



TECHNICAL BULLETIN No. 40

Creep feeding lambs and kids



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Foreword

This Technical Bulletin titled “ *Creep feeding of lambs and kids* ” is the 40th produced by the Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP). The ESGPIP is a USAID funded Project with the objective of improving the productivity of Ethiopia’s sheep and goats.

Lambs and kids can grow faster and be weaned earlier if provided with supplemental feeding. The dam can also be free for the next breeding earlier if she can wean her offspring faster. This technical bulletin describes how supplemental feeding can be provided to lambs and kids through creep feeding, an arrangement whereby the lambs and kids are given access to supplemental feed across gates that allow the small ones through but prevent the larger dams thus giving the lambs/kids exclusive access to the supplement. The experience of the ESGPIP indicates that this set up can be implemented by small scale producers using inexpensive materials.

At this juncture, I would like to thank all those involved in the preparation and review of this technical bulletin.

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Chief of Party,
ESGPIP
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Creep feeding lambs and kids

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1. Introduction

The objective of any sheep/goat production enterprise is to produce lambs/kids that are in good body condition at weaning and subsequent marketing. Ewes/does do not often produce sufficient milk to achieve good lamb/kid growth because of very low body condition (i.e., a body condition score less than 2) at the time of lambing/kidding. Lambs/kids subjected to such circumstances will have a very low weaning weight. Their survival rate and post-weaning performance will also be poor. This is a challenge particularly when lambing/kidding occurs during drought periods. The problem of poor weaning weight and survival can by and large be overcome by selectively supplementing lambs/kids through creep feeding. A young lamb or kid converts feed to gain very efficiently. It is, thus, more efficient to feed the lamb/kid directly than to feed ewes for milk production.

2. What is 'creep feeding'?

Creep feeding is a simple method of providing nursing lambs/kids access to high-quality supplemental feedstuffs while excluding their dams. The lambs/kids continue to suckle milk and graze, but will also receive additional nutrients to make up for any shortfalls in intake. The lambs/kids receive access to supplemental feedstuffs through an opening in a fence or gate known as a 'creep' that is large enough to allow their entry but too small for the dams. This arrangement is shown in Figure 1.

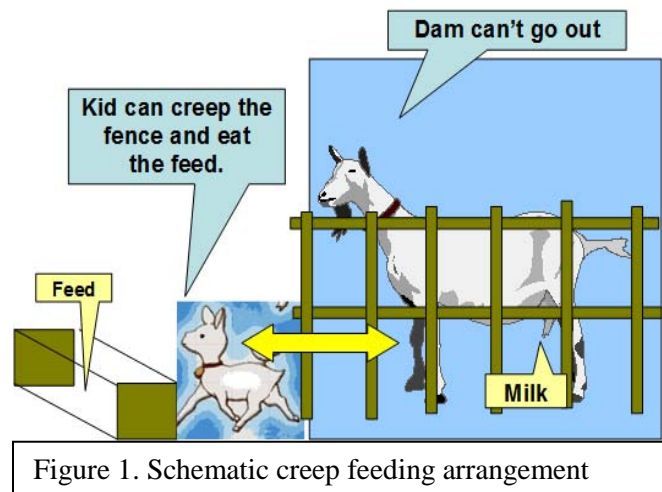


Figure 1. Schematic creep feeding arrangement

3. When is creep feeding appropriate?

Creep feeding may not be necessary and/or cost-effective under all situations. Creep feeding is appropriate when:

- milk production and hence lamb/kid performance are limited by the quality or quantity of pasture;
- milk production of ewes/does is reduced because of poor body condition;
- lambs/kids must meet target market weights;
- flocks/herds have high numbers of multiple births that cannot be supported by the level of milk production.

4. Advantages of appropriate use of creep feeding

Creep feeding lambs/kids can have the following advantages if used under appropriate situations:

- Creep fed lambs/kids will have greater daily weight gain because use of supplemental feedstuffs is more efficient at this stage of growth. The effect is more evident in lambs/kids reared as twins or triplets compared with single litters;
- Lambs/kids will reach a target market weight at an earlier age, which has a positive effect on net profit;
- Creep feeding reduces the stress associated with weaning by making the transition from milk to a dry diet much smoother. Lambs/kids already trained to creep feeds are much easier to wean at an early age without stress;
- Early weaning of creep fed lambs/kids allows the dam to use nutrients for reproductive functions, thereby facilitating earlier rebreeding. An increased body condition of dams will improve conception rate.

5. The creep area and creep feeding arrangement

Creep feeding need not be complicated. It is a relatively simple concept that requires only simple equipment.

The main structure in a creep feeding system is the creep gate that needs to have openings 20–30 cm wide and about 50 cm tall (Figure 2). This should be large enough to allow access for lambs/kids up to 20 kg live weight. It is good to have several openings that can be adjusted for the size of the growing lambs/kids. Make sure that the sides of the creep are high enough that ewes cannot jump over them.

