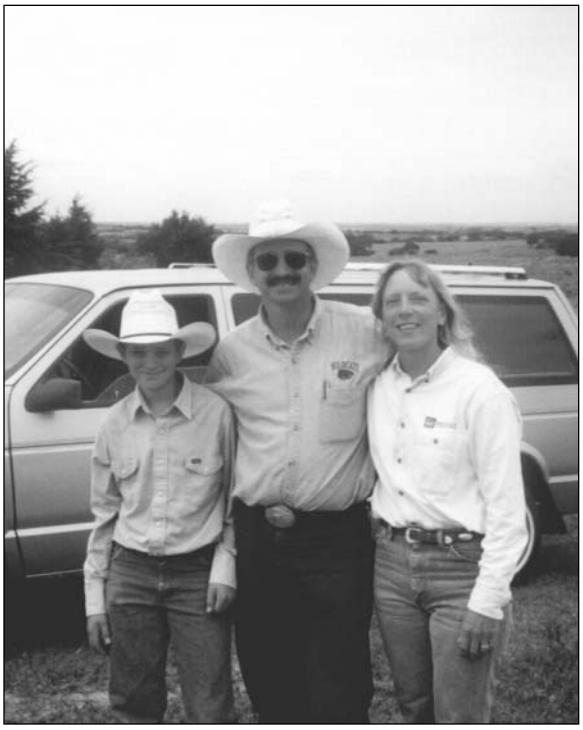
Alan Hubbard
Pottawatomie County

Alternative Livestock Watering System



Cooperator:
Alan & Sharon Hubbard
4915 Long Parkway Rd.
Olsburg, Ks. 66520

Watershed:
Blue River

Water Quality Concerns:
Livestock waste run-off into ponds and streams; erosion caused by livestock watering points.

Demonstration:
* Develop an alternative livestock watering system including buried waterline & tanks, & limiting pond access

Alan and Sharon Hubbard's 5,700 acre ranch, "Shannon Creek Cattle Company" is located in the picturesque Shannon Creek Valley northeast of Olsburg. The ranch includes 5,292 leased acres of mostly native bluestem, and also about 800 acres of brome and "go-back" grass. ("Go-back" refers to cropland that was allowed to "go back" to its original native grass state.)

A typical year will see 1,200 to 1,500 custom grazed stockers from May 1st through early August, and 300 beef cows maintained on the operation year round. They also have about forty-five horses.

The ranch is very steep, rough Flint Hills, in the breaks along Tuttle Creek Reservoir on the Blue River, the state's largest reservoir.

When Alan applied for CWFP assistance, he had already been practicing a management intensive grazing system for several years -- long enough to identify some water quality and erosion problems with the system.

Alan had already established that he could manage large paddocks and that the MIG system was a profitable system for his ranch. Crop yields for the ranch are measured by pounds of beef per acre, which can vary from 45 to 120 pounds. Results of a 1995 Kansas State University grazing study showed a dramatic increase in gain per acre on the MIG managed system as compared with the continu-

Alan drilled a new well and installed a 10,000 gallon storage tank (see right) to provide a reliable, fresh source of water to his livestock paddocks. The storage tank gravity feeds about 6,000 feet of waterline to three watering tanks to supply water to about 700 head of yearling cattle. Not only does it provide clean water to the cattle, but his new system provided a reliable source of water during a recent dry summer .

ously grazed system. By 1999, Alan's records indicate that his MIG system grass produced 101 pounds of beef per acre and his continuous grazed acres produced 56 pounds.

However, the cattle were watered from a number of ponds and streams on the ranch. Running several hundred head in one unit in a MIG system was doing massive damage to the watering points (pond banks and streams) in the various paddocks. Livestock wastes were impacting the water quality of the ponds and creeks.

Alan's demonstration plan was to limit cattle access to ponds and streams by developing a gravity supply line to watering tanks throughout 30 some paddocks, fed from a 10,000 gallon storage tank recharged from a well. The water line was laid from the storage tank or tower to three water tanks along the main axis of the center of the pasture, providing water in four to six paddocks from each tank.

The ponds earlier utilized for water were fenced off to prevent erosion and to protect the water quality . He also installed (see photo next page) a water ramp that limits cattle access to the pond. Alan has also developed a spring for another controlled water source.

Presently there is one paddock out of 20 where cattle can still drink out of a pond, but Alan says, "Where there is available clean tank water they will pass up ponds and streams to drink out of the tank."

