EVALUATION OF EFFICACY OF THE BIOLOGICAL CONTROL FUNGI Trichoderma harzianum AND Trichoderma viride IN PROTECTION BLACK CUMIN SEED AND SEEDLING FROM INFECTION WITH FIELD FUNJI Fusarium solani, Fusarium lateritium AND Rhizoctonia sp. AND EFFECT ON SOME CALIBRATE GROWTH.

Diyar Saqban Alwan * Abd Al-Kareem Eraby Sabea Al-Kurtany ** Najim Abdullah Jumaa Al-Zubaide ***

*Dept.of Biology- Coll. of Al-Razi of Education –Univ. of Diyala - diyaralmahdawy@yahoo.com **Dept. of Soil – Coll. of Agriculture –Univ. of Tkriat - alkurtany@yahoo.com ***Dept.of Biology- Coll. of Al-Razi of Education –Univ. of Diyala najim_alzubaidy@yahoo.com

ABSTRACT

The study is made to enhance the quality of the fury *T.viride* and *T.harzianum* in protection black seeds from infecting with the field fury is *F.lateritium*, *F.solani*, *Rhizoctonia* sp. and their effect on growing and the positive effect of *T.harzianum* and *T.viride* in improving the germination percentage, plant length and dried weight of the vegetation and root system especially for isolating the fungus *T.viride* if the features measure the growth by (70%, 16.16cm, 0.330g, 0.120g) respectively in comparative with others (64.66%, 11.66cm, 0.123g, 0.053g)

The results shown that adding biocontrol agent *T. harzianum* didn't gave positive results in controlling fungi pathogen *F. solani*, *F. lateritium* & *Rhizoctonia sp.* While adding biocontrol agent *T.viride* with fungi *F. solani* & *Rhizoctonia sp.* Significantly improve the plant features, but failure in control fungus *F. lateritium*.

Key word : Trichoderma harzianum . Trichoderma viride . biocontrol .Nigella sativa L .