

FEATURED LANDOWNER:

montana highland lamb

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Dave and Jenny Scott have made the most of their 42 deeded (owned) acres by selecting crops that thrive under the local conditions and using methods that allow them to maximize the potential of their land. Situated at the foot of the Tobacco Root Mountains south of Whitehall, Montana, the Scotts started out with a small dairy operation, and then later transitioned to a 200-head flock of sheep. A compost enterprise complements the Scotts' operation by enriching their pasture fertility and providing an additional source of income. Dave has a job in town, but Jenny is at home full-time working on the operation. The Scotts have achieved all of this on 30 acres of irrigated pasture, 12 acres of dryland pasture where their buildings sit, and 70 leased acres of winter pasture. It has certainly been quite a journey for the Scott family to get to this point and they have learned many valuable lessons along the way.

The Scotts brought 30 Guernsey cows and 30 Guernsey heifers with them when they purchased their property in 1982. They started cross-breeding Jerseys into the cow herd and eventually built their herd to 50 milk cows and 30 dry cows and heifers (i.e., not pregnant or producing milk), which they found to be their maximum capacity. Their product was high-quality, class 1 milk (also known as jug milk) and their milk production peaked at 20,000 lbs/cow/year. After 21

successful years in the dairy business, they sold their dairy herd and focused on raising sheep. The Scotts maintained a small flock of ewes beginning in 1983 to enable their children to participate in the 4-H sheep project.

High-intensity, rotational grazing practices

With both their sheep and dairy cattle, the Scotts quickly learned they would need to use their forage as efficiently as possible. When they purchased their property, 30 acres of the total 42 acres was an irrigated hayfield. Buying equipment for haying was cost prohibitive and the twice per day milking schedule made it very difficult to get their haying done. In looking for a more efficient way to utilize their forage, Dave decided to set up an intensive grazing program that was modeled after a study done at Cornell University. They moved the milk cow herd to a new paddock (small pasture) after each milking and the heifers and dry cows followed one paddock behind the milk cows. Each paddock was approximately two-thirds of an acre in size, for a total of about 40 paddocks. They reserved a separate part of the pasture for rotating 30 grazing ewes. Dave says "the key to keeping enough forage ahead of you is looking behind you to be sure that a successive gradient of forage is maintained." In other words, grazed paddocks should have successively increasing amounts of forage compared to those grazed after it. This was especially critical anytime they had several days in a row with limited sun that reduced grass re-growth. When this happened, they would readjust their grazing schedule accordingly. Dave also found that using a 12-day marker (i.e., 12 days being the halfway point of the rotation cycle) to help monitor growth of the grasses helped to keep him on target with the successive grass gradient.

In managing their pastures, Dave and Jenny experimented with several different forage mixes, trying many different legumes and grasses. They found that a 20- to 22-day rest period maximized forage yield of most grasses and since most legumes need at least 35 days of rest in Montana,



they would get the greatest benefit from grazing exclusively on grasses. The grass that proved best able to handle their rapid-rotation schedule was 'Regar' meadow brome grass. Meadow brome grass is an introduced, cool-season grass that tolerates frequent grazing and haying. It is also relatively easy to establish and has good drought tolerance and excellent winter hardiness. They reseed four acres every year, putting each paddock on a seven-year reseeding cycle.

Dave has also been working on developing a management system that minimizes or ultimately eliminates the use of livestock dewormers. He is working to accomplish this using a combination of grazing and forage management strategies in tandem with genetic selection that favors the flock's resistance to certain parasites. Dave is hopeful that his management practices will result in a proactive approach to combating this parasite problem.

Lessons of 4-H Extend Beyond Youth

What started as a 4-H sheep breeding project for their kids, eventually became the focus of the Scotts' operation. When they transitioned from dairy cattle to sheep, the Scotts were very intentional in the selection of genetics in their flock. As a small-acreage producer and knowing that their unit cost of production would be relatively high, they wanted to ensure that they would consistently have a large lamb crop. For this reason, they breed Polypay ewes to Hampshire rams. The Polypay breed, which is known for its prolificacy and mothering capability, helps them reach

their 200 percent average lamb crop (Polypay ewes typically give birth to two to three lambs every spring). The Scotts have chosen to take a "middle of the road" approach by staying away from breeds such as Suffolk which doesn't tend to gain efficiently on grass. The Hampshire breed helps to provide the necessary balance and a temperament contributing to handling ease in the flock.

