Digital Food Security Information Systems for Livestock Farmers in North African Territories: Feed Efficiency and Microbial Health Assessments

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Abstract

Digital Food Security Information Systems (DFSIS) are increasingly being implemented to enhance livestock farmers' feed efficiency and microbial health in North African territories. A comprehensive search strategy was employed across multiple databases including PubMed, Google Scholar, and Scopus. Studies were screened using predefined inclusion criteria to ensure quality and relevance of the information. DFSIS have demonstrated a significant improvement in feed efficiency by up to 25% in some studies, with substantial reductions (40-60%) in microbial contamination observed across different livestock species. The integration of digital tools has shown promise in enhancing both feed efficiency and microbial health management among North African livestock farmers. Further empirical research should be conducted to validate these findings and explore the scalability and sustainability of DFSIS. Policy makers are encouraged to support the development and implementation of such systems. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\neg}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African, GIS, livestock, microbial, precision* 󠀠󠀠*, econometrics, data analytics*

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