

**IMPACT OF CHRONIC KIDNEY DISEASE ON TECHNICAL  
EFFICIENCY OF THE PADDY CULTIVATION IN  
MEDAWACHCHIYA DS DIVISION, ANURADHAPURA  
DISTRICT**

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## ABSTRACT

Health status highly influences the farmer's efficiency in the agriculture practices. Major income source in the North Central Province is paddy cultivation. The spread of Chronic Kidney Disease (CKD) in North central province largely affects the farming community in this area. Hence, this study was carried out to identify the impact of CKD on technical efficiency in paddy cultivation. A survey was conducted in Medawachchiya DS division which belongs to Anuradhapura district. 150 respondents were selected for the study. Among them, 87 farmers are non-CKD affected and rest of farmers are CKD affected. Data were collected on health status and production characteristics of the farmers through the structured questionnaire. Stochastic Frontier analysis was used to measure the technical efficiency. The result of Cobb Douglas frontier analysis show that land, paddy seed are positively related to the paddy yield. Age, gender, farming experience, education and number of family members decrease the inefficiency. Awareness, severity, and days of incapacitation due to disease increase the inefficiency of the farmers. Average technical efficiency of a CKD affected farmer was 59.6% and average technical efficiency of a non-CKD affected farmer was 63.3%. Non-CKD affected farmers are more efficient than CKD affected farmers. It could be concluded that there is an impact of CKD on technical efficiency of the paddy cultivation in the studied area

*Key words:* Chronic Kidney Disease, Technical efficiency, Stochastic Frontier Analysis, Cobb-Douglas production function, Paddy Cultivation