in the last FFS that needs to be facilitated in the next FFS. The curriculum of an FFS is not fixed and it may need to be modified after conducting a few field schools. Any such modification should also be made in the curriculum before going to the next FFS. Any follow-up decisions needing a facilitator’s help must be acted on before planning the next FFS.
The next step and important part of the preparation for an FFS is to select an observation unit. In the IGM FFS in Nepal, participants divided themselves into five groups and each group selected a pair of goat kids of similar age. One member agreed to raise the kid using existing goat raising practices or traditional practices while the other member agreed to raise the goat using new or improved practices as decided during each FFS. The rest of the group members agreed to regularly watch the selected kids to ensure they were raised as agreed. Group members also agreed to help the group member who agreed to raise the kid in the improved practice.

Local CAHWs or facilitators may be assigned some duties like regular follow-up. In IGM FFS, a local CAHW was assigned to dispense feed, medicine and other supplies for kids kept in improved practice. The CAHW was also given the assignment of primary health care of the goats.

Running a Farmer Field School

Participants and the facilitator gather at the meeting place for the FFS. A typical day in an FFS starts with greetings and introductions, which are followed by the activities listed below.

Group dynamic exercise:
Activities that create a teaching-learning environment; develop group cohesiveness and facilitation skills; make a session lively; or give some important lessons to the training participants to improve their weakness or to make them more active, punctual, curious and serious are called group dynamics. Some examples of group dynamics include games, mathematical puzzles, problem-solving puzzles, role play, icebreakers, brainstorming sessions and other team-building exercises. Such exercises are carried out with one or another of the following objectives:

- Discuss whether to do things for or with people.
- Involve participants in group activities.
- Energize participants and make sessions lively.
- Set the climate for creating a teaching-learning environment.
- Develop creativity in training participants.

Use group dynamics at the beginning of the training, between and during sessions as brainstorming activities or icebreakers to make and keep the session lively, and before the afternoon session as a team-building exercise. Group dynamic exercises are necessary in every field school day to keep participants active and engaged in their activities as they work together for longer periods. It brings cohesiveness within small groups and develops competencies among them.

Observation and recording of observation unit using GESA:
Usually participants become more active and energetic after group dynamic exercises and are ready to carry out FFS activities. They divide into their groups and go to the observation unit with an observation tool like GESA. Groups also take all the necessary materials and equipment required during observation and an observation tool like GESA. They reach the observation unit; hang the GESA or other observation tool; and start observing, discussing and recording the required information on the GESA. The facilitator may want to observe each group to make sure everything is on track while they are making observations and recording. Sometimes group members may be reluctant to speak out about proper implementation of the last FFS decisions, as they know they may hurt their fellow group members. The facilitator should explain to them the importance of proper follow-up of decisions and stress that these comments shouldn’t be taken personally. It is for achieving their FFS goals.

An important part of observation and recording is the final suggestions and recommendations by group members for further improvement. They decide such recommendations through discussion. Group members should also be made aware that they have to present their observations in front of the other groups.

Presentation of observations or GESA:
Each group should present its GESA in front of all the FFS participants. Each group selects one member to present and the rest of the group is ready to make clarifications if any other participants have questions. It may be hard for some groups to present early in the FFS. They may become confident later on. Facilitators should also listen to the presentation with interest.
and ask questions for clarification on any issue. A good facilitator can challenge participants to test their skills and knowledge by asking critical questions. Questioning and facilitation during the presentation are very important for the success of any FFS. But facilitators must refrain from giving direct answers or solutions to participants. Rather, they should be challenged to brainstorm or learn from trial and error. This is the session where many of the decisions for new trials are made. Any decision made during the GESA presentation should also be recorded, and a plan for follow-up by the group should be made to ensure implementation.

Facilitation on special topic:
At every FFS, farmers discuss a special topic. The facilitator plans a topic, with farmer input, that is relevant to the age of the animals and the needs of the farmers. These topics may cover nutrition, housing, animal health, diseases and parasites, breeding or marketing. The facilitator prepares and brings relevant materials for discussion. A detail of the special topics to be covered should already be included in the FFS curriculum. Special topics are also adjusted based on need while the FFS is progressing. If an outbreak occurs, then discussion on the disease will be a priority. Special topics are synchronized in a way to ignite discussion for a certain physiological stage of the animal. If goats are reaching puberty, a special topic on breeding management is planned. Special topics help participants make critical decisions at critical times. A list of special topics planned and discussed in IGM FFS is included in Annex I.

