

## **Analysis of Resource Use Efficiency in Chilli Production and Its Contribution to Household Farm Income in Manmunai South and Eruvilpattu DS Divisions, Batticaloa**

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Chilli is one of the major cash crops grown in Sri Lanka. The resource use efficiency in chilli production has a significant contribution to household income. Technical efficiency is determined by several efficiencies and inefficiency variables. The major objective of this study was to analyse the resource use efficiency and its contribution to household farm income in Manmunai South and Eruvilpattu DS divisions. Quantity of urea, NPK, organic fertilizer and pesticides and method of irrigation were included as explanatory variables in the production function. Age of farmer, education, involvement, experience, extension services and the number of plants in the field were considered as the factors for the inefficiency of chilli production. Descriptive statistics, and Cobb Douglas stochastic frontier production function were used to analyse data. The result of this study shows that, in Cobb Douglas production function, the coefficient of urea (0.1) is positive and significant. It indicates that if the quantities of urea per plant increase by 1%, it increases the yield of green chilli per plant by 0.1% while other things equal. In the inefficiency model, the number of plants in the farm was positive and significant. The coefficient of number of plants indicates that number of plants in the farm increases by 1000 units, the inefficiency of the farm increases by 2%. The average technical efficiency of chilli production in this study area is around 81%. Variations in the efficiency of chilli productivity in the farms were around 81%. Therefore, there is high potential to increase the efficiency in chilli production by 19% with available current technology. This study indicates that small chilli farms are more efficient than large chilli farms. Therefore, Department of Agriculture should provide materials and technical assistance to small farms to increase the efficiency and total chilli production in this study area.

**Keywords:** Chilli, Inefficiency, Productivity, Resource use efficiency