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Flood Reduction Function of Paddy Rice Fields under Different Water Saving Irrigation Techniques

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ABSTRACT

This study is conducted to investigate the function of paddy fields for flood reduction under different water saving irrigation techniques. A daily water balance component data including rainfall, percolation, and overflow through the paddy field levee were collected from experimental paddy rice fields during rainy season cultivation. Results show that paddy field was very effective in flood reduction. More than 40% of rainfall could be stored in the paddy fields. However, the effectiveness of paddy fields in flood reduction was highly depends on the WSI technique used. Semi dry cultivation technique was the most effective one in terms of flood reduction. It retained the rainfall up to 55.7% (365 mm) of the total rainfall (636 mm) without reducing the yield. In terms of flood volume reduction, the alternate wetting and drying performed similarly with traditional continuous flooding, i.e., 37.2% and 40.8%, respectively.

KEYWORDS

Flood Reduction Function, Water Saving Irrigation, Paddy Field

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