The Asian Journal of Animal Science (December, 2010), Vol. 5 Issue 2 : 144-146 | *RESEARCH ARTICLE*

Studies on three months body weight of Sangamneri kids under field condition

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ABSTRACT

The data pertaining to 1797 growth records of Sangamneri kids from 17 different villages of Ahmednagar and Pune districts maintained at A.I.C.R.P on Sangamneri goat unit, M.P.K.V., Rahuri over a period of 4 years (2004-2007) were collected and subjected to the least squares analysis. The least squares means for body weight of Sangamneri kids at 3 months of age under field condition were 8.91±0.06 kg. The year of birth, season of birth, type of birth, sex and cluster of villages significantly affected the body weight of kids at 3 months of age. The phenotypic and genotypic correlation between the body weights of kids at 3 months of age was positive and significant.

Key words : Sangamneri goat kids, Body weight, Sex, Season and Heritability.

Goats constitute a very important species of livestock in India mainly on account of their short generation intervals and higher rates of prolificacy. Goats had played important role in upliftment of landless labourers, marginal farmers, village artisans and people who are below the poverty line, by improving their socio-economic status. The present goat population of India is 124.4 million (FAO, 2006) out of which 30.94 lakh in Maharashtra state and ranks 4th in India. India constitutes 16.55 per cent of the total population of world and ranked 2nd in population next to China (Anonymous, 2006). India posseses large number of goats which can be classified into 20 different breeds adaptable to various climatic conditions.

The overall efficiency of goat breed or crossbred is judged not only on the basis of yield of milk, meat or fibre but also on growth. All these economic traits are affected by several genetic and non-genetic factors; however the literature is scanty on Sangamneri goats. Therefore, the present investigation was conducted to study the effects of various non-genetic factors on body weight at 3 months age in Sangamneri kids under field condition.

MATERIALS AND METHODS

The data pertaining to 1797 growth records of Sangamneri kids from 17 different villages of Ahmednagar and Pune districts maintained at A.I.C.R.P on Sangamneri goat unit, Mahatma Phule Krishi Vidyapeeth, Rahuri over a period of 4 years (2004-2007) were collected and subjected to the least squares analysis (Harvey, 1990) by using following model:

$$Y_{ijklmn} = \mu + B_i + P_j + S_k + T_l + X_m + e_{ijklmn}$$

where,

Y_{ijklmn} is n^{th} Observation of i^{th} year of birth, j^{th} season of birth, k^{th} type of birth, l^{th} sex of individual and m^{th} cluster of villages. Duncan's Multiple Range Test (DMRT) as modified by Kramer (1957) was used to make pair wise comparison between the least square means with the use of inverse elements and roots mean square for error.

RESULTS AND DISCUSSION

The least square means and analysis of variance for body weight of Sangamneri goat kids are given in Table 1 and 2, respectively. The overall mean for body weight at 3 months of age for Sangamneri kids was 8.91±0.06 kg. Similar findings were reported in Anonymous (2008).

Effect of year of birth:

The influence of year of birth on 3 months body weight of Sangamneri kids was found to be significant ($P<0.05$). In present study the 3 months body weight of Sangamneri kids born during 2007 was (9.00±0.07 kg) significantly higher than the kids born during 2004 (8.92±0.10 kg). These results were in close conformity with Singh (2002).

Effect of season of birth:

The analysis of variance indicated significant ($P<0.01$). Effect of season of birth on 3 months body weight of Sangamneri kids. The 3 months body weight of

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