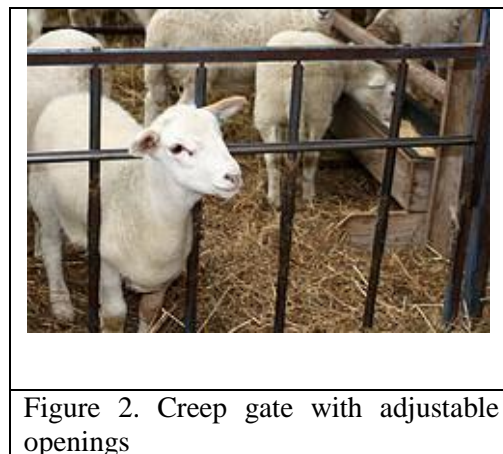


Figure 2. Creep gate with adjustable openings

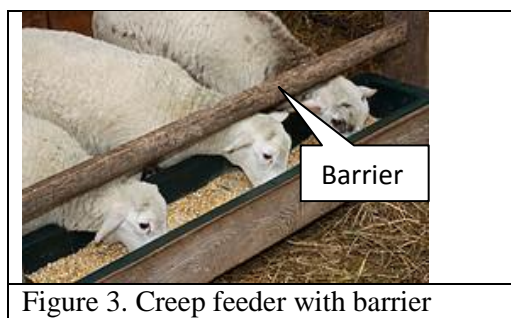


Figure 3. Creep feeder with barrier

Allow 20 centimeters of creep feeder space per lamb/kid. The feeding trough should be constructed with barriers on top so that contamination from lambs/kids standing or playing in the feeder is minimized (Figure 3).

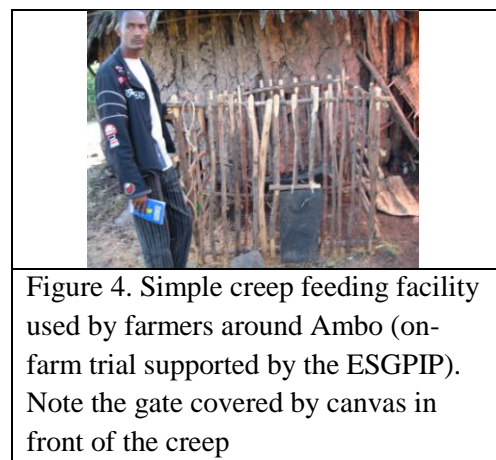


Figure 4. Simple creep feeding facility used by farmers around Ambo (on-farm trial supported by the ESGPIP). Note the gate covered by canvas in front of the creep

Creep feeders need not be expensive. Creeps can be constructed from locally available materials as shown in Figure 4.

6. Where should the creep be located?

A “creep area” may be set up in a barn (Figure 5) or out on pasture (Figure 6) in a location frequently visited by the flock/herd. Locations close to water or shades are ideal, as these areas will be visited regularly. Convenience for attendants should also be considered. Placing a light source over the creep area will help attract the lambs/kids to the feed. One can also arrange the creep in such a way that the sun shines into the area during the day.



Figure 6. Creep area set up on pasture

It is useful if the creep pen is portable for ease of movement to a fresh area. The creep pen should be located close to a source of

good quality water. Water located in the pen can create wet areas in the pen and increases the risk of drowning. Sunny sheltered spots will attract the ewes/does and lambs/kids and are ideal localities for creep pens. It may be useful to move the pen to a cooler location during hot weather. If the use of the creep by lambs/kids is not satisfactory, then try a different location.

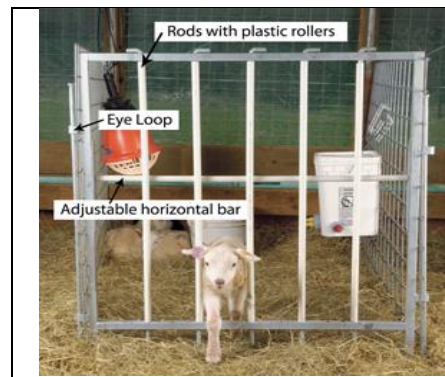


Figure 5. Creep area set up in the barn

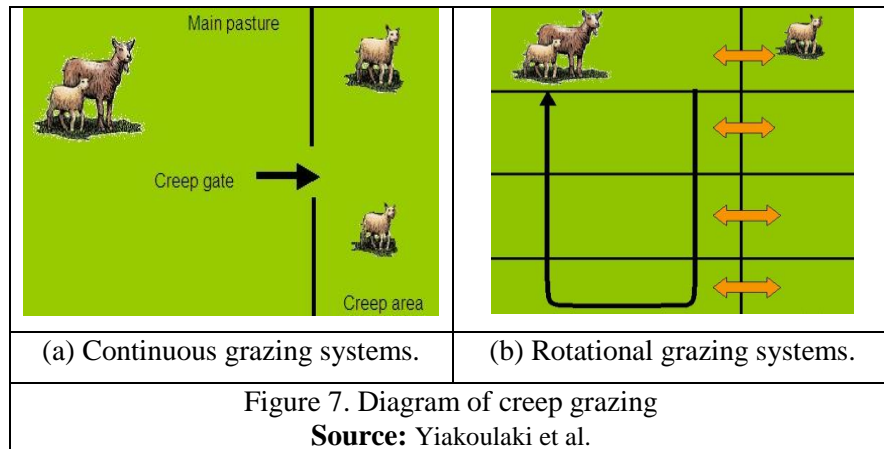
7. What should the composition and type of a creep feed be?

