



Natural Resources Conservation Service

Case Studies

Intensively Managed Grazing-Dairy

Rocky Road Brown Swiss Dairy Farm

Capital and Management Issues in Transitions

Change in any agricultural operation can cause uneasiness for its owners. When that change encompasses an entire shift in the management and operation of the unit, those concerns are even greater. However with sound advice, education and commitment, successful change can be achieved.

Resource Setting

Rocky Road Brown Swiss is a grass based dairy operation in South Central Illinois. The operation began with Tony and Marsha Snow in 1976. Their daughter Ashley joined the operation in 2004. The farm consists of 312 acres; the land is relatively flat, and soil erosion is not a key concern. The dairy is operating near capacity at this time with 300 total animals, and with 140 freshened cows at any one time.

Changing Directions

When the farm was first purchased, it was a combination grazing and grain fed dairy. Crop production also took place on part of the farm acreage. The first major change was converting the dairy to a confinement system that operated as such for 30 years. Tony said it felt like the operation was just trading dollars, and not really getting ahead; as the confinement system was very capital intensive. Big money was coming in but big money was also going out.

The Snow's first evaluated a possible change in the early 1990's, looking at grass and grazing systems. However the systems available at that time did not appear to be economical, so they remained in a conventional production system.

With the need to update and replace a number of components in the conventional dairy system, the Snow's decided it was time to change. They converted to all grass production in 2004; and in 2007 bought a grass drill. This was critical for establishment of quality forage for their animals. Primary grass in pastures and paddocks is fescue. A number of areas also have clover with the grass (clover is naturally present in some areas of the farm). Orchard grass is the primary grass utilized in the production of hay/baleage. The Snow's tried to utilize annual warm season grasses, but have discarded them as uneconomical.

Another major change came with the enrollment in EQIP contracts for waterlines and fences. These conservation programs allowed Rocky Road Brown Swiss to be able to establish the permanent perimeter fences for the farm and paddocks and watering stations that would be required to efficiently operate a rotationally based grazing system.

Improving Returns

Tony will be the first to tell you that the first two years of changing operational systems had a very steep learning curve. He characterizes the biggest hurdle to adoption as they had to realize and accept the tank average (pounds of milk produced) was going to fall. However even with that falling average, they realized they did not need a 65 pound tank average; they are profitable at 42 pounds in a grass based system.

One key grass based advantage the Snow's discovered—they reduced veterinary bills significantly. Vet expenses dropped from \$23,000 per year to \$6000 per year. Tony attributes this to a basic equation:

Healthy Grass=Healthy Cows; Healthy Soil=Healthy Grass

The Snow's are able to maintain the health and productivity of their cows for an extended period of time in this grazing system. They have between 15 and 20 cows in milk production that are over 10 years old, whereas the average age of cows in conventional dairy systems is 3.8 years.

Some of the facilities that were present with the conventional dairy are still utilized, such as the manure collection system, concrete lots, and sacrifice area. Equipment changes were mostly of utilization, such as purchasing a drill instead of a planter; instead of producing silage and haylage, the associated equipment was replaced for baleage.

Ashley notes that with the grazing system, it is actually easier to take care of the cows. They know what they need to eat, and all that has to be done is move them to the next paddock. Cows are gentler and have better disposition than when they were in a confinement setting. She also commented 'putting more cows on a small area and moving them often is more productive than putting 10 cows on 40 acres and never moving them'.

58 paddocks are available for rotational grazing. There are 52-two acre paddocks, and 6-five acre paddocks. The five acre paddocks are for the dry cows. Freshened cows are rotated more often on the vegetative smaller paddocks. The longest walk for the cows to any paddock is ½ mile. Water is available in each paddock.

The fresh cows are typically moved onto fresh grass every 12 hours, coinciding with the completion of their milking. This way the animals are exposed to fresh forage after each milking. Paddocks are divided with poly wire and step in posts that are easy to move within the permanent fences. They have installed multiple gates along the permanent fence to help guide and quicken the movement of the temporary fences.

Another key production goal in the grazing system is QUALITY Hay. Without quality hay, milk production will fall in the cows. Quality hay for this dairy means typically harvesting the hay wet. The goal is to mow in the morning and bale in the same evening. To successfully maintain the quality needed the Snow's strive to wrap the baleage within 12 hours of cutting. They target 20 acres per day mowing and

baling. Hay is harvested as baleage, at moisture content of 55%-65%. When feeding, they only need to feed one bale per day to stay ahead of spoilage.

Bales are stored in long plastic, airtight covers/bags in groups as opposed to wrapping bales individually. They determined this is much more economical and easier to manage than continuing the individually wrapped bales they began with. There is a reduction of over 66% of the plastic waste and cost by going to tube wrapped hay.

Tony concludes that a producer has to have a completely different mindset to be productive in a grazing system. Grass management is the key to success; and a producer in this system needs to manage to keep the grass in a vegetative state.

With a constant focus on the cows, the pastures, and the hay, Rocky Road Brown Swiss has shown that Conservation Pays!



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