

Growth pattern and mortality rate of kids of pantja goat under farm condition

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Abstract : Pantja are the local goats of Tarai region of Uttarakhand and the experiment was carried out on a total of 20 primiparous local pantja goats. The results of the experiment indicated that the mean kid weight at birth was 1.94 ± 0.123 kg. Whereas, female and male kid weight at birth were 1.89 ± 0.084 kg and 1.94 ± 0.123 kg, respectively. In case of twins, overall, male-female, male-male and female-female twin's birth weights were 1.92 ± 0.002 , 2.09 ± 0.106 , 1.63 ± 0.132 and 1.7 ± 0.147 kg, respectively, whereas, in singlet's kids overall, male and female birth weights were 1.9 ± 0.175 , 1.73 ± 0.002 and 2.02 ± 0.162 kg, respectively. Kid weight at 0, 15, 30, 45, 60, 75, 90 days was recorded 1.91 ± 0.088 , 3.50 ± 0.154 , 4.64 ± 0.213 , 5.62 ± 0.217 , 6.62 ± 0.191 , 7.5 ± 0.187 and 8.55 ± 0.164 kg, respectively. Male kid weight changes at 15 days interval from 0 to 90 days after their birth were 1.96 ± 0.149 , 3.43 ± 0.247 , 4.51 ± 0.333 , 5.44 ± 0.330 , 6.5 ± 0.267 , 7.27 ± 0.256 and 8.48 ± 0.195 kg whereas, in case of female body weights were 1.85 ± 0.092 , 3.57 ± 0.195 , 4.76 ± 0.275 , 5.8 ± 0.287 , 6.74 ± 0.279 , 7.73 ± 0.267 and 8.61 ± 0.270 kg at 0, 15, 30, 45, 60, 75, 90 days, respectively.

Key words : Growth pattern, Pantja goat kid, Mortality

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INTRODUCTION

Goat is an important livestock species since prehistoric times and it has been easy source of good quality meat, milk, fiber and manure to the people. Goat is known as poor man's cow in India. These are dual-purpose goats, having brown to tan body colour with black top line and two white strips on head (on either side of head). These goats are found in the Himalayan foothills of Uttarakhand and nearby areas. These goats are the medium sized goats and recognized for similarity with deer in their morphological characteristics. These goats are having brown red dorsal coat colour with back line over dorsum and lighter ventral surface. There is presence of white streaks on either side of face. These characteristics are permanent in nature which passes from one generation to other. As these goats are found in Tarai, they are well adapted to climatic conditions of this region and resistant to many of the diseases of this region compared to other goats. The importance of goat rearing in providing nutritional and financial sustenance to the economically weaker sections of the society is well recognized in developing countries.

RESEARCH METHODOLOGY

Present investigation was carried out at Goat unit, Department of Livestock Production and Management, College of Veterinary and Animal Sciences, Pantnagar. The experiment was carried out on a total of 20 primiparous local Pantja goats and weight of kid measured using digital weighing balance at various interval.

RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Kids weight at birth :

The mean kid weight was 1.94 ± 0.123 kg whereas, female and male kid weight at birth were 1.89 ± 0.084 kg and 1.94 ± 0.123 kg, respectively. In case of twins, overall, male-female, male-male and female-female twin's birth weights were 1.92 ± 0.002 , 2.09 ± 0.106 , 1.63 ± 0.132 and 1.7 ± 0.147 kg, respectively, whereas, in singlet's kids overall, male and female birth weights were 1.9 ± 0.175 , 1.73 ± 0.002 and 2.02 ± 0.162 kg, respectively. Ayoade and Butterworth (1982), Karua (1989b) and Kasowanjete *et al.* (1987) reported singlets average weight to be 2.5, 1.9 and 2.0 kg, respectively and male kid birth weight reported by earlier scientists were as 2.6 ± 0.5 , 2.0 ± 0.6 , 2.1 and female

