BRITISH COLUMBIA

RESEARCH SUMMARY

January 2000 **Ministry of Forests – Range Research Program**

TEMPORAL AND SPATIAL DIETARY OVERLAP AMONG CATTLE, DEER, AND ELK

modified from *Ross, T.J. 1997. Vegetation Monitoring Program. Final Report for the East Kootenay Trench Agriculture/Wildlife Committee, Cranbrook, B.C.*

Approximately one dozen key forage species are major contributors to all grazers diets. The shorter the interval between their respective grazing periods, the more apt elk and cattle diets are to be similar.

Objectives

The objectives of this project were to:

- determine cattle, deer, and elk diets during all respective grazing periods on low-elevation range plant communities in the Rocky Mountain Trench of southeastern B.C.
- develop forage selection indices for cattle, deer, and elk throughout the year based upon diet species composition and botanical composition of available plant species

Diet composition

Cattle, deer, and elk diets were quite broad with elk and deer eating between 31 and 63 species during the year and 18 to 25 species seasonally. Cattle, deer and elk diets were consistent among years, seasons and sites.

Deer diets were dominated by browse species in all periods in this study. Grasses and forbs were more important in spring. Bitterbrush is likely a more important browse species for deer, than for elk and cattle. However, bitterbrush is not a preferred species and receives little use except by deer in winter. Douglas-fir, Saskatoon, buckbrush and low Oregongrape are more prominent in the diets of deer, elk, and cattle.

Elk were primarily grazers, with grass and grass-like species ranging to >90% of diet composition in some months. Cattle diets were dominated by grasses, with diet composition ranging between 60% and >90%. Elk diets were dominated by rough fescue, while cattle diets were more evenly distributed among all key grass species.

Approximately one dozen key forage species are major contributors to all grazers diets.

- bluebunch wheatgrass
- Idaho fescue
- rough fescue
- bluegrasses
- needlegrasses
- orchardgrass
- bromegrass
- small-flowered penstemon
- alfalfa/clover
- Saskatoon
- buckbrush
- low Oregongrape
- soopolallie
- Douglas-fir

Diet overlap

Competition results if key forage species are used in common and are in short supply.

Elk and cattle diets were similar among grazing periods. The shorter the interval between their respective grazing periods, the more apt elk and cattle diets are to be similar. Diet overlap is common between winter/spring elk diets and summer cattle diets. Summer cattle diets also overlap fall/winter elk diets but not as consistently.