

## Conclusion

The F<sub>1</sub>NDce and F<sub>1</sub>Mtb seem similar for their physical characteristics whereas they are bigger than the 3/4 Mtb animals. But compared with the both F<sub>1</sub>NDce and F<sub>1</sub>Mtb, the 3/4 Mtb cows performed the best milk production trends which would be related to exotic gene level increasing.

## References

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# Studies on the adaptability of Jersey × Sahiwal crossbred cattle to tropical conditions and their productive performance

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Crossbreeding plays a vital role in the improvement of productive and reproductive performance of native cattle in developing countries like India. The Jersey cattle breed is the breed of choice for crossbreeding as it suits well to the tropical climate of India. In order to bring about Genetic improvement of the crossbred cattle, there is a strong need to produce genetically superior bulls in required members for artificial insemination and natural services. The present work was therefore focused on the establishment of a bull mother farm of proven germplasm of Jersey × Sahiwal crossbred animals so as to supply young breeding bulls of proven germ plasma. Hence there is a need to test the productive performance and adaptability of crossbred animals to tropical conditions in order to establish the farm. The physiological data and results of biochemical analysis of blood samples of twenty-one Jersey × Sahiwal crossbred cows were noted regularly at weekly intervals. The milk production and peak yield were recorded and the milk samples were analysed for fat, protein and solids not fat (SNF).

The mean ± SE values of temperature, pulse and respiration were recorded as 101.53 ± 0.07, 57.88 ± 0.76 and 23.13 ± 0.58 respectively. The mean ± values of biochemical analysis of blood samples were 94.64 ± 2.84, 27.58 ± 1.45, 61.78 ± 1.94, 2.06 ± 0.90, 1.42 ± 0.07, 10.27 ± 0.32, 6.03 ± 0.09, 1.97 ± 0.04, 146.1 ± 3.3 and 4.81 ± 0.11 respectively for SGOT (μ L<sup>-1</sup>), SGPT (μ L<sup>-1</sup>), glucose (mg dL<sup>-1</sup>), urea (mg dL<sup>-1</sup>), creatinine (mg dL<sup>-1</sup>), calcium (mg dL<sup>-1</sup>), phosphorus (mg dL<sup>-1</sup>), magnesium (mg dL<sup>-1</sup>), sodium (mg dL<sup>-1</sup>), and potassium (mg dL<sup>-1</sup>) respectively which were all in the normal range for the crossbred cows. The mean total milk production (lt) during the lactation and peak yield were 1345.9 ± 0.25 and 9.26 ± 0.12 respectively. The mean fat, protein and SNF percent were 4.90 ± 0.10, 3.67 ± 0.03 and 9.39 ± 0.12 respectively which were all in the normal range. The study suggests that the crossbreds were well adapted to the tropical climate and the bull mother farm can be established successfully so as to supply breeding bulls in surplus in the future to the farmers.

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# Temperature-Humidity Index scenarios in the Mediterranean basin

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## Introduction

In its 2007 assessment, the Intergovernmental Panel on Climate Change (IPCC) for the first time provided best estimates and likely ranges for global average warming under each of its emission scenarios. Based on plausible emission scenarios, the IPCC estimates that average surface temperatures could rise between 2°C and 6°C by the end of the 21st century. Projected increases in temperature could cause more severe conditions of heat stress in farm animals and also a number of other effects (reduced growth and quality of grassland and crops, water availability, higher diffusion of vector-borne diseases, etc), which may indirectly impair animal health, welfare and performances (Lacetera *et al.*, 2003). The Mediterranean basin has been

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