Technical Efficiency of Onion Production in Jaffna District

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This study examines the technical efficiency of onion production in Jaffna district. Among the crops cultivated in this district, onion is an important cash crop and has tremendous potential to improve the economy of this region. Due to the suitable agro-ecological condition and the knowledge in onion production, commercial scale onion production is mainly concentrated in Jaffna district. The outbreak of war has disrupted the onion production due to the non- availability of cultivable land, middlemen problems, price instability, lack of marketing facilities and availability of fertilizers and agro-chemicals. For this study, seventy seven farmers were randomly selected from the major onion cultivating area in the Jaffna district during the period of July 2007 and data was collected from the selected farmers, regarding the agricultural practices in onion production. In this analysis, seed rate, irrigation interval, land area, fertilizer application and irrigation interval are considered as main variables affecting the technical efficiency of onion production.

The Stochastic Cobb-Douglas production frontier model specified by Battese and colli (1995) was estimated to measure technical efficiency of onion production. This model shows that land area, organic fertilizer, inorganic fertilizer and seed rate positively influence the onion production. Coefficients of these variables are significant at 5% level. The irrigation interval showed negative sign as expected but not significant effect at 5% level. Widening irrigation interval are negatively influence on the onion production. The average level of technical efficiency of onion production is 69%, but the best farmer achieved at 97% efficiency. This indicates that there is high potential to increase onion production and its efficiency in this region by better agronomic practices. Therefore, dissemination of new technology on post harvesting, agronomic practices and proper marketing facilities are needed.