

Reproductive Performance of Kamori Goat Flock under Semi-intensive Management System

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Abstract: The study was conducted on randomly selected 30 Kamori goats for five kiddings from the flock of Livestock Experimental Station Khudaabad, Sindh, Pakistan. The mean value of age at first kidding of Kamori goat recorded was 565.70 ± 12.51 days. The lactation length was higher in 3rd lactation and animal attained 106.60 ± 3.49 lactation days whereas maximum kidding interval appeared in kidding 5 where animal had 277.30 ± 25.18 lactation days. In Kamori goat, the average birth of male single kids observed were 24%, whereas, female single births were 26.70%. The male twin births attained were 12%, whereas female twin births were 10%. However, male, female twin births appeared 16.60% and remaining 10.70% births were aborted/still births. It was concluded that Kamori goat is large breed, good milk producer, has rapid growth rate, and prolificacy rate is also higher in this breed.

Key Words: Kamori Goat, Reproductive, Traits

Introduction

Goats play a crucial role in the subsistence economy of small farm holders. They provide a substantial amount of meat to the people. Goats are common among small, marginal and landless farmers. They are also reared on large farms, because of their size, easy management, small space requirement, high fertility, short generation interval and small investment (Haq, 1988).

The nutritive value of goat milk does not differ from that of cows milk. The fat globules are much smaller and its cream line is distinctly thin or absent and more easily digested. The mineral content is slightly higher as compare to cow because of the presence of relatively higher amount of calcium, phosphorus and chlorine. However, it has lower iron value. The casein of goat milk during digestion form a soft and more triable coagulum than does the casein of cow's milk, which due to the digestive enzymes make easy digestion (Banerjee, 1990). The chemical composition of goat meat is as: moisture, 74.2-76.0%, protein 20.6-22.3%, fat 0.6-2.6%, ash 1.1%. Goat meat contain more arginine, leucine and isoleucine than other mutton and is adequate in all the essential amino acids. Goat meat is usually low in fat because the tissue is more concentrated in the viscera. (Davendra, 1988). Looking the economic importance of goat meat and milk, there is an urgent need for studies on indigenous breed of goats through performance records on reproduction, milk production, growth and survival, as well as specific characteristics related to adaptation and disease resistance are valuable (Acharya, 1988).

Materials and Methods

Data on reproductive traits of 30 Kamori goats in five kiddings were collected from Kamori Goat Farm

Khudaabad, district Dadu Sindh, Pakistan. The flock was managed under semi-intensive management and was allowed to graze on the open area. During winter, animals were kept indoor, the sheds were scientifically designed having adequate facilities for space, sunlight, ventilation and sanitation etc. The animal in the flock were vaccinated regularly against caprine contagious pleuropneumonia, enterotoxaemia, and anthrax diseases and dewormed twice in the year. The flock grazed in the farm field and on return was stall-fed. The sexes grazed separately. The flock used green fodders (Jantar, Maize and Barseem) available according to season and concentrates like cotton seed cake, wheat bran and common salt was placed for licking in the mangers. The bucks were allowed to the flock for breeding after returning from grazing. The kids were weaned after 3 to 4months.

Results and Discussion

The mean value of age at first kidding of Kamori goat was observed as 565.70 ± 12.51 days. Whereas, maximum and minimum age at first kidding of Kamori goat was recorded as 586 and 544 days respectively (Table 1). The results are in conformity with Singh and Sengar (1970), who reported that the age at first kidding may be influenced by size and weight of goat, kidding interval, feeding season, occurrence of oestrus and management Further, Gill and Dev (1972) observed that the Kamori goats belong to dry zones and these breeds reach their first parturition at the age of 14 to 16 months.

The mean maximum lactation length of Kamori goat was 106.60 ± 3.49 days observed in 3rd lactation followed by 4th and 5th lactation (104.76 ± 2.17 and 104.36 ± 2.67 days) respectively (Table 2). The present findings are in agreement with Singh *et al.* (1990)

Table 1: Age at First Kidding (Days) of Kamori Goat Flock under Semi-intensive Management

No. of observations	Age at first kidding (days)			S.E.
	Maximum	Minimum	Mean	
30	586.00	544.00	565.70	12.51

Table 2: Lactation Length (Days) of Kamori Goat Flock under Semi-intensive Management

Lactations.	No. of observations	Lactation length (days)	S.E.
1 st	30	98.06	2.08
2 nd	30	102.03	1.88
3 rd	30	106.60	3.49
4 th	30	104.76	2.17
5 th	30	104.36	2.67
Mean	30	103.16	3.86

Table 3: Kidding Interval (days) of Kamori Goat Flock under Semi-intensive Management

Kiddings	No. of observations	Kidding interval (days)	S.E.
1 st	30	258.30	26.40
2 nd	30	253.60	20.25
3 rd	30	252.30	23.87
4 th	30	256.30	27.47
5 th	30	277.30	25.18
Mean	30	260.40	10.19

Table 4: Male, Female and Aborted/still Births of Kamori Goats under Semi-intensive Management

Sex	No. of observations	KIDDINGS					S.E	Total	Mean	Percentage
		K1	K2	K3	K4	K5				
SINGLE BIRTHS										
Male	150	9	8	9	4	6	2.16	36.00	7.20	24.00
Female	150	6	11	8	1	12	4.30	40.00	8.20	26.70
TWIN BIRTHS										
Male	150	3	4	4	4	3	0.54	18.00	3.60	12.00
Female	150	3	3	3	2	4	0.70	15.00	3.00	10.00
Male & Female	150	4	3	8	7	3	2.34	25.00	5.00	16.60
ABORTED/STILL BIRTHS										
aborted/ stillbirths	150	4	5	1	5	1	2.01	16.00	3.20	10.70

who reported that in Bengal goats milk duration was 105±5.5 days. Further, Isani and Khan (1994) observed that Sindh Desi Breed has 95 days, whereas, Tharki and Jattan goat breeds have 120 and 130 days, respectively.

The maximum kidding interval of Kamori goat was 277.30± 25.18 days appeared in kidding 5 whereas, minimum kidding interval was (252.30± 23.87 days) exhibited in kidding 3 (Table 3). The findings are supported by Raja and Singh (1973-74) who reported that Indian goat breeds like Barbari, Alpine and Malabari have 280, 299 and 285 days respectively. That is probably due to geographical and seasonal similarities of Pakistan and India.

The average birth of male single kids of Kamori goat appeared 7.20 (24%) whereas; female single births were 8.20 (26.70%). The male twin births were 12% of total births, whereas, female twin births were

observed 10% of the total births. The male, female twin births of Kamori goat recorded were 16.60% of the total births. The remaining 10.70% births appeared as aborted/still births (Table 4). Aboul Naga *et al.* (1988) reported that in goat twins rate was 48%. Singh and Sahni (1989) observed that Malabari, Alpine x Malabari and Sannen 999 x Malabari female, the percentage of female kidding averaged 43.8, 64.8 and 43.5 respectively. Thus, it was concluded that the Kamori goat is good milk producer, large size, and its growth rate and prolificacy are high.

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