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SCREENING OF TOMATO CULTIVARS FOR RESISTANCE AGAINST *MELOIDOGYNE INCOGNITA*

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Summary. Twenty-one tomato cultivars were screened in pots against *Meloidogyne incognita* during 1990-91. None of the cultivars was found to be resistant to the nematode attack except Mont Carle which was found to be moderately resistant.

The tomato (*Lycopersicon esculentum* Mill.) crop is extensively grown in the Sultanate of Oman and is often attacked by root-knot nematode, *Meloidogyne incognita* (Kofoid *et* White) Chitw. Increasing cost of nematicides and the wide host range of this nematode limit the use of nematicides and crop rotation, respectively in the management of the nematode. The use of resistant/tolerant cultivars is a viable and economical alternative. Therefore, twenty-one tomato cultivars/hybrids were screened against *M. incognita* to identify possible sources of resistance.

Materials and methods

A trial with twenty-one genotypes, with eight replications of each, was undertaken during October to March, 1990-91, at the Agricultural Research Center, Rumais. Seedlings were raised in Jiffy pots and after four weeks, were transplanted into 25 cm diam. plastic pots containing 8 kg of sterilized soil and peat moss mixture (3:1), one seedling per pot. One week after planting, the pots were inoculated with a suspension of 1000 second-stage juveniles of the nematode. Three months after inoculation, the plants were removed and the nematode gall index was determined on 0-5 scale and the reaction was classified according to Mani and Sethi (1985).

Results and discussion

The results suggested that the tomato cultivars varied significantly in their reaction to *M. incognita*. Mont Carle exhibited moderately resistant reaction with a gall index of 2.8. Cultivars like LM-25, Tobol F1 and Tresor VFNTm F1 recorded a gall index of 3 while Acor F1, Big set hybrid, Cororbe, Davisto F1, Dynamo BFNT-RF1, Hymar F1, and Tropic recorded an index of 3-4. The remaining ten cultivars namely, Allegro hybrid, Ace 55, Arasta F1, Clivius F1, Conquerer, Fantastic, Pink forcer, Pink glory, Radius F1 and Selma Ace hybrid exhibited highly susceptible reaction with a gall index of more than 4.

Literature cited

MANI A. and SETHI C. L., 1985. Reaction of certain chickpea varieties and selections to *Meloidogyne incognita*. *Indian J. Nematol.*, *15*: 107.

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