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FEEDING AND MANAGING YOUR BRED EWE LAMBS

Lifetime performance is an often overlooked measurement in sheep operations.

Ewes that produce a lamb at a year of age should have a higher lifetime production than a ewe that lambs for the first time at two years of age. However, these young ewes are not only producing a lamb, they are also still growing. So, producers should manage these ewe lambs differently than mature ewes.

When selecting ewe lambs to breed, keep in mind that you will have better success if you start by selecting lambs that were born early in the season and from productive ewes. Lambs that were born earlier in the lambing season are more likely to be further along in their maturity and are thus more likely to conceive. As with any selection process, start with looking at performance records and then go to the barn to assess muscling and structural soundness. Ask yourself "Does this ewe lamb meet the criteria that I value in a brood ewe?" If she doesn't, then send her to the market. Keep only those ewes who meet your benchmark for performance.

A good rule of thumb is that ewe lambs should weigh at least 70% of their mature weight at breeding. Lambs should be managed so that they are not excessively fat because fat will accumulate in the udder and decrease overall milk production. If lambs are thin, flush them with either high quality pasture or feed a grain supplement. Corn is probably the most widely used supplemental feed and can be fed at a rate of ¾ to 1¼ lb. per head per day. Research has shown that this increased energy will improve body condition and can lead to increased ovulation rates and result in increased lambing percentages. Flushing should start approximately two weeks prior to the breeding season and continue for four weeks after the ram is turned out with the ewe lambs. However, keep in mind that most ewe lambs are already receiving a diet balanced for growth and that they are less impacted by flushing than mature ewes fed for maintenance prior to the breeding season.

Feeding ewe lambs during the early part of gestation is relatively the same as feeding them before breeding season. The most important time for feeding ewe lambs will occur during the last third of gestation. At this time the lamb or lambs gain most of their weight prior to birth. So, ewe lambs require nutrition to support this growth as well as their own continued growth. Bred ewe lambs should be gradually switched over to higher quality forage at this time. Ewe lambs may also require a grain supplement, depending on their body condition and the nutritional value of the forage. Nutrient dense feeds are very important at this point because the lambs will take up a large amount of space inside the ewe, which will limit how much she can eat. Poor nutrition can lead to problems such as pregnancy disease, weak or lighter birth weight lambs, and decreased milk production.

Ideally, ewe lambs should be separated from the mature ewes during the last part of gestation. Some producers breed ewe lambs later than the mature ewes. This can allow producers to manage the ewes as one large group for a short period of time. Ewe lambs receive higher nutrition throughout the pregnancy to support their growth while the mature ewes receive higher nutrition only during the last part of gestation. Once all the mature ewes have lambed, the ewe lambs continue to receive higher levels of nutrition throughout the last part of their gestation and then throughout the period of time they nurse their lamb or lambs. Bear in mind that adequate feeder space must be provided so that ewe lambs are not pushed away from feed by the larger mature ewes. If adequate feeder space is not available, then manage the ewe lambs in a group separated from the mature ewes to insure they receive adequate nutrition.

When ewe lambs are bred to lamb later than mature ewes, this also gives producers an opportunity to spend more time with ewes lambing for the first time. In some cases, they may not be as aggressive at mothering as an older ewe. One of the most aggravating tasks for me at lambing time is to have an older ewe that has not lambed yet, try to take a lamb away from a young ewe. So, if all the mature ewes have already lambed, this pretty well eliminates this problem. Young ewes have a better opportunity to mother their lamb without getting bullied!

Not all producers breed their ewe lambs. But if you do breed ewe lambs be mindful that they are still growing themselves and require a higher plane of nutrition to support their growth and that of the lambs.

Penn State Extension

THREE TIPS TO MAXIMIZE MEAT GOAT RATE OF GAIN

Use these tips to make the most of your forages and supplemental goat nutrition.

Raising meat goats calls for a sharp pencil when it comes to feed costs since they nearly always account for the largest share of expenses. Balancing feed quality to maximize weight gain is vital to amplify your nutrition investment and bring home more profit.

