

BIRTH WEIGHT AND BODY MEASUREMENT OF OSMANABADI GOATS IN ITS BREEDING TRACT OF MAHARASHTRA, INDIA

S.D. MANDAKMALE, D.K. KAMBLE AND R.D. BANSOD

See end of article for authors' affiliations

Correspondence to :

D.K. KAMBLE

Department of Animal Science and Dairy Science, N.A.R.P., Shenda Park, KOLHAPUR (M.S.) INDIA

Accepted : March, 2007

ABSTRACT

The body weight and measurements at birth of 653 Osmanabadi kids were collected from its breeding tract and analysed for various effects. The year of birth had non significant effect on body weight and measurements at birth. The season of birth, type of birth and location had significant effect on body weight and measurements. The overall birth weight, body length, wither height and chest girth at birth were 1.846 ± 0.11 kg., 29.501 ± 0.215 , 32.184 ± 0.242 and 30.500 ± 0.248 cm, respectively. The winter born kids had higher body weights and measurements at birth. The singles were superior over the multiples and the kids born in Solapur district were having higher body weight and measurements at birth.

Key words : Birth Weight and Body Measurement, Osmanabadi Goat, Maharashtra

Osmanabadi is the predominant goat breed of the Scarcity Zone of Maharashtra. Its breeding tract is located in the Ahmednagar, Solapur and Osmanabad district of Maharashtra. The breed is most sturdy, having capacity to walk long distance for grazing and having a very good potential for meat production. Five colour variant were noticed in Osmanabadi goats viz., entire black with horns (CV₁), entire black and polled (CV₂), entire black, horned having white dots on ear (CV₃), entire black, polled having white dots on ear (CV₄) and goats having brown and white patches from the face to lower side of body (CV₅). Body weight and measurements is the first measurable character for selection and very little information is available for these traits of Osmanabadi goats. Hence the present study was conducted in the field conditions in the breeding tract of Osmanabadi goats.

MATERIALS AND METHODS

The data pertaining to birth weight, body length, wither height and chest girth at birth was collected from 653 kids located at Ahmednagar, Solapur and Osmanabad districts of Maharashtra for the period from 1995 to 1998.

The data is classified in to the years of birth viz., 1995-96, 1996-97 and 1997-98. Seasons at birth viz., winter, summer and rainy, type of birth viz., single and multiple; sex viz., male and female, locations viz., Ahmednagar, Solapur and Osmanabad and colour variants viz., CV₁, CV₂, CV₃, CV₄ and CV₅.

The least square technique of Harvey (1966) was used to analyse the data to study the effect of the above factors on body weight and measurement at birth.

RESULTS AND DISCUSSIONS

The analysis of variance indicating the significance of different effects on body weight and measurements at birth are depicted in Table 1. The least squares means

Table 1 : Analysis of variance indicating the significance of various effects on body weight and measurements at birth.

Source of variation	df	M.S.S.for			
		Body weight	Body length	Wither height	Chest girth
Year of birth	2	0.00571 ^{NS}	6.92547 ^{NS}	3.346431 ^{NS}	3.32182 ^{NS}
Season of birth	2	0.11697**	109.00900**	58.21520**	113.2707**
Type of birth	1	0.77834**	74.12552**	130.38440**	35.63185 ^{NS}
Sex	1	0.06130 ^{NS}	87.68343**	5.504572 ^{NS}	88.594642**
Location	2	0.38085**	263.70880**	174.4212**	65.17536**
Colour variants	4	0.01295 ^{NS}	14.08321 ^{NS}	59.93714*	11.79111 ^{NS}
Error	638	0.02076	8.40674	10.58033	11.12157

* Significantly at P < 0.05

** Significantly at P < 0.01

NS : Non-significant