

Bruce & Cheryl Spare Saline County

Management Intensive Grazing System



Cooperator:

Bruce & Cheryl Spare
10501 S. Simpson
Assaria, Ks. 67416

Watershed:

Smoky Hill River

Water Quality Concerns:

Erosion and run-off from highly erodible cropland into adjoining stream

Demonstration:

- * Convert cropland to permanent grasses and legumes;
- * Implement a management intensive grazing system including alternative water system

Bruce and Cheryl Spare's farm near Assaria, Kansas, has gone through some mighty changes in recent years. His Clean Water Farms demonstration is a part of that change. Spare's conversion of cropland to permanent forages has enabled him to develop a management intensive grazing system using cattle to harvest the forages. The cattle increase the value of the harvested crop and the permanent forages help protect water quality.

Spare's demonstration features the development of a grazing system on 80 acres of cultivated ground. Fifty-eight acres of this project are designated as Highly Erodible Land (HEL) by the Natural Resources Conservation Service. Wheat was harvested

from those acres in 1995. The remaining acres include an intermediate creek and wooded area above the Smoky Hill River. Alfalfa had already been established on the tillable acres north of the creek. The primary water quality concerns were soil erosion and runoff of chemical fertilizers and herbicides from the crop acres to the adjoining stream.

In 1995, Bruce received a CWFPP grant to purchase and install fence and a watering system in conjunction with the cropland conversion. The wheat ground was prepared for seeding and fertilized in early September of 1995 according to a soil test with 100# of 40-20-0 and 2,000#/acre of lime. Martin Fescue, Kansas common



Bruce Spare converted highly erodible cropland to permanent grasses (above), installed buried waterlines for watering livestock (left), and reduced erosion into the adjacent creek (below).

KBS set up groundwater and runoff samplers at the Spare site. See Appendix.



alfalfa, hairy vetch, and cicer milk-vetch were seeded later in the month. Drought conditions in the fall of 1995 and a late freeze in the winter of 95-96 prevented the establishment of the fescue and the milkvetch. The fescue was replanted the following fall.

The 80 acres were divided into 36 cells using high tensile wire, with water available in each cell. Each of these cells could be divided again with polywire to make a total of 72 grazing cells. The fencing and watering systems were completed during the winter of 1995-96. Two wells were drilled to supply adequate water for the watering system.

Benefits from this project are numerous. Wildlife habitat has improved considerably with the addition of more diverse plant species and continuous cover. Animal health is improved as cattle graze on stockpiled forages during the winter instead of being fed in a confined lot prone to mud or dust. The animals spread

their own manure across a large area with no need for the operator to scrape cattle lots and haul manure.

Spare says he has achieved a primary goal by eliminating machinery rent or ownership related to this particular farmland. This system allows him to harvest a crop directly with cattle. He plans to extend this system to the rest of his farm.

Bruce sees these soil and water improvements, along with the development of a more diverse forage base, as steps to improve the drought tolerance of the farm and, therefore, its economic stability.

With regard to water quality, Bruce notes a big decrease in the amount of water running off of the converted cropland. He expects the permanent forages and livestock manures to increase the organic matter of the soil over time, which should further increase the soil's water-holding capacity.

Spare Farm Characteristics

Farm Size: 900 acres

Crops: Native grass, perennial grasses with legumes, annual cool season forage.

Livestock Enterprises: Beef stockers.

Equipment: One tractor with loader, rotary mower, hay mower, round baler, feed truck, 4-wheeler with sprayer.

Seed Varieties and Rates: Endophyte-free fescue (15 lbs.), alfalfa (4 lbs.), red clover (3 lbs.) white clover (1 lbs), triticale (2 bu.) Barenburg BG perennial ryegrass/fescue/orchard grass mix (5 lbs.), brome (20 lbs.).

Labor & Management Practices: Integrate family in helping with the stockers and haying when we have excess forage.

Livestock Management Practices: Rotational grazing in most pastures.

Marketing: Stockers purchased at 250-400#; most sold at 725-800#; a few are retained in finish phase.

Weed Management: Grazing, some rotary mowing, spot spray areas with noxious weeds.

Insect & Disease Management: Non-problems.

Soil Fertility Management: Soil sample, fertilize based on analysis of samples. Manage cattle so that animal waste is scattered over pastures as they graze.

Water Quality Management: Has extended the grazing season to reduce time cattle spend in confined areas; fenced the creeks; uses fertilizer based on soil samples.