

GRASSLAND PLANT COMMUNITIES ON THE CORONA RANCH

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(Key Words: Vegetation Types, GIS, Classification, Soils, Topography)

Vegetation of eastern and much of central New Mexico is grassland with scattered shrubs and other woody plants. This grassland vegetation supports large numbers of domestic livestock and other wildlife. However, few quantitative descriptions or analyses of this important resource have been made. The acquisition of the Corona Ranch provided the opportunity of analyzing the various grassland types within the Ranch to provide a better understanding of the ecology of the grasslands as well as to provide information for research planning. Intensive point sampling for plant cover was conducted during the summer of 1991 over the grassland portions of the Ranch. These data were analyzed by a cluster procedure which identified 5 major plant communities. One was a typical blue grama (*Bouteloua gracilis*) community with blue grama contributing more than 70% of the plant cover. Another community exhibited fairly high composition of blue grama, wolftail (*Lycurus phleoides*), purple threeawn (*Aristida purpurea*), and broom snakeweed (*Gutierrezia sarothrae*). Communities near the transition with the piñon-juniper woodland were dominated by wolftail which contributed over 50% of the cover. Sideoats grama (*Bouteloua curtipendula*) dominated another community with several other herbaceous species on certain soils. The cool-season (C₃) grass New Mexico feathergrass (*Stipa neomexicana*) dominated the fifth community. These communities represent vegetation subjected to domestic livestock grazing for many years. We hope to establish exclosures in all these communities to help isolate grazing and climatic effects. These vegetational data will be combined with topographic and soils data into a Geographic Information System to help us understand some of these complex relationships and to plan additional research.

EFFECT OF RANGE CONDITION ON PRONGHORN POPULATIONS IN SOUTHCENTRAL NEW MEXICO

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(Key Words: Rangeland, Pronghorn, Wildlife, Habitat)

Research evaluating the influence of range condition on pronghorn populations on Chihuahuan desert ranges in New Mexico is lacking. In 1988 a study was initiated to monitor pronghorn numbers on two areas in fair condition and two areas in good condition on the College Ranch near Las Cruces. The fair condition area has about 50% of the climax vegetation remaining while that remaining on the good condition area is about 70%. Pronghorn populations have been evaluated monthly since July 1988. Aerial counts, road transects and land transects walked by observers are being used to evaluate pronghorn numbers on the study areas. Pronghorn numbers have consistently been higher on the good condition area than the fair condition area. Pronghorn foods, mainly forbs, are more prevalent on the fair condition area.