Producer/veterinarian perspective: Adding value to small ruminant dairies

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Abstract

Commercial dairying has broadened my understanding of the key factors affecting small ruminant dairies beyond my veterinary background. Owning a sheep dairy and managing a goat dairy has allowed for insights into what it really takes to survive the hardships, failures, and successes related to milking sheep and goats. Certain trends are present in successful and failing dairies that are easy to find, once you know what to look for. In this talk, we will review the commonalities of successful and unsuccessful small ruminant dairies.

Key words: sheep, goat, dairy, disease, economics, management

Introduction

In 2010, I became involved with a goat cheese creamery as a consultant. I was asked to help develop and then manage a goat dairy that would provide a year-round milk supply to the creamery. The goal over time to was to provide the majority of the milk to the creamery. In addition, the dairy should set the highest standards for animal care, productivity, and be a model dairy to provide educational tours to other creameries and dairy producers. In 2012, my husband and I started a sheep dairy with a partner to produce milk, make cheese, and sell genetics to other producers. In this talk, I want to share what I've learned about success and failure in small ruminant dairies. What I want to do and what I actually do are likely to vary significantly. In reality, I will share the blood, sweat, and tears it takes to be too stubborn to give up. I've chased information and knowledge that didn't exist, performed on-farm research trials to learn what I couldn't find answers to, and developed a breeding program to create dairy does and ewes that could be profitable in unprofitable industries. For all the work I've done and things I've learned, dairying has shown me more about what I don't know than I likely ever will know.

Lessons Learned

When we talk about adding value to small ruminant dairies, the question arises of where to start, what to prioritize, and how to approach the concept of value. If you are reading this paper, you are likely 1 of 2 types of people. One, you want to provide better consultation or develop a consultation aspect to practice to aid sheep and goat dairy producers. Two, you are thinking of starting a small ruminant dairy because it will be rewarding, enjoyable, and an easy way to make some extra money with profits that need to go someplace other than the IRS. Here is the take-home message at the front end: small ruminant dairies have a very small profit margin. Do not be influenced by what the current milk price is. Small ruminant dairies are labor-intensive, sheep and goats eat more as a percent of body weight than cattle so feed cost per pound of milk is higher, and disease and poor genetics are huge limiters on profitability in commercial herds.

Lesson #1: high milk prices are relative. Due to seasonality of production in most herds, difficulty maintaining milk components at higher milk volumes, and extensive labor related to care of adult and replacement herds, the added value for goat and sheep milk vs cattle is nebulous. Goat dairy milk production commonly fluctuates by 50% from summer peak to winter trough. Feed expenses change very little over the year for the milking herd; however, kidding season means tremendous increases in labor, feed costs to kids, and management demands.

Good dairy owners prepare and budget throughout the year for this increased need for time and money. Dairy owners that do not have the funds to pay for added labor, feed for kids, and a management plan for intensive kidding are quick to fail. There is a period of months where costs are high and milk income has not caught up to expenses. Traditional small ruminant dairies with seasonal kidding experience a two-fold increase in labor demands during kidding season. With year-round kidding, this can be avoided but the success of year-round breeding depends on labor, management, and facility design. These 3 factors can also carry large costs. Dairies without savings generally end up with high death losses in does and kids, poor milk production, and reduced income for the rest of the lactation year. Sheep dairies in the US have an average lactation length of 180 days. That means producers are feeding dry, non-income producing ewes for half a year. Although sheep milk is valuable and demands a high price, the income is so seasonal that cash flow is generally very limited. Many producers become sheep dairy owners prior to understanding the cash flow repercussions and believe they will be able to do it differently. High labor costs and lactation variation throughout the year are big drivers for small ruminant dairy profitability.

Lesson #2: sheep and goats eat a lot. They eat a lot and they eat only premium quality feed in order to produce high volumes of milk for extended periods. There are no savings to

be made in price shopping for cheaper forages or low-quality feeds. The result is always the same. Short lactations, low production, poor fertility, high percentages of single kids and lambs, and a subsequent poor lactation the following year are all warning signs of cutting expenses at the cost of profitability. Cheap feed not only hurts the current lactation, but it severely limits the next lactation. Economically, this is a difficult problem to solve and there is no short-term solution.

Losing money for 2 years in a row is generally not sustainable. In addition, there are few resources related to feeding high-production dairy goats and sheep in the United States. More research exists originating from the EU, but the feedstuffs are different and direct transfer of that knowledge has limited application in many instances. The result is that there are many feed salespeople with limited knowledge of formulating dairy goat and sheep rations that hinder milk production and the overall health of the animals.

Lesson #3: diseases of goats and sheep are extremely hard on animal longevity and productivity. Herds with a high incidence of caprine arthritis encephalitis virus (CAEV), ovine progressive pneumonia (OPP), Johne's disease or contagious lymphadenitis (CL) struggle with high cull rates, low production, and higher replacement mortality or failure to enter the milking herd. Many producers feel it is too much work to maintain a negative herd disease status. Profitability cannot occur in herds with high disease incidence, and this has tremendous impact on small ruminant herd survivability.

Lesson #4: genetics and the concept of genetic potential are poorly developed in the United States' small ruminant dairy industries. Most herds are bred by natural service. Bucks and rams come from other producers or from backyard breeders with limited production records. Although the goat industry has improved tremendously in terms of type and production quality, the sheep industry is still in the early stages of development. The best animals are still the ones that 'make the most milk'. Little emphasis is placed on length of lactation, productive life, or type traits that are conducive to profitability. Whereas the cattle industry is moving towards genomics, sheep dairy producers generally focus solely on increasing milk production with the goal of increasing income. Unfortunately, the result frequently is dairy ewes with no udder support and short productive life.

Reflecting on my producer perspective in small ruminant dairies, the best recommendation I have developed is that there is no benefit to cutting corners. I have never seen a successful least-cost producer of milk goats or sheep. It takes good feed and good labor to produce the milk necessary to pay the bills. Reducing costs does not increase the profit margin. It reduces the milk check. Second, the best way to increase the profit margin is to raise and develop high-quality, disease-free animals to sell as replacements to other producers. Adding value to the operation is important. The only profitable dairies I have seen have had another income stream besides milk. The worst scenario I have encountered is the retiree who wants to milk sheep or goats to make extra money in retirement. Small ruminants are a tremendous amount of work and very little is automated or mechanized. The daily labor requirement, low profit margin, and inability to find productive animals have led many wise people down a path of failure. Success in small ruminant dairying comes from disease management, good dairy management skills, an ability to breed quality animals, and effective economic planning.