Up-scaling Water Saving Technologies in Rice Cultivation Under CSR (Corporate Social Responsibility)

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Rice is the principal food crop grown all over 29 districts of Tamil Nadu state in India. Rice crop being the major consumer of water, the water use efficiency of growing rice crop is low compared to other field crops. The promising technologies on water saving in rice were advocated to the farmers on corporate social responsibility basis by upscale and popularisation of these techniques among poor land holding farmers in rice growing locations of Villupuram district of Tamil Nadu State in India. The main objective of the study was to bring awareness among rural farmers on water saving technologies in Rice production, thereby increasing water usage efficiency and enhanced grain yield. Field demonstrations were carried out in 25 locations each separately in Villupuram district for up scaling water saving technology in rice cultivation like System of Rice Intensification (SRI) and Alternate Wetting and Drying Irrigation (AWDI). The bio-metric observation data was recorded in the embarked area in the demonstration field plots conducted in 25 locations. The average mean data was computed and used for analysis. In SRI demonstrations, the conventional planting system recorded water requirement from 1200-1390 mm compared to 850-1050 mm of water requirement in SRI. Quantity of water required to produce one kilogram of rice was 2200-2950 L in conventional planting compared to 1440-1880 L in SRI system. The number of irrigations recorded were 24-30 in conventional planting and 15-24 irrigations in SRI. There was water saving of 350 mm recording 29.16 percentage. In AWDI demonstrations, the normal irrigation system recorded water requirement from 1200-1350 mm compared to 750-1050 mm of water requirement in AWDI. Quantity of water required to produce one kilogram of rice was 2300-2900 L in normal irrigation system compared to 1300-1900 L in AWDI. The number of irrigations recorded were 24-30 in normal irrigation system and 15-24 irrigations in AWDI. There was saving of 270 mm to 350 mm water per hectare area. Increase in the grain yields obtained with water saving made the farmers confident on the water saving technologies.

Keywords: Rice crop, Up-scaling, Water saving technology