RESEARCH ARTICLE

EFFICACY OF BIO-AGENTS AND ORGANIC AMENDMENTS AGAINST *SCLEROTIUM ROLFSII* CAUSING COLLAR ROT OF CHICKPEA

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Abstract: Chickpea is cultivated throughout the Chhattisgarh state and mostly grown in kanhar soil in Chhattisgarh plains. However, chickpea productivity is low due to susceptibility of the crop to different biotic and abiotic stresses. The collar rot disease of chickpea caused by *Sclerotium rolfsii,* which is soil borne and fast spreading fungus, causes considerable damage to the plant stand. The collar rots of chickpea caused by *S. rolfsii,* can cause considerable loss to plant stand when soil moisture is high and temperature is warm (nearly 30^0C) at sowing time. Drying of plants with foliage turned slightly yellow before death, scattered throughout the field is an indication of collar rot infection. The study of bio-agent and organic amendment application revealed that all the treatments significantly increased seed germination and reduced collar rot incidence. Seed treatment with bio-agent *Trichoderma* and Neem cake application in soil was found to be the most effective recording maximum seed germination and minimum mortality followed by *Trichoderma* with Mustard cake and *Trichoderma* with Karanj cake combination under natural condition.

Keywords: Collar rot of chickpea, *Sclerotium rolfsii, Trichoderma spp,* Bio-agents

REFERENCES

Anonymous, (2008). Project Coordinator`s Report AICRP on Chikpea IIPR, Kanpur Ann. 21-22

Baker,A. and Khan, A. A. (1981). Effect of nitrogenous amendments on the incidence of *Sclerotium* wilt of potato. *Potato Res*. 24(3): 363-365.

Bhoraniya, M. F., Khandar, R. R. and Khunti, J. P. (2003). Integrated management of stem rot of chilli with fungicides, oil cakes and biocontrol agent *Trichoderma harzianum. Adv. Pl. Sci*. 16(1): 59-61.

Chowdary, A. K., Reddy, D. R., Rao, K. C., Reddy, T. B. and Reddy, I. P. (2000). Integrated management of *Sclerotium* wilt disease of bell pepper (*Capsicum annum* L.) *Indian J. Pl. Prot.* 28(1): 15-18.

Prasad, R. D., Rangeshwaran, R. and Kumar, P. S. (1999). Biological control of root and collar rot of sunflower. *Indian J. Mycol. Pl. Pathol.* 29(2): 184-188.

Prasad, R. D. (2005). Status of biological control of soil born plant pathogens. *Indian J. Agri. Sci.* 77(9): 583-588.

Siddique, M. A. B., Meah, M. B., Siddqua, M. K., Haque, M. M. and Babar, H. M. (2002). Control of foot rot of brinjal using fungicide and organic amendment. *Bangladesh J. Pl. Pathol.* 18(1): 61-64.

Upmanyu, S., Gupta, S. K. and Shyam, K. R. (2002). Innovative approaches for the management of root rot and web blight of Frenchbean. *J. Mycol. Pl. Pathol*. 32(3): 317-331.

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