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Productive Performance of Red Sindhi Cattle

Pershotam Khatri, Khuda Bakhsh Mirbahar and Uris Samo
Sindh Agriculture University Tandojam, Hyderabad, Sindh, Pakistan

Abstract: A retrospective study of 250 calving of Red Sindhi cows were carried out to analyze the productive performance of Red Sindhi cattle under routine management system at Tando Mohammed Khan. The result showed that overall milk yield, lactation length, dry period and age at first calving averaged 1060.3 litters, 226.98 days, 455.1 days and 2154.6 days respectively. The highest milk yield (1220 liters) was found in third lactation, the lactation length was higher in second lactation (249.0 days), whereas, dry period was higher in first lactation (485.3 days). Birth weight for male was higher (19.0 Kg) than the female (16.5 Kg).

Key words: Productive performance, red sindhi

Introduction

Various animal diseases and nutritionally induced disorders are undoubtedly the most important factors causing retarding livestock development in the country thereby reducing animal origin food for human consumption. The recent reports reveals loses of more than 50 million cattle and 100 million sheep and goats due to epidemic diseases and parasitic infections in the world. (Proceedings of consultant meeting 1983). Beside, physical losses, it has also been reported that the productive and reproductive efficiency of many million animals is hampered and vast quantities of animal products (offal) are condemned at slaughter houses due to their unwholesomeness for human consumption. (Chaudhry,1989). One of the most important factors determining the success of livestock production is the efficiency of reproductive ability of the animals. Reproductive inefficiency will extend lactation beyond high milk production, decrease mean milk production and increase the number of non-lactating days.

The original home tract of red Sindhi breed is around Karachi, including hilly areas of Mahal Kohistan of Balochistan, where they are well adopted. This breed has been imported by many countries due its adaptation in various climatic conditions for milk purpose. The Red Sindhi breed has been imported by many countries due to its adaptation in various climatic conditions for milk purpose (Wahid, 1975).There are three red Sindhi cattle farms in Pakistan; Hub Balochistan, Karachi, Sindh and Tando Mohammad Khan Sindh.

The study is therefore designed to investigate the potential of this important breed by analyzing the data.

Materials and Methods

Data on reproductive traits of Red Sindhi cattle were collected from Red Sindhi cattle farm Tando Mohammad khan involving 250 calving of 50 cows during the period 1985-1997. Five lactations of each animal were studied. The data for each cow were collected on a prescribed proforma specially designed for this purpose.

The data on the following parameters were collected:

a. Lactation yield in liters
b. Lactation length in days
c. Dry period in days
d. Age at first calving in days
e. Birth weight of calves in Kg.

The collected data were transferred in computer using MSTATC stastical package.

Results and Discussion

Table 1 depicts the average milk yield of five parities 1060.3 ± 67.26 liters. The milk yield was highest during third lactation (1220.5 ± 65.0), the difference was however non significant (p.0.05). A milk yield ranging between 1392-1731 liters per lactation has been reported by various workers (Lodhi, 1991; Malhotra and Singh, 1980; Lodhi *et al.*, 1991 and Gogoi *et al.*, 1983). The average milk yield observed in this study is lower than reported by others workers, this could be attributed to environmental conditions, nutrition and poor management practices.

The overall lactation length was 226.98 ± 10.82 days (Table 2). There was significant difference between the 2nd and 4th lactation ($P<0.05$). Although the length of second and fifth lactation was apparently higher than the remaining three lactations. (Runar, 1969; Kale *et al.*, 1982; Lodhi, 1991; Malhotra and Singh, 1981 and Lalli *et al.*, 1979) reported 268 to 319 days, which is higher than this study. This may be due to difference in managemental and environmental conditions. This could be seen from the fact the same breed kept under different managemental and environmental conditions exhibited great variation in the lactation length (Lodhi, 1991).

Table 1: Lactation wise milk yield of Red Sindhi cattle

Lactation No.	Number of Animals	Mean (liters)	S.E.M.
1	50	956.2	90.3
2	50	1113.4	85.7
3	50	1220.5	65.0
4	50	912.1	55.4
5	50	1099.3	39.9
Average	50	1060.3	67.26

p = 0.0260

Table 2: Lactation wise lactation length of Red Sindhi cattle

Lactation No.	Number of Animals	Mean (liters)	S.E.M.
1	50	219.5	11.2
2	50	249.9	12.0
3	50	225.1	11.4
4	50	209.6	11.3
5	50	230.8	8.2
Average	50	226.98	10.82

P=0.1938

Table 3: Lactation wise dry period of Red Sindhi cattle

Lactation Number	Number of Animals	Mean (days)	S.E.M
1	50	485.3	47.6
2	50	477.1	47.8
3	50	419.0	36.0
4	50	439.0	35.2
Average	50	455.1	41.65

p=0.766

Table 4: Mean age at first calving in Red Sindhi cattle

Number of observations	Mean (days)	SEM
50	2154.6	92.3

Table 5: Mean birth weight of male and female calves of Red Sindhi cattle

Sex of calf	No. of observation	Mean (Kg)	SEM
Male	118	19.0	0.189
Female	108	16.5	0.126

p<0.05

The overall average dry period in Red Sindhi cattle was 455.1 ± 41.65 days (Table 3). The dry period of first and second lactation was longer, whereas, the third calvers had shortest dry period (419 ± 36.0 days) the difference was however, not significant. The dry period of red Sindhi breed reported by Gogoi *et al.* (1993) is lower than that of the present study. This difference may be different feeding practices during various seasons.

As shown in Table 4, the age at first calving was 2154.6 ± 92.3 days The reported age at first calving in Red Sindhi cattle ranges between 1592 and 982 days (Runar, 1969 and D'souza *et al.*, 1979). The higher age observed in this study may be due to poor management, environmental conditions, health status of animal and poor nutrition.

The male and female calves of Red Sindhi cattle at birth weighed 19.0 ± 0.189 Kg and 16.5 ± 0.126 Kg respectively (Table 5). This difference is consistent with others who have reported higher birth weight of male calves against female calves (Kijak *et al.*, 1995 and Nasambu *et al.*, 1995). The average birth weight for male and female calves observed in Red Sindhi calves is however, lower than that reported for European breeds (Mascoili *et. al.* 1996).

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