

# Small ruminant dairy production for the bovine practitioner

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## Abstract

Goat and sheep dairies are a growing subset of the dairy industry in the United States. Although sheep and goats differ significantly from cattle in some ways, bovine practitioners have a wealth of expertise that can and does greatly benefit the small ruminant dairy industry. The need for greater utilization of knowledge exists and can have a large impact on profitability and sustainability of small ruminant dairies. In this talk, we will review the areas of goat and sheep dairies where bovine veterinarians can have the most influence and how the small ruminants differ from cows in a dairy setting.

**Key words:** goat, sheep, dairy

## Background

The small ruminant dairy industry in the United States is significantly smaller than the dairy cattle industry. As a result, there is an unsurprising lack of research, resources and general knowledge of advanced dairy techniques. There are a wide range of producers from small-farm producers and to very large European-style dairies. The ability to translate knowledge from European systems which are generally government subsidized is difficult at best. Many producers have tried and bankrupted their operations in the process. Bovine dairy concepts are sound and repeatable across operations in the U.S. As practitioners, we are experts at adjusting the information available to best suit individual clients. This same skill can be used to benefit goat and sheep dairies. In this talk, we are going to cover how to meet the needs of small ruminant dairy producers using knowledge bovine practitioners already have access to.

## The goat dairy industry in a nutshell

The main drivers of profitability for the dairy goat industry are milk price, feed cost and labor inputs. Does this sound familiar? As a bovine vet, how comfortable are you talking around these three concepts? Unfortunately, many veterinarians have met the bib-overall wearing, toothless farmer with goats in the backyard. Many of us do not meet the 100% RFID, daily milk weight collecting, TMR-feeding goat milk producer. These producers are the future of the small ruminant industry and they need professional support. We are experts when it comes to talking about profit margins, efficiency of production and effective use of labor. These are the primary concerns of every dairy producer, regardless of the species.

## Profitability and milk price

Profit margins are extremely small for goat dairies in the U.S. Although the milk prices are significantly higher than cattle milk prices, goat milk in the U.S. is sold to private creameries. There is no federal order and there is no connection to barrel prices, the Chicago Mercantile, or a cooperative that assists in marketing milk for the best prices. Each individual producer is

essentially an island. Milk prices tend to lag behind feed prices, which can lead to dire economic situations. One of the first discussions with producers needs to address the current milk price and what incentives are given by their creamery. If milk quality bonuses are present, what will it take to maximize that bonus? Many producers have poor milk components. Working with a nutritionist or learning the basics of goat nutrition will greatly improve income. There is plenty of information in the cattle industry on milk fat suppression. This can be applied to goats, even if the requirements are slightly different, the management of feeding applies. Many creameries offer bonuses for winter milk since this is generally a time period in which milk volumes are low. Producers are always looking for management tools to assist in maximizing milk during the winter months.

## Profitability and nutrition management

Goats eat a higher proportion of their body weight than cattle. This increases feed cost per pound of milk produced. Most high producing does will consume close to 6% of their body weight. Goats are also extremely selective and excellent at sorting feed. For this reason, goats will not consume poor quality feedstuffs and the overall expenses are significantly higher than dairy cattle. Due to the smaller size of goat dairies, it can be difficult to contract feed commodities. Buying "spot" loads of feed significantly decreases the profitability of small ruminant dairies.

## Profitability and labor

Goat dairying is labor intensive. Many aspects of managing dairy goats require frequent handling of both goats and kids. Consider that when attaching a milking machine to a cow, the yield is on average 80-100 lbs. The same labor to attach on goat milk machine yields 4-8 lbs. Dairy goats in the U.S. produce, on average, approximately 5-7% of the milk that a Holstein dairy cow produces per day. Unfortunately, goat milk is priced at a little more than half the cow milk price. To equalize this scenario, the cow would need to produce approximately 125 lbs per day on average. The profitability per goat is lower while labor to perform similar tasks does not change.

Another key difference between cows and goats is related to hoof care. Hoof trimming should occur 3 times a year for the whole herd. Hoof growth is rapid for goats and neglecting hoof care will result in low production and extensive lameness problems for a dairy. These 2 factors contribute to high cull rates on many small ruminant dairies.

Goats require shelter from the elements and cannot live in mud or wet manure conditions. They are the most destructive ruminant in terms of dismantling their living area and any exposed milk-barn hosing, hydraulic lines, electrical conduit, etc. will not survive the goat's curious nature. For these reasons, housing areas need to be well maintained and designed to prevent destruction by goat situations.

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Kid rearing is like raising tiny Jersey calves. It is possible to achieve greatness, but it requires excellent management and dedication. It can be difficult for goat dairies to effectively rear replacement stock due to the seasonal nature of kidding on a dairy. The majority, upward of 75%, of all kids are often born between February and June. Seasonal labor is often of poor quality and the strain on employees, owners and the facilities can create a dire situation. As a bovine veterinarian, it is easy to find sources of contamination and potential bottlenecks, as they are similar to a calf operation. The necessity to respect the mental health and stress that accompanies management failures is extremely important. Many operations do not seek preventive care assistance and instead are requesting disaster management from their veterinarian. Attempting to save a kid crop that is mostly deceased by the time the veterinarian arrives is like asking for a miracle. Maintaining a solution-oriented approach is the best way to build a long-term, working relationship.

### **Solution-oriented management**

Focusing on solution-oriented care creates an immediate place for a veterinarian on any operation. With respect to goat dairies, becoming a consultant who can provide suggestions and learning opportunities is a long-term approach that works. Understanding background costs and the labor associated with

them is important when making management suggestions. Most dairies are labor deficient and suggestions that improve efficiency are welcomed. Concepts related to reducing stress, disease prevention, and managing the transition period for peak performance are all transferrable from cattle to goat dairy operations. Bovine veterinarians have excellent observation skills and can quickly find the areas of poor efficiency without fully understanding goat dairy management. Learning along with individual clients certainly keeps the level of engagement high and will allow the U.S. goat dairy industry to acquire the greatest benefits from the cattle industry.

### **Conclusion**

The trend towards larger, consolidated goat dairies is creating an opening for herd health veterinarians. Goat dairies understand the importance of disease management, labor efficiency, milk quality control and nutritional support. They have struggled to find the resources to achieve the level of success required to be successful in the U.S. dairy industry. With a little knowledge regarding differences between goats and cows, bovine veterinarians could help bridge the gap between the 2 industries.