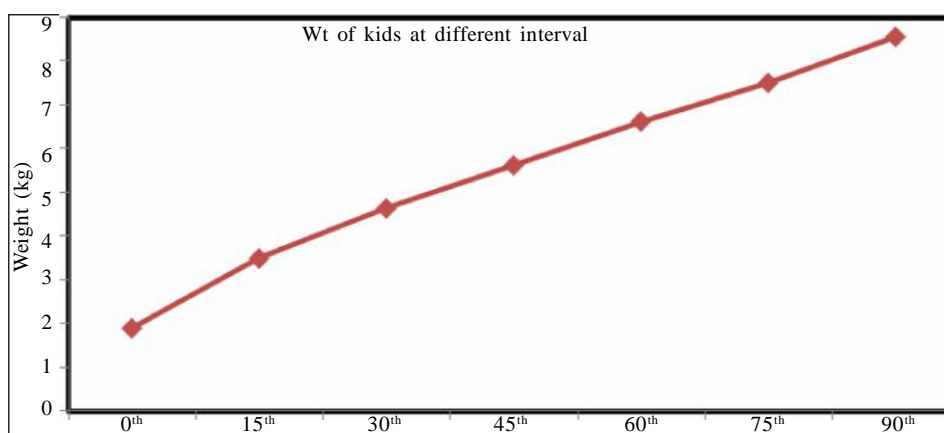


Fig. 1 : Kid and dam weight at 15 days interval

Days	Overall	Male	Female
0	1.91±0.088	1.96±0.149	1.85±0.092
15	3.5±0.154	3.43±0.247	3.57±0.195
30	4.64±0.213	4.51±0.333	4.76±0.275
45	5.62±0.217	5.44±0.330	5.8±0.287
60	6.62±0.191	6.5±0.267	6.74±0.279
75	7.5±0.187	7.27±0.256	7.73±0.267
90	8.55±0.164	8.48±0.195	8.61±0.270

Particulars	Total	Male	Female	Singlets			Twins		
				Total	Female	Male	Total	Male	Female
Total born(n)	33	7	16	7	1	2	2	1	1
Died (n)	5	3	2	3	3	4	26	13	13
Mortality (%)	15.55	18	12.5	42.8	33.33	50	7.69	7.69	7.69

birth weight was 2.3 ± 0.5 , 1.8 ± 0.5 , 1.9 kg, respectively, while Reynolds, (1979), Karua, (1989b), Kasowanjete *et al.* (1987) reported mean weight in Malwi goats in multiple birth 2.0 , 1.7 , 1.6 kg, respectively, male birth weight as 2.0 ± 0.3 , 1.7 ± 0.5 , 1.6 kg and female birth weight 1.9 ± 0.5 , 1.6 ± 0.5 , 1.6 kg, respectively. Hassan *et al.* (2010) reported mean birth weight in Jamunapari goats as 1.6 kg. This differentiation in birth weight may be due to availability of nutrients in the uterus and breed differences.

Kid weight change at 15 days interval :

Kid weight at 0, 15, 30, 45, 60, 75, 90 days was recorded 1.91 ± 0.088 , 3.50 ± 0.154 , 4.64 ± 0.213 , 5.62 ± 0.217 , 6.62 ± 0.191 , 7.5 ± 0.187 and 8.55 ± 0.164 kg, respectively. Male kid weight changes at 15 days interval from 0 to 90 days after their birth were 1.96 ± 0.149 , 3.43 ± 0.247 , 4.51 ± 0.333 , 5.44 ± 0.330 , 6.5 ± 0.267 , 7.27 ± 0.256 and 8.48 ± 0.195 kg whereas, in case of female body weights were 1.85 ± 0.092 , 3.57 ± 0.195 , 4.76 ± 0.275 , 5.8 ± 0.287 , 6.74 ± 0.279 , 7.73 ± 0.267 and 8.61 ± 0.270 kg at 0, 15, 30, 45, 60, 75, 90 days, respectively (Table 1).

While Reynolds (1979) reported mean single and multiple kid weight at 12 weeks as 9.0 and 6.0 kg while male kid weight 9.0 ± 1.4 and 6.6 ± 0.6 and female 8.9 ± 2.0 , and 5.4 ± 1.4 kg, respectively in Malwi goat. This difference in weight may be due to differences in nutrition and management (Fig. 1).

Mortality rate of kids :

The mortality rate of kids is shown in the Table 2. The total mortality rate of kids was 15.55 per cent, while male and female mortality were recorded as 18 per cent and 12.5 per cent, respectively. In case of singlets overall, male and female mortality noted was 42.8 , 33.33 , and 50 per cent, respectively.

Whereas, in case of twins overall, male and female mortality noted was 7.69 per cent. Srivastava *et al.* (2009) reported mortality rate as 15.81 per cent for female and 15.02 per cent for male kids which is in total agreement with the present results. In contrast to present study Simplicio *et al.* (1981) observed that kid mortality upto 1 yr of age was 76.47 and 22.22 per cent, respectively for single males and females vs. 52.00 and 62.53 per cent for twin males and twin females, in non descript goat under traditional management. There were causes of mortality mainly due to pneumonia and under birth weight of kids. Singh *et al.* (2009) and Verma *et al.* (2008) also worked on the related topic.

Conclusion :

The present study revealed that the kids of pantaja goat are well adopted under farm condition and shown normal growth as other breed kids and mortality is less hardly it is 15 to 16 per cent.

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