Analysis of Present Status and Production Forecasting of Potato Farming in Sri Lanka

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Potato is one of the most important cash crops in the upcountry Sri Lanka where majority of farmers depend on it as their main livelihood. Despite its importance to the economy, Sri Lanka mainly depends on the importation of potato from low cost producing countries which is a huge burden to the government. Under this background, this study aims to analyze the present scenario of the potato industry in Sri Lanka with a view to forecast the potato production of future. The Box Jekins Autoregressive Integrated Moving Average (ARIMA) time series model has been employed for forecasting the potato production and production data obtained from Department of Census and Statistics for the period of 1997-2017 were used. The descriptive analysis shows that self-sufficiency ratio in potato has not improved over the past few decades and there is a 5.28% import dependency. Moreover, potato importation bill has increased over the years from 1.30 billion LKR in 1997 to 5.44 billion LKR in 2017. In the meantime, 6.78% increase in cost of production over the last two decades has been resulted in farmers reluctant to continue potato farming as their livelihood. Among the inputs, seed cost contributed to the highest share of the total cost of production. In spite of that profitability of the potato farming has been increased by 7.81% (Department of Agriculture) over the years. The study also revealed that the best models are ARIMA (0, 0, 1) and ARIMA (2, 0, 0) for future forecasting. Therefore, this forecast would be useful for the policy makers to foresee the future requirement and the government to take measures to enhance the production capacity to cut the burden on country's food import bill.

Keywords: ARIMA, Potato, Production, Time series model