The Oasis in Corn and Bean Country -

Sound hay & pasture management practices anchor profitability on Millers' farm in SE Minnesota

by Paul Peterson, University. of Minnesota

Alfalfa and reed canarygrass under oats. Pretty simple formula, but a main equation for success on Dan and Cara Miller's diversified farm. Dan, Cara, and their six children, aged 1-8, together with great hired help, farm 600 acres near Spring Valley. Of those acres, they own 450 and rent the remaining acres. In 1993, they began farming there on 120 acres, six kids and 480 acres ago.

The Millers run a 100-cow purebred Angus herd, and custom graze ~75 dairy heifers annually. In a corn and soybean dominated landscape, over 400 acres of their farm are in perennial forages for hay and grazing. In spring, their farm is a virtual oasis of green when most of the surrounding Fillmore County rolling hills are brown with exposed soil, corn and bean residues.

Equipped to Hay. Dan bales hay for his use and to market. He bales with a John Deere 567 round baler, bought in 2001, and is pleased with its performance and service. Dan likes round bales because of concerns that hay will not dry enough to bale in medium or big squares. His bales, soft or hard-centered, usually are 1000-1600 lb, and many are net-wrapped. The baler is equipped with a moisture meter and preservative applicator. If rain is imminent, and windrow moisture is over 20%, he applies preservative and bales. When moisture tops 25%, he quits baling. "Wet hay in the field is a whole lot better than wet hay in the bale," Dan says. His positive baler experience prompted the purchase of a new 13' John Deere discbine in 2004 (center pivot w/steel roller conditioner). Previously, he used a 9' New Idea discbine, which was reliable, but did not have capacity to handle the growing hay acreage.

Why Alfalfa-Grass? Dan has direct-seeded alfalfa, but in recent years, has moved almost exclusively to seeding reed canarygrass with alfalfa. He has also used bromegrass, timothy, and orchardgrass, but has settled on reed canarygrass as his grass of choice. Dan concedes that he may sacrifice some quality by including reed canarygrass with alfalfa, but feels there is plenty of quality there for his beef cattle and dairy heifers. He likes reed canarygrass with alfalfa because it: yields well, dries faster than straight alfalfa, has broad leaves making it palatable as hay and pasture, has less bloat potential and has good drought tolerance. "Drought will kill me," states Dan. "The alfalfa-reed canarygrass combination gives me some insurance against it."

Dan seeds pretty heavy (~6 lb/ac of reed canarygrass, 15 lb/ac of alfalfa). He uses modern, top-performing varieties. He has used Palaton, Chieftan, and Marathon reed canarygrass; and potato leafhopper-tolerant alfalfa varieties. Dan maintains that with the high opportunity cost of land, he cannot afford a failed seeding, so he uses plenty of good seed.

Miller says he will do whatever is needed to get a good, firm seedbed. He uses an old grain drill with a small seed box that broadcasts the seed. Oats go through the grain box at 1.5-2 bu/ac, and a cultipacker follows. Dan has had some difficulty getting oat hay dry enough to bale, so this year he plans to work with a custom wrapper to wrap oat round bales wet as oatlage.

Dan and Cara Miller and family hosted U.S. Congressman Gil Gutknecht and NRCS regional assistant chief Merlin Beartz on their Spring Valley, MN, farm for the unveiling of the map of approved Conservation Security Program (CSP) watersheds for Minnesota. Photo by Charlie Warner, Spring Valley Tribune.

After taking the oats off, Dan takes 1-2 more seeding-year cuttings. The year after seeding, the reed canarygrass will still be fairly light in the first cutting, but then thickens. He takes 3 cuttings/year, and sometimes grazes the fourth crop after frost. His cutting interval averages 35 days, generally the first week of June, second week of July, and third week of August. This cutting schedule produces hay with RFV of 100-140 and 16-23% crude protein.

Within pastures, he hays about 50% of the acreage at first cutting, 25% at second cutting, then rotationally grazes it all the remainder of the season. Dan follows UM recommendations for P and K, applying once in fall, or in split applications after the first and second cuttings. If there is more than 30% legume, he uses no nitrogen fertilizer.

Rotations. Dan typically will not rotate out of the alfalfa-reed canarygrass hay/pasture mixtures until after 6 years. By the 5th year, he sees more bluegrass and less alfalfa. Then, he usually does some frost seeding mid-March with red and white clover. After 6 years of grass-legume hay/pasture mix, he follows with 2 years of corn for grain/silage, 1 year of soybean, then seeds back to alfalfa-grass under oats.

Dan typically gets 7 grazing cycles/year, aiming to turn in each paddock at 10" and rotate out at 4". Cattle are grazed from the 3rd week of April into October with grazing periods of no more than 5-7 days; if more, cattle paths develop and regrowth is slowed. He effectively used EQIP dollars to cost share pasture development.

Cattle. Dan custom raises dairy heifers from 400-450 lb up to 22 months of age, 2 months before freshening, when weighing 1200-1250 lb. They are bred at 15 months or about 800 lb. Until bred, he supplements with 3-5 lb of coarse ground corn and feeds an ionophore. Their monthly weights are recorded in a spreadsheet which is sent to the owner. After breeding, Dan usually stops grain feeding as long as the heifers are on good forage.

Dan targets the NRC-recommended rate of gain (1.8 lb/day) on his heifers. He feels good worming, vaccinations, and fly control are important (he uses a pour-on monthly when weighing and uses mobile mineral feeders with a cloth flap saturated with insecticide). For his dairy heifer program, 1 acre supports about 1350 lb of animal over 150 days. He nets about $250/ac with dairy heifers, much more than corn or soybeans, but certainly with more labor.

With his beef herd, Dan calves on pasture in April and May and weans in November. He sells some feeder calves, finishes and direct markets others, and also sells some purebred bulls. He uses a combination of artificial and natural insemination. His 205-day adjusted weaning weights average 650 lb without creep feeding. His purebred Angus cows are of moderate size. By calving on pasture in April and May, Dan is convinced he has fewer problems and less calf mortality, helping to consistently achieve a calf crop over 90%, which Dan feels is critical to profitability.

The Millers round bale and netwrap most of their alfalfa-reed canarygrass hay, then promptly put it under cover to preserve its quality.

Dan and Cara are diligent in maintaining production and financial records for their farm. Dan practices what he preaches, since “by day” he is a farm business management instructor with Riverland Community College.

Dan recently joined the MFA Board of Directors and is interested in helping to re-invigorate local councils in southeast Minnesota. The Millers organize and host a field day every summer that consistently draws 100-150 people. In 1998, the Millers won Fillmore County’s Conservation Farmer of the Year award. While the operation itself certainly contributes to that oasis feeling, it is Dan and Cara’s energy, kindness, openness, and positive attitude that are the true refreshment of their oasis.