

**SUTDIES ON DIFFERENTIAL HOST TEST FOR IDENTIFICATION OF
ROOT-KNOT NEMATODE SPECIES AND DETERMINATION OF
PHYSIOLOGICAL RACES IN PAKISTAN**

M.A. MAQBOOL AND S. HASHMI

*National Nematological Research Centre,
University of Karachi, Karachi-32, Pakistan*

Abstract

Root-knot nematodes are of great economic value all over Pakistan. There are four species of root-knot nematodes reported to occur in this country (Maqbool, 1981, Maqbool & Saeed 1981). The most common species are *Meloidogyne incognita* (Kofoid et White) Chitwood and *M. javanica* (Treub) Chitwood. Though *M. arenaria* (Neal) Chitwood and *M. hapla* Chitwood are found, they are not very common and are present in few areas. *Meloidogyne incognita* and *M. javanica* cause injury to many crops of economic importance such as banana, bean, eggplant, chillies, cotton, pyrethrum okra, maize, papaya, sugarbeet, tomato, tobacco, garlic and jute. During February-July 1982, attempts were made to confirm species identification and to evaluate the occurrence of races. In Pakistan, a wide survey of root-knot nematodes was conducted in Sind and many hosts were recorded for root-knot nematodes. Hosts include fruit trees, vegetable crops and ornamental plants. Population of *Meloidogyne* species collected were identified using perineal pattern of females from infected roots (Taylor & Sasser, 1978). It was noticed that Race I and II of *M. incognita* are not only more common than *M. javanica* but also more widespread. *M. incognita* had more host plants than *M. javanica*, but certain plants were hosts for both species.