

Studies on Phenotypic Characters of Osmanabadi Goat in Scarcity Zone of Maharashtra State

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ABSTRACT: A study was conducted to analyze the Phenotypic Characters of Osmanabadi Goat in Scarcity zone of Marathwada region of Maharashtra State under field condition. A total of 777 goats, 253 were the males and 524 were the females herds from 40 villages spread in 4 blocks in two districts (Latur and Osmanabad) were utilized for this study. Based on the age and sex wise classification of Osmanabadi goats it was revealed that out of total 214 (27.54%) kids in 0-3 months age, 112 (52.34%) were the males and 102 (47.66%) were the females. Similarly, out of the total 112 (14.41%) kids in 4-6 months age, 51 (45.54%) were the males and 61 (54.46%) were the females. In 7-12 months age group, 102 (13.13%) goats 46 (45.10%) were the males and 56 (54.90%) were the females. The total goats in 13-36 months age group were 216 (27.89%), of which 19 (8.80%) were males and 197 (91.20%) were the females and out of the total 133 (17.12%) goats above 36 months of age, 25 (18.88%) were the males while 108 (81.20%) were the females. Maximum population of Osmanabadi goats were found in Latur and Osmanabad districts in 0-3, 4-6, 7-12, 13-36 and above 36 months. Out of that male per centage is higher as compared females. And in Ausa and Tuljapur district, population is at par with each other. Breed sub type in surveyed area were 62.16, 17.12, 10.68, 3.09 and 6.95 per cent goats were S₁, S₂, S₃, S₄ and S₅ colour breed sub-types. The majority of Osmanabadi goat population is comprised of breed sub-type 1 and 3; while the proportion of breed sub-type 3 and 4 was comparatively negligible than the first two strains. The breed sub-type might be developed due to the admixture of different colours and breed combination in the population. Sex and sub-type effects revealed that sex difference is an inherent pattern which can be considered from commercial point of view till the age of 11-12 months for production of Chevon.

Keywords: Osmanabadi Goat, Phenotypic Characters and Scarcity zone

INTRODUCTION

Goats can thrive under zero inputs and have rightly been quoted as 'Poor Mans Cow. Goats are rightly considered as gold which can encashed by their keepers at any time of the year. Goats are distributed all over the world because of their wide adaptability to varying environmental conditions and the different nutritional regimes under which they are evolved and subsequently maintained. Goats are reared basically for the purpose of meat and milk production. In addition they also provide skin, fibre, bone, hooves, horn, blood and manure in substantial quantities. In India, there are about 24 goat breeds (NBAGR, 2015). Out of that four are found in Maharashtra viz.; Osmanabadi, Sangamneri, Kokan

Kanyal and Berari. Population of goat in India is 135.17 million and out of that in the Maharashtra state is 84.35 lakh in 2012. Goats are distributed at 26% in 2012. Latur has 8% goat population out of total population (NDDB statistics. com, 2012). These local goat breeds constitute valuable sources of genetic material because of their adaptation to harsh climatic conditions, their ability to better utilise the limited and poor quality feed resources.

MATERIALS AND METHODS

A total of 777 goats, 253 were the males and 524 were the females herds from 40 villages spread in 4 blocks in two districts (Latur and Osmanabad) were selected using multi stage random sample survey.

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Table 1
Age and sex wise classification of Osmanabadi goats

Block	Number of goats in																	
	0-3 months			4-6 months			7-12 months			13-36 months			Above 36 months			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Latur	32	29	61	9	21	30	12	20	32	9	61	70	5	17	22	67	148	215
Ausa	17	25	42	17	14	31	13	18	31	6	38	44	3	25	28	56	120	176
Osmanabad	36	22	58	15	18	33	14	14	28	0	44	44	9	43	52	74	141	215
Tuljapur	27	26	53	10	8	18	7	4	11	4	54	58	8	23	31	56	115	171
Total	112	102	214	51	61	112	46	56	102	19	197	216	25	108	133	253	524	777

M = Male, F = Female, T = Total

The origin of Osmanabadi goats in Latur and Osmanabad districts of Marathawada region in Maharashtra. The village were selected in consultation with the Department of Animal Husbandry and Dairy Science of the Latur district on the basis of goat population existing there and goat herds were selected at random. Most of information and data were collected at morning or evening time, when the goats as well as farmers were available at their home or farm. The data collected were subjected to descriptive statistics, correlation, simple linear regression and multiple regression. The data obtained were analyzed by applying least squares techniques.

