

Potential of the natural biopolymers, chitin and chitosan in root-knot nematode, *Meloidogyne incognita* (Kofoid and White) Chitwood management

N.H. Archana and O.P. Reji Rani

Received August 20, 2017 and Accepted November 5, 2017

ABSTRACT : The experiments were conducted at College of Agriculture, Vellayani during 2016-17 with an objective to evaluate the nematicidal properties of the natural biopolymers, chitin and chitosan for utilization in nematode management. *In vitro* screening of root-knot nematode against different formulations revealed that chitin and chitosan were highly effective to *M. incognita*. Chitosan 5% and 7% significantly reduced egg hatching by 66.6%, followed by chitin 7% (53.34%). The juveniles (J₂) were highly susceptible to all the formulations at 7% causing 100 per cent mortality on second day. Soil amendment of treatments in pot culture experiment showed that chitin 7% reduced the population in soil as well as in root sample, followed by chitosan 7%. Both chitin 7% and chitosan 7% enhanced the plant growth as well as yield in tomato.

Key Words: Chitin, chitosan, *Meloidogyne incognita*..