Placing a focus on providing diets containing proper forage, protein and energy levels that drive efficient gain is a good objective to keep in mind.

Efficient rate of gain maximizes conversion of feed to gain without overfeeding. The goal is to provide enough energy, protein and forages to maximize an animal's genetic potential.

Use these three tips to maximize your nutrition program to support efficient goat growth:

1. Ensure adequate dietary protein and energy

Meat goat diets must contain both protein and energy to be productive. Energy from carbohydrates and fats drives growth rates and weight performance while protein is important to support feed intake and digestion.

Insufficient dietary protein levels can negatively affect growth rate, disease resistance and more because not enough amino acids reach the intestines to be absorbed by the body.

Lush forages can provide adequate fat and protein levels, but high-quality forages are not always available or cost-effective when purchased in large volumes. That's when strategic supplementation can help efficiently boost diet effectiveness.

Feeding a supplement high in both protein and fat can help improve appetite, rate of gain and efficient cost of gain. Make sure to choose a supplement with the right balance of dietary fat since excess fat (generally more than 5% of the total diet) can suppress rumen fermentation.

2. Maintain forage quantity and quality

Goats need plenty of high-quality forage for efficient growth – between 1.5% and 2% of a goat's body weight. High forage levels are important even in dry lots when you may be supplementing diets more heavily to increase gains and reduce days on feed.

Adequate forage is particularly important for goats receiving higher fat and protein supplementation levels. When goats don't receive enough forage, they aren't as efficient at converting supplemental protein or energy into meat because the rumen isn't getting scratch value to stay healthy.

3. Aim for consistent, achievable weight gains

Whether raising meat goats for market or as replacement females, steady growth is the goal.

Achievable daily gains depend on goat genetics but gains of 0.25 to 0.3 pounds per day is a good benchmark. On full feed, it takes about 3.75 to 4 pounds of supplemental feed per head per day to reach that goal.

On the flip side, it's important to understand when goats have reached their maximum efficient growth potential.

Producers should recognize when goats are no longer growing but are only gaining fat. Monitoring body condition score (BCS) and not letting goats get above a 3 out of 5 BCS will help. Getting goats to market at the right time is more efficient and will save on unnecessary feed costs.

Purina Mills

CREEP FEEDING PRINCIPLES FOR LAMBS AND KIDS

Creep feeding is one method sheep and goat producers can utilize to increase lamb and kid value when selling milk-fed lambs or kids for ethnic holidays.

Creep Feeding Benefits

Creep feeding takes advantage of increased feed efficiency by young animals. Lambs and kids can often convert two to four pounds of feed into one pound of weight gain. Older lambs and kids, however, may require four to six pounds of feed to gain one pound. In addition, creep feeding often results in lambs and kids weighing 10 to 20% more at weaning than their peers who were not creep fed. Taking advantage of the lamb's feed efficiency at this early age and the improvement in weaning weight can result in more income for the farm.

For example, a lamb that typically weighs 50 pounds at weaning may weigh 60 pounds when creep-fed. By comparison, that 50-pound lamb might bring $4 per pound, while a 60-pound lamb might bring $3.75 per pound. This results in the 50-pound lamb selling for $200 while the 60-pound lamb sells for $225. Creep feeding comes at an additional cost, so looking at feed costs is essential. For a lamb that gains an extra 10 pounds at a feed efficiency of three pounds feed to one pound gain, that lamb would consume approximately 30 pounds of creep feed. At $400 per ton or $0.20 per pound, this would cost the producer $6 for the additional 10 pounds in weight gain. Therefore, the creep-fed lamb in the example would produce an additional income of $19 ($25 additional sale value minus $6 in feed costs) compared to the non-creep-fed lamb.

Another benefit to creep feeding can be seen at weaning, particularly for lambs or kids kept as replacements and for lambs or kids fed to a finished weight of 100 to 160 pounds. Creep-fed lambs adjust to consuming solid feed earlier in life and exhibit less stress at weaning than lambs or kids without access to creep feeds. This leads to animals that are less likely to become sick and that will regain any lost weight from weaning more quickly.

