



RESEARCH PAPER

Forewarning the outbreak of Haemorrhagic Septicaemia disease by using suitable statistical models

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Abstract : Haemorrhagic Septicaemia was considered as one of the lethal diseases for the bovines. Ingestion or inhalation were considered as the major sources of natural infection of the disease, but the mortality rate was high when casual agent introduced to non-endemic regions. This disease was observed as most deadly bacterial disease which was responsible for highest number of annual deaths of bovines. Three generalized linear models such as poisson regression, zero inflated poisson and zero inflated negative binomial models were fitted, among these models zero inflated models were found to be best fit and the risk factors viz., land surface temperature, air temperature, potential evapotranspiration, rainfall and soil temperature were found to have significant effect in the outbreak of Haemorrhagic Septicaemia disease.

Key Words : Haemorrhagic Septicaemia, Poisson regression, Zero inflated poisson model, Zero inflated negative binomial model, Akaike information criterion, Akaike information criterion for correction

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