Practical exercise and special examination:
Participants need to learn some skills to complete the observation. They may need to learn about examining the animal from head to tail for any abnormality. They may also need to learn how to take rectal temperature, how to count heartbeats, or learn about normal respiration and ruminal motility. A session in the FFS is also allocated to train participants to carry out such observational activities. Alternatively, they can be trained during the observation unit while they are doing observations. Some examinations like fecal examinations may need the help of a technician. It may be carried out by a separate technician while the FFS is going on, or the technician may decide to do it a day ahead. A list of practical exercises carried out in IGM FFS is detailed in Annex II.

Field trials:
In a field school, farmers may conduct several trials and studies as a supporting tool to confirm innovations and to see their effectiveness, as well as to study different components of IGM.

Evaluation:
FFS is a participatory learning process, and both participants and facilitators can evaluate the school. There are various methods to evaluate the school.

Similarly, participants can evaluate the FFS by using happy, normal and sad facial expressions at the end of each school. Participants' knowledge can be tested during the FFS or at the end of the FFS using a ballot box test. The ballot box is one of the ways in which a facilitator can find out gaps in knowledge at the start of the FFS. At the end of the FFS, we can evaluate what farmers have learned during the FFS.

Planning for next FFS:
Participants may make some decisions by the end of the day in the FFS. A plan for implementation of decisions made can be prepared by assigning responsibilities. A detailed plan for the next FFS should be worked out. Groups should be reminded about their duty of conducting the next FFS managing the FFS meeting place, managing snacks, and organizing entertainment activities. Participants should also be informed about special topic discussions or any special exercises at the next FFS.

Awards:
Provision of awards at the end of each school may motivate participants and groups to perform better at the next FFS. Small awards for good presentation, engaging discussion in group, or thorough implementation of decisions in an observation unit may motivate participants to perform their best and make the school lively.

Concluding remarks and a vote of thanks:
It is always worthy to appreciate the efforts made by participants and groups to make the FFS successful. Innovation and work carried out by participants should be appraised, and suggestions for improvement should be given before closing and leaving the school. A facilitator may give a vote of thanks and concluding remarks. Participants may also be invited to deliver such remarks once the school progresses.

Recording all activities and presentations should be done at each school. The GESA form printed on paper may be used to copy the presentation. It is useful to take photographs and video for the record.

Organize Farmer Field Day
Farmer field day is an occasion when farmers and facilitators show other people or the community what they have learned and the results from their study trials and small experiments. It is a celebration when community people and stakeholders are invited to witness and learn from the achievements of farmers. It serves as an occasion to disseminate the learning to nearby communities. A field day should only be two to four hours. Different stakeholders, local government and nongovernmental organizations, line agencies, local leaders, self-help group members and facilitators should be invited to field day.
At the end of FFS but before field day, a day is necessary to rigorously discuss with the participants the results regarding weight gain, economic analysis and lessons learned to draw conclusions. Such findings are presented in different forms on field day.

A typical farmer field day may have the following components:

1. **Exhibition and decoration (output exhibit/display)**
   - Miniature props (animation).
   - Preserved and live specimens of poisonous grasses, etc.
   - Graphs of results.
   - Posters/pictorials.
   - GESA posters (completion of GESA from different sub-groups showing systematic improvement from the very first to the last).
   - Special topics.
   - Community maps.

2. **Experimental unit and stall observation**

3. **Management of sound system/megaphone**

4. **Stage program (folk media/cultural programs)**
   - IGM song and dance.
   - IGM poem.
   - IGM drama.

5. **Speeches**

6. **Prizes and certificate distribution**

7. **Refreshments**

---

**Annex I**

**Special Topics for IGM FFS**

- **A. Housing and its management**
  - A.1 Methods of goat rearing
  - A.2 Characteristics of improved goat raising pen
  - A.3 Housing management
B. Nutrition management

B.1 Difference between ruminants and non-ruminants
B.2 Classification of feeds and their requirement including importance and sources of carbohydrates, fat, protein, minerals, vitamins, water, etc.
B.3 Selection of pasture and fodder grasses and their cultivation practices
B.4 Fodder and pasture management
B.5 Supplementary feed ingredients
B.6 Drinking water management
B.7 Feeding management: kid, pregnant doe, lactating doe, breeding buck, castrated goat
B.8 Locally available feed ingredients for goat and seasonal feed calendar

