

Competitive Ability of some Selected Rice Varieties against Weed under Aerobic Condition

ABSTRACT

Sustainable weed management strategy in aerobic rice cultivation system would be beneficial from both economic and environmental perspectives. Glass house and field experiments were conducted to evaluate competitive ability of five rice varieties, namely AERON 1, AERON 4, M9, MR211 and MR220-MCL2 against weeds under aerobic rice cultivation systems to select suitable varieties for cultivation in tropical Asia. Results revealed that AERON 1 had the lowest weed dry weight and weed density and the highest weed dry weight was recorded in MR211, both in glass house and field trials. Grasses were the most dominant weeds which occupied more than 60% of sum dominance ratio in which *Leptochloa chinensis* and *Echinochloa colona* were the most dominant weeds in glass house and field conditions, respectively. AERON 1 with characteristics of taller plant stature and short growth duration competed better with weed as compared to other varieties with shorter plant and longer growth duration. Weed competition had negative impact on rice plants. Lower weed dry weights and relative less yield loss was found in AERON 1 indicated its better weed suppressive and competitive ability against weeds. These results concluded that AERON 1 is the most competitive variety against weeds under aerobic rice cultivation systems.