

CATTLE GRAZING ON GREAT BASIN DEER WINTER RANGE

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There is considerable evidence that the essential shrub matrix on many of our Great Basin deer winter ranges is the result of past destructive grazing. Now, after many years of succession under careful grazing management, the perennial bunch grass has increased and the shrubs have become old and decadent. The perennial bunch grass understory has increased to the point that it is preventing the establishment of replacement shrubs necessary for the winter survival of deer.

A study was conducted to see if cattle grazing could be used to set back succession again and improve the range for deer. The study used two replications of two seasons and two intensities of cattle grazing at two locations. One on the Devil's Garden in Modoc County, California, and the other south of Silver Lake, Lake County, Oregon. Treatments were applied to five acre fenced units using 3 to 6 head for 1 to 3 days several times during the season to simulate grazing patterns on large allotments.

Treatments were moderate grazing, May 15 through September 30; Heavy grazing, May 15 through September 30; Moderate grazing, April 15 until cattle spent 1/3 or more of their time eating bitterbrush; and heavy grazing, April 15 until cattle spent 1/3 or more time on bitterbrush.

Herbaceous and woody plant cover were sampled each year. Bitterbrush seedling establishment was studied. The cattle were observed closely to determine diet by species for each stage of phenology, season and intensity of use.

Results of the study showed that perennial bunchgrass cover could be reduced by 50 percent in four years with heavy grazing. Early season use as high as 90 percent can be accomplished before the cattle do serious damage to bitterbrush. Cattle turn to bitterbrush slowly during early summer, have a sharp peak during the red juice stage of bitterbrush seed and the use then declines for the rest of the season. Heavy early grazing will allow more bitterbrush seedlings to become established.

While evidence is strong that the results of this study could be duplicated on a large allotment scale with fencing, manager-permittee cooperation and careful monitoring will be necessary.