

Seasonal Calving

Dan and Ruth Vosberg
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In 1991, when Dan and Ruth Vosberg moved to their newly purchased, 158-acre southwestern Wisconsin farm and started milking 18 cows, the popular view of dairy grazing was laid-back, low-input, and “graze what grows.” The Vosbergs saw managed grazing and seasonal milk production as the ticket to reaching their dream of making a full-time living milking cows. They felt they could manage a relatively small dairy herd, and not deal with such worries as planting crops, or maintaining a fleet of machinery. “Starting out, we thought grazing was simpler than conventional,” Dan relates.

Grazing and breeding all cows and heifers to calve during the spring weeks have indeed proven to be the means for fulfilling the Vosbergs’ goals. The cost and labor savings offered by managed grazing has allowed them to make facilities improvements, purchase additional land, and build a new house.

Yet reaching that dream has taken quite a different path from the original vision. The herd is not small: In 2003 they milked 170 cows and produced 2.5 million pounds of milk while running the farm with slightly more than two full-time labor equivalents. The Vosbergs have done far more pasture tilling and re-seeding than originally planned, and have experimented with a large number of grass and legume varieties. They found that profits increased markedly along with per-cow production when they provided more supplemental feed to their cows. And their equipment inventory has grown far beyond what they had anticipated.

Pasture

The Vosbergs originally planted “salad bar” mixes of various grasses and legumes to their hilly pastures. Dan said they made the mistake of grazing pasture stands too frequently, which encouraged many of the seeding mixes to evolve into nearly pure orchardgrass. A large share of this grass suffered leaf diseases, and cows often refused to graze these stands properly. Dan has since experimented with a wide variety of legumes and both annual and perennial grass species, including



Dan Vosberg feels that grazing is the best way to manage a relatively large herd on his hilly farm.

some newer orchardgrass varieties. The mix has evolved to include Kentucky bluegrass, reed canarygrass, tall fescue, bromegrass, quackgrass, and perennial ryegrass. The Vosbergs have also planted red and kura clover. “I believe in diversifying the farm rather than the paddock because it’s too hard to manage a wide variety of grasses with a wide variety of growth characteristics,” Dan said. In this way, some paddock is always ready for grazing.

Dan often applies up to 150 pounds of nitrogen per acre each summer and early fall to boost grass growth. In order to allow pastures to rest and stockpile additional dry matter that the cows can graze for several weeks after the growing season ends, he increases supplemental feeding in late summer, reduces grazing allocations, and limits haying of surplus grass. “To achieve the full benefits of grazing, I feel it’s very important to have cattle out grazing as many days as possible each year,” Dan said. The fall rest period also allows plants to accumulate the root energy reserves that help them survive the winter and produce well the following year.

He is experimenting with feeding cattle on specific pasture paddocks each winter, and then resting those paddocks through the middle of the following growing season. Dan is seeing signs that the combination of hoof pressure, manure, and rest is improving both the production and quality of the grass stands on his steep, thin-soiled farm.

FARM PROFILE: SEASONAL CALVING OPERATION



The Vosbergs constructed two canvas hoop sheds to provide shelter on bedded packs during the worst winter weather.

During the design of the pasture and fencing, Dan planned paddock size and shape to fit topography. To avoid erosion, he didn't want to put lanes on steep hills. In the spring, he follows a two-week rotation among his 25 paddocks, sometimes subdividing them with polywire. In the fall, he extends the rotation to 40 days and feeds supplemental hay if needed.

Facilities

In 1997, the Vosbergs built a pit parlor within a single-story tie stall building. A row of 12 milking units hangs over the center of the milking pit. The units are moved from one row of cows to the next, with units placed between the hind legs of each cow. During milking, cows consume a grain ration from a concrete manger filled by a lightweight auger controlled from the parlor pit. The parlor was built to allow expansion to 16 milking units. The rear portion of the building was converted into a covered holding area for cows waiting to be milked. In 2003 the Vosbergs used federal cost-share funds to build a concrete manure lagoon that holds run-off from the milking facility and a nearby barnyard. Also in 2003, they installed new milking equipment that makes it easier for one person to do all of the milking.

Not counting the manure lagoon and the new milking equipment, the Vosbergs spent about \$65,000 to retrofit the old barn into a milking facility that allows one person to milk 150 cows in an hour and a half.

"We wanted a milking facility that would not be hard on us physically, and wouldn't be a bottleneck to expansion," Dan explains.

The original farm plans did not include housing, but it became obvious that the farm's lack of natural shelter could lead to serious problems during severe weather spells and harshest winter months. The Vosbergs built two canvas hoop buildings, one 38 ft by 100 ft, the other 50 ft by 120 ft, that house cattle on bedded packs. The larger one includes a feeding area. The hoop houses are also used in the early spring to house cows and heifers that are approaching calving.

In their early years, the Vosbergs fed groups of heifer calves milk replacer and whole milk from barrels equipped with nipples. But after suffering a serious outbreak of Johne's disease, they switched to raising calves individually in pens within large hutches. After weaning, calves are fed in a small lot with access to a shed. Yearling heifers graze as a group, often following the milking herd into a paddock to clean up excess forage.

Rather than add water lines and tanks to paddocks, or invest in portable tanks, the cows are given access to water during milking and at mid-day during summer. This choice reduced the overhead costs associated with developing the grazing system.

