

IMPACT OF DROUGHT ON FOOD SECURITY IN ANURADHAPURA DISTRICT, SRI LANKA

S.H.M.T.N. Senevirathna¹, L.P. Rupasena¹, and J.M.S.B. Jayasundara²

¹*Department of Agricultural Systems, Faculty of Agriculture,*

²*Department of Environment Management, Faculty of Social Sciences and Humanities,*

Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.

Sri Lanka, a country in the tropical region has experienced cyclical droughts of high intensity, occurring in the intervals of three to four years. These droughts have had a series of adverse impacts on the household food security especially in areas with rain-fed cultivation. This study assessed the impacts of drought on food security by comparing normal and drought situations in minor irrigation areas and ascertained mitigation strategies adapted by households of the *Anuradhapura* district. The survey conducted by the Department of Environmental Management of the Faculty of Social Sciences and Humanities of Rajarata University of Sri Lanka in 2017 was used for the study. Data collected from 533 randomly selected households from eight divisional areas in minor irrigation schemes in *Anuradhapura* district were analyzed employing descriptive statistics and paired T-test using SPSS software. The results reveal that paddy productivity has reduced during the period of droughts by 49% compared to the normal season. The mean comparison between two periods found that drought has a significant negative impact on paddy productivity ($p < 0.05$) creating food insecurity of the households in the study area. Further, during the drought period majority households received insufficient incomes to meet the daily necessities and hence savings were utilized for essential household needs such as food (64%), children's education (28%), and health (21%). The major drought coping strategies used by households include consuming less amount of favorite foods (49%), borrowing foods (56%), reducing quantity of meals (27%), skipping meals (2%), reducing buffer stock of seeds (28%), use of food reserves (40%), collecting rainwater (76%), and food preservation (20%). Introduction of drought resistant paddy varieties, provision of credit facilities, renovation and reconstruction of village tanks, and popularizing of drought coping strategies among paddy farmers are needed to mitigate the impacts of droughts on household food security.

Keywords: Drought, Household food security, Paddy productivity