

Cost-effective management of ufra disease of rice and identification of resistant landraces.

ABSTRACT

A series of trials were undertaken to evaluate 3 nematicides, marshal 6G, diafuran 5G and pilarfuran 5G @ 1.0 kg ai/ha along with standard check, furadan 5G and to explore the resistant genotypes against ufra disease caused by *Ditylenchus angustus* in the rain-fed and irrigated ecosystems during 2001 to 2004. All the tested nematicides were effective to control the ufra disease of rice and increased yield compared to control (diseased). In respect of all seasons, marshal 6G, diafuran 5G, pilarfuran 5G increased yield by 3.35 to 5.10, 3.23 to 5.00 and 3.26 to 4.90 t/ha, respectively over the control (diseased). Yield loss due to ufra disease was 87.85% in the rain-fed rice, while it was 90.82% in the irrigated rice in artificial inoculation condition. In simple profitability analysis, marshal 6G, diafuran 5G and pilarfuran 5G showed 16.20, 15.76 and 15.58 times profitable in the rain-fed rice and 20.40, 20.11, 19.68 and 20.58 times profitable respectively, over the control (diseased) in the irrigated rice. So, the application of 3 nematicides, marshal 6G, diafuran 5G and pilarfuran 5G @ 1k ai/ha were effective in controlling ufra disease and could be used as alternative to furadan 5G. Of 40 landraces of rice tested, 5 (Daudin Da-21, Lambo Sail, Madhu Sail, Bhawalia Aman and Lal Chamara) showed highly resistant against ufra disease.

Keyword: Ufra disease; *Ditylenchus angustus*; Management; Nematicides; Profitability analysis; Varietal screening.