ISSN 1023-1072

Pak. J. Agri., Agril. Engg., Vet. Sci., 2011, 27 (1): 66-72

POTENTIAL OF RHIZOBACTERIA FOR THE BIOCONTROL OF *MELOIDOGYNE JAVANICA*

J. A. Tariq[1], M. I. Haq[1], F. Y. Hafeez[2], S. T. Sahi[1] and M. M. Khan[3]

[1] Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan
[2]COMSATS Institute of Information Technology, Islamabad, Pakistan
[3]Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan

ABSTRACT

Root knot nematodes are production hazards to vegetable crops of the world. Present studies were conducted to search out antagonistic bacteria against these castrophic pathogens and to find out active metabolites secreted by the rhizobacterial strains. Fifteen Rhizobacterial strains were selected for antagonism against *Meloidogyne javanica.* Maximum mortality was observed by strain Rh37 which showed 53% juvenile mortality after 48 hr. as compared to control. Minimum mortality 3% was noted by Asr14 and R.E.4. Strains MR1, Mr53, AJ-3, Asr28 and Rh17 exhibited 43%, 28%, 25%, 24% and 23% mortality of *Meloidogyne javanica.* Mortality by remaining strains ranges from 9-23%. Active metabolites secreted by the rhizobacterial strains were found to be protease. The protease producing strains AJ-3 and Rh3 showed 25% and 53% juvenile mortality after 48 hrs. Hence, these studies will be helpful to manage tomato root knot.

Keywords: Rhizobacteria, *Meloidogyne javanica*, biocontrol, proteases

Corresponding author: jatariq_1411@yahoo.com