Alan has noticed that the physical shoreline has improved with fenced off ponds. Soil erosion due to trails leading to the old watering sites has been greatly reduced because of the water tank location on top of the hill.

Also, Alan attributes additional profits to his new water system. He figures at least a 10% increase over the past two years in stocking rate because of the new water system.

"As my rotations have intensified, I've been able to drop some pastures that have been conventionally grazed because my return to management is so much greater with MIG. I make $3 per acre on conventionally grazed grass compared to $25 per acre on MIG. I also get a $6.60 per acre winter benefit by being able to graze win-

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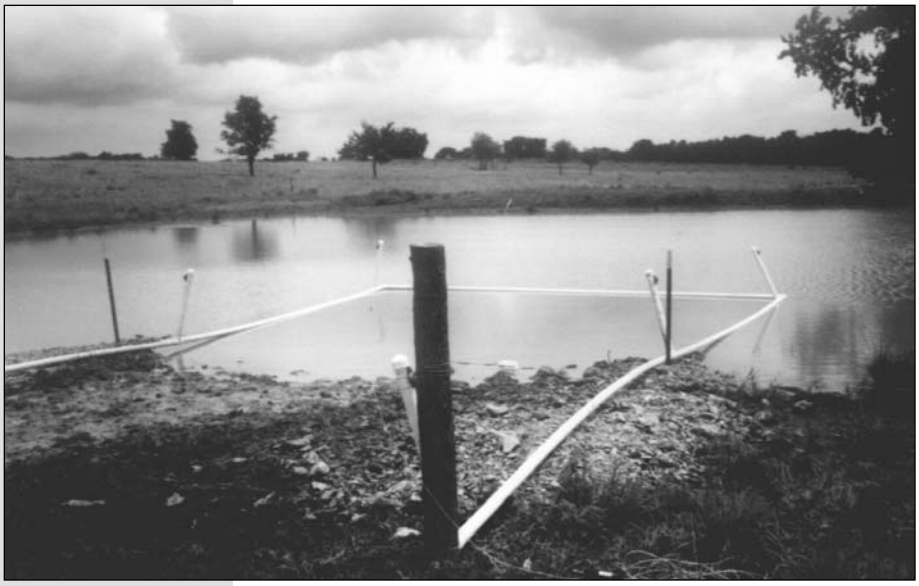

Simple PVC pipe and some rock are part of a water ramp limiting cattle access to a pond on Alan Hubbard's ranch. An electric fence - barely visible in the photo - keeps cattle out of the pond.

KBS chose to monitor three of the ponds in Alan's pastures to see how his management practices affected the water quality. See Appendix for more.

ter stockpiled grass with my beef herd. The new water supply gives me more flexibility and a more reliable supply."

Ten percent of $25/acre profit on the MIG cells x 950 acres that the new water system supplies will make an additional profit of $2,375 per year.

In addition to the benefits to his cattle, the reduced erosion and run-off, Alan has also noticed that wildlife habitat around the ponds has improved.

Hubbard Ranch Characteristics

Farm Size: 5700 A. including 5,292 rented.
Crops: All grass, mostly native bluestem, about 800 A. of brome.
Livestock: 1200 to 1500 custom grazed stockers from May 1 through early August; 300 beef cows year round.
Equipment: Goal is to eliminate all possible machinery, and let animals harvest forages. Has one tractor, a Case 870 with loader and two pick-ups.
Labor: Alan, Sharon and their 3 children and a nephew part-time provide all the labor.
Livestock Management Practices: Cattle are moved through a series of paddocks and pastures in a Management Intensive Grazing system.
Weed Management: Hoof action and grazing management; burning and manual cutting of cedars.
Insect and Disease Management: Cows are vaccinated for Lepto-Vibrio; and calves for blackleg and Pinkeye. Some Pour-on for parasites is used.
Soil Fertility Management: This applies only to the brome. The hayed brome gets 70 lbs of N applied, and the grazed brome gets 30-40 pounds of N.
Crop Yields: Yields are measured by pounds of beef produced per acre. In 1999, his MIG produced 101 lbs of beef per acre and his continuous grazed produced 56 lbs. /acre.
Water Quality Management: Use of MIG system and alternative watering system to limit cattle access to streams and ponds.
Profitability Indicators: Records indicate his MIG system more profitable than conventional grazing system. See body of story.

Alan and his family have been very generous with their time and what they have learned on their ranch; they have hosted numerous tours over the past several years.

From farm groups and state officials to high school FFA classes, Alan has opened the ranch to visitors.