C. Reproduction/breeding

C.1 Reproductive age, time and selection of goats for reproduction
C.2 Breeding: inbreeding, out-crossing, cross-breeding, etc.
C.3 Goat breeds and their characteristics

D. Health, diseases and parasites

D.1 Symptoms of healthy and unhealthy goats
D.2 Diseases, their causes, symptoms, prevention and management
D.3 Parasites, their types, prevention and management
D.4 Vaccination, its importance and vaccination calendar
D.5 Importance of sanitation in disease and parasite prevention
D.6 Indigenous herbs for treatments against diseases and parasites

E. Marketing of goats

E.1 Appropriate age for sale
E.2 Market information system and linkage to local and central market
E.3 Formation of market management group

F. Management of goats at different stages

F.1 Feeding schedule and management of six-month-old kids and grower goats
F.2 Pregnant doe management
F.3 Buck management
F.4 Castrated goat management

Annex II

Practical Exercises for IGM FFS

1. Routine operations (daily management)
2. Pen, floor and surrounding sanitation
3. Feeding according to the body weight
4. Grooming/cleaning
5. Taking body temperature
6. Checking respiration
7. Weaning
8. Castration (advantages, age, method, care to be taken)
9. Tagging
10. Taking body weight
11. Handling goats
12. Observation of feces and urine
13. Deworming
14. Vaccination
15. Detecting heat
16. Pregnancy diagnosis
17. Dentition and age
18. Vaccination/medicine administration technique
19. Feed formulation
20. Mineral mixture preparation

# Annex III

## Form for Recording Existing Goat Raising Practices for IGM FFS

<table>
<thead>
<tr>
<th>Stages in production cycle</th>
<th>New born (0-3 days)</th>
<th>Young kid (4-30 days)</th>
<th>Growing kid (1-4 months)</th>
<th>Breeding stage (4-6 months)</th>
<th>Pregnant goats</th>
<th>Buck</th>
<th>Castrated male</th>
<th>Kidding stage</th>
<th>Lactation</th>
<th>Before next service</th>
<th>Female goat after many lactations</th>
<th>Source of fodder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Practices</td>
<td>Feeding</td>
<td></td>
<td></td>
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<td>concentrate</td>
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<tr>
<td></td>
<td>Housing</td>
<td>indoor</td>
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<td>outdoor</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Health and sanitation</td>
<td>infectious disease</td>
<td>internal parasite</td>
<td>external parasite</td>
<td>other problems</td>
<td>treatment</td>
<td>vaccination</td>
<td>other</td>
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<td></td>
<td>Breeding management</td>
<td>selection</td>
<td>servicing</td>
<td>kidding</td>
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<tr>
<td></td>
<td>Marketing management</td>
<td>selling</td>
<td>weight</td>
<td>market</td>
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<td></td>
<td>Others (if any)</td>
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</tr>
</tbody>
</table>
### Annex IV
**Form for Preparing Seasonal Calendar for IGM FFS**

<table>
<thead>
<tr>
<th>Season (months)</th>
<th>Special management practices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Newborn (0-3 days)</td>
</tr>
<tr>
<td></td>
<td>Young kids (4-30 days)</td>
</tr>
<tr>
<td></td>
<td>Growing kids (1-4 months)</td>
</tr>
<tr>
<td></td>
<td>Breeding stage (4-6 months)</td>
</tr>
<tr>
<td></td>
<td>Pregnant</td>
</tr>
<tr>
<td></td>
<td>Castrated male</td>
</tr>
<tr>
<td></td>
<td>Kidding stage</td>
</tr>
<tr>
<td></td>
<td>Lactation</td>
</tr>
<tr>
<td></td>
<td>Before next service</td>
</tr>
<tr>
<td></td>
<td>Female goat after many lactations</td>
</tr>
</tbody>
</table>

