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Screening of cucurbitaceous rootstocks against root knot nematode *Meloidogyne incognita* Kofoid and White

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ABSTRACT : Root knot nematodes are responsible for severe crop loss in cucurbits to the tune of 547.5 million. Pot culture experiments were conducted under glasshouse conditions to study the effect of root knot nematode, *Meloidogyne incognita* Kofoid and White in twelve wild and cultivated cucurbitaceous species and to identify resistant root stocks for grafting in bitter gourd. Second stage juveniles of *M. incognita* were inoculated at $2J_2$ per cc soil into the rhizosphere of 21 days old seedlings and changes in the growth rate *viz.*, shoot length, shoot fresh and dry weight, root length, root fresh and dry weight were recorded after sixty days after inoculation. Number of galls per 10 gram of root, egg mass and females per gram of root, soil nematode population per 200 cc soil, final nematode population and root gall indices were also determined at the end of the experiment. Soil and root population of nematodes were assessed by standard methods and growth parameters were worked out. Among ten rootstocks screened against *M. incognita*, three genotypes *viz.,* Kumati kai (*Citrulus colocynthus*), african horned cucumber (*Cucumis metuliferus*) and pumpkin (*Cucurbita moschata*) showed resistant reaction followed by two rootstocks *viz.,* Sponge gourd (*Luffa cylindrica*) and mithi pakal (*Momordica charantia* var. *muricata*) which were moderately resistant. These rootstocks were further used for grafting with bitter gourd scion.

KEY WORDS : Root knot nematode, *Meloidogyne incognita*, Resistance, Bitter gourd grafting

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