



شبكة المعلومات الجامعية

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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

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بالرسالة صفحات
لم ترد بالأصل

MINUFIYA



UNIVERSITY

FACULTY OF AGRICULTURE

AGRICULTURAL BOTANY DEPT.

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In

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By

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ABSTRACT

“Integrated control of root-rot disease of faba bean (*Vicia faba*)”

By

Rania Zaky El-Shennawy (Plant Pathology)

Root-rot disease of faba bean is mainly caused by *Rhizoctonia solani*, *Fusarium solani* and *pythium* sp., *Trichoderma hamatum*, *T. viride* and *T. harizianum* were the best fungal biocontrol agents which inhibited the growth of all tested pathogens. However, *Bacillus subtilis* was the best tested bacterial one. Both Topsin and Monoserin were the most effective fungicides against *R. solani* and *F. solani* at 100 ppm. All Trichoderma isolates tolerated previcure N (100 ppm) and Vitavax-Thiram (50 ppm); while Topsin and Rhizolix (100 ppm / each) inhibited the growth of all Trichoderma isolates. all mutants of *T. hamatum*; that induced chemically in combination with UV; suppressed the growth of the three pathogens and gave much better results than did the wild type of *T. hamatum*. Mutant (1) was the best for controlling all the pathogens. Sugar cane baggase followed by wheat bran supported the maximum colony formation of Trichoderma up to 60 days, where it favoured the mycelia growth, sporulation and consequently disease control. On the contrary, peat soil and saw dust inhibited the growth of *T. hamatum*. Faba bean cultivar Giza 714 was more resistant, while Giza 643 was more susceptible to root-rot disease.

Application of the biocontrol agents; alone or in combination with Topsin fungicide led to disease control and decreased faba bean damping-off. Biocontrol agents still effective in the potted soil for the second time of sowing. Mutant (1) and (6) + Topsin M gave the lowest against *Pythium* sp. damping-off. Mutant (9) in combination with 50 ppm Topsin gave the best results against *R. solani* damping-off. However, Mutant (1) + Topsin (50 ppm) or Mutant (9) + Topsin M managed *F. solani* damping-off.

All tested biocontrol agents decreased root rot disease. Seed coating and / or soil application using different carrying materials decreased root-rot infection with different rates.

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