

GROWTH AND PRODUCTION PERFORMANCE OF SAHIWAL CATTLE IN ANDHRA PRADESH

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Abstract: The data on Sahiwal cows and calves maintained at Livestock Research Station, Palamaner, Chittoor District, Andhra Pradesh under the Rastriya Krishi Vikas Yojana Project were utilized for the study. The average total lactation milk yield, average daily milk yield, peak yield and lactation Length in Sahiwal cows were 1355.63 ± 97.48 kg, 3.98 ± 0.43 kg, 6.11 ± 0.62 kg and 348.25 ± 29.42 days, respectively. The average Fat and SNF % in Sahiwal cows were $3.98 \pm 0.16\%$ and $8.36 \pm 0.05\%$, respectively. The average body weights of calves at 1 Month of age was 34.25 ± 5.27 kg and at 3,6,9,12 months of age the average body weights were 34.75 ± 4.97 , 46.25 ± 5.57 , 59.38 ± 6.92 and 71.88 ± 6.44 kg, respectively. The males were significantly heavier than females.

Keywords: Growth, Sahiwal, Production Performance.

Introduction

Among the zebu cattle of India, Sahiwal is considered as the best milch breed of India recognized for its highest milk production, resistance to diseases and adaptability to varied environmental conditions. The extensive and indiscriminate crossbreeding of the native cattle with the exotic breeds of Holstein Friesian and Jersey for high levels of exotic inheritance (above 75%) resulted in reduced conception level, repeat breeding problems, poor heat tolerance and adaptability, low disease resistance and more management problems leading to low productivity of the animals. The economic success of dairy cattle depends upon the good production and optimum reproduction performance of the herd. Hence a research study was undertaken under the Rastriya Krishi Vikas Yojana Project to study the suitability and performance of Sahiwal cows under the agro climatic conditions of Andhra Pradesh.

Materials and methods

Performance records on four Sahiwal cows and calves maintained at Livestock Research Station, Palamaner, Chittoor District, Andhra Pradesh were utilized for the research study. The animals were maintained under optimum conditions of management, housing, feeding and disease control. The economic traits considered for evaluating the performance include

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average total lactation milk yield (TLMY) in kg, average daily milk yield (DMY) in kg, peak yield (PY) in kg, lactation Length (LL) in days, milk constituents like Fat% , SNF%, and protein. Similarly, the different constituents of milk were estimated by using Ecomilk ultra milk analyzer. The body weights were recorded early in the morning before feeding until they were twelve months of age. The statistical analysis of the data was carried out by taking mean and standard errors for all the traits as suggested by Snedecor and Cochran (1994).

Results and Discussion

(A) Production Performance

Total Lactation milk yield (TLMY): The average total lactation milk yield in the Sahiwal cows was 1355.63 ± 97.48 kg during the study period. These findings are in agreement with the findings of Raja (2010) and Kumar (2007) in their studies in Sahiwal cows. The lactation milk yield ranged from 1336.60 ± 18.42 to 2052.93 ± 206.96 kg as reported by Singh *et al.* (2005) in Sahiwal cows whereas a higher lactation yield of 1823.35 ± 51.76 kg was reported by Maurya and Saraswat (2002). The differences in the lactation milk yield observed may be due to variations in the managerial practices and the prevailing agro climatic conditions of different regions.

Peak Yield (PY): The mean Peak yield in the Sahiwal cows in the present study was 6.11 ± 0.62 kg which is in accordance with the findings of Sharma *et al.* (2010) who reported as 6.26 ± 0.05 kg. The days to attain peak yield during this study period was 55 days.

Lactation Length (LL): The overall mean lactation length in the Sahiwal cows is 348.25 ± 29.42 days during the study period which is in agreement with Maurya and Saraswat (2002) who reported an almost similar value of 313.78 ± 4.66 days. However the lactation length in the Sahiwal cows ranged from 254 ± 2.83 days to 313.78 ± 4.66 days as reported by Zafar *et al.* (2008) and Yadav *et al.* (1992), respectively. The variations in the lactation length were due to year / period, season of calving and parity. A lactation length exceeding 10 months is not desirable as it affects the life time production, prolong the calving interval and decreases the number of calves obtained during the lifespan of a cow.

Daily Milk Yield (DMY): The average daily milk yield in Sahiwal cows observed in this study was 3.98 ± 0.43 kg. These findings are comparatively lesser than the value of 6.02 ± 0.05 kg as reported by Yadav *et al.* (1992).

Milk Constituents: The overall fat and SNF values were 3.98 ± 0.16 and 8.36 ± 0.05 percent, respectively while the protein and density of milk were in the range of 10.69 ± 0.84 percent and 29.56 ± 0.58 , respectively.

(B) Growth Performance

The average body weights of calves at 1 Month of age was 34.25 ± 5.27 kg. While at 3,6,9,12 months of age the average body weights were 34.75 ± 4.97 , 46.25 ± 5.57 , 59.38 ± 6.92 and 71.88 ± 6.44 kg, respectively. The males were significantly heavier than females upto one year age. These findings are comparatively lesser than the values reported by Manoj *et al.* (2012). The variations in the growth rate are primarily due to the managerial practices and feeding schedule followed in different regions of the country.

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