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Growth Performance of Nellore Brown Strain of Sheep

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Abstract: Nellore breed is the tallest sheep bread of India and widely distributed in the Andhra Pradesh. An attempt was made to study the growth performance of Nellore sheep at various growth stages under organized farm conditions. Nellore brown is completely brown in colour with little hair except at brisket, withers and breech regions on the body. Least square analysis showed significant influence of the body weight at birth, 3rd, 6th, 9th and 12 months of age.
Keywords: Nellore breeds, growth, colour, brisket

INTRODUCTION

Nellore sheep is the tallest mutton breed of sheep in India which is widely distributed in Nellore district and neighboring areas of Prakasam and Kadapa districts of Andhra Pradesh. Strains are distinguished primarily on the basis of their coat colour. Nellore Jodipi is the most predominant population with white colour on the dorsal surface of body with black colour under the belly. Nellore palla is completely white in colour. Nellore brown is completely brown in colour with little hair except at brisket, withers and breech regions on the body. Acharya [1] reported 52.7% Palla, 34.04 % Jodipi, and 13.43% dora or Brown in a survey of 279 sheep. The Photographs of the Nellore Brown strain of sheep are given in Illustrations 1-2.

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MATERIALS AND METHODS

The experiment is carried out at Livestock Research Station, Siddarampuram, Andhra Pradesh, India. The institute maintains a flock of 200- 250 breedable ewes. The animals maintained under a semi-intensive system are provided with 250g concentrate diet, 8 hrs grazing. The data on body weights of the animals that are born during the years 2009-10 to 2013-14 at Livestock research Station, Siddaramapuram are utilized for the study. Least square analysis [2] was employed to study the effect of season, sex, year on bodyweights at different ages.

The body weight of Nellore brown animals at various ages is presented in the table 1.

RESULTS AND DISCUSSION

Birth weight

The overall mean birth weight of lambs was 2.86 $\pm$ 0.01kg .The body weights of Nellore brown sheep are comparable with Madras Red sheep reported by Raman et al [8] and Ganesan et al [7] and higher than the values reported by Reddy [3] and Charyulu and Munirathnam [4]. Lamb weight at birth was significantly influenced by year, season of birth and sex of lamb. Rao et al [5] and Charyulu and Munirathnam

[4] also reported significant effect of the year on birth weight. The birth weight of the male lambs (2.94 ± 0.02kg) was higher than the female lambs (2.83 ± 0.02 kg) and the lambs born during off season (2.98 + 0.02 kg) were significantly heavier than lambs born during main season (2.79 ± 0.01 kg). The present findings are in concurrence with the observations reported by Rao et al [5].

Weaning weight:

The mean weaning weight was 13.09 ± 0.94kg with a range of 10.44 ± 0.27 kg to 17.13 ± 0.19 kg during different years. The weight of male weaners (13.93 ± 0.12 kg) was significantly higher than the female weaners (12.86 ± 0.12 kg).The weaners during off-season recorded higher weaning weight (14.56 ± 0.16 kg 0 when compared to main season weaners (12.22 ± 0.10 kg).The average weaning weight of males (13.93 ± 0.12 kg) was significantly higher than females (12.85 ± 0.12kg). The average weaning weight was significantly influenced by year of birth, sex and season of lambing. The overall weaning weight in the present study was higher than the values reported by Rao et al [6] and Reddy [3] and Charyulu and Munirathnam [4].

Six Months weight:

The overall mean six months weight during the report period was 17.32 ± 0.15 kg. The present study weight showed a higher 6 months weight (Hogget) when compared to values reported by Rao et al [5] and Reddy [3] and comparable to the value reported by Charyulu and Munirathnam [4] with a value of 17.97 ± 0.21 kg . The weight at six months of weight of age was significantly influenced by year, season and sex.

Body weight at 9 months of age:

The mean body weight at 9 months of age was 20.35 ± 0.14 kg which was significantly influenced by year of birth. It was significantly affected by sex and males were heavier (22.47 ± 0.27 kg) than females (18.58 ± 0.18 kg). Season of birth did not have significant influence on weight at nine months of age. The average 9 months weight in the present study (20.53 ± 0.17 kg) is lower in comparison to value reported by Rao et al [6].

Body Weight at 12 Months of Age:

The average body weight at 12 month of age during the period was 24.18 ± 0.20 it was significantly influenced by the year and season of birth and sex. The significant influence of season of birth continued up to 12 months of age and also the individuals born during off season were significantly heavier. Males weighed 27.81 ± 0.34 kg while females weighed 21.52 ± 0.20 kg.

Table 1. Least square means of Body weight (kg) of Nellore Brown sheep

Particulars	Birth weight	Weaning weight	6- month weight	9- month weight	12 - month weight
Overall mean	2.86 ± 0.01	13.09 ± 0.94	17.42 ± 0.15	20.35 ± 0.14	24.67 ± 0.20
Year	**	**	**	**	**
2009-10	3.11 ± 0.04	15.71 ± 0.28	20.35 ± 0.35	18.30 ± 0.39	24.28 ± 0.54
2010-11	2.85 ± 0.03	13.39 ± 0.22	15.72 ± 0.27	20.79 ± 0.33	24.76 ± 0.49
2011-12	2.81 ± 0.03	14.27 ± 0.22	18.70 ± 0.28	23.45 ± 0.39	30.32 ± 0.50
2012-13	2.68 ± 0.04	15.28 ± 0.24	20.90 ± 0.30	21.23 ± 0.38	24.04 ± 0.41
2013-14	2.88 ± 0.03	17.13 ± 0.19	21.31 ± 0.24	19.96 ± 0.83	22.57 ± 0.86
Sex	**	**	**	**	**
Male	2.94 ± 0.02	13.93 ± 0.12	18.56 ± 0.18	22.47 ± 0.27	27.81 ± 0.34
Female	2.83 ± 0.02	12.85 ± 0.12	16.49 ± 0.18	18.58 ± 0.18	21.52 ± 0.20
Season of birth	**	**	**	NS	**
Main season	2.79 ± 0.01	12.22 ± 0.10	16.97 ± 0.15	20.79 ± 0.20	24.06 ± 0.24
Off season	2.98 ± 0.02	14.56 ± 0.16	18.07 ± 0.22	20.26 ± 0.27	25.27 ± 0.34

CONCLUSION

Nellore breed is the tallest sheep bread of India and widely distributed in the Andhra Pradesh. An attempt was made to study the growth performance of Nellore sheep at various growth stages under organized farm conditions. Nellore brown is completely brown in colour with little hair except at brisket, withers and breech regions on the body. Least square analysis showed significant influence of the body weight at birth, 3rd , 6th , 9th and 12 months of age.

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