

## Evaluating Host Plant Reaction of Indian Musa Germplasm for Resistance to Root lesion and Burrowing Nematodes under Greenhouse

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Investigations were carried out in 59 banana genotypes (*Musa* spp.) comprising of 10 diploids and 49 triploids belonging to Eumusa section, comprising of wild and cultivated banana accessions against burrowing nematode (*Radopholus similis*) and root lesion nematode (*Pratylenchus coffeae*) under greenhouse condition. Healthy suckers were planted in cement pots and two experiments were conducted for diploid and triploid accessions in a factorial completely randomized design (FCRD) with five replications. controls and varieties (Yangambi Km5, Pisang Lilin and Nendran) with known reaction to burrowing and lesion nematodes were included as reference clones. Banana accessions in pots were inoculated with infective juveniles of root-lesion nematode or burrowing nematode, 45 days after planting 1,000 nematodes and 400 nematodes/pot, respectively. Ninety days after inoculation, Data were recorded and subjected to statistical scrutiny by analysis of variance (ANOVA) using the AgRes statistical software (1994, Pascal International Software Solutions). Root necrosis percentage varied from 10-85%. Lowest root necrosis (10%) was observed in *M. balbisiana*, *Karthobiumtham* and *Athiakol*. *P. coffeae* root nematode population was lowest in Bhimkol (54), Kanai Bansi (58) and *Karthobiumtham* (65). Root studies indicated higher number of roots, root resistant and tolerant accessions even after nematode inoculation. Experiments revealed that triploids Ankur-II (ABB), Kachkel (ABB) and *Karthobiumtham* (ABB) and diploids *M. balbisiana* (BB), Bhimkol (BB), *Athiakol* (BB), Aittakola (BB), Kechulepa (BB) and Kanai Bansi (AA) were resistant to *P. coffeae*. Least number of *R. similis* infected roots was recorded in Kanai Bansi (2.4%) while maximum was observed in Manguthamng (11%). Lowest root nematode population was recorded in Bhimkol (33), Kanai Bansi (40) and Kothia (70). Root necrosis percentage varies from 10-85%. The least RNI (10%) was recorded in *M. balbisiana*, Elakkiebale and high in Jahaji (85%) and Barjahaji (80%). Diploid accessions, Kanai Bansi (AA), Elakkiebale (AB), *M. balbisiana* (BB), Bhimkol (BB), *Athiakol*(BB) and Aittakola (BB) and Triploids Kothia (ABB) and Ankur II (ABB) were resistant to *R. similis*.

**Keywords:** Banana, *Pratylenchus coffeae*, *Radopholus similis*, Resistance