

RESPONSE OF BROOM SNAKEWEED POPULATIONS TO GRAZING MANAGEMENT STRATEGIES

R. D. Pieper

(Key Words: Seasonal Grazing, Snakeweed Dynamics)

When snakeweed reached high population densities in the 1970s and 1980s on many rangelands in New Mexico, there was concern about grazing practices that may favor or retard development of snakeweed populations. In most cases livestock tend to consume grass and other herbaceous species while generally avoiding snakeweed. Under these circumstances, grazing tended to promote snakeweed establishment and development. However, under other circumstances, livestock might graze snakeweed sufficiently to keep it under control. Interest in intensive specialized grazing strategies has also increased during the last 20 years and questions concerning response of snakeweed to specialized grazing systems have been raised. Little information is available concerning grazing and snakeweed interactions. Deferment from grazing during the spring growing season for cool-season grasses has been considered a positive strategy for minimizing snakeweed in grasslands of central New Mexico. Other studies have indicated that June or June and July deferment from clipping minimizes Snakeweed populations. Broom snakeweed densities and canopy cover were higher under grazed conditions compared to areas protected from grazing by cattle on the College Ranch north of Las Cruces on some sites. Snakeweed frequencies differed little between grazed and comparable ungrazed exclosures on 24 sites in southern New Mexico. In central New Mexico snakeweed cover tended to be lower under continuous grazing compared to short-duration grazing. Allison (1990) reported lower snakeweed densities under short-duration grazing on two ranches, but higher densities on a third.

In light of the scarce and inconsistent information concerning influence of grazing on snakeweed populations, several lines of study have been initiated at the Corona Ranch facility. Comparisons of snakeweed density and size class structure are being made on pastures grazed at different seasons as part of a larger supplemental feeding study and on comparable ungrazed situations. These studies will be made in replicated pastures.

Other studies involve simulated clipping of both grass and snakeweed at different seasons to investigate the grazing x competition interaction on both herbaceous species and snakeweed. Earlier studies showed severe reduction of herbaceous production from snakeweed plants in different range sites in Texas and New Mexico. These field studies should help explore some of the mechanisms involved in these competitive interactions.