#### Winter (October-February)
- **Feeding**
- **Housing**
- **Breeding**
- **Health and sanitation**
- **Marketing**

#### Summer (March-June)
- **Feeding**
- **Housing**
- **Breeding**
- **Health and sanitation**
- **Marketing**

#### Monsoon (July-September)
- **Feeding**
- **Housing**
- **Breeding**
- **Health and sanitation**
- **Marketing**

### Annex V
**Materials and Equipment Planned for IGM FFS**

1. Feed ingredients
2. Feed supplements: ingredients for making mineral block, mineral mixture
3. Anthelmintics for deworming
4. Vaccines: peste des petits ruminants, hemorrhagic septicemia, black quarter, foot-and-mouth disease, enterotoxaemia
5. Feeding calendar for different physiological stages of goat
6. Photo of a goat kid
7. Posters of goat housing
8. Photograph of different fodder and forage
9. Thermometer
10. Weighing balance
11. Microscope
12. Syringe
13. White board (1.5mX1m)
14. Brown paper
15. Marker and crayons
16. Notebook for participants
17. Adhesive tape
18. Pencil
19. Pencil cutter
20. Eraser
21. Ballpoint pen
22. Attendance register
23. Measuring tape
24. Glue stick
25. Scissors
26. Scale
27. Calculator
28. GESA formats (Annex VI)
## Annex VI

### GESA
Goat Ecological System Analysis (GESA) No.: 

Name of school: Name of group: Date:

### General Information

1. Breed (local/cross-bred)
2. Time of observation (morning/afternoon/evening)
3. Weather (sunny/rainy/cloudy)
4. Sex (male/female)
5. Season (summer/monsoon/autumn/winter/spring)

### Goat-related data

<table>
<thead>
<tr>
<th>Improved Practice</th>
<th>Description</th>
<th>Traditional Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tag number</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Number of kids</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Date of birth (date/month/year)</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Age today</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Any treatment in last month</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Name of vaccine and date of vaccination last month</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Date castrated</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Number of days after castration</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Number of days after weaning</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>Body weight today</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>Last month body weight</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>Increase in weight</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>Date of breeding</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>Number of days after breed</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>Pregnant (yes/no)</td>
<td>15</td>
</tr>
<tr>
<td>16</td>
<td>Kidding interval</td>
<td>16</td>
</tr>
</tbody>
</table>

### Feeding

<table>
<thead>
<tr>
<th>Source/type</th>
<th>Frequency in day</th>
<th>Quantity</th>
<th>Quality (high/good/low) and quantity of feed/supplement/forage, fodder and water</th>
</tr>
</thead>
</table>

### General Observation of Goat and Environment

#### Improved Practice

<table>
<thead>
<tr>
<th>Description</th>
<th>Traditional Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hair coat</td>
</tr>
<tr>
<td>2</td>
<td>Appetite</td>
</tr>
<tr>
<td>3</td>
<td>Body condition</td>
</tr>
<tr>
<td>4</td>
<td>External parasite</td>
</tr>
<tr>
<td>5</td>
<td>Condition of eyes and ears</td>
</tr>
<tr>
<td>6</td>
<td>Eyes (congestion/discharge)</td>
</tr>
<tr>
<td>7</td>
<td>Mucous membrane</td>
</tr>
<tr>
<td>8</td>
<td>Rate of respiration</td>
</tr>
<tr>
<td>9</td>
<td>Rumination (yes/no)</td>
</tr>
<tr>
<td>10</td>
<td>Ruminal motility in two minutes</td>
</tr>
<tr>
<td>11</td>
<td>Condition of ear (dropping/alert)</td>
</tr>
<tr>
<td>12</td>
<td>Feces</td>
</tr>
<tr>
<td>13</td>
<td>Gait</td>
</tr>
<tr>
<td>14</td>
<td>Urine and urination</td>
</tr>
<tr>
<td>15</td>
<td>Anus and around</td>
</tr>
</tbody>
</table>

#### Environment

<table>
<thead>
<tr>
<th>Description</th>
<th>Traditional Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type of goat shed</td>
</tr>
<tr>
<td>2</td>
<td>Floor of the shed</td>
</tr>
<tr>
<td>3</td>
<td>Roof of the shed</td>
</tr>
<tr>
<td>4</td>
<td>Earth below the shed</td>
</tr>
<tr>
<td>5</td>
<td>Ventilation inside the shed</td>
</tr>
<tr>
<td>6</td>
<td>Shed sunny or shady</td>
</tr>
</tbody>
</table>
7 Goat management (stall fed/grazing/rued) 7
8 Giving forage and fodder (fodder and forage rack/tied in rope/on ground) 8
9 Protection from sunlight around shed or not; if yes, what type 9
10 Presence of predators and insects around shed 10

Suggestions and Recommendations for Improvement

<table>
<thead>
<tr>
<th>What activities</th>
<th>Details of activities</th>
<th>When</th>
<th>Who</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Goat shed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Feed, water, fodder, forage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Hygiene and sanitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. General care</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Annex VII
Sample of Daily Lesson Plan of IGM FFS

