

Ulocladium atrum* as a Biological Control Agent for White Mold of Bean Caused by *Sclerotinia sclerotiorum

Hung-Chang Huang^{1,*} and R. Scott Erickson¹

Field studies were conducted near Lethbridge, Alberta, Canada, in 2001, 2004 and 2005 to determine the efficacy of the antagonistic fungus *Ulocladium atrum* for control of white mold of bean caused by *Sclerotinia sclerotiorum*. Results of the 3 years of field trials showed that, compared with the untreated control, foliar application of a spore suspension of *U. atrum* (300 ml m⁻² of 10⁶ spores ml⁻¹ suspension) significantly reduced incidence and severity of white mold, increased seed yield and reduced contamination of bean seed by sclerotia of *S. sclerotiorum*. The level of control of white mold observed in the treatment of *U. atrum* was similar to that of the mycoparasitic fungus *Coniothyrium minitans*, but lower than the fungicide treatments of Ronilan (vinclozolin) at the rate of 1200 g ha⁻¹ per application in 2001, or Lance (boscalid) at the rate of 750 g ha⁻¹ per application in 2004 and 2005. The potential for use of *U. atrum* as a biological control agent for sclerotinia diseases is discussed. KEY WORDS: Antagonism; common bean; biological control; *Phaseolus vulgaris*; *Sclerotinia sclerotiorum*; *Ulocladium atrum*; white mold.

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¹Agriculture and Agri-Food Canada, Lethbridge Research Centre, Lethbridge, AB, Canada T1J 4B1. *Corresponding author [e-mail: huangh@agr.gc.ca].