RESEARCH ARTICLE

EFFICACY OF MEDICINAL PLANT LEAF EXTRACTS, OILS AND BIOAGENTS AGAINST *RHIZOCTONIA SOLANI* CAUSING AERIAL BLIGHT OF SOYBEAN

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Abstract: Soybean (*Glycine max* (L.) Merrill) is one of the most important oil seed crop of India .It was wonder of the twentinth century. Soybean ranks first among world oilseed with an annual production of about 105 mt. In Chhattisgarh, the crop is grown over an area of 0.82 m ha with production and productivity of 0.73 mt and 891 kg/ha, respectively which are much lower than national average. Soybean aerial blight caused by *Rhizoctonia solani* is a most important oilseed disease. The disease appears during July-August and is characterized by sudden and complete death of the plants. This disease is very destructive and causes heavy losses to the tune of 35-60 % in warm and humid parts of the countries. Antifungal activity of different medicinal plant leaf extracts, oils and *Trichoderma spp* were studied under *in vitro* condition. Out of fifteen medicinal plants studied, the leaf extracts of Butch significantly inhibited the mycelial growth of *Rhizoctonia solani* under *in vitro* conditions. Among the medicinal oils, Eucalyptus and Neem oils were found to significantly inhibit the mycelial growth of *Rhizoctonia solani* at 5% concentrations. Among the antagonists, maximum mycelial growth inhibition was caused by *Trichoderma harzianum* (74.81%) followed by *Trichoderma viride* (67.40%) while *Trichoderma spp.* (mushroom isolates) was least effective against *Rhizoctonia solani*.

Keywords: Soybean, *Rhizoctonia solani*, Antifungal compound, *Trichoderma spp.*

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