

SUPPRESSION OF BACTERIAL WILT DISEASE OF POTATO, USING BIOCONTROL AGENTS AND COMPOST

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ABSTRACT: *Ralstonia solanacearum* (Yabucchi) Race 3 (biovar. II) is the causal organism of potato bacterial wilt disease (brown rot) in Egypt. The obtained isolate was pathogenic to both tomato and potato plants. *Bacillus subtilis* , *Pseudomonas fluorescens* , *Streptomyces griseus* and *Trichoderma harzianum* were in association with symptomless potato plant roots and tubers, grown in naturally heavily infested fields. Under laboratory conditions ; inhibition zones were recorded between the biocontrol agents and *Ralstonia solanacearum*. Under greenhouse conditions and artificial soil infestation, the application of compost and /or the biocontrol agents significantly reduced incidence potato wilt disease and rotten tubers. These treatments improved significantly potato vegetative growth, increased the average number of tubers / plants, fresh and dry weight of tubers plant and total carbohydrate .

Key Words: *Ralstonia solanacearum* , Potato bacterial wilt (brown – rot), biological control, *Bacillus subtilis*, *Pseudomonas fluorescens*, *Streptomyces griseus* , *Trichoderma harzinaum* and Soil amendment.