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
<th>Objectives</th>
<th>Method</th>
<th>Materials</th>
<th>Responsible Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:10</td>
<td>Attendance</td>
<td>To keep records</td>
<td>Signature</td>
<td>Register, pen</td>
<td>Chairperson of the group</td>
</tr>
<tr>
<td>8:10-8:20</td>
<td>Climate setting</td>
<td>To create teaching-learning environment</td>
<td>Based on the energizers/group dynamic exercise</td>
<td>Determined by exercise chosen</td>
<td>Facilitator “A”</td>
</tr>
<tr>
<td>8:20-8:30</td>
<td>Recapitulation</td>
<td>To revisit the last month’s FFS activities and learning</td>
<td>Presentation by host team</td>
<td>Tape, marker, brown paper</td>
<td>Sub-group “C”</td>
</tr>
<tr>
<td>8:30-8:40</td>
<td>Observation and data collection</td>
<td>To collect the data for GESA</td>
<td>Sub-group and facilitator visit the sample goat pen</td>
<td>Data collection format, pencil, eraser, thermometer, scale</td>
<td>Sub-group members and facilitators</td>
</tr>
<tr>
<td>8:40-8:50</td>
<td>GESA for making decisions</td>
<td>To enhance the decision-making skills of participant farmers for the improvement of goat health</td>
<td>Processing, analysis, conclusion-drawing and suggestions by small group</td>
<td>GESA paper, markers of different colors</td>
<td>Sub-groups</td>
</tr>
<tr>
<td>8:50-9:00</td>
<td>GESA presentation</td>
<td>To enhance the decision-making skills of participant farmers for the improvement of goat health</td>
<td>Discussion</td>
<td>GESA paper, masking tape</td>
<td>All (participants and facilitators)</td>
</tr>
<tr>
<td>9:00-9:10</td>
<td>Attendance</td>
<td>To keep records</td>
<td>Signature</td>
<td>Register, pen</td>
<td>Chairperson of the group</td>
</tr>
<tr>
<td>9:10-9:20</td>
<td>Climate setting</td>
<td>To create teaching-learning environment</td>
<td>Based on the energizers/group dynamic exercise</td>
<td>Determined by exercise chosen</td>
<td>Facilitator “A”</td>
</tr>
<tr>
<td>9:20-9:30</td>
<td>Recapitulation</td>
<td>To revisit the last month’s FFS activities and learning</td>
<td>Presentation by host team</td>
<td>Tape, marker, brown paper</td>
<td>Sub-group “C”</td>
</tr>
<tr>
<td>9:30-10:30</td>
<td>Observation and data collection</td>
<td>To collect the data for GESA</td>
<td>Sub-group and facilitator visit the sample goat pen</td>
<td>Data collection format, pencil, eraser, thermometer, scale</td>
<td>Sub-group members and facilitators</td>
</tr>
<tr>
<td>10:30-11:30</td>
<td>GESA for making decisions</td>
<td>To enhance the decision-making skills of participant farmers for the improvement of goat health</td>
<td>Processing, analysis, conclusion-drawing and suggestions by small group</td>
<td>GESA paper, markers of different colors</td>
<td>Sub-groups</td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>GESA presentation</td>
<td>To enhance the decision-making skills of participant farmers for the improvement of goat health</td>
<td>Discussion</td>
<td>GESA paper, masking tape</td>
<td>All (participants and facilitators)</td>
</tr>
<tr>
<td>12:30-1:00</td>
<td>Meal</td>
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<tr>
<td>1:00-1:10</td>
<td>Group dynamics</td>
<td>To bring activeness in participants</td>
<td>Four and its multiple clapping</td>
<td>None needed</td>
<td>Facilitator “B”</td>
</tr>
<tr>
<td>1:10-1:20</td>
<td>Special topic on symptoms of healthy and unhealthy goats</td>
<td>To enhance the knowledge level of participant farmers</td>
<td>Participatory discussion/briefing</td>
<td>Brown paper, marker board</td>
<td>Facilitator “A”</td>
</tr>
<tr>
<td>1:20-1:30</td>
<td>Practical class on measurement of body temperature</td>
<td>To enhance the skill of farmers to check the health of their goats</td>
<td>Practical experience</td>
<td>Thermometer, goats</td>
<td>All</td>
</tr>
<tr>
<td>1:30-1:40</td>
<td>Discussion on coming FFS activities</td>
<td>To make the program well organized and disciplined</td>
<td>Participatory discussion</td>
<td>Brown paper, marker, masking tape</td>
<td>Facilitator</td>
</tr>
<tr>
<td>1:40-1:50</td>
<td>Vote of thanks and departure</td>
<td>To depart in a happier environment</td>
<td>Statement</td>
<td>None needed</td>
<td>Facilitator</td>
</tr>
</tbody>
</table>
Annex VIII

Group Dynamic Exercises

1. Rearrange the Glass

Purpose:
- Brainstorming to keep the session lively.
- To ensure the participation of every participant.