FARM PROFILE: SEASONAL CALVING OPERATION

Seasonal milk production

Because seasonal milk production means that all cows calve in the spring and dry off by January, the Vosbergs felt it would be best to match the production cycles of grass and cows, along with allowing a few weeks' time off from milking each year. "Eventually, we also realized that seasonal calving matched the way our farm is set up," Dan explains.

The Vosbergs have been successful in attaining their seasonal goal. Out of 184 cows and heifers that calved in 2003, 159 did so between early March and mid-April. In 2004, 140 out of 156 calved over a four-week period beginning in early March. Between 1996 and 2003, the milking herd grew from 91 to 184 head without buying a single animal, even though the Vosbergs culled Johne's-infected animals, and sold cows that did not calve between March 1 and June 15 each year.

Years ago, the Vosbergs tried various drugs and hormones in an effort to get their cows to breed for freshening in a short spring time frame. "What we ended up finding was that with our herd, less is best," said Ruth. The Vosbergs attained better success through concentrating on cattle nutrition, dry cow care, and heat detection.

They favor Jerseys, but have crossed a substantial portion of the herd with Dutch Belted, Milking Shorthorn, Ayrshire, Normande, New Zealand Friesian, Norwegian Red, and German Red Angler genetics. "When we choose a bull, we look at what he has to offer to our breeding program more than what breed he is," Dan explained. The Vosbergs' goal is to work with small- to mid-size cows with broad muzzles, sound feet and legs, and bodies that can hold large volumes of forage. Cows that produce high levels of milk fat and protein are also preferred since the Vosbergs sell their milk to a cheese plant that pays premiums for milk solids.

Cows are bred artificially for at least three weeks while bulls breed heifers and any cows that do not settle with artificial insemination. Dan said a 60 percent first-service conception rate is required to meet their goal of having the great majority of the herd freshen within six weeks. In recent years the Vosbergs consistently achieve that mark, which is well above the industry average.

Dan said that his farm's emphasis on strictly seasonal milk production won't work for people who cannot deal with intense periods of work and stress, such as during calving season. "It takes a certain mindset," he said.



The Vosbergs have crossed a large number of breeds into their Jersey herd with the goal of improving grazing efficiency.

FARM PROFILE: SEASONAL CALVING OPERATION

“We like the lifestyle, but someone else might not.” Seasonal producers must be willing to work to avoid cash flow problems, he said. Overall, Dan believes that seasonal production reduces his costs compared to year-round production.

Feeding

The Vosbergs’ original feeding plan was definitely “low input”: pasture, supplemented primarily with only a small amount of grain. The strategy worked, but the Vosbergs were disappointed in per-cow milk production, cow body condition scores, and overall profits.

In the mid-1990s they began adding some feed inputs. They started feeding wilted, wrapped baleage, which increased feed intakes compared to dry hay. They added more byproducts to the grain ration, such as cottonseed and distillers grains. Then they started feeding corn silage at a rate of about 15 pounds per day. Most early afternoons on summer days, the milking herd is brought in to the farmstead feed bunk for corn silage and water. Dan estimates that pasture provides no more than half the cows’ total daily dry matter intake even during the prime growing season. Yet his informal trials have shown that cows will consume more total dry matter if given more feed choices. “It’s better to err on the side of spending more for feed than to let the cows go hungry,” Dan asserts.

The cows have responded. Milk shipped per cow rose from 11,500 pounds in 1998, to 15,500 pounds in 2003. Total milk shipped increased from 1.1 million pounds to 2.5 million pounds over the same period. Breeding performance improved, as did the farm’s financial performance.

He said the additional supplemental feeding adds to his total costs and machinery needs, even though the silage is planted and harvested by custom operators. After starting with one tractor, a manure spreader and a skidsteer, the Vosbergs now own a substantial line of tractors and haymaking and manure handling equipment. However, Dan said that compared to most confinement dairies, his equipment costs are much lower.

Financial performance

While profit margins have varied based on milk prices, “We’ve always been profitable,” Dan said. The farm’s rate of return on assets has been above 10 percent each year since 1995. Net operating income has averaged in the \$800 to \$1,400 per cow range in recent years, while total net farm income has been above \$100,000 in five of the past six years. In 1998 the Vosbergs were able to purchase a neighboring 130 acres to provide forage for more cows. In 2002 they built a new house. Ruth and Dan say the combination of managed grazing to control costs, feeding cows well to produce more milk, and an efficient milking system has been key to that success.

Labor

Dan said they needed to work hard to establish their farm during uncertain times in the dairy industry. “We always had a sense of urgency, so we pushed hard,” he explains. It has been difficult to raise small children while also dealing with the demands of a growing dairy enterprise. As they reach middle age, the Vosbergs want to take some steps to reduce labor requirements while still maintaining profitability. In late 2003 and early 2004 they sold 82 cows and heifers. Rather than hauling feed, they now rent neighboring acreage for grazing and nearby feed sources. Dan and Ruth want to show their three children that the dairy farm can be a worthwhile place to make a living, both from financial and lifestyle standpoints.

Words of advice

The Vosbergs say that dairy farmers who use managed grazing must be willing to explore ideas and make well-informed decisions about what will or won’t work on their particular farms. Dan admits that he and Ruth were naïve in their early days of farming, and bought into some grazing ideas that cost them money. “When you’re gathering information, you must be careful not to assume anything,” Dan said. Financial planning and goal setting are important to this process. “You’re not just a cow man. You’re not just a grass farmer. You’re not just a businessman. You have to be good at all three,” he adds. “If you’re not, you have to be working with someone who’s strong in the area where you’re weak.”