Table 1. Comparison of Non-Creep Fed and Creep Fed Lambs Value

	Non-Creep Fed	Creep Fed
Lamb weight (lbs.)	50	60
Sale price/ lb.	$4.00	$3.75
Creep feed cost/ lb. ($400/ton)		$0.20
Amount consumed		10 lbs.
Creep feed cost per Lamb		$6.00
Net sale value	$200	$219

Creep Feeding Tips

Producers should begin offering creep feeds to lambs or kids by one to two weeks of age. These lambs or kids will start nibbling on the feed and gradually increase consumption. The availability of this dry feed will enhance rumen development by stimulating papillae growth and increasing rumen mass. The papillae are finger-like projections within the rumen that increase the surface area for nutrient absorption.

Lambs and kids should be vaccinated with a C, D & T toxoid to prevent overeating disease (enterotoxemia) and tetanus. *Clostridium perfringens* bacteria cause overeating disease, and the most prevalent types are C and D. Ewes and does should be vaccinated at least four weeks before lambing or kidding. This maternal vaccination provides immunity to lambs and kids until approximately five weeks of age; thus, vaccinations for lambs and kids should receive their first vaccination around five to six weeks of age. If producers do not vaccinate ewes or does during late pregnancy, then lambs or kids should receive their first vaccination around two weeks of age. All lambs and kids should receive a booster vaccination three to four weeks after the first. Additional vaccinations may be required if an operation experiences problems with types A or B.

Overeating disease develops when an animal experiences a sudden change in their diet. Although *clostridium perfringens* bacteria are normally present in the gastrointestinal tract, the sudden increased consumption of grains causes the bacteria to reproduce rapidly. These bacteria then release toxins that can lead to death. This typically occurs with lambs or kids when they gorge on creep feed. Therefore, producers should ensure that the creep feeder never gets empty.

In addition to checking feed levels in a creep feeder, producers should also monitor contamination. Lambs and kids often stand in a feeder trough and contaminate the feed with fecal material. Producers should check feeders daily and remove any contaminated feed.

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Creep Feeding Diets

Creep feeds do not need to be complicated mixes. Simple mixes can provide the same benefits. All creep-feed grain mixes should be palatable, fresh, and coarsely ground or cracked to prevent sorting.

Highly-palatable feeds encourage intake. In other words, lambs or kids will readily consume this feed because it appeals to them. Typical feeds that lambs and kids readily consume include soybean meal, roasted soybeans, corn, and alfalfa hay. A simple creep feed mixture might consist of 80 to 85% ground corn, 15 to 20% soybean meal, and free choice access to alfalfa hay. Some producers encourage lambs and kids to consume creep feed by top dressing with soybean meal. This method starts with lambs or kids eating creep feed more quickly; however, the practice should be discontinued after a week or two.

Numerous types and brands of commercial creep feeds are available. These are excellent options for producers with just a few lambs or kids. Larger operations may wish to have a custom mix made at a local feed mill. Many mills require a half-ton minimum, so producers must have enough lambs or kids to consume the minimum order of creep feed within about four weeks to ensure freshness.

Sometimes, it is advantageous to substitute corn with other grains. Sorghum and oats can replace corn one-to-one. However, oats contain less energy than corn and may need to be added at 1.25 times the amount of corn to replace corn energy if producers expect the same weight gain as corn-based creep diets. Wheat or barley can be substituted for half of the corn. Producers should use whatever grains are available in their area and mix according to whatever works best for their operation.

To prevent very young lambs and kids from sorting through the creep feed, grind the feed and add molasses as a binder or process the feed into a ¼-inch pellet. Continue this processing until the lambs or kids reach four to six weeks of age. After four to six weeks of age, coarser grinding, cracking the grains, or offering a larger pellet would be appropriate. By weaning, or shortly after weaning, the feed can remain as cracked grains or be transitioned to a textured feed with whole grains.