Materials required: White board/flip chart, marker.

When: Between sessions or at the start of the afternoon session.

Procedure: The facilitator first explains the situation and draws six glasses with and without water as mentioned in the situation below.

Situation: There are six transparent glasses arranged systematically in a row. The first two glasses are empty; the third, fourth and fifth glasses contain liquid; and the sixth is empty.

- Now, ask the question, “Can you rearrange the glasses so that they alternate one with liquid, one without, one with liquid, one without and so on?”

Condition: You are allowed to touch or move only one glass once.

Answer: Pour the liquid from cup number four to cup number one, and then return cup number four to its place.

Further discussion is not needed.

2. Ways to Answer

Purpose:
- To motivate the participants to be active by demonstrating the different ways to answer the same question, so there is no need to hesitate or be afraid to respond to the question, because no one is wrong.
- To demonstrate that everyone has creativity, and one only needs to bring it out and use it.

Materials required: None.

When: Any time or after lunch break.

Procedure:
- Mark the line from which participants will go to touch the target point, and fix a target point so that a person can touch it easily, either inside or outside the training hall.
- Make the distance be at least 20 meters between the line and the target point (for example, the writing board may be a target point, and one end of the classroom may be the line).
- Now ask all the participants to touch the target point starting from the demarcated line.
- Explain the conditions or rules of the game before it starts: “One’s action must not be the same as the person before” to go from the line to touch the target point.
- Process the activity, asking questions to stress the purposes mentioned above.

Question: What lessons can be learned from this game?

3. Nine Dots Game

Purpose:
- Demonstrate the creativity and importance of self-evaluation.
- Demonstrate the goal to “Be broader in thinking and look from the outside also rather than always from the inside” to solve the problem.

When: During or between sessions.

Materials: Marker, white board/flip chart.

Procedure:
- Facilitator will put nine dots (three rows of three dots) in a square either on a board or flip chart and ask the participants to join all the dots without repetition or lifting the pen.
- Allow five minutes of time to think/brainstorm and solve the problem. If someone finds the answer before five minutes of time, then ask him or her to wait until the time allocated to do the exercise.
- Finally, ask a volunteer to show the answer on the board; if no one finds the answer, the facilitator will show how it is possible.
- Ask everyone for a consensus.
- Then ask questions to lead the discussion about the importance of this game.

Question: What lessons can be learned or conclusions drawn from this game?

4. Rigid to Flexible

Purpose:
- Demonstrate the importance of being flexible rather than being rigid in doing FFS activities.
- Ensure full participation of everyone in the FFS.

Materials: Pen.

When: During or between the sessions.

Use:
- Icebreaker.
Climate setting.
To make training interesting and lively.

Procedure:
- Facilitator will ask participants to put the middle part of their pens in between the thumb and index finger of their right hand loosely and shake the hand gently up and down and a little to the right and left at the same time in such a way that the pen in their hands seems to be flexible like rubber.
- Facilitator will show once and do together with participants.
- Ask them to practice for five minutes.
- Lead the discussion, asking questions to demonstrate the importance of being flexible in their life and in training activities.

Question: What lessons can be learned from this game?

5. How Many Squares?

Purpose:
- Icebreaker.
- To ensure the participation of everyone in group activities.
- Brainstorming to develop creative thinking in the participants.

Materials: White board and marker.

When: During or between the sessions.

Procedure:
- Facilitator will draw a diagram as shown below in which all the cells are squares in shape.
- Then ask the question after showing the diagram: “How many squares are there?” Allow five minutes of time to find the answer to all.
- Write down the different answers that come up from the participants.
- Lead the discussion to arrive at a consensus on one exact answer.

Further discussion is not needed.

6. Rain Splash Clapping

Purpose:
- Demonstrate the importance of the group for achieving the community’s goals.
- To create a learning environment ensuring the participation of all participants in the activity.
- Icebreaker.

Materials: None.

