

## ABSTRACT

The adverse impacts due to changing climatic conditions are likely to be greater in climate-sensitive sectors such as agriculture, water resources, dairy, etc., and in developing countries. This study focuses on the physiological impact of heat stress on dairy cattle, and the impact of high temperature and high humidity on milk yield. The impact of temperature and rainfall is assessed on milk yield from different categories of cattle in India (viz. Bovine, Buffalo, Indigenous, and Crossbreed) using panel data comprising districts of twelve large states and over 25 years. The results based on fixed effects model indicate that while increase in maximum temperature would have negative impacts on milk yield, the increase in minimum temperature and rainfall could ameliorate the adverse impacts to some extent.

**Key Words:** Climate Change, Heat Stress, Milk Yield, Developing Countries

**JEL Codes:** C21, C23, Q15.