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Photosynthetic efficiency promotion of sugar beet by formulation of *Trichoderma* and control of some sugar beet disease seedling

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Four isolates of *Fusarium sambucinum* (Fuckel) (isolates 1,2,3,4) and four isolates of *Fusarium solani* (Mart.) Sacc. (isolates 5, 6, 7,8) were isolated from different localities of sugar beet in Assiut Government. The tested isolated were pathogenic to sugar beet variety causing damping off and root rot. Isolates 2 and 5 had the highest pathogen city to sugar beet isolates 3 and 8 had the lowest pathogen city pathogen city. *Trichoderma viride* have been used for their potential antagonism for controlling Fusariumsp damping off and root rot disease of sugar beet. *In vitro* studies showed that the culture filtrate of *Trichoderma viride* significantly decreased the growth of the tested isolates of both *Fusarium sambucinum* and *Fusarium solani* treating the soil with formulation of *Trichoderma viride* before planting decreased damping off and root rot of sugar beet compared with untreated and untreated soil with formulation of *Trichoderma viride* under greenhouse conditions during growing seasons 2010 and 2011. Chlorophyll a chlorophyll b and total chlorophyll carotenoids decreased when treatment the infested soil with either *Fusarium sambucinum* or *Fusarium solani* compared with untreated and untreated soil with formulation of *Trichoderma viride*.

Biography

Heidi I G Abo-Elnaga is an Associate Professor, Department of Agronomy, Faculty of Agriculture, Assiut University. She completed her PhD in Plant Pathology, Assiut University, Egypt (2002). She published more than 15 research papers.

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