

Integration of herbicides with manual weeding for controlling the weeds in rice under saline environment

ABSTRACT

The pot experiment was conducted to select appropriate integrated weed management method in rice under different salinity levels (0.4 and 8 dS m⁻¹). All the parameters including rice and weed measured were significantly influenced by weed control treatments at all salinity levels. Treatments including weed-free condition, Pretilachlor @ 0.375 kg ai ha⁻¹ + hand weeding, Propanil + Thiobencarb @ 0.9 kg ai ha⁻¹ and 1.8 kg ai ha⁻¹ + hand weeding performed better under all salinity levels. Pretilachlor @ 0.375 kg ai ha⁻¹ with one round of hand weeding and propanil + thiobencarb 0.9 kg ai ha⁻¹ + 1.8 kg ai ha⁻¹ with one round of hand weeding were comparable to weed-free yields, and were superior to other treatments under salinity condition. Considering all the parameters, pretilachlor @ 0.375 kg ai ha⁻¹ + one round of hand weeding (at 65 DAT), propanil + thiobencarb 0.9 kg ai ha⁻¹ + 1.8 kg ai ha⁻¹ + one round of hand weeding (at 65 DAT) gave the most effective control of weeds in rice under saline environments.

Keyword: Hand weeding; Herbicides; Integration; Rice; Saline environment; Weed management