

A COMPARATIVE ANALYSIS OF THIRD-SEASON CULTIVATION ON CROPPING INTENSITY AND INCOME GENERATION IN SELECTED VILLAGE TANK CASCADE SYSTEMS IN SRI LANKA

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Third-season cultivation serves as a valuable approach to optimize land use efficiency and maximize agricultural output by utilizing the interim period between major cropping seasons. The UNDP has introduced the cultivation of other field crops (OFC) in the third season to farmers through the 'Wevu Gam Pubuduwa' project to diversify the cropping pattern of the farmers. This study was conducted to investigate the impact of third-season cultivation on cropping intensity and income generation of beneficiary farmers of the project. Questioner survey was conducted with 126 farmers in 5 different cascades in Anuradhapura (*Palugaswewa* cascade), Vavuniya (*Thuduwakkaikulam* cascade), Trincomalee (*Kumbukwewa* cascade), Puttalam (*Medderembewa* cascade) and Kurunegala (*Mamunugama* cascade). Data were analysed through descriptive statistics and ANOVA using SPSS software. According to the analysis, cropping intensity has increased in all the selected areas but a significant increment was only detected in *Thuduwakkaikulam* from 1.57 to 1.65 ($p=0.001$), *Kumbukwewa* from 2 to 2.3 ($p=0.0309$) and *Medderembewa* from 1.7 to 2.0 ($p=0.0508$). According to income earned by practice third season, there are clear gaps among the cascade in an average year. The highest average income is shown in *Palugaswewa* (LKR72000.00) and the lowest average income is shown in *Thuduwakkaikulam* (LKR11300.00). Reasons for the income difference are mainly due to the availability of inputs, financial problems, water availability, and poor adaptability to technology practices. Therefore, considering the reported benefits of practicing the third season with OFC, it is recommended to provide the necessary location-specific technology packages for third season cropping located in cascade system located in Anuradhapura, Kurunegala, Puttalam, Trincomalee and Vavuniya District of Sri Lanka.

Keywords: Cascade, Cropping intensity, Third season, Cascade system