

Interactive effect of *Meloidogyne incognita* and *Sclerotinia sclerotiorum* on disease development, plant growth and seed yield of *Plantago ovata*

Anisha Bano¹ and Akhtar Haseeb²

Received May 26, 2012 and Accepted September 16, 2012

ABSTRACT : An experiment was carried out under pot conditions to determine the effect of *Meloidogyne incognita* (@ 5000 J₂/kg soil) and *Sclerotinia sclerotiorum* (@ 7.5 g mycelial culture/kg soil) alone, concomitant and sequential inoculations on the nematode multiplication, disease development, plant growth and seed yield of *Plantago ovata*. Results indicated that both the pathogens caused significant reduction in all the plant growth parameters, when plants were inoculated alone as well as in various inoculation sequences. Highest per cent reduction in all the plant growth parameters and seed yield was observed in plant inoculated concomitantly with *M. incognita* and *S. sclerotiorum*, followed by *M. incognita* 7 days prior to *S. sclerotiorum*, *S. sclerotiorum* 7 days prior to *M. incognita*, *S. sclerotiorum* alone and *M. incognita* alone, respectively. Similarly, highest multiplication (Rf= 4.21) of *M. incognita* was found in plants inoculated concomitantly with *M. incognita* and *S. sclerotiorum*, followed by *M. incognita* alone, *M. incognita* 7 days prior to *S. sclerotiorum* and *S. sclerotiorum* 7 days prior to *M. incognita*, respectively. Highest percent root infection (62.5) by the *S. sclerotiorum* was observed in plants inoculated concomitantly with *M. incognita* and *S. sclerotiorum*, followed by *S. sclerotiorum* 7 days prior to *M. incognita*, *M. incognita* 7 days prior to *S. sclerotiorum* and *S. sclerotiorum* alone, respectively.

Key Words: Disease development, Interaction, *Meloidogyne incognita*, *Plantago ovata*, *Sclerotinia sclerotiorum*.