

EFFECT OF SELECTIVE GRAZING ON THE BOTANICAL COMPOSITION OF *LASIURUS SINDICUS* GRASSLAND

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A three-year study involving yearling heifers and ram lambs was conducted to assess the impact of five stocking combinations on *Lasiurus-Eleusine* grassland at the Range Management and Soil conservation Area, Jaisalmer (26.54° N and 70.55°E longitude) of the Central Arid Zone Research Institute, Jodhpur. Mean annual precipitation ranged from 107 mm (1980) to 328 mm (1977) of which 85-90% was received between July to September. The temperature ranged from -3°C in the winter (November-February) to 49° C in the summer (May-June). Key species occurring on the rocky range-land were *Lasiurus indicus* Henr., *Eleusine compressa* (Forssk.) Aschers & Schweinf., *Dactyloctenium indicum* Boiss., *Aristida funiculata* Trin. et Rupr., *Cenchrus biflorus* Roxb. and *Indigofera cordifolia* Heyne ex Roth.

The cover of this *L. indicus* grassland was classed as 'good' (Bhimaya and Ahuja, 1969). The terrain is a sandy burried pediment with varying levels of sand depositions. The 45 ha range area was divided into 5 paddocks of 9 ha each having an average carrying capacity of one heifer per 2.25 ha per year.

The year-long grazing treatments included, 4 yearling heifers (T1), 16 ram lambs (T 2), 1 heifer+12 ram lambs (T 3), 2 heifers+8 ram lambs (T 4) and 3 heifers+4 ram lambs (T 5). The animals were grazed during day hours from August onwards each year i. e., 1977 to 1980. New set of yearling animals of the same breed was chosen for each grazing year.

Vegetative cover and plant population was recorded by line intercept method (Cainfield, 1941). Percentage basal cover and frequency were computed from the line transect data.

Percentage basal cover of *L. indicus* declined over the years under the grazing treatments involving predominance of cattle (Table 1) Being a tall, tussocky perennial grass, cattle obviously have an easy access to it. The basal cover of short grasses i.e. *E. compressa* and *D. indicum* not preferred by cattle increased over the years. By and large all these major grasses survived under the impact of selective grazing. Similar observations were earlier recorded by Chakravarty et al. (1970).

In the grazing treatments involving large number of ram lambs, the cover of the annual legume *I. cordifolia* declined over the years. This legume is reported to be

