

## **Pathogenicity of root-knot nematode (*Meloidogyne incognita*) and determination threshold level in potato (*Solanum tuberosum* L.) crop cv. Lady Rosseta**

**Bhumika Patel, D.B. Patel, Poonam V. Tapre and N.K. Singh**

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**ABSTRACT:** Pot studies were undertaken to prove the pathogenicity of root-knot nematode (*Meloidogyne incognita*) and to determine the threshold level in potato cv. Lady Rosseta. Sixty days after inoculation, recorded data revealed that initial inoculum level of 100 Juveniles/plant/pot (10 kg soil) significantly reduced the plant growth parameters viz., plant height (cm), tuber weight (g), fresh shoot and root weight (g) and dry shoot and root weight (g) and were pathogenic to potato cv. Lady Rosseta. Increase in root-knot index and number of root galls/plant root (1 g) were noticed with increase in inoculum levels. Reproduction of root-knot nematode (*M. incognita*) in potato cv. Lady Rosseta revealed significant increase in nematode population parameters viz., different stages of embedded females and eggmasses/plant root (1 g), soil nematode population/pot and total nematode population build-up with increase in inoculum level. Reproduction rate (Pf/Pi) decreased with increase in inoculum levels. It was maximum (404.90) at the inoculum level of 10 J<sub>2</sub>/plant/pot and minimum (4.03) at the inoculum level of 10,000 J<sub>2</sub>/plant/pot.

**Key Words :** Potato (*Solanum tuberosum* L.) cv. Lady Rosseta, reduction in growth, yield and quality, *Meloidogyne incognita*, pathogenicity, inoculum level.