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Effect of Combinations among Two Fungicides, the Biocides Rhizo-N and the Biofertilizer Humix on Suppressing Damping-off and Root-Rot Diseases of Tomato

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BOTH FUNGICIDES Rizolex-T and Topsin-M70 caused similar significant reduction to the linear growth of *Fusarium solani* (Mart.) Sacc. and *Rhizoctonia solani* Kuhn compared with unpoisoned medium Potato Dextrose Agar (PDA). The tested fungicides, the biocide Rhizo-N and the biofertilizer Humix, each alone or in different combinations resulted in significant reduction to both damping-off and root-rot diseases of tomato (cv. Castle Rock)caused by the two tested fungi compared with control treatment. In addition, the different combinations were more efficient in this regard, especially when more than two treatments were combined, compared with applying one treatment alone. This reduction in both damping-off and root-rot diseases was reflected on the estimated crop parameters, *i.e.* plant height, foliage fresh weight and root length, where considerable increase was found due to using the corresponding treatments.

Keywords: Plant diseases, *Fusarium solani*, *Rhizoctonia solani*, Pathogen control.

Tomato (*Lycopersicon esculentum* Mill.) is one of the major Solanaceous crops grown allover the world including Egypt. It is considered most suitable crop that can be grown at all times of the year in Egypt. The cultivated area with tomato during 2007 in Egypt amounted to about 495381 feddan which produced about 8391223 ton fruits with an average of 16.94 ton/feddan (Ministry of Agriculture, Reports of Econ. Agriculture and Statis. Department, Egypt, 2007).

Tomato fruits can be used as fresh or canned. In addition, it is considered one of the highest nutritional Solanaceaus crops that has high vitamin C content, many chemical compounds and elements which are not found in the other members.

Under Egyptian conditions, tomato plants are vulnerable to many fungal, bacterial, viral and nematode diseases as well as physiological disorders (Fletcher & Harris, 1979 and Assal *et al.*, 1995).