

P.25 - *Trichoderma* species in Mianeh for biocontrol of chickpea *Fusarium*

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In recent years damage caused by *Fusarium* diseases in chickpea plants has increased in the Mianeh chickpea fields (East Azarbaijan province of Iran). In this research, samples of infected chickpea plants were collected and the causal agents *Fusarium oxysporum* and *Fusarium solani* were isolated from the diseased plants. In the pathogenicity tests, all isolates of *F. solani* and *F. oxysporum* were found to be pathogenic in chickpea seedlings. Biological control of *Fusarium* diseases of chickpea, i.e. black rot, and *Fusarium* wilt were tested using the antagonistic fungi: *Trichoderma harzianum* Tr1 and Tr2, isolated from the soil of fields and mycoflora from the chickpea rhizosphere. In laboratory tests the mechanism by which the two antagonists affected the pathogens appeared to be hyphal contact, coiling, deformation and lysis. Isolates of Tr1 and Tr2 showed strong mycoparasitism on the *F. oxysporum* and *F. solani*. Their metabolites completely inhibited the mycelial growth of the pathogens. Under greenhouse conditions, the experiments were conducted in a completely randomized design using pot plants. The inoculums of Tr1 and Tr2 applied to the soil at 10% (W/W), caused reduction of 31.3 and 33.4 percents respectively in the incidence of *Fusarium* diseases.