

**FACTORS AFFECTING EFFICIENCY IN POTATO PRODUCTION IN
NUWARA ELIYA DISTRICT**

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Potato is an important food crop, which plays a vital role in the world economy as well as in Sri Lankan economy. However, prevailing high cost of production and low productivity have reduced the total production efficiency in Sri Lanka's potato sector, and little attention has been paid to conduct studies to estimate production efficiency in potato production. Therefore, this study attributed to reveal the level and determinants in production efficiency of potato production in Nuwara Eliya district. Using multi stage random sampling technique, a sample of 107 commercial level potato farmers were selected and a Cobb Douglas Stochastic Frontier Production function was estimated using survey data. The results revealed that, levels of technical efficiency were between 10% and 96% with a mean of 56%, showing that the production can be increased by 44% or cost can be reduced by 44% by adopting the best farming practices. Land and fertilizer were statistically significant and positively related with total production, whilst farm power was negatively significantly related. Elasticity of land extent was the largest (0.902), whilst elasticity of cost of agrochemicals was the lowest (-0.202). The inefficiency effect model revealed that, farmer's experience, prevalence of membership in farmer organization and credit amount have impacted positive effect on technical efficiency whilst, the farmer's age has a negative effect on technical efficiency. Allocative efficiency analysis showed that the land, fertilizer, agrochemicals and labor were underutilized as the marginal productivity to factor cost ratio was greater than one. This indicates that profitability can be increased by increasing land extent, fertilizer, agrochemicals and labor, whilst decreasing seeds. Seeds were over utilized as the ratio is less than one. Therefore, it is recommended that the government should take effective steps to control the prices of inputs and should enhance the knowledge of the farmers in order to increase production efficiency.

Keywords: Cobb Douglas Stochastic Frontier, Efficiency, Potato