

EVALUATION OF *TALAROMYCES FLAVUS* AND *TRICHODERMA HARZIANUM* IN BIOLOGICAL CONTROL OF SUGAR BEET DAMPING-OFF DISEASE IN THE GREENHOUSE AND FIELD CONDITIONS

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ABSTRACT

Antagonistic effects of *Trichoderma harzianum* and *Talaromyces flavus* on sugar beet damping-off in the greenhouse and field were investigated. Antagonist fungi, obtained from Karaj sugar beet fields, were used in this study. Based on the results of greenhouse experiments, four most effective isolates (T.F.K.1- T.F.K.3- T.H.K.1 and T.H.K.2) were selected for the field studies conducted during 2008 and 2009. Field results indicated that in all intervals, treatments containing antagonistic fungi were superior to carboxin-thiram and control in terms of number of healthy seedlings. Among treatments, those containing T.F.K.3 had the maximum number of healthy seedlings. However, there was no significant difference between treatments containing T.F.K.1 and T.H.K.1 in terms of number of healthy seedlings and the yield. In addition, a significant increase was observed in the total yield for all antagonistic treatments compared to carboxin-thiram and control.

KEYWORDS: Biological Control, Seedling Damping, off Disease, Sugar Beet, *Talaromyces flavus*, *Trichoderma harzianum*