

Effects of irrigation regime on irrigated rice

ABSTRACT

Field experiments on the effects of irrigation regime on irrigated rice production were carried out in Muda irrigation scheme (MADA) and Kemubu irrigation scheme (KADA) during off season 2004 and main season 2004/05. Five irrigation regimes were imposed on MR 220. Results showed that rice can be grown under saturated conditions without significant effect on the growth and yield when compared with rice grown under normal flooded or partially flooded conditions. However, rice growth and yield were significantly affected when rice was grown under field capacity conditions. Plants and panicles were also shorter whereas aboveground biomass at maturity and grain yield were lower when compared to rice grown under flooded or saturated conditions. Yield reduction in the range of 8 to 16% was observed in MADA and 40 to 61% in KADA for rice grown under field capacity conditions. Results from this study suggest that saturated conditions throughout the crop growth period which requires less irrigation water input than flooded conditions has high potential for the growing of direct-seeded rice under minimal water input.

Keyword: Irrigation regime; Direct seeded rice; Saturated soil; Growth; Yield