African Physical Chemistry (Pure Science)

Remote Sensing Technology in Livestock Health Surveillance: Enhancing Disease Detection and Time Efficiency in Nairobi County, Kenya

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Abstract

Remote sensing technology has been increasingly applied in various sectors for monitoring environmental changes and health conditions of living organisms. In livestock management, remote sensing can provide a non-invasive method to detect diseases and monitor animal welfare without direct contact. A theoretical framework was developed based on existing literature and expert consultations. The model incorporates satellite imagery analysis and machine learning algorithms to predict disease prevalence. This theoretical framework demonstrates the potential benefits of integrating remote sensing into livestock health surveillance systems in Nairobi County, offering significant improvements over conventional approaches. Investigate further validation studies to ensure robustness and reliability of the predictive models. Develop guidelines for policymakers on how to integrate this technology effectively into existing practices. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sub-Saharan, GIS, Remote Sensing, Precision Agriculture, Satellite Imagery, Data Analytics, Ecopath Models*

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