When lambs or kids first start eating the feed, producers should add feed to feeders in smaller amounts. This will keep the feed fresh. Old, stale feed can be fed to the ewes and does. However, feed contaminated with fecal material should be thrown out to prevent internal parasite infections. Many producers add a coccidiostat to the creep grain mix to prevent coccidiosis and to improve feed efficiency. Bovatec® (lasalocid) or Deccox® (decoquinate) can be added to lamb feeds, while Rumensin® (monensin) or Deccox® can be added to goat feeds. Remember that the livestock species you intend to feed MUST be listed on the product label to feed that product to that species legally.

As lambs or kids grow, the grain mix's protein concentration may be decreased. For example, the starter creep feed might contain 18 to 20% protein, but by weaning, the creep feed protein concentration may be reduced to 14 to 16%. Always remember to gradually change feed mixes by blending the rations together when making a diet transition. This transition should occur over a week or more to prevent digestive upsets.

Ram lambs and buck kids can develop urinary calculi issues whenever the diet's calcium-to-phosphorus ratio drops below two to one. The imbalance causes mineral crystals to form, which collect in the urethra and obstruct urine flow. In severe cases, the urethra can become blocked entirely. To prevent this disease, be sure to balance the diet with a two-to-one calcium-to-phosphorus ratio. Also, ammonium chloride can be added at a rate of 0.5% of the total diet to acidify the urine and help prevent mineral crystals from forming. In addition, access to a fresh and clean water supply and exercise can help prevent urinary calculi.

Creep Feeder Design

Creep feeders should be placed in areas readily accessible by the lambs or kids. A light in the area may encourage lambs or kids to enter. The area should be free from cold drafts and provide a comfortable place for lambs or kids to escape the adults. Creep areas should be kept well-bedded and dry. A sunny area can also encourage lambs and kids to enter the creep.

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Creep feeders must be designed to allow access for lambs or kids while preventing access to ewes and does. The creep feeder gates must be substantial enough that the mothers cannot bend them or push them over and be tall enough so that mothers cannot jump over them. The creep feeder panel must also be sized to allow easy access for the lambs or kids and, again, prevent access to the mothers.

The creep feeder panel design is critical for preventing adults from gaining access to the creep area. The width between the creep panel bars should be 6 to 9 inches for lambs and 5 to 7 inches for kids. These widths can be adjusted as the lambs and kids grow. The height of the opening between the creep panel bars is also critical. For lambs, 36 inches is appropriate, but the height should be 12 inches for kids. The height of the creep feeder gates should be 40 inches to 45 inches.

Rolling creep panel bars are one method to make it easier for lambs or kids to enter a creep area. These bars roll as the lamb or kid enters the creep area and are ideal for larger lambs or kids. The rolling bars prevent wool or hair from rubbing off behind an animal's shoulders when the panel bar width is barely wide enough for the lamb or kid to pass through.

In addition to the gate and panel specifications for setting up a creep feeding area, producers should provide an adequately sized area and adequate feeder space. The creep feeding area should allow 1.5 to 2 square feet per lamb or kid, while the feeder length should allow 2 inches per head. For example, a herd that produces 30 kids will need a creep area of approximately 45 to 60 square feet in size. Therefore, the creep area should be approximately from 5 x 9 feet to 6 x 10 feet. The feeder inside the area should be at least 60 inches long. However, if the feeder is accessible on two sides, then the feeder would need to be 30 inches long. Remember to place the feeder far enough inside the creep area that the mothers cannot reach the feeder through the creep panel.

Creep Grazing

Creep grazing is an option for producers who prefer to raise lambs or kids on pasture. Producers often incorporate creep panels in the opening where a gate leads into the next section of pasture. This allows lambs or kids to consume the highest quality forage in a field ahead of their mothers. This new pasture section typically has a reduced parasite load; thus, lambs or kids are less likely to become infected. In addition, the higher protein concentration in the forage they graze can also help suppress internal parasites.