When: Use this energizer either at the start of the session as a climate setting, between the sessions or at the start of the afternoon session. The appropriate time to use this game/exercise depends upon the expertise of the facilitator.

Procedure:
- Facilitator will demonstrate the way to clap first by one index finger, second by two fingers (index and middle), third by three fingers (index, middle and ring) and fourth by four fingers (index, middle, ring and little) of the right hand each time for 10 seconds on the left palm.
- Ask all the participants to repeat the whole process five times.
- Ask questions to lead the discussion about the importance of this game/exercise to achieve community goals.

Question: What conclusions can be drawn or lesson can be learned from this exercise/activity?

7. Make the Maximum Number of Segments in a Circle

Purpose:
- To ensure the participation of all members in the group activity.
- Demonstrate discovery learning.
- Brainstorming and developing creativity in training participants.

Materials: White board/flip chart, marker, and notebook and pen for participants.

When: During or between the sessions.

Procedure:
- Facilitator will draw a circle on the white board or flip chart and ask the participants to divide the circle with four straight lines to create the maximum number of segments possible.
- Allow the participants to brainstorm and try to solve the puzzle.
- Many answers will come up, but the person who can make the maximum number of segments is asked to come to the board and show the other participants how to do it.
- Ask questions to lead the discussion.
Answer: 11

Question: What lessons can be learned from this exercise?

8. Find the Switch

Purpose:
- To ensure the participation of all members in the activity.
- Brainstorming.

Materials: None.

Procedure:
- Explain the situation: “There is one electric light bulb in a room, but three switches outside the room. Only one switch will turn on the light inside.”
- Explain the condition: “You only have one chance to enter the room. The windows and doors are completely closed.”
- Ask the question: “How can you figure out which switch turns on the light bulb inside the room?”
- Allow five minutes of time to think and find the answer.
- If someone comes up with the answer, he or she will be given the chance to explain it to the others. If nobody can figure out the answer, the facilitator will explain the answer to the group.
- Ask questions to lead the discussion.

Answer: You first flip one of the three switches outside the room for a few minutes. Then, switch that one off and flip a second switch and enter the room. If the light bulb is off, the second switch is the one. If the light bulb is cool, the third (untried) switch is the one.

Question: What lesson can be learned from this exercise?

9. Water Buffalo, Bee, Goat

Purpose: Demonstrate the importance of coordination in teamwork.

Materials: None.

When: Good during the first month of the training period, at the start of an afternoon session after lunch in training of trainers, and after GESA presentation or before a special topic in the FFS.

Procedure:
- All small sub-groups will play the game with each other. Thus, first ask participants of two sub-groups to come to the center of the training hall and then to form two equal lines facing each other. There should be an equal number of members in both groups.
- The facilitator will explain first the rules of the game. There are three actions each group can choose to play: water buffalo, bee or goat. To play water buffalo, group members make buffalo horns with their hands on their heads and make a buffalo grunt. To play bee, members turn around and use their hands to make a bee stinger and say “buzzzzz.” To play goat, members use a hand to make a goat beard and make a goat noise.
- Point count:
  - Water buffalo steps on goat, so water buffalo gets the point.
  - Bee stings water buffalo, so bee gets the point.
  - Goat eats bee, so goat gets the point.
- The groups will be asked to turn their backs to each other, and they will coordinate within their group what animal they’ll play. If anyone does not follow the others in the group, the other group scores the point.
- At the facilitator’s count of three, the groups face each other and play their chosen animal, making their animal sound.
- Allow them to do the action five to seven times, and the group who gets the highest points wins the round.
- The winning group of the first round will be played by the next group, until all groups have played. The group with the highest points wins the game.
- Ask questions to lead the discussion to stress the importance of coordination in teamwork.

Questions:
- Why are actions/sounds of group members not coordinated?
- What needs to improve for successful teamwork?

10. IGM Story

Purpose: Icebreaker.

Materials: None.

When: Use the game between sessions or to start the afternoon session.

Procedure:
- Whoever leads the activity can share his/her story. The principle behind the game is that members of the big group participate and are active players in the story.
- Divide participants into four groups.
- Assign each group to be one of the characters in the story.
- Assign a corresponding sound or action to each character.
- Group members should execute the action and make the sound of their respective character. For example:
Group 1: Farmer
Group 2: Goat
Group 3: Diseases
Group 4: Medicine

The facilitator may make up stories. For example:

One day a farmer (group assigned whistles) was walking to his goat (group assigned claps hands). He wanted to see what diseases (group assigned stamps feet) his goat (group assigned claps hands) was suffering from. While the farmer (group assigned whistles) was walking, he remembered that he forgot medicine (group assigned laughs aloud). The farmer (group assigned whistles) decided to go back to his house.

