

**IMPACTS OF SEASONAL CLIMATE ON QUALITY OF SEED PADDY
AND FARMER CLIMATE RESILIENT STRATEGIES IN
ANURADHAPURA DISTRICT**

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The agriculture sector is considered as the most vulnerable sector to erratic weather and climate patterns. *Anuradhapura* district is one of the main rice-growing districts of the country which has adversely affected by extreme weather conditions and low adaptive capacity of farmers. Seed paddy is the main planting material of rice and the quality of seed paddy decides the crop performances. Hence, this study was conducted to investigate the impacts of seasonal climate and farmer resilient strategies on the quality of seed paddy in the *Anuradhapura* district. Data were collected from a total of 40 households sampled proportionately representing both seed paddy producers and paddy farmers. Multiple linear regression analysis was used to identify climatic factors that affect the quality of seed paddy. Correlation analysis was applied to find the relationship between seed quality parameters and comparable moisture content, seed viability, and germination percentage with climatic factors over time, and descriptive statistics were used to elaborate the farmers' climate-resilient strategies. Out of climatic parameters, only the average monthly rainfall resulted ($p < 0.05$) significantly a negative effect on seed moisture content, while average monthly maximum temperature and average monthly minimum temperature remaining insignificant. Correlation analysis revealed that there is a strong negative relationship between average monthly rainfall and moisture content of the seed paddy. Water management, paddy straw recycling, and cultivation of short to medium duration paddy varieties were the main climate-resilient strategies in the region. The descriptive statistics results also revealed that adaptation to climate change is constrained by several factors such as poor awareness of adaptation practices, high cost of farm inputs, limited access to agriculture market, inadequate farm labour availability, pest and disease attack, and lack of assured price. The findings of the study suggest the need of improving institutional support for practicing climate-resilient strategies and enhance awareness among farmers on the current trend and future scenarios of seasonal climate change.

Keywords: Climate change, Climate-resilient strategy, Seed paddy quality