7.1. Creep feed composition: An adequate protein supply is critical for growth of young lambs/kids because mostly lean muscle (protein) rather than fat is deposited. They begin to deposit more fat at a later age, which decreases the protein requirement. Creep feeds should, therefore, be high in energy and protein for maximum efficiency. A recommended level would be at least 12 MJ/kg DM of metabolizable energy and 18% crude protein (CP). It is important that the protein sources all be natural (i.e., not containing non-protein nitrogen sources like urea) since young lambs/kids are very susceptible to urea toxicity. The protein content of the ration can be reduced as the lambs get older. Protein requirements of lambs drop to 15-16% at weaning. Calcium (Ca) to phosphorus (P) ratio of at least 2: 1 and a P content less than 0.50% are recommended.

7.2. Types of feeds for creep feeding: A question raised very often is about the feed type most appropriate for creep feeding. Creep feeds can be of various types and forms. These can be grossly grouped into two categories.

7.2.1. Creep Grazing: Creep grazing is a management system designed to match particular pasture forages and/or grazing areas with the specific nutritional requirements of different classes of grazing ruminants. It allows young nursing animals access to forage of high quality and palatability (creep area), while restricting more mature animals with lower nutrient requirements to an area with forage of lower mass and/or quality (main pasture or rangeland area). This can be achieved through special openings in the fence (creep gates). Figure 7 shows a diagrammatic representation of creep grazing under continuous and

rotational systems of management . Creep feed does not necessarily have to be offered in a feeder or poured out of a sack. Creep grazing is a viable option for boosting weight gain by nursing lambs/kids. Forages offered in a creep grazing program must be high quality forage such as alfalfa.



7.2.2. Concentrate supplements: Typical feed ingredients are ground or cracked corn, soybean meal, oats, and molasses. The concentrate creep feed must be fresh and palatable. The nutrient content is irrelevant if the animals do not eat it. Dusty and/or excessively fine particles in the feed will reduce intake and result in wastage. When lambs are young, feeds with a small particle size are more palatable. As they get older, coarser feeds are preferred, and whole grains are digested very efficiently. Coarser feeds become more palatable as the lambs/kids get to 4 to 6 weeks of age and older.

If the rations are constituted using the above mentioned ingredients only, then they will be low in Ca relative to P. It is, thus, important to add fine-ground limestone at 1 to 1.5% of the ration to return the Ca:P ratio to the desired 2:1. This practice will offset the risk of urinary calculi especially in male lambs. The addition of 1% common salt is also desirable.

When the creep feed is a concentrate, it is important to allow the lambs/kids access to good quality roughage, preferably legumes such as alfalfa hay. This will promote development of proper rumen function. It will also provide another attraction to get lambs into the creep pen.

8. When should creep feeding be started?

Lambs/kids begin to nibble at feed very early. They can start to eat solid food as early as 2 weeks of age. They do not, however, begin to consume significant quantities until they are about 4 weeks old. Creep consumption will still be inadequate until they are 8-10 weeks of age. It is a good idea to open the creep pen to the ewes/does for a few days so that they can train lambs/kids that do not adapt readily.

9. Managing creep feeding

The following management steps will help to increase efficiency of feed utilization and reduce wastage during creep feeding:

- Never let a creep feeder get completely empty. Feed should be renewed on a daily basis and sufficient quantity provided to ensure that continuous access is available (there should be some feed remaining in the trough at the end of the day).
- Feeders should be protected from moisture. Wet feed will likely mold and should, therefore, be removed from a creep feeder immediately.
- Open troughs are good. They should, however, be designed to prevent lambs/kids from getting in the troughs (Figure ??).
- Young lambs/kids will not consume stale or contaminated feed. Clean out fine particles that accumulate in the troughs at least once per week. Stale feed can be removed and fed to older animals as part of their ration, thus avoiding wastage.
- Access to good quality water is essential to lamb/kid performance and efficiency. Watering troughs will also need cleaning at regular intervals.

10. Feeding rates and economics

10.1. Economics of creep feeding: Creep feeding may not always be economical, especially on farms where high quality and quantity of forage is available. For creep feeding of concentrates to be economical, the higher value (extra weight and higher prices) of creep-fed lambs/kids needs to exceed the cost of the creep feed. It is, therefore, important to pay close attention to feed costs, weight gains and the market value of the additional weight gained. Good record keeping is essential in determining if a net profit is made from creep feeding.