

The role of Bio-control agents with special references to combination of botanicals against *Fusarium oxysporum* f. sp. *ciceri* the wilt disease of Chickpea

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Abstract

Pulses crops are significant wellsprings of food protein, nutrients, lipids and certain minerals for the most part developed under hazard inclined under peripheral grounds. Chickpea (*Cicer arietinum* L.) the world's third most significant heartbeat crop after Dry beans (*Phaseolus vulgaris* L.) and Dry peas (*Pisum sativum* L.) is imperative wellspring of plant determined consumable protein in numerous nations. Chick pes likewise a significant wellspring of solvent and insoluble strands. Around 172 microorganisms including Fungi, Bacteria, Viruses and Nematodes have been accounted for to contaminate the yield, out of which 89 have detailed from India alone (Cothier, 1977). Ascochyta scourge (*Ascochyta rabies*), shrink (*Fusarium oxysporum* f. sp. *ciceri*), dark root decay (*Fusarium solani*) and wet root decay (*Rhizoctonia solani*) are among the genuine contagious illnesses of Chick pea (Nene and Reddy, 1987) and *Fusarium* shrivel of chick pea was accounted for in India by Butler, 1918. By and large shrinking at early development stage cause more prominent misfortune than a latter stages. The microorganism *Fusarium oxysporum* f. sp. *ciceri* is as soil occupants go into xylem vessels and cause blocking prompting seedling demise. The shriveled plants shows checked staining of the vascular tissues in the stem (Haware et al., 1982) with respect to trim loses in the time of serious plagues, as high as 60-70 percent yield misfortune happen (Jalali and Harichand, 1992). It is hard to deal with the illness either through harvest turn or use of synthetic compounds in view of soil structure tirelessness and its ability to endure long time (Haware et al., 1996). Viability of shrivel the executives was endorsed under biocontrol operators and the mix of botanicals. Natural control gives an option the benefits of more prominent open acknowledgment. Natural control including *Trichoderma viride*, *Trichoderma harzianum*, *Pseudomonas fluorescens* and *Bacillus subtilis*. Out of which *T. viride* (Native strain-I), indicated fundamentally more noteworthy hindrance zone of 63.64 percent and *Bacillus subtilis* demonstrated least percent restraint of 36.33 individually.

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