

RESOURCE USE EFFICIENCY OF MAIZE (*Zea mays* L.) PRODUCTION IN MAHAWALI “H” AREA

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Maize is a popular commercial crop mainly grown in Anuradhapura, Ampara and Moneragala Districts. Importation of maize has been declined significantly in the recent past due to increased production. However, this achievement was obtained with high import tariff, which cannot be continued under the present trade agreements. Hence it is necessary to reduce the cost by increasing production efficiency. This study was conducted with the view of better understanding about the efficiency of maize farmers in the H area of Mahawali system and make suggestions to enhance the efficiency. A combination of purposive, multistage and random sampling was used to select 70 respondents for the questioner. Data were statistically analyzed using Frontier version 4.1 and Minitab software package. Regression analysis showed that 67 percent of the variation of maize production was explained by land, seed, fertilizer, agrochemicals and labour. Except agrochemicals and labour, all other variables were positively related with production indicating that increase in land, seed and fertilizer would increase maize production whereas increase in agrochemicals and labour would decrease the production. Elasticities of independent variables were less than one with the highest value of 0.66 for seeds. Returns to scale was less than one (0.82), which implies that if all the variables increase by one percent production would increase less than one percent. Frontier production function analysis found that mean technical efficiency was 0.90, showing that production in the area can increase by 10% by adopting the best farmers' practices without adding to cost. Allocative efficiency analysis showed that profitability can be increased by increasing land, seed and fertilizer and reducing use of agrochemicals and labour. The study recommends that the present extension service should be strengthened to reduce resource use inefficiency and to increase profitability of maize cultivation.

Keywords: Allocative efficiency, Mahawali H, Maize, Production efficiency