

Category	: International Rice Research Conference
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Title of Entry	: EVALUATION OF SAFE ALTERNATE WETTING AND DRYING IRRIGATION IN TRANSPLANTED LOWLAND RICE
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Select only one type of presentation	: 15 minute oral presentation
Abstract	: A field experiment was conducted during rabi season at Wetland Farms, Tamil Nadu Agricultural University, Coimbatore, to evaluate Safe Alternate wetting and drying method of irrigation and its influence on growth and yield of lowland rice by monitoring the level of depletion of water below the soil surface with the use of field water tube. A field water tube was devised and installed to monitor Safe AWD methods of irrigation and the treatments were imposed based on the drop of water at specified level below the soil surface as per treatment schedule. The results revealed that irrigation after 15 cm DPW upto maximum tillering and continuous submergence upto 10 days prior to harvest was comparable with the conventional irrigation practice of recouping 5 cm submergence one day after disappearance of ponded water and registered maximum plant height, total number of tillers, LAI and DMP. A similar trend was observed on panicle length, number of filled grains and test grain weight. Early flowering and maturity was noticed under the treatments with widening intervals of irrigation while flowering and maturity was delayed under the conventional The consumptive use of water was minimum under irrigation after 15 cm DPW from 7 DAT to 10 days prior to harvest with maximum daily water use, water saving and registered the higher WUE of 5.77 kg ha ⁻¹ . Net income and benefit cost ratio were higher with the conventional irrigation practice (T8) and irrigation after 15 cm DPW upto maximum tillering and continuous submergence upto 10 days prior to harvest (T5). It could be concluded that considering the stability in yield with lesser consumptive use of water, the need based irrigation practice of scheduling irrigation at depletion of water to 15 cm below the soil surface may be recommended for enhancing water productivity in the context of scarcity of water for rice production. In areas of acute water scarcity, scheduling irrigation after 20 cm

depletion of ponded water below soil surface may be advocated for efficient use of available water with marginal yield loss.

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