# At the FEEDER wi





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#### In this Issue...

Feeding "Candy" to Milking Goats

16% Kid Goat Developer

**Company Update** 

How Can Late Gestation Ewe Management Improve Post-Partum Performance?

36% Sheep Supplement



### Feeding "Candy" to Milking Goats

Written by: Srdjan Nesic, MSc, Ruminant Business Manager

Alfalfa in the form of wrapped large bales, also known as "baleage", is an excellent forage source for milking

goats. However, it is not easy to make high quality baleage every year. Quality and digestibility will depend on maturity, weather conditions, type of grass and percentage of grass to alfalfa in the standing forage.

Prior to harvest, the standing forage should be at 55-60% moisture. Once cut, wrapping the forage in plastic film at a moisture of 45-50% will ensure adequate forage conservation. Today, farmers have enough experience to make high quality baleage with a Relative Feed Value (RFV) of over 200 and digestibility of 70% or more.

Milking goats perform very well when consuming adequate amounts of high quality baleage, and therefore, baleage can be fed as the sole forage type in these rations. Compared to haylage, baleage performs better in the ration for milking goats due to the higher DM content, large portion of long stem fibers and increased leaf fraction, which is what makes this type of feed 'candy' for goats. Baleage also out-performs other forage sources, such as wet haylage and dry hay. Wet haylage (70% moisture) in a bunker silo will often become sour, resulting in reduced feed intake and poor milk production. Dry hay, on the other hand, does not provide adequate soluble protein. There also tends to be a high level of leaf loss during feeding which reduces the nutritive value, particularly for high producing goats.

The key component when it comes to the feed value of baleage is digestibility. Increased digestibility means that a reduced amount of grains can be fed for lactating goats, which results in a more economical diet. Table 1 shows a basic ration utilizing baleage as recommended by New-Life Mills (NLM):

## Table 1: Example lactating dairy goat rationutilizing baleage as the forage source

Ration Component	Amount (lbs)
Baleage	Free choice (5.0-6.0 average)*
Dry Corn	1.0
NLM Complete 18% Dairy Goat Ration	2.0

\*Depends on dry matter of baleage used

The above basic diet provides adequate nutrition for milking goats to produce 2.5-2.7L milk (Caprine Arthritis Encephalitis (CAE) positive herd) and 3.0-3.25L (CAE negative herd). New-Life Mills Small Ruminant Specialists are recommending to feed a top dress supplement for goats in early lactation (first 5-6 months) to meet nutrient requirements and boost milk production. The amount of top dress to feed will depend on the body condition of the goats, quality and digestibility of baleage, as well as the level of milk production you are targeting. The top dress inclusion level averages 0.5-1.0 lbs/h/d of NLM Top Dress Pellet (30/40 HF Top Dress). With the extra top dress, you can expect to have a milk production of 3.25-3.50 lit (CAE positive herd)) and 3.5 - 4.2 lit (CAE negative herd). When it comes to baleage digestibility, the higher digestibility of the baleage means that less top dress is needed to achieve targeted milk production.

The method of feeding baleage will vary depending on farm size. Producers with a herd size of 200-350 milking goats have great success with feeding individual bales using a layer by layer approach in the feed bunk. On the other hand, producers with 500+ milking goats will often put individual bales of baleage into the TMR mixer (with knives) and run the mixer for about 20 min. After which time, you can add the appropriate proportions of dry corn and pellets to the mixer.

It is important to remember that when we are talking about forages for goats, milk production is directly correlated with the forage's digestibility. For high producing goats, alfalfa, alfalfa/grass type of forages needs RFV 160 plus and digestibility over 60%. New-Life Mills Small Ruminant Specialists are always available to meet you on the farm and discuss about the forages you have available, how to use them with goats, what grains to combine with your forages, and how much top dress is needed. **Company Update** By: Phil Roberts, National Sales and Marketing Manager

The good news is the ground hog did not see his shadow, so hopefully an early spring!

I want to thank you, our clients, for your ongoing support as we continue navigating through the challenges of Covid-19. The challenges from the pandemic are slightly different for everyone, yet it is fascinating to observe the creativity and resilience demonstrated in finding new and unique ways to get the job done.

Our supply chains continue to be interrupted by the ongoing global pandemic; however, our teams continue to explore options to keep your feed and our offerings competitive. It is certainly not an easy feat to pilot the market volatility we are experiencing, which is truly quite incredible. Our team is committed to finding options and resources to help you, our business partners, through these uneasy times. Please ensure you are consulting with your New-Life Mills representative to assist you and your operation with the best viable solution to meet your needs.





