



## ANTELOPE CREEK HABITAT DEVELOPMENT AREA

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The Antelope Creek Habitat Development Area is a 5,500 acre tract of land located approximately 7 miles west of Brooks. The ranch purchase was facilitated by the creation of a unique wildlife agency partnership. Cooperating agencies include Alberta Lands, Forestry & Wildlife, Habitat Canada, Ducks Unlimited and Alberta Fish & Game.

Ranch management is guided by a multiple use or integrated use philosophy. A key objective of the project is to demonstrate range improvement practices that are beneficial to both livestock and wildlife. Cooperating agencies in conducting the research are Alberta Agriculture, Alberta Lands Division, the Eastern Irrigation District, Ducks Unlimited, Alberta Fish & Wildlife and Agriculture Canada.

The top priority on this project is to establish a grazing management plan to enhance a vegetation cover that will provide productive grasses for livestock grazing and adequate nest cover for waterfowl on the native rangeland and wetland margins. Crested wheatgrass, irrigated pasture, and native rangeland have been incorporated into a complementary rest-rotation grazing system. The crested wheatgrass pasture provides grazing during early spring and the irrigated pasture provides late spring-early summer grazing. The use of these tame grass pastures facilitates deferment of grazing on the native rangeland during the critical spring growth period. A four-field rest-rotation grazing system established on the rangeland allows plants in some fields to gain in vigor, to produce seed and to become established.

Research on this project consists of a cooperative, multi-disciplinary monitoring program designed to quantitatively and qualitatively document changes in waterfowl nest success, nest density and population, changes in the range vegetation and range condition, forage production and utilization, cattle performance, and soil characteristics and chemical changes. A weather station has been established and the whole area will be examined through Landsat imagery to assist in documenting vegetation changes.

Some of the terms used in vegetation management may convey different meanings. The following definitions may minimize misunderstanding and facilitate an appreciation of rangelands:

Carry-over: Carry-over is the current years' growth of grass that is left on the ground at the end of the grazing season.

Carrying capacity: The carrying capacity is expressed as the number of animals a range can support without deteriorating below its present state.

Complementary grazing: A system of management that depends upon seeded pasture for part of the grazing and on native range for the balance of the season.

Deferment:

Delay or discontinue livestock grazing on an area for an adequate period of time to provide for plant reproduction, establishment of new plants, or restoration of vigor of existing plants.

Deferred grazing:

Any system that defers the use of native range and makes use of seeded pasture in the spring.

Grazing system:

A grazing system is a simple and flexible schedule indicating when and where livestock are to graze.

Litter:

A layer of undecayed plant material that promotes high production through nutrient cycling.

Over Grazing:

Over grazing is a level at which the range-land cannot be maintained in a productive condition and continues to deteriorate.

Plant Succession:

The process of vegetational development whereby an area becomes successively occupied by different plant communities normally dominant in the area.

Rest\_Period: A period of deferment included as part of a grazing system to improve pasture condition.

Rest-Rotation: A system of grazing in which part of the range is grazed while other parts are left ungrazed for part or all of the growing season.

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