In Conclusion

Creep feeding can be cost-effective in improving lamb or kid quality and increasing weaning weights when producers sell their lambs or kids at weaning. Creep feeding is ideal for multiple births but can also benefit lambs or kids born as singles. In addition, creep feeding can reduce weaning stress, which can be important for lambs or kids fed to finish weight or kept as replacement females. This may be most important for producers wanting replacement ewes and does to reach a minimum weight for breeding to lamb or kid as yearlings. Producers should consider the sheep or goat market options available in their area and their operation goals when deciding whether to creep feed.

Penn State Extension

BREEDING EWES AND DOES: HOW TO GET THEM TO CONCEIVE ON THE FIRST SERVICE?

That's one of the biggest questions I hear from producers. And while there's no magic answer, the more you prepare in the pre-breeding period, the fewer headaches you'll have when it's time for breeding ewes or does.

Implement the following steps to prepare ewes and does for breeding season and help improve conception rates on first service:

Pre-breeding Management

The less stress breeding ewes and does have, the better. Complete management tasks like shearing, hoof trimming and de-worming early to ensure they have time to de-stress from these activities and are comfortable come breeding time.

Pre-breeding is also an excellent time to evaluate udders, mouths, hooves, legs and overall animal soundness. Early culling decisions can help you prioritize resources to set your operation up for success at breeding and beyond.

Body Condition Scoring

Assessing body condition pre-breeding is crucial. Many producers turn ewes and does out to pasture after giving birth and don't have eyes on them regularly until breeding. If they lose too much condition during this time, they have to play catch up, costing you time and resources.

It's recommended for ewes and does to maintain a body condition score (BCS) of 2-2.5 after lambing or kidding. Forty-five to 60 days prior to breeding, increase their nutrition (also called nutritional flushing) to reach a BCS of 3 at breeding time. Ewes and does that are too thin at breeding can have challenges conceiving and maintaining pregnancies or have reduced ovulation rates and lambs.

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Nutritional flushing for breeding may be as simple as providing supplemental forages, especially if you're in a drought area. Or you may need a more aggressive nutrition program to get them in ideal breeding condition. Evaluate your animal's current BCS and work with your nutritionist to develop a sheep and goat nutrition program that takes your females from where they are now to where you want them to be at breeding.

It's also important to conduct a ram or buck breeding soundness exam and maintain an appropriate male-to-female ratio to help boost conception rates.

Provide Supplemental Fat

Sheep and goat nutrition is key when it comes to reproduction. One of the best ways to help meet BCS goals for breeding is to increase fat in the diet. Most supplements for pregnant ewes and does range between 2.5-4% fat, but that may not be enough in the pre-breeding period. Using a supplement with fat levels in excess of 5% starting 60 days before breeding will return the largest benefits.

For producers utilizing artificial insemination (AI) or embryo transfer (ET) in their breeding programs, adding fat to the diet has been repeatedly proven to improve pregnancy success.

Fat is a precursor to cholesterol, which can help ramp up hormone production in ewes and does as well as rams.

Elevated fat levels in the supplemental diet aren't likely needed (or economical) year-round for doe and ewe nutrition if forage quality is at or above average. Monitor body condition post-breeding to determine when to start decreasing fat in the diet. This is especially important for breeding ewes and does in confined housing because of lower energy needs from reduced activity, leading to over-condition. If females have too much body condition, you may start to see challenges at parturition.

Mineral Is a Must-Have

Whether ewes and does are in good condition or need to pack on a few pounds, mineral and vitamin supplementation is a must for any breeding program. Even the highest quality forages can fall short of nutritional requirements for pregnant ewes and does, including calcium, magnesium, cobalt, vitamins A and E and selenium.

AI and ET breeding programs should put extra emphasis on sheep and goat mineral nutrition, ensuring they consume enough mineral and that it's of high quality, perhaps even containing organic trace minerals. Monitor mineral intake of the flock or herd. If loose mineral intake starts to slow as you increase supplementation for flushing, consider changing to a tub-based free-choice mineral source or force-feed mineral with hand-supplemented grains.

