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# Reaction of wild *Solanum* rootstocks and tomato scions against root knot nematode (*Meloidogyne incognita* kofoid and white)

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**ABSTRACT :** Root-knot nematodes (*Meloidogyne incognita*) are responsible for severe crop loss in tomato and grafting with resistant rootstocks may be effective strategy for managing this disease. Hence, the study was carried out to identify the resistant *Solanum* rootstocks for grafting of tomato against root knot nematode. Eight wild *Solanum* rootstocks and two tomato hybrids were screened against root-knot nematode. The experiment was conducted in a Completely Randomized Block Design with three replications. The seedlings of the wild *Solanum* rootstocks and tomato hybrids were maintained in pots filled with sterilized soil under glasshouse condition and inoculated with *Meloidogyne incognita* @ two second stage juveniles per gram of soil after 15 days of planting. Leaf samples were also taken from all the plants at different days after inoculation and analyzed for the biochemical parameters using spectrophotometric methods. Results revealed that the *S. sisymbriifolium*, *Physalis peruviana* and *S. torvum* showed highest level of expression of phenolics and defense related enzymes viz., peroxidases, polyphenol oxidases, phenyl alanine ammonia lyase and acid phosphatase than the susceptible tomato scion such as US-618. TNAU tomato hybrid CO-3 showed moderately resistant reaction. These rootstocks can be used as resistant source to root knot nematode in tomato grafting technology.

**KEY WORDS :** Biochemical parameters, Root-knot nematode, *Solanum* rootstocks, Tomato

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