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## PATHOTYPES OF *MELOIDOGYNE JAVANICA* IN INDIA

by

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**Summary.** *Meloidogyne javanica* population from Kapadvanj, Kaira district in Gujarat, India reproduced on peanut cvs. GG 2, JL 24 and J 11 while *M. javanica* and *M. incognita* populations from Anand, Gujarat did not infect them.

A population of *Meloidogyne javanica* (Treub) Chitw. (identification confirmed by Prof. A. C. Triantophyllou and Dr. M. R. Siddiqi) was found to infect peanuts (*Arachis hypogaea* L.) at Kapadvanj, Kaira district, Gujarat, India. Since *M. javanica* and *M. incognita* (Kofoid *et* White) Chitw. are considered unable to infect and reproduce on peanut (Taylor and Sasser, 1978), host range tests were undertaken with Indian populations of these two species of root-knot nematodes.

### Materials and methods

Seeds of three peanut cvs, GG 2, JL 24 and J 11 were sown singly in earthen pots (15 cm diameter) filled with 500 g autoclaved soil (coarse sand 1.3%, fine sand 63%, silt 15%, arid clay 20%). Okra (*Abelmoschus esculentus* L.) cv. Pusa Savni was used as susceptible check. When the seedlings were 2-3 cm high, each pot was infested with 2000 freshly hatched second stage juveniles of either *M. incognita* or *M. javanica* from a tobacco field in Anand or of *M. javanica* from Kapadvanj. Noninoculated peanut and okra plants served as control. Each crop/cv. was repeated

five times in completely randomised design. Ninety days following nematode inoculation, each plant was carefully depotted, roots washed free of soil and rated for root-knot intensity using 0-5 scale (0 = free; 5 = Maximum disease intensity).

### Results and discussion

*Meloidogyne incognita* and *M. javanica* from Anand did not infect nor reproduce on any of the peanut cultivars while *M. javanica* from Kapadvanj infected heavily all peanut cultivars (Table I). Okra was heavily infected by all three *Meloidogyne* populations.

This result indicates that *M. javanica* from Kapadvanj may represent a pathotype or a race within the species.

### Literature cited

TAYLOR A. L. and SASSER J. N., 1978. Biology, identification and control of root-knot nematodes (*Meloidogyne* spp.) Coop. Pub. Dept. Plant Pathol., North Carolina State Univ. & U.S.A.I.D., Raleigh, N.C. 111 pp.

TABLE I - *Reproduction of different Meloidogyne populations on three peanut and one okra cultivars.*

Plant	<i>Meloidogyne</i> population	Nematode reproduction		RKI (0-5)
		No. of egg masses	No. of eggs	
<i>Peanut</i>				
GG 2	<i>M. incognita</i> (Anand)	0	0	0.0
	<i>M. javanica</i> (Anand)	0	0	0.0
	<i>M. javanica</i> (Kapadvanj)	106	14355	4.5
JL 24	<i>M. incognita</i> (Anand)	0	0	0.0
	<i>M. javanica</i> (Anand)	0	0	0.0
	<i>M. javanica</i> (Kapadvanj)	106	14355	4.6
J 11	<i>M. incognita</i> (Anand)	0	0	0.0
	<i>M. javanica</i> (Anand)	0	0	0.0
	<i>M. javanica</i> (Kapadvanj)	95	12893	4.5
<i>Okra</i>				
Pusa Savni (CK)	<i>M. incognita</i> (Anand)	123	19653	5.0
	<i>M. javanica</i> (Anand)	103	18626	5.0
	<i>M. javanica</i> (Kapadvanj)	94	12780	5.0