

DAYS OPEN, GESTATION LENGTH AND DRY PERIOD IN BEETAL, ALPINE×BEETAL AND SAANEN×BEETAL

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Days open, days dry and gestation period are important economic traits of dairy goat. These traits govern the profitability of dairy goat enterprise. The present investigation was, therefore, undertaken to compare important economic traits related to efficiency of reproduction among Beetal, Alpine×Beetal and Saanen×Beetal. First lactation records of 125 does comprising of 40 Beetal, 63 Alpine×Beetal and 22 Saanen×Beetal from 1972 to 1978 constituted the material of the study.

Least square means of days open, days dry and gestation period are presented in Table 1 and least square analysis of variance for various factors affecting these traits is presented in Table 2.

Overall least square mean of days open,

days dry and gestation period was 168.00 ± 7.7 , 100.60 ± 6.50 and 149.70 ± 0.7 days respectively (Table 1). In all the three traits, the differences among genetic groups, among seasons and among period were non-significant (Table 2). The observations of Mishra *et al.* (1976) in Beetal and Alpine×Beetal; Kaura (1943) and Slaster and Bhatia (1935) in Indian breeds were quite close to present findings. However Kaura (1943) observed higher dry period in Beetal.

Slight though non-significant reduction in days open was observed in Saanen×Beetal and in dry period of Alpine×Beetal and Saanen×Beetal over Beetal. Results indicated that crossing Beetal with Alpine and Saanen would improve reproductive efficiency.

TABLE 1

Least squares mean with standard error and coefficient of variation for days open, dry period and gestation length (days).

Trait		Breed			Season			Period			Overall mean
		Beetal	Alpine × Beetal	Saanen × Beetal	March- June	July- Oct.	Nov- Feb.	1973- 1974	1975- 1976	1977- 1978	
Days open	Mean	170.27 (33)	175.12 (58)	146.88 (18)	214.66 (6)	172.26 (64)	156.58 (39)	220.61 (21)	159.28 (53)	151.51 (35)	168.00 (109)
	S.E.	5.34	10.74	23.17	19.95	10.45	12.51	20.83	12.80	5.68	7.70
	C.V.	39.00	46.00	66.00	22.00	48.00	49.00	42.00	55.00	22.00	47.00
Gestation length	Mean	148.90 (32)	151.50 (56)	148.76 (15)	146.61 (6)	150.32 (60)	150.58 (37)	148.58 (18)	150.00 (50)	153.40 (35)	149.00 (103)
	S.E.	0.80	1.05	1.94	2.38	0.94	0.50	1.12	1.07	1.49	0.70
	C.V.	3.00	4.00	7.00	5.00	5.00	1.00	4.00	5.00	3.00	5.00
Dry period	Mean	120.32 (40)	97.90 (63)	72.68 (22)	118.91 (12)	98.60 (71)	98.85 (42)	134.85 (40)	100.66 (63)	77.60 (22)	100.60 (125)
	S.E.	12.11	9.83	14.63	18.50	9.17	11.36	18.14	10.60	10.20	6.50
	C.V.	63.00	74.00	94.00	54.00	78.00	74.00	62.00	80.00	59.00	72.60

Figures in parentheses indicate the number of observations.

TABLE 2

Least squares analysis of variance for various factors affecting days open, gestation length and dry period in Beetal, Alpine × Beetal and Saanen × Beetal.

Trait	Source	Beetal and Alpine × Beetal		Beetal, Alpine × Beetal and Saanen × Beetal	
		d.f.	M.S.	d.f.	M.S.
Days open	Breed	1	3625.19	2	778.54
	Season	2	1327.25	1	9004.86
	Period	2	1361.80	1	2567.78
	Breed × Season	2	4197.40	2	457.34
	Breed × Period	2	23.61	2	0.60
	Error	81	5304.93	74	5473.36
Gestation length	Breed	1	16.86	2	19.55
	Season	2	14.14	1	113.66
	Period	2	28.28	1	0.0002
	Breed × Season	—	—	2	46.87
	Breed × Period	—	—	2	0.08
	Error	78	46.87	71	44.83
Dry period	Breed	1	6928.63	2	3318.73
	Season	2	34.36	1	1430.49
	Period	2	4707.93	1	2127.59
	Breed × Season	2	720.80	2	39.74
	Breed × Period	2	3.29	2	0.39
	Error	93	5399.60	81	4685.54

Note:— Saanen × Beetal crossbred goats were not available for comparison in season 1 and period 1.

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