Abstract

Common bean (*Phaseolus. vulgaris* L.) has the most under – cultivation areas among cerales in the world and is very important becase of having 22% protein in food diet. *Rhizoctonia* root rot and crown rot of bean caused by *R. solani* is one of the most important disease of this crop in Iran. Root - knot nematode *Meloidogyne javanica* is the most causal agents o many crops especially bean. Interaction of these microorganism has been studied in diferent hosts by investi gators in the world.

Since the presence of these pathogens in been seedling were approved in Tehran provience. In this study *R. solani* AG_4 isolated were prepared from Theran university and was cultured on PDA medium. Second stage juvenials (J_2) of nematode was used as the sourceof inoculum was prepared from shahed university Tehran and was reared on tomato seedling var. Rutgers. In this study seedling of bean culivars , Bahman, Daneshkadeh, Dehghan, Naz, Sadaf, Sanray and Sayad, were transplanted to pots containing 1000g of sterilized sand loam soil. In this experiman a factorial completely randomized design (CRD) with 9 treatments and 3 replication was conducted in a greenhouse. Treatments was as fllows: control, nematode alone, fungus alone and nematode+fungus (simultaneously). pots were inoculated with (0, 1000, 2000) J_2 nematode and/or (0, 5, 10 no/g soil) propagule of fungus according to the treatmants. Pots were arranged in glasshouse benches with the temperature of 25-27^{0}C and natural light. Experiment was terminated after 2months and fllowing parameters were determined i, e., dry and weight of root and stem, plant height, no galls and egg masses per root system, and necrosis of root tissue and disease incidence by fungus. Results showed that presence of nematode caused reduction on colonization of the fungus in the root and stem and v ice verse i. e., presence of fungus caused reduction on no. of galls and egg masses produced the nematode in atreatment. Maximum disease incidence was observed in Dehghan and sadaf cultivar. Minimum disease incidence was observed in fungus alone treatment of sayad cultivar. Maximum and of Galling and egg mass in root system were in cvs. Daneshkadeh, sadaf, respectively.

Keyword: Pathogenicity, *Rhizoctonia solani, Meloidogyne javanica,* bean

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