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Key role of environmental factors on lactation length in Deoni breed of cattle in their breeding areas

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Livestock is an integral component of agriculture and plays a critical role in the welfare of Indias rural population. Cattle are the foundation of Indian farming. Deoni is one of the important dual purpose cattle breed of India. Animal life has constant struggle against the forces of nature and one important force is climate. In the present study systematic record in respect to birth, date of calving and lactation length are maintained at Cattle Cross Breeding Project. The sixteen years (1995-2010) data on monthly lactation length of cows calved during cold, hot, south-west monsoon and post monsoon season each for twelve month in year was utilized. The data in respect to climatic parameters like minimum and maximum temperature, relative humidity (RH), wind velocity and sunshine hours were recorded. Monthly lactation length data were analyzed statistically by correlation and multiple regression to see the effect of climatic attributes and to know their association. The average monthly lactation length was recorded as 220.21 days in Deoni cattle. It can be inferred that maximum lactation length was recorded during post monsoon season (240.94 days) followed by south-west monsoon season (222.28 days), cold season (218.67 days) and hot season (198.95 days), respectively. The climatic factors viz., sunshine hours and wind velocity shows positive significant association with lactation length, where as the maximum temperature, minimum temperature, maximum humidity, minimum humidity and Temperature Humidity Index shows negative non-significant association. Among the Deoni cattle, the October-November calvers had longer lactation length as compared to other seasons. Thus the correlation studies indicated more concern with the fluctuation in the sunshine hours and wind velocity during post monsoon season from the point of their association with lactation length in Deoni cattle.

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