RESULTS AND DISCUSSION

Out of total 777 goats, 253 (32.56%) were the males and 524 (67.44%) were the females. The total population of Osmanabadi goats was classified in different age groups and two sexes within each age group. It was revealed that out of total 214 (27.54%) kids in 0-3 months age, 112 (52.34%) were the males and 102 (47.66%) were the females. Similarly, out of the total 112 (14.41%) kids in 4-6 months age, 51 (45.54%) were the males and 61 (54.46%) were the females. In 7-12 months age group, 102 (13.13%) goats 46 (45.10%) were the males and 56 (54.90%) were the females. The total goats in 13-36 months age group were 216 (27.89%), of which 19 (8.80%) were males and 197 (91.20%) were the females and out of the total 133 (17.12%) goats above 36 months of age, 25 (18.88%) were the males while 108 (81.20%) were the females (Table 1). It was observed that the percentage of male goats decreased from birth to adult age. The decreasing trends in the male population with advancing age is due to the sale of surplus male goats for slaughter and keeping the female goats for production and reproduction. Shinde (2000) recorded 631 goats, of which 194

(30.74%) were the males and 437 (69.26%) were the females. It was also observed that the males between 0-3 months and 3-6 months were maximum in the surveyed population.

Osmanabadi goats have different breed sub-type. According to the colour and presence or absence of horns, Osmanabadi goats are classified in to five breed sub type. There is no any specific name for these breed sub types, except *Kali* (Black), *Morkani* (white spotted ear) and *Hondi* (polled). The data pertaining to the breed sub type wise classification of Osmanabadi goats are given in Table 2.

The distribution of goats in surveyed area revealed that 62.16 per cent (483) goats were from first breed sub-type *i.e.* entirely black and horned followed by 17.12 per cent (133) goats with black colour and polled goats *i.e.* breed sub-type 3 (Hondi). The proportion of breed sub-type 2 *i.e.* goats with black colour and horned goats with white spotted ear (Morkhani) is 10.68 per cent (83). The proportion of breed sub-type 4 *i.e.* entirely black, polled goats with spotted ears was 3.09 per cent (24) and proportion of remaining goats having different colour combination *i.e.* breed sub-type 5 was 6.95 per cent (54). Thus the majority of Osmanabadi goat population is comprised of breed sub-type 1 and 3; while the proportion of breed sub-type 3 and 4 was comparatively negligible than the first two strains. The breed sub-type might be developed due to the admixture of different colours and breed combination in the population. Prakash and Balin (1992) reported that the common colour of Osmanabadi goats is black and a mixture of white and black or red is also met with. Anonymous (1999) recorded the distribution of Osmanabadi goats according to different breed sub-types in three districts and reported 82.60, 11.19, 2.67, 0.75 and 2.84 per cent of goats in the respective five breed sub-types, (CV_1 , CV_2 , CV_3 , CV_4 and CV_5). Shinde

Table 2
Breed sub-type classification of Osmanabadi goats

Block	Number of goats in Breed sub-type					Total
	S ₁	S ₂	S ₃	S ₄	S ₅	
Latur	128 (59.54)	26 (12.09)	37 (17.21)	10 (4.65)	14 (6.51)	215
Ausa	97 (55.12)	17 (9.67)	26 (14.77)	6 (3.40)	30 (17.04)	176
Osmanabad	124 (57.67)	33 (15.35)	43 (20.00)	6 (2.79)	9 (4.19)	215
Tuljapur	134 (78.36)	7 (4.09)	27 (15.79)	2 (1.17)	1 (0.59)	171
Total	483 (62.16)	83 (10.68)	133 (17.12)	24 (3.89)	54 (6.95)	777

Figures in paranthese indicate percentages.

(2000) recorded the distribution of Osmanabadi goats according to different breed sub-types and reported 60.54, 20.44, 8.72, 3.01 and 7.29 per cent of the goats in the respective five breed sub-types.

CONCLUSION

Breed sub type in surveyed area were 62.16, 17.12, 10.68, 3.09 and 6.95 per cent goats were S₁, S₂, S₃, S₄ and S₅ colour breed sub-types. Sex and sub-type effects revealed that sex difference is an inherent pattern which can be considered from commercial point of view till the age of 11-12 months for production of Chevon. However these criteria may not be useful for breeding stock. The type effect is prevalent from 0-3 months of age there after the types are uniformly prevalent, however if there is any defect in the sub-types could be choice out and culled. In future concerted improvement programm needs

to be made to harvest the full potential for milk and meat of these goats.

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