

having different electrophoretic mobility. The newly synthesized proteins were identified as peroxidase components and judged to be significant in relation to resistant responses.

ON THE BIOCHEMICAL MECHANISM OF RESISTANCE IN TOMATO AGAINST THE ROOT-KNOT NEMATODE, *MELOIDOGYNE INCOGNITA* : D. R. Dasgupta, T. N. A. Farooqi, A. K. Ganguly, U. N. Mote, Sudershan Ganguly and D. Premachandran, Division of Nematology, Indian Agricultural Research Institute, New Delhi-12.

Basic studies relating to biochemical mechanism of resistance in tomato to the root-knot nematode, *M. incognita* were made to elucidate biochemical basis of resistance in hosts to the nematode. Enzymic regulation of phenylpropanoid pathway leading to biosynthesis of certain benzoid compounds during post-infection period of hosts varied significantly in the resistant-reacting and susceptible tomato varieties. Our studies indicated that the nematode mediated disease resistance in tomato var. SL-120 was due to inducible production of antibiotic molecules. The initial biochemical events which occurred soon after nematode infection of host plants leading to resistance responses was mediated by *de novo* gene activation, and thereby resulting in the synthesis of new species mRNAs and enzyme proteins possibly required for the production of antibiotic molecules. The results of this investigation lead us to suggest that interactions between the hosts and the parasite resulted in a rapid alteration of host metabolism at the gene transcriptional level.

PATHOGENICITY STUDIES WITH *MELOIDOGYNE INCOGNITA* AND *ROTYLENCHULUS RENIFORMIS* ON TWO VARIETIES OF GRAPE VINE : K. Tirumala Rao and A. R. Seshadri, Department of Entomology, A. P. Agril. University, Agricultural College, Bapatla.

Eight Pathogenicity experiments, four on *M. incognita* and four on *R. reniformis* were conducted. These studies revealed that 10 days old seedlings of grape (Anab-E-Shahi) were killed by *M. incognita* within 30 days of inoculation with an initial population level of 1000 nematodes per pot (500 g soil) and above, while 1,00,000 larvae of *Rotylenchulus reniformis* were able to kill only 3 plants out of 7. No death was observed in seedlings of 60 days and above and also in cuttings of 4 months age. Inoculations on 60 days old seedlings at 90 days after