

PERFORMANCE OF GROWING MANDYA SHEEP ON NATURAL *SEHIMA-HETEROPOGON* GRASSLAND

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Sain (*Sehima nervosum* (Rottl.) Stapf.) and Spear grass (*Heteropogon contortus* (L.) Beauv. ex Roem and Schult.) are the two dominant grass species in the *Sehima Dichanthium* grass cover of India. These are found predominantly in Peninsular India. The Spear grass is also a dominant species of *Themeda Arundinell* and *Dichanthium-Cenchrus-Lasiurus* grass covers (Dabadghao and Shankarnarayan 1973).

Forage production and chemical composition of above two dominant grass species (Rai et al. 1979 and Singh et al. 1983) and performance of mature wethers on these grassland have been reported (Shankarnarayan et al 1975. However, knowledge about performance of growing sheep on these grassland is meagre. Therefore, present study was undertaken to study the performance of growing Mandya sheep which is a well known meat breed and adopted to the agro-climatic situations where this grassland is predominantly found.

The grazing was done in an extensive natural *Sehima-Heteropogon* dominant grassland community at the Central Research Farm of the Indian Grassland and Fodder Research Institute, Jhansi (U.P.) during the year 1979, 1980 and 1981. The rainfall received during corresponding years was 627.5, 1226.2 and 680.6 mm with 53, 52 and 42 rainy days, respectively. In addition to above, two predominant grass species other vegetation such as *Eragrostiella biferia*, *Atylosia scarabaeoides*, *Phaseolus trilobus*, *Eragrostis pilosa*, *Apluda varia*, *Indigofera cordifolia*, *I. linifolia* etc. were also available for grazing. Five lambs of Mandya breed (4-6 months of age) born at the farm were used as experimental animals each year. Animals were grazed from 8.30 AM to 4.30 PM every day and no concentrate was fed. The body weight of the animals was recorded at weekly intervals throughout the experimental period. The animals were withdrawn from grazing when they started losing their body weight. Grazing was started late during first year since it was a drought year and monsoon was received late due to which there was not sufficient harbage to start the grazing in time i.e. in the month of July.

The results indicate (Table 1) that growth rate of growing Mandya lambs varied from 60 to 80 g/h/day in different years. The variation between the years may be due to the variation in initial age and weight of the animals, availability and quality of herbage etc. The herbage production of natural *Sehima Heteropogon* grassland ranged from 2.5 to 3.5. t/ha depending on the amount and pattern of rainfall during the

Table 1. Average body weight of Mandya lambs.

Date of start of experiment	Date of termination of experiment	Duration of experiment (days)	No of animals	Initial body weight (kg)	Final body weight (kg)	Total gain (kg)	Gain/h/d (g)
24.8.1979	23.11.79	92	5	14.7	22.1	7.4	80.4
17.7.1980	23.11.80	130	5	18.3	26.3	8.0	61.5
17.7.1981	24.12.81	161	5	10.9	22.7	11.8	73.5

year. The variation in chemical composition *Sehima nervosum* grass in different months has been reported by Kanodia and Rai (1981). The maximum crude protein content of 6.98 per cent was recorded in the month of July followed by August (3.94%), September (3.17%) and October (2.89%). Similarly highest calcium was recorded in July (0.68%), followed by November (0.54%), October (0.49%) and minimum in August (0.24%). The maximum phosphorus concentration was recorded in July (0.14%) and minimum in October and December (0.07%).

Thus, it can be concluded that growing Mandya lambs can perform satisfactorily on *Sehima-Heteropogon* dominant grassland between July and November-December.

REFERENCES

- Dabadghao, P.M. and Shankarnaryan, K.A. 1973. The Grass cover of India, ICAR, New Delhi.
- Kanodia, K.C. and Rai, P. 1981. Changes in forage yield and chemical composition of tropical grasses under rainfed condition. *Annals of Arid Zone* 20 : 241-245.
- Rai, P., Kanodia, K.C., Shankarnarayan, K.A., Velayudhan, K.C. and Agarwal, R. 1979. Effect of various sources and levels of nitrogen on the botanical composition, dry matter production and forage quality of *Sehima-Heteropogon* grassland. *Forage Research* 5: 37-48.
- Shankarnarayan, K.A., Dabadghao, P.M., Upadhyay, V.S. and Rai, P. 1975. A note on the utilization of Spear grass pasture. Monthly variation in yield, chemical composition and performance of wethers. *Indian Journal of Animal Science* 45: 92-95.
- Singh, V.P., Upadhyay, V.S., Gupta, S.C. and Rekib, A. 1983. Studies on yield and quality of tropical grass species harvested at different intervals. *Indian Journal of Range Management* 4: 47-49.