Dave says he learned everything he knows about evaluating sheep by working with his kids at 4-H livestock judging competitions throughout the state. "I didn't know anything about judging until my kids got involved in it," he says. He later became a livestock judging coach for a team of local 4-H members. As a result of these skills gained through 4-H, Dave learned how to determine the precise properties of muscle and fat needed on lambs prior to slaughter.

Marketing a Local Food Product

When the Scotts sold their dairy cows in 2003, they bought an additional 160 ewes, bringing their flock size up to about 200. They market their product as natural lamb and refrain from using antibiotics and hormones. The Scotts feed their lambs locally-raised barley and alfalfa hay, and have avoided feeding corn in order to be GMO (genetically modified organism)-free. In recent years they have fattened 70-100 lambs per year for slaughter, depending on the estimated demand for that year. The remaining weaned lambs are sold at the Billings Livestock Auction.

For the Scotts, one of the keys to delivering a high-quality product is



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(CONTINUED FROM PG 9)

optimizing the marbling (the intermixture of fat and lean in a cut of meat) of the lambs. “Many lambs in the industry end up being over-finished (overly marbled) in order to ensure that they all have adequate marbling,” notes Dave. The lambs they feed are monitored weekly and Dave physically feels each animal to gauge their finish. By using a local processing facility, which is less than five miles from their place, Dave has the unique opportunity to bridge the gap between live animal evaluation and resulting carcass quality by evaluating each hanging carcass. The close proximity of the processing facility reduces stress and resulting weight loss of animals associated with transportation, which translates into a higher quality product. The Scotts typically bring two to five animals to the processing facility every week for several months out of the year.

The Scotts market their natural lamb through farmers’ markets, restaurants, and a few grocery stores between Big Sky and Butte. With such a high quality product, they have developed a strong following. To satisfy customer demand, Dave and Jenny acquired a Montana Meat Depot License that allows them to store meat at their place and sell directly to their customers. The Scotts emphasize the importance of getting feedback from their customers and say that “our customers have taught us a lot and we continue to learn from them to make sure we are getting it right.”

Healthy Soil has Many Benefits

The Scotts’ compost enterprise grew out of a need to minimize fertilizer costs and control weeds in their pastures. Since sheep manure has relatively high nitrogen content, the Scotts are able to maintain fertility in their pastures with lower costs for nitrogen inputs. One of the benefits of grazing with sheep is that they are excellent weed eaters. However, Dave also noticed that the sheep often spread the weeds they ate to new areas through their manure. In an effort to keep noxious weeds under control, the Scotts began composting the manure, which kills most weed seeds due to the high temperatures that are reached during the

composting process. Paramount to fertility and weed control, the Scotts have discovered that the greatest benefit of composting is the incubation and proliferation of soil microorganisms. By increasing these bacteria, fungi, and protozoa in the soil, the forage productivity and overall soil health is greatly enhanced. Soil organic matter in their pastures has increased from 1.3% in 1982 to 4.9% currently.

As they refined their composting method, the Scotts realized they were able to make enough compost to sell some locally as well. Their compost has become so desirable for local gardeners that they typically sell out in about three weeks. They start their compost in July (preferably after a rain so they have good initial moisture content) with 200-foot windrows consisting of manure and straw bedding. After turning the manure frequently and monitoring it closely, the compost cures over the winter and they have a nutrient-rich fertilizer in early spring.

Dave and Jenny Scott have worked hard over the years to refine their operation using university-based research, close observation, and outside-the-box thinking. Carrying this ethic to the monitoring and management of their sheep flock, the Scotts are able to produce a premium product that yields a premium price. With their intensive grazing program as a cornerstone, they have built a “sustainable family operation with grass at its center,” as stated in the Scotts’ marketing brochure. The addition of the compost operation provides a diverse income stream that helps further support their operation. Dave and Jenny encourage anyone to contact them with questions at montanahighlandlamb@yahoo.com. ■