He saw that the goat (claps hands) was suffering from diseases (stamps feet). The farmer (whistles) fed the medicine (laughs aloud) to the goat (claps hands). Finally, the goat (claps hands) recovered.

Further discussion is not needed.

11. Four and its Multiple Clapping

**Purpose:**
- Involve participants in a group activity.
- Break the ice.

**Materials:** None.

**When:** Beginning of the FFS session, between or during sessions, or at the start of the afternoon session

**Procedure:**
- Ask participants to form one big circle. Participants count off aloud one at a time from number one. Whenever a multiple of four is reached, the person whose turn it is to count claps instead of counting aloud.
- Begin counting from number one every time somebody makes a mistake.
- Eliminate those making mistakes and punish them at the end of the game.
- Let the big group decide on the kind of punishment to give.

Further discussion is not needed.

12. List as Many as You Can

**Purpose:** Demonstrate the advantage of working in groups.

**Materials:** Pieces of paper and pens.

**When:** At the start of the afternoon session in training of trainers and after GESA in FFS.

**Procedure:**
- The facilitator invites the whole group to listen while he or she reads a list of 20 wholly unrelated items such as:

<table>
<thead>
<tr>
<th>PIN</th>
<th>CHAIR</th>
<th>BLANKET</th>
<th>KEYBOARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUICE</td>
<td>DOOR</td>
<td>LINE</td>
<td>APPLE</td>
</tr>
<tr>
<td>PHONE</td>
<td>SPOON</td>
<td>CAR</td>
<td>SYRINGE</td>
</tr>
<tr>
<td>SEA</td>
<td>CAT</td>
<td>GLOBE</td>
<td>TROUSERS</td>
</tr>
<tr>
<td>SHIP</td>
<td>CARPET</td>
<td>LIGHT</td>
<td>EYE GLASS</td>
</tr>
</tbody>
</table>

- After reading the list once, participants are asked to write the items they can recall. At the end of three minutes, ask who among the participants was able to list 20 items, 19, 18. Then ask them to work in pairs and give them three minutes more for the task. After three minutes, ask again which pair has listed 20 items, 19, 18. Next, ask them to group into fours to do the same task in one minute. When the time is up, ask which group was able to list all 20 items.
- Process the activity when everyone has settled. Ask the following questions: “Were you able to list more items when you worked alone or when you worked in pairs?” “Did working with a bigger group result in your being able to list more items?” “Why was this so?” Compare this exercise with working in the community.
- Ask the participants if they think more will be accomplished in the community, particularly with farmers, if they work in teams rather than working alone. Find out why they think so.
- Ask questions to lead the discussion about the importance of this exercise.

**Question:** What lessons can be learned from this exercise?

**Conclusion:** If a person works alone, he or she might not complete the task. This is true for community projects. More can be achieved by working together. Members need to cooperate and contribute and perform their roles to get big things done.

13. PIC-PAC-BOOM

**Purpose:** Demonstrate the need for interdependence for team success.

**Materials:** White board/flip chart, marker for processing the exercise.

**When:** In the beginning of the training program and to start the afternoon session as a team-building exercise.

**Procedure:**
- Ask the participants to count off by threes. Each group of three then sits together.
- Assign numbers to each group consecutively.
- Within each group, instruct the person on the left to say “PIC,” the person on the right to say “PAC” and the person in the middle to say “BOOM.” Each group member stands
up as he or she says the syllable assigned and immediately sits down so that the next person can do his or her part. After the person in the middle says “BOOM” and sits down, the three members of the group stand together to call the number of the group they chose.

All members of the group should stand at the same time and call out the same group.

Failure to coordinate will mean elimination from the game. (Calling out the number of a group previously eliminated will also cause elimination. The group that is not eliminated wins the game.

Questions:

- Why do you think groups were eliminated from the game?
- What are strengths of the winning group?
- What is the importance of planning, coordination and interdependence for the success of teamwork?

Conclusion: in the process of team building, interdependence is important. Team members each have definite roles and functions, but they are also dependent on each other for advice, encouragement, etc. Each needs the other members of the team. The contribution of each member impacts the success of the whole team.

References


Notes