

Occurrence of Root Rot Disease of Common Bean (*Phaseolus vulgaris* L.) In Association with Bean Stem Maggot (*Ophiomyia* sp.) In EMBU District, Kenya

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Abstract

Two surveys were carried out in October 2001 (season 1) and April 2002 (season 2) in five divisions of Embu district during the short and long rains, respectively. Ten farms were randomly selected per division and fifteen bean plants were sampled from every farm and used to determine the occurrence and incidence of bean root rot and bean stem maggot. Each bean root was examined for the presence of bean stem maggot and root rot pathogen. The incidences of bean root rot diseases and bean stem maggot were significantly ($p = 0.05$) higher during the short rain than during the long rains. Wetter agro-ecological zones such as LH2 and UM1 had more incidence of root rot than UM2, UM3 and UM4. During both seasons *Fusarium solani*, *Rhizoctonia solani* and *Macrophomina phaseolina* were the major root rot pathogens isolated. The species of bean stem maggot found in Embu district were *Ophiomyia spencerella* and *O. phaseoli*, with the latter being the dominant species. Agro-ecological zones had no significant effect on the incidence of bean stem maggot. Root rot disease was frequently associated with bean stem maggot. Pearson correlation (r) between bean root rot disease and bean stem maggot was 0.495. The result is important in the management of bean root rot and bean stem maggot.