



Association of climatic variables with lactation performance of Deoni cows in subtropical region of India

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Abstract : The study was undertaken to evaluate the effect of different macro climatic variables on lactation length and lactation milk yield of Deoni cattle. Milk data of Deoni cows with 438 of lactation records and the meteorological data over a period of 15 years (1995-2009) were obtained from Cattle Cross Breeding Project, Vasantnao Naik Marathwada Krishi Vidyapeeth, Parbhani and University Meteorological Observatory, respectively. It was observed that lactation milk yield and lactation length was highest (542.97 ± 16.40 lt and 289.07 ± 9.85 days) among the cows calved during winter season as compared to rainy (515.91 ± 26.99 lt and 277.04 ± 5.3 days) and summer season (480.24 ± 18.52 lt and 274.53 ± 7.29 days). All the climatic variables considered in the study accounted for 43 per cent, 82 per cent and 86 per cent direct variation on lactation milk yield and 37 per cent, 42 per cent and 47 per cent direct variation on lactation length in rainy, winter and summer season, respectively, as verified by the value of co-efficient of determination (R^2). This research indicates that Deoni cows were not sensitive to seasonal changes on their lactation length, but causes direct variation in the range of 82 to 87 per cent in lactation milk yield in winter and summer seasons. As Deoni cows are originated in this region they did not suffer much from heat stress but if favourable conditions are provided to animals, their productivity will be increased in future.

Key words : Climatic factors, Lactation milk yield, Lactation length, Regression, THI

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