Processing with Passion

Cubing alfalfa and grass hay provides a bright future for forages on this 5th generation Minnesota family farm

by Paul Peterson, University of Minnesota

Idle Acres is anything but that. Owned and operated by Harlan and Mary Anderson with their sons Richard and Mark, this 1,000-acre, 135-year-old farm "rests" about an hour west of Minneapolis, near Cokato, MN, in Wright County Harlan is the 4th generation on this farm, his sons are the 5th.

About half (500 acres) of the farm is in alfalfa, and another 100 acres in perennial grass, mainly reed canarygrass; all grown for hay. The balance of the acreage is in corn and small grains. But Harlan envisions the day when the entire 1,000 acres can be in perennial forages, possibly alfalfa in rotation with perennial grasses for hay.

The Andersons also contract feed hogs for a large neighboring farrowing operation. This provides some valuable manure to fuel his forage crops.

On-farm Cubing. The Andersons make mostly small square bales that they market primarily to horse owners, but also to some dairy and sheep customers. They have found that with bales, small squares market better than big rounds. The Andersons have a hay cuber on their farm. Hay that will be cubed is usually put into big round bales. About two-thirds of their hay is marketed in bales, and one-third as cubes, but Harlan anticipates the balance to continue to shift toward cubes. Rain-damaged alfalfa hay provides another market opportunity which Harlan processes into high-value mulch marketed to gardeners.

Alfalfa ABCs. Harlan seeds most of his alfalfa in early August. His acreage includes a fair amount of peat ground that stays wet most of the spring, making spring seeding difficult. He seeds 12 to 15 pounds per acre of a good variety. Harlan thinks variety selection is important. He has used no-till, brillion, and conventional grain drill seeders with success, but prefers no-till for its moisture and soil conservation advantages.
Harlan keeps his alfalfa stands for 5 to 8 years. He acknowledges that grasses, primarily quackgrass, increase over time, but he views this as a positive for his market. Hog manure provides about 75% of his fertility with the most of the balance provided by potash. Harlan also feels he gets a growth response to some N fertilizer after first cutting or in late fall.

The Andersons usually take three cuttings per year in early June, mid-July, and September, but prefer to take two cuttings. Alfalfa will usually be in full bloom. Harlan likes to let the alfalfa get more mature for more yield and root reserve replenishment. He has found that by cutting at more mature stages, he has no winter injury problems taking a cutting in September. He feels the fertility balance provided by hog manure may help persistence, too. Small square bales are picked up by an accumulator, minimizing hand labor.

TMR Cubes. A challenge in supplying hay and cubes to horse owners is matching that hay to the unknown of what the horse owner may also be feeding. Harlan argues that a TMR cube can take a lot of the guesswork out of that. Harlan has worked with Dr. Sarah Ralston of Rutgers University in New Jersey for the past two years evaluating how growing horses do on TMR cubes compared to free-choice hay and a commercial supplement. The TMR cubes are about three-fourths alfalfa-grass hay and one-fourth grain mix. In those trials, horses often consumed as much as 3% or more of their body weight in cubes, had similar or greater gain, and higher feed efficiency.

Processing Pays. Harlan is convinced that processing is key to effective use of Minnesota-grown hay. His cubing is one method, but he is quick to point out that other methods are certainly viable, too. A former practicing veterinarian, Harlan has seen the ailments associated with improper nutrition. "We can grow high yielding hay, but putting it up early can be a challenge," says Harlan. Processing improves hay's digestibility and palatability, e.g. his reed canarygrass. Harlan is convinced that effective fiber in processed hay is what is missing on many Minnesota dairies.

Service is Key. Harlan does not use preservatives because his horse clients don't want it. He typically has 50 to 60 customers who own from one to 125 horses. He indicates that service, in particular on-time delivery, is key. Harlan stores all the hay and cubes and personally delivers whenever his clients need them. That way he learns first-hand of any concerns and issues they may face.

Research Needs. Harlan is always asking questions of himself and others. Last August, he planted a 50-acre field to about a dozen different grass varieties to see how they perform. He is particularly interested in forages that can persist and perform on peat. He is passionate about forages and the opportunities that lay ahead for our industry. He looks forward to the day when his land can be planted entirely to perennial forage.