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RESEARCH PAPER

Effect of management systems on testicular development in Osmanabadi goat

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ABSTRACT

Eighteen weaned Osmanabadi male kids (bucks) of same body weight and age were selected and randomly distributed among three groups each consisting of six male kids *viz.*, Grazing system (T_1), Stall fed system (T_2) and Semi stall fed system (T_3). The kids under grazing system were allowed for browsing 08 hrs, no concentrate was offered. Kids under stall fed system were given adlib green and dry roughages on their dry matter requirements and also provided 250-300 g concentrate per kid / day. In semi stall fed system kids were allowed for browsing 04 hrs and then they were kept under stall and were given adlib green and dry roughages with 150 gm concentrate per kid / day. It was observed that kids under semi stall fed condition had significantly higher biometrical parameters of testes.

Key words : Management systems, Testicular development, Osmanabadi goats

Goat has special feeding habit, which are typical of the species as a whole. They differ from those of other ruminants and are the basis of much of the criticism that has been directed at goats. By means of their mobile upper lips and very prehensive tongue, goats are able to grasp on very short grasses and to browse on foliage, not normally eaten by other domestic livestock. Feeding resources are the major limiting factors in exploiting genetic potential of livestock in India. In most parts of the country, green fodder is usually scarce for greater part of the year. Poor nutrition caused by inadequate amount and poor quality of feed is one of the major causes of low livestock productivity.

Osmanabadi is one of the famous breeds of Maharashtra well distributed in eight districts of Marathwada region. The breed is reared for mutton production. Traditional goat keepers, marginal farmers, landless labourers and tribal communities are the professional goat keepers in this region.Evaluation of the male for sound breeding is based on the combination of informations obtained from clinical and andrological examinations. In andrological examinations, the biometric analysis of testicular development is of great importance, since it is significantly correlated with reproductive activity (Skinner, 1970, Elwishy and Elsawaf, 1971).

Very less information on morphological characteristics of testes of Osmanabadi buck is available. Therefore, to know the various factors that affect testes characteristics were considered for present work with objective such as to study the effect of management systems biometric parameters of testes in Osmanabadi bucks.

MATERIALS AND METHODS

Eighteen weaned Osmanabadi male kids (bucks) of same body weight and age were selected and randomly distributed among three groups each consisting of six male kids. All these experimented animals were well grown and free from external parasites. The three groups were statistically tested for their homogeneity and found homogeneous for age and body weights. Three groups were 1) grazing system (T_1) in which kids maintained on browsing and grazing with available grasses and shrubs for 08 hours from 08 am to 04 pm, (2) stall fed system (T_2) in which adlib green and dry roughages were provided in addition to 250-300 g concentrate / kid / day and (3) semi stall fed system (T_3) in which kids were allowed to browse and graze on available grasses and shrubs for 04 hrs daily from 08 am to 12 am and then kids were housed in goat shed and fed there itself the required feed with additional 150 g concentrate / kid / day and then observations of testes parameters namely testicular length, testicular width, testicular breadth, scrotal circumferences and testicular volume were recorded during experimental period at one month interval from weaned age up to the fifteen months. The data so recorded were analyzed under CRD (Complete Randomized Design).

RESULTS AND DISCUSSION

The observation on testes parameters under various management systems recorded at different months from the age of fourth month to fifteen month of age are discussed as below.