

## ABSTRACT OF PAPERS

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**CROP LOSS ASSESSMENT IN BRINJAL DUE TO ROOT-KNOT NEMATODE  
*MELOIDOGYNE INCOGNITA* : K. Krishnappa, K. G. H. Setty and K. S.  
Krishna Prasad, Department of Plant Pathology, University of Agril. Sciences,  
Hebbal, Bangalore-560024.**

A field experiment was conducted to assess the crop loss due to root-knot nematode, *Meloidogyne incognita* in brinjal at the main Research Station, Hebbal, Bangalore. Randomized complete block strip trial was adopted with paired treatments in a nematode sick plot. Plants were protected with aldicrab (Temik 10G) at the rate of 8 kg a.i./ha applied a day prior to transplanting in five replications. Another set of unprotected plants served as check. Significant differences in plant growth and vigour were observed in shoot height, fresh weights of shoot and root and length of roots between protected and unprotected plants. The root-knot index in the scale of 1-5 was 0.7 in protected plots compared to 4.71 in unprotected plots. There was a significant increase in fruit yield per plant in protected plots. The per hectare fruit yield was 20,500 kgs in treated plots as against 11,300 kgs in unprotected check plots. Thus, 44.87 per cent yield loss could be accounted to be due to root-knot nematode alone in a heavily infested field.

**EFFECT OF <sup>60</sup> COBALT RADIATION ON THE GROWTH AND DEVELOPMENT OF *MELOIDOGYNE GRAMINICOLA* IN RICE ROOTS : K. S. Krishna Parsad, Y. S. Rao and K. Krishnappa, Department of Plant Pathology, University of Agril. Sciences, Hebbal, Bangalore-560024.**

Well developed egg masses of *Meloidogyne graminicola* on rice cultivar 'IR-8' were radiated in <sup>60</sup> Cobalt at 2.534 kilorads for 10 minutes. The infectivity and development of larvae hatched from this treatment was compared with larvae of untreated egg masses at weekly intervals following inoculations to

'IR-8' rice seedlings. Though the infectivity of radiated larvae did not differ, there was a delay in their development in rice roots. The egg mass production in radiated females was delayed by about a week compared to untreated females which produced egg masses in about four weeks. The II<sup>nd</sup>, III<sup>rd</sup> and IV<sup>th</sup> developing stages within the rice roots did not show much differences in their size, but the females, developed from radiated larvae, were smaller as compared to their untreated counter parts. However, the fecundity of these nematodes was not affected as observed by all most equal number of eggs per egg mass which were of same size. Further, the next generation of larvae from these females developed normally like their untreated counterparts.

**FACTORS EFFECTING LARVAL EMERGENCE FROM CYSTS OF THE MAIZE CYST NEMATODE, *HETERODERA ZEA* : A. C. Verma and B. S. Yadav, Department of Nematology, Rajasthan College of Agriculture, Udaipur, Rajasthan.**

Effect of different media, cyst age, light and darkness, temperature, hydrogen ion concentration and root diffusates of maize varieties on larval emergence from cysts was investigated. Double distilled water and sandy soil diffusate were best for larval emergence. *H. zea* showed maximum per cent emergence from white than brown cysts. Light and darkness did not influence emergence. No hatching occurred at 10°C and 40°C and the optimum temperature was 30°C. Hatching was observed from 4.0 to 11.5 pH with an optimum of 10.5 pH but not at 3.5 or lower pH levels.

**MOVEMENT OF OXAMYL IN SOIL COLUMNS : R. P. Singh, S. K. Saxena and Abrar M. Khan, Section of Plant Pathology and Nematology, Dept. of Botany, Aligarh Muslim University, Aligarh.**

The movement of oxamyl in soil was studied in laboratory columns by leaching it with distilled water. Distribution co-efficient for the absorption of oxamyl by soils was calculated to determine the amount of water required to leach oxamyl upto a depth of 152.4 cms. These values would be helpful in designing suitable control methods where average rainfall or irrigation water is known.