THE ROLE OF SELENIUM IN THE DEVELOPMENT OF *FUSARIUM TABACINUM* ROOT ROT OF LUPINE AND ITS BIOLOGICAL CONTROL

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