

GRAZING TRIALS

L. Knox, G. B. Donart, E. Parker, M. Petersen, and R. D. Pieper

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Rotational and/or seasonal grazing has been recognized as a possible means to enhance forage conditions on rangeland. Generally livestock performance can also be enhanced using grazing strategies, provided the animals are not stressed in the grazing process. Most grazing research has been conducted using the cow-calf pair under year-long conditions. Little work has been conducted using the stocker (growing) animal. To accomplish these objectives a winter grazing trial and a summer continuous and summer rotational grazing trial were established.

Winter pastures were established with and without juniper control. Weaned calves were placed on the pastures in early November and grazed until May 1. Weight gain from the cattle was collected. The primary response of the trials is vegetation change, as measured by ground cover, species composition and production. The rate of change in this strategy will be compared to changes that occur in the summer grazed pastures.

Summer grazed pastures are stocked with the heifers from the winter grazed trials, starting about May 15, and are grazed until November 1. The grazing trials include continuous grazing for that period of time with and without juniper control. The continuous grazing is compared to a three pasture rotational grazing plan where cattle are moved monthly. At the start of the

grazing period each year, the rotational grazing is shifted forward by one pasture to insure that the pastures are used at different times and to allow for optimum growth of forage species. Cattle are weighed every 28 days to assess performance. Forage production, utilization, and species composition are measured at the end of the grazing season.

In 1997 all summer grazing treatments were stocked at a rate of 16 acres per yearling for a six month grazing period. During the initial years of the study drought conditions prohibited adequate stocking of the pastures to obtain meaningful data. During this time animals were grazed in a manner to lightly graze the pastures and to even out the forage differences. 1997 was the first year in which the summer grazed pastures were fully stocked and animal performance collected. The 1996-1997 winter was the first season for the winter pastures to be grazed.

While vegetation data are still being collected on the winter grazed pastures, it appears that winter grazing followed by summer rest has stimulated forage production. Release of desirable forage species also appears to be occurring in the juniper treated pastures. Winter grazing was terminated about 4 weeks early because of limited forage in the brush treated pastures. The dry summer of 1996 did not provide for adequate growth in this pasture. Vegetation data has not been collected in the summer grazed pastures, but

fence line contrasts indicate differences in forage available between the rotationally grazed and juniper treated pastures and the continuously grazed pastures with no juniper treatment.

Animal performance data for 1997 favored the rotational grazing program. Heifers grazing in this strategy gained an average of 2.17 lbs/day from May 22 through August 27 (97 days). Cattle in the continuously grazed pastures which were treated for juniper gained an average of 2.0 lbs per day, and cattle performance in pastures without brush control and continuously grazed showed the lowest performance at 1.79 lbs/day. All animal performance data are

preliminary and will be subjected to further testing and statistical analyses.

The grazing trial pastures are also available as a laboratory for numerous studies. For example, the winter grazing trials are divided so that three winter supplemental treatments can be evaluated as replicates and provide a split plot design for the grazing trials. The summer grazing trials are being used to collect forage quality, animal diet and animal behavior information.

Rotational grazing programs that will provide improved animal performance while improving ecological status of the site can provide desirable managerial alternatives.