

**Pat and Russ Brehm,
Dickinson County**

**Grazing & Alternative
Watering System**



Cooperator:

Pat & Russ Brehm
1946 1400 Ave.
Hope, Ks. 67451

Watershed:

Lyons Creek

Demonstration:

- * Convert cropland to permanent grasses
- * Develop an alternative livestock watering system
- * Fence former CRP land for grazing use

Water Quality Concern:

Livestock Impact on Carry Creek; bank erosion; livestock winter pasture run-off; Fertilizer & pesticide run-off from cropland

“We depend on good water for survival, physically as well as economically.”

Pat & Russ Brehm

Russ and Pat Brehm begin the story of their farm and their efforts to protect water quality with these words, "Our dream is to get our farm completely into grass."

Russ and Pat farm with their teenage sons, Hans and Levi, near Woodbine in the Lyons Creek watershed of Dickinson County. The Brehm's have a flock of nearly 200 ewes and a cowherd consisting of 30 part-Holstein, fall calving cows. Sheep are often run with the cows in order to take advantage of two species with different grazing patterns and preferences.

Russ and Pat used CWFPP funding to convert cropland to permanent forage and to improve existing forages. They began by planting K-31 fescue and a clover-ryegrass mix on 40 acres of cropland in early September of 1999. They were able to start grazing the forages in January 2000 and grazed the cows on it through the spring. Russ indicated that they chose fescue in order to have forages stock-piled for grazing during December and January.

They also converted an aging alfalfa stand to permanent pasture by inter-seeding brome into the alfalfa sod.



The Brehms use "guard donkeys" to protect their sheep herd from predators.

Their current grazing pattern uses the fescue during winter and early spring, the brome/alfalfa mix during late spring and early summer, native grasses or alfalfa through the summer, and then fescue or brome in the fall and into winter.

The Brehms still had 80 acres of cropland planted to corn in the fall of 2000. They planned to convert those acres to native grass and forbs in the spring of 2001. The corn stalks would provide fall and winter grazing before no-tilling the grass into the residue.

"We still have hay equipment," says Pat, "but we want to use as little machinery as possible and save on all those high costs." Russ says, "You feel kind of funny feeding hay in September. But then, when we have a summer drought, we can be short on grass at the end of the summer and we know the sheep will be grazing in January."

At the time of their CWFPP application, the Brehms had fenced Carry Creek at the west end of the farm to protect hardwood trees growing next to the stream. The Kansas Forest Service Wildlife Program helped fund the fencing project and in return the Brehms agreed to restrict livestock from the riparian area for ten years. The Brehms believe this plan will benefit the trees and the stream quality as leaf mulch increases and stream banks regain living plant cover.

Once the stream was fenced, the Brehms needed a new water source for the livestock wintering area. The cattle would need to walk nearly a half-mile from winter windbreaks on the hill to drinking water in the farmyard lots. Russ and Pat were particularly concerned about concentrating animals in one watering area and creating trails to and from the farmyard, increasing erosion. A new water supply would also allow them to graze eight acres of grass that would be coming out of the Conservation Reserve Program.

Originally, they considered constructing a pond in the winter pasture. Eventually, they chose to install a pressurized water line that would allow them to make the best use of the grass and provide more flexibility.

Pat and Russ rented a trencher and laid the waterlines themselves. "It's neat to be able to move livestock clear out on the grass and not have to bring them in," Russ comments. For others pursuing a similar project, Russ suggests putting in shutoffs in the water line wherever possible.

The pressurized water system allowed the Brehms to divide their forages into paddocks with high tensile fence for management intensive

grazing with water available in each paddock. The CWFP provided funding to help fence the eight acres of CRP grass for an additional paddock.

Management intensive grazing also necessitates different methods for checking the animals that previously came to the barnyard each night. Says Russ, "It forces you to walk more. It's probably healthier for you. And if you try to drive out through the paddocks, it just takes too much time to keep opening and closing gates." Pat adds, "Also, I think you look at the animals closer when you check them on foot."

The move to a complete grazing system was not without problems. The lamb crop suffered some serious coyote kills during the first season. The Brehms finally resorted to bringing the sheep in at night and eventually they bought guard donkeys.

With each step toward that "farm completely in grass", the Brehms took a step toward improved water quality. By replacing annual crops with permanent forages the family has reduced the potential for soil erosion. Fertilizer and chemical use has been reduced and the potential for runoff of these materials is small.



The Brehms have restricted livestock access to Carry Creek. Tour goers check out the plant diversity in the riparian area.

As the Brehms stated in their CWFP application, "Our goal is to maintain our family's farm as a quality place of life for ourselves, our young sons, and future generations. A viable source of water is essential for sustaining us, our livestock, and our crops. We depend on good water for survival, physically as well as economically."

Brehm Farm Characteristics

Farm Size: 280 acres incl. 200 cultivated, 80 A. native grass; also lease 160 A. pasture for cattle.

Primary Crops: Forages, grass and alfalfa.

Livestock Enterprises: 25 fall calving cows; 250 ewes (sheep).

Equipment: Haying equipment, some tillage equipment.

Seed Varieties & Seeding Rates: Tetragold ryegrass, K-31 fescue; native grass mixture plus extra legumes.

Weed Management: Grazing, haying; spot treatment for noxious weeds

Insect Management: Spray for alfalfa weevil prior to first cutting.

Soil Fertility management: Yearly soil tests

Crop Yields: County average (35 bu. wheat, average tonnage upland alfalfa.)

Water Quality Management: Converted cropland to perennial grasses; limit livestock access to creeks; use an alternative watering source for livestock.

Marketing: Mostly livestock auctions; sell fat lambs, beef at weaning weights, some direct marketing to customers.

Profitability indicator: Numbers of lambs and calves weaned; Less inputs of grain, protein supplements; more dollars invested on the farm for the long term.; more money in our checking account.