

**PRODUCTION CHARACTERISTICS AND
TECHNICAL EFFICIENCY OF BUFFALO
FARMING IN THANAMALWILA VETERINARY
DIVISION**

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by

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Abstract

Livestock plays a vital role in rural economic development of Sri Lanka. Out of that, dairy sector can be recognized as most popular livestock subsector because it is accepted by almost all ethnic cultures in Sri Lanka. Dairy cattle farming and buffalo farming can be identified as the major two categories of dairy sector in Sri Lanka. Uva province gives large contribution to Sri Lankan dairy industry. This study was conducted to identify the current status of buffalo farming system in Thanamalwila veterinary division. The main objectives of this study were to identify the important socio-economic determinants and to estimate the technical efficiency of buffalo farming in Thanamalwila veterinary division. Data was collected from fifty buffalo farmers. Maximum likelihood estimation method was used to determine the stochastic production function of average daily milk production per animal. Breed combination, Average birth weight, Shed condition, Grazing duration, Labor power, Frequency of water given for animals, Cost of livestock farming and combination of feeding method were used as the variables of production function. Specification of Battese and Coelli (1995) was used to estimate the determinants of technical inefficiency.

Breed combination used, birth weight of animals, and amount of labor power used in farming were the significant variables of Cobb-Douglas function in buffalo farming. Monthly income was the only variable which significant in technical inefficiency estimation of buffalo farming. According to results of the study indicates that estimated mean technical efficiency for buffalo farms was 86.83%.

Key words: Technical efficiency, Stochastic frontier production function, Cobb-Douglas model, Maximum Likelihood Estimation, Ordinary Least Square estimation