Management-Intensive Grazing Project:
Rotational Grazing Reduces Erosion, Increases Profits

Farmers, ranchers, and all landowners who manage grasslands in South Dakota face the dual challenges of running a profitable business and sustaining a quality grassland environment. Through the Management-Intensive Grazing Systems Project, initiated in July 1999 with support of 319 funding, South Dakota grassland managers, grassland and livestock organizations, and local, state, and federal agencies are working together to design, implement, and monitor six "management-intensive" grazing systems in South Dakota.

The "management-intensive" grazing method focuses on a high (intensive) level of management; the term does not mean that the grassland vegetation is grazed intensely (short). Management-intensive grazing systems often involve 15 or more pastures and short 2- or 3-day grazing periods. Information learned from the on-ranch demonstrations and from other producers using this method is shared with other grassland managers, researchers, agency specialists, and the public.

Site example

In 2000 Mark Sip of Geddes, South Dakota, began to use a 205-acre management-intensive grazing system for his pastures. The pastures were divided into 10 paddocks, ranging from 17 to 27 acres in size, with a stocking rate of 1.0 animal unit months per acre. This is a safe stocking rate under normal conditions using continuous season-long stocking.

Livestock water is supplied to the pastures by a buried pipeline using rural water as the water source. An aboveground pipeline serves as a distribution system to the 10 paddocks. All division fences consist of polywire and temporary fiberglass posts. Several of the paddocks use a narrow lane to access the water tank. The fences are moved as the cattle are rotated to fresh grass.

The entire area supports a plant community composed of a mixture of cool season and warm season native plants. Cool season plants dominate the pastures. It is projected that the warm season native plants will benefit from the rests provided and will begin to increase. This would provide a higher-quality diet to the livestock during the hot summer months.

Benefits realized

The environmental benefits offered by management-intensive grazing include improved grassland vegetation and streambank protection, resulting in significant reductions of water runoff that carries nutrients and sediment.

Increased farm or ranch profit also results from management-intensive grazing. Sip estimates that although the initial cost of establishing a rotational grazing program in his pastures was approximately $1,560, the rotational grazing theoretically increased his revenue by $4,680. Not only are farms capable of increasing their stocking rates but they also can better stockpile grass for winter grazing, which reduces the need to feed hay and lowers total feed costs.

Primary Sources of Pollution:

- cattle grazing

Primary NPS Pollutants:
- sediment and nutrients

Project Activities:
- management-intensive grazing

Results:
- reduced erosion (decreases sediment/nutrients into water)
- increased farm profit

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