

INVESTIGATIONS ON THE MANAGEMENT OF *MELOIDOGYNE JAVANICA* BY *PASTEURIA PENETRANS* ISOLATES OVER THREE CROP CYCLES OF EGG PLANT

R. AHMAD AND T. MUKHTAR*

Department of Plant Pathology,
University of Agriculture, Faisalabad, Pakistan.

* Department of Plant Pathology,
University of Arid Agriculture, Rawalpindi, Pakistan.

Abstract

The effects of three *Pasteuria penetrans* isolates and their blend (Pp1, Pp2, Pp3 and Pp blend) on the production of galls and egg-masses by *Meloidogyne javanica* and on the number of juveniles per 500 g of soil over three crop cycles of egg plant were studied in pot experiments. The data were analyzed as “treated / control” and shown as D-gall, D-egg mass and D-juvenile. The three subsequent crops have affected the number of galls and egg-masses. After each crop the numbers of galls and egg-masses were significantly reduced, but a marked reduction was found after the third crop. A similar trend was also observed in numbers of juveniles. D-galls were 0.927, 0.581 and 0.109; D-egg-masses were 0.470, 0.279 and 0.055 while D-juveniles were 0.755, 0.759 and 0.421 after first, second and third crop cycles, respectively. The three isolates of *P. penetrans* and their blend also affected the D-galls and D-egg-masses. Pp1, Pp2 and Pp blend behaved almost similarly for gall production. Comparatively less egg-masses were produced in Pp1, Pp2 and Pp3 as compared to Pp blend. No significant differences were recorded in number of juveniles after each crop for all the *P. penetrans* isolates. After first crop the numbers of spores attached were 6.00/J₂ which rose to 13.15 spores / J₂ after second crop and finally reached to 26.89 spores / J₂ after third crop. The three isolates of *P. penetrans* and their blend also behaved significantly differently. The maximum numbers of spores attached were with Pp3 (23.15 spores / J₂) followed by Pp blend (16.24 spores / J₂), Pp1 (12.74 spores / J₂) and Pp2 (9.25 spores / J₂).