#### How Can Late Gestation Ewe Management Improve Post-Partum Performance?

Written by: Rami Kridli, PhD, Ruminant Technical Representative

Lactation is a period of high nutritional demand as the nutrient requirements

of the ewe exceed those of any other phase of her productive life. Similar to other dairy species, feeding for optimal milk production in sheep must begin in late gestation. Ensuring proper late gestation nutrition is not only essential for preparing ewes for lactation, but also in preventing pregnancy toxemia.

Compared to cows, sheep have higher nutritional strain during late pregnancy. This is primarily because they are more prolific, have a shorter gestation length and a higher lamb birth weight to ewe weight ratio. This means that the fetal growth rate per kg of maternal body weight is 4 times greater in twinbearing ewes than in cows during the last month of gestation. Furthermore, feed intake is on the decline due to space constraint in the abdomen. Thus, the last 4 to 6 weeks of gestation represent a key period to prevent pregnancy toxemia in prolific sheep breeds (refer to our fall 2020 Small Ruminant Newsletter) and to prepare the ewe for the ensuing lactation. This is also the period with the highest secretory tissue

development in the udder, which is stimulated by adequate nutrition and placental hormones. Poor nutrition at this time reduces the deposition of body reserves and, if severe enough, can result in smaller udders, delayed initiation of lactation (for several hours), low colostrum and milk production. Feeding an energy concentrated ration during late gestation helps in compensating for the declining feed intake. In addition to nutrition, providing adequate floor and feed bunk space to pregnant ewes allows for more comfort and uniform feeding.

Upon lambing, ewes should have free access to fresh, clean drinking water and high-quality feed. The requirements for protein and energy increase by approximately 100% post-lambing when compared with late gestation. It is important to note that this will vary between 70 and 150% depending on many factors including parity, genetics, number and total weight of lamb(s). Depending on breed, peak milk production is reached around 3 to 4 weeks post lambing (ranges from 2 to 5 weeks). However, even though feed intake increases after lambing, maximal



Figure 1: An example of milk production and dry matter intake (DMI) during the first 12 weeks of lactation. As shown in the graph, peak milk production precedes maximal DMI by 3 to 4 weeks. Data for intake and production in the graph are based on averages for various high producing dairy sheep breeds.

feed intake lags about 3 to 4 weeks behind peak milk (Figure 1). This means that despite the steady increase in feed intake from lambing onwards, early lactation ewes undergo a period of negative energy balance in the first few weeks post-partum.

During periods of negative energy balance, ewes rely on mobilized body reserves of fat and protein to sustain (and increase) milk production. Therefore, proper care needs to be given to late gestation nutrition to allow ewes to deposit sufficient fat and protein reserves without overfeeding. Body condition scores (BCS) above 3.5 are not desired. Studies have shown that ewes with high BCS (>4.5) during late gestation are not only more susceptible to metabolic problems and lambing difficulties, but also experience reduced feed intake, which leads to lower milk production after lambing compared with ewes in moderate BCS (around 3.5). Additionally, ewes with high BCS at lambing lose body condition faster (due to lower feed intake) and are predisposed to ketosis.

When energy requirements for milk are high and the animal is unable to meet them through feed intake, protein supplementation becomes more important. Thus, increasing protein intake in fresh ewes has been shown to improve milk production at any level of dietary energy. However, a greater increase in milk is achieved when protein is supplemented to higher energy diets. For this reason, it is highly recommended to offer post-lambing ewes a protein top-dress to meet their lactational demands during this critical time period. The top-dress can be removed during the later stages of lactation.

In conclusion, nutrition and proper management during the last 4 to 6 weeks of gestation are key for good post-partum performance. Ewes should receive adequate nutrition without being overfed to prevent over conditioning. Understanding the dynamics of feed intake and milk production during early lactation helps in supporting the nutritional demands of early post-partum ewes.

# **Contact Information**

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- Can be mixed with on farm grains to prepare a balanced ration for growing/finishing lambs as well as ewe rations.
- Supplies Vitamin E and selenium in organic form to enhance animal health.
- Ammonium chloride is included to aid in the prevention of urinary calculi.

## Management Recommendations for Late Gestation Ewes:

- Provide late gestation ewes with higher nutrient density feeds (in addition to forages) to meet their requirements during this period of declining feed intake.
- Keep ewes in a 3 to 3.5 BCS.
- Late gestation ewes require about 15 ft<sup>2</sup> of floor space and 16 inches of feed bunk space.
- Offer fresh, clean drinking water and palatable high-quality feed immediately after lambing.
- Top dress the feed of fresh ewes with protein to increase milk production during the first 2 months of lactation.