TECHNICAL EFFICIENCY OF CATTLE FARMING IN MONERAGALA VETERINARY REGION
- A STOCHASTIC FRONTIER APPROACH -

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ABSTRACT

In economics, it is well recognized that resources involved in the production process are limited in supply and the scare resources should be efficiently used without wasting. Efficient utilization depends on managerial ability of entrepreneurs-farmers, firm, etc. Available literature suggests that farmers in the developing countries fail to exploit the full potential of a technology and make allocative errors. Thus, increasing the efficiency in production assumes greater significance in attaining potential output at the farm level. However it is an undeniable fact that the majority of dry zone dairy farmers are characterized by poor economic status due to inefficient utilization of available resources. This paper investigates the economic and technical efficiency of dairy farming in Moneragala veterinary region in Sri Lanka and to suggest some policy recommendation for improving the efficiency of resource use. The experiment sites were ten villages in Moneragala veterinary region and respective villages were randomly selected based on the list of district. The empirical study was carried based on a sample of 80 farmers in selected villages. In this study, the technical efficiency of dairy farmers was estimated by using stochastic frontier production function, incorporating technical efficiency effect model. The Cobb Douglas production function was found to be an adequate representation of the data. According to the results obtained from the stochastic frontier estimation, the average technical efficiency of selected farmers given by the Cobb Douglas model is 69 per cent. This indicates that there is scope of farther increasing the output by 31 percent without increasing the level of input. The analysis using the Cobb-Douglas function indicated miss-allocation of resources in most of the location in the sample area due to managerial inability of farmers.

Key word: Dairy farming, Cobb-Douglas production function, Technical efficiency, Frontier Production Function. Maximum likelihood estimates