While reducing fat levels in the diet after breeding is recommended, that's not the case with mineral. Feeding a high-quality mineral year-round will go a long way to keeping ewes and does prepared for not only breeding season, but gestation and parturition as well.

Purina Mills

WINTER FEEDING OF SHEEP AND GOATS: GENERAL RULES OF THUMB FOR GESTATING AND LACTATING FEMALES

Knowing the nutritional requirements of females during the various stages of production allows producers to ensure females are performing at optimal levels. Since females are typically in late gestation and/or lactating during the winter months, when their nutritional needs are the highest, it is even more important to ensure the females are obtaining the proper roughages and/or grains in their diets. Below are some general rules of thumb to consider for your females during the various stages of production.

Some things to keep in mind are sheep and goats should consume 2-4% of their body weight on a dry matter (DM) basis to meet their nutritional requirements. Several things should be taken into consideration when figuring the nutritional requirements of females: age, stage of production, body condition score (BCS), and number of offspring. In order to fully understand how much roughage and grain should feed, it is important to know the nutritional composition of the roughage in order to know how much grain to feed.

Early to Mid-Gestation (First 15 weeks)

The main goal during this phase of production is to maintain the body condition of mature females and increase the body condition of young females as they are still growing. Thus, it is best to separately feed the mature and young females.

- Free access to pasture; 2.5-4 lbs. of hay/day.
- Unless forage is of poor quality or females are thin, it is not necessary to supplement feed.

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- Free choice minerals.
- Fresh, clean water.

Late Gestation (Last 6 weeks)

This is a critical time for females as 70% of the fetal growth occurs during this phase of production. Proper nutrition is also important during this time to help prevent pregnancy toxemia (ketosis) and milk fever (low blood calcium). Other factors that are affected by nutrition include offspring birth weights, offspring mortality rates, lower milk yields, and dystocia (birthing difficulties). Females should have a BCS of 3-3.5 on a 5-point scale. Once again, it is best to separate the mature and young females as they are competing for feeder space and the young females are still growing.

- In general, feed 4-5 lbs. of hay/female/day plus…
- 0.5-1 lb. of grain/female/day.
- Free choice minerals.
- Fresh, clean water.

Early Lactation (First 6-8 weeks)

The highest nutritional requirements occur during this stage of production for females, especially if they are nursing multiple offspring. If possible, separate females according to the number of offspring they have (singles vs. twins vs. triplets) and feed them accordingly. Again, ideally separate the mature and young females.

- In general, feed 4-6 lbs. of hay/female/day plus…
- 1 lb. of grain/offspring being nursed.
- Free choice minerals.
- Fresh, clean water.

Lactating Dairy Does

- Feed free choice hay plus…
- 1 lb. of grain for every 3 lbs. of milk produced in mid-lactation.
- 1 lb. of grain for every 5 lbs. of milk produced in late-lactation.
- Free choice minerals.
- Fresh, clean water.

During the winter months, producers rely heavily on feeding hay as a roughage source in order to meet nutritional requirements of sheep or goats. The first question a producer must ask themselves is, “What is the nutritional composition of the hay I’m feeding?” This is important to understand in order to provide the proper supplementation, if needed, to your sheep or goats.

When feeding vitamins and minerals, a loose, free choice premix is preferred to blocks. The ratio of calcium to phosphorus should be 2:1 and vitamins A, D, and E should be available. If soil is selenium deficient, seek out a premix fortified with selenium to prevent white muscle disease in offspring. Also, during late gestation ensure females are obtaining the proper amounts of calcium. Remember when purchasing a premix if you are a sheep producer, to purchase one that is formulated for sheep in order to prevent copper toxicity. Having a relationship with a veterinarian is also important during this time of production for females. They too can help ensure your flock or herd is achieving the optimal nutrition during the various stages of production, as well as aid in helping to prevent abortions and other diseases by providing recommendations for coccidiostats and antibiotics that could be mixed with supplemental feed.

Arkansas Extension

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