

# Susceptibility of Seven Tomato (*Lycopersicon esculentus*) Varieties to Root-Knot Nematode, *Meloidogyne incognita*

Lalithanjalie D. Amarasinghe\* • Yohani S. Dalugoda

---

Department of Zoology, University of Kelaniya, Dalugama, Kelaniya, Sri Lanka

Corresponding author: \* deepika@kln.ac.lk

---

## ABSTRACT

A study was conducted to determine the effect of tomato variety on the infestation and population development of root-knot nematode, *Meloidogyne incognita* (Kofoid and White) in pot experiments. Seven tomato varieties namely T<sub>245</sub>, B-1 'Ravi', HT-148-3-11 'Tharindu', BT-15-1 'Thilina', HT 01 'Rashmi', HT.01.16.38 'Rajitha', and 'Maheshi' were tested against the second stage juveniles of *M. incognita* at a rate of 15 and 30 nematodes per plant. The nematodes could multiply rapidly within the root system of all the tomato varieties tested. However, T<sub>245</sub> and B-1 'Ravi' did not show significant damage by the nematodes at any of the doses tested. In contrast, there was a significant reduction of root length and root weight in HT.01.16.38 'Rajitha' and 'Maheshi' at the higher nematode dose. These four varieties had comparatively less root gall formation at both doses tested. Significant reduction in plant height, root length and root weight and a high rate of gall formation and nematode reproduction were observed in HT-148-3-11 'Tharindu', BT-15-1 'Thilina' and HT 01 'Rashmi'. Overall the tested varieties exhibited a higher number of chlorotic leaves at the higher dose of nematodes. By integrating the experimental data, T<sub>245</sub> and B-1 'Ravi' could be categorized as less susceptible, HT.01.16.38 'Rajitha' and 'Maheshi' as susceptible and HT-148-3-11 'Tharindu', BT-15-1 'Thilina' and HT 01 'Rashmi' as highly susceptible to *M. incognita*.

---