Current Nematology, **25**(1,2) : 25–29, 2014

Survival strategies of *Meloidogyne graminicola* under different soil pH regimes of rice growing districts of Karnataka

H. Ravindra[1], Mukesh Sehgal[2], H.B. Narasimhamurthy[3], D.M Soumya[3] and H.S. Imran Khan

Received January 15, 2014 and Accepted May 2, 2014

ABSTRACT : Rice root-knot nematode *Meloidogyne graminicola* is a potential threat for all types of rice production systems in Karnataka. A Random survey was conducted in all the districts of Karnataka where rice is being cultivated. The survey revealed that all the districts are infected with rice root-knot nematodes. However; there level of incidence differs in different districts. Among the districts, more severe incidence of rice root-knot nematode was observed with root knot index of 5.0 in Shimoga and in Chickmagalure districts. However, Mandya and Hassan districts recorded same pH regimes and root-knot nematode population with root-knot index of 4.0. Moderate infection was noticed in districts viz., Davanagere, Dakshina Kannada, Udapi, Uttar Kannada, Mysore, Kodagu and Haveri with root-knot index of 3.0 where the pH regime was between 6.5 and less than 8.5 with soil population of 500 in all the seven districts except Davanagere (600). Root-knot index of 2.0 was observed in Chitradurga, Gadag, Bangalore Rural, Chamarajanagara, Tumkur, Kolar, Ramanagara, Bangalore Urban and Chikkaballapura districts with pH regime ranging between 6.5 and 8.5. Interestingly, the soil population varied from 300 to 400. It is observed that in majority of the northern districts of Karnataka, the root-knot index was least (1.0) where the soil type was black or vertisols with pH regime varied between 6.5 and more than 8.5 with population varying between 100 to 200. Thus, the root-knot disease is spreading throughout all the rice growing areas of the state.

Key Words: Rice (*Oryza sativa* L.), root-knot nematode, *Meloidogyne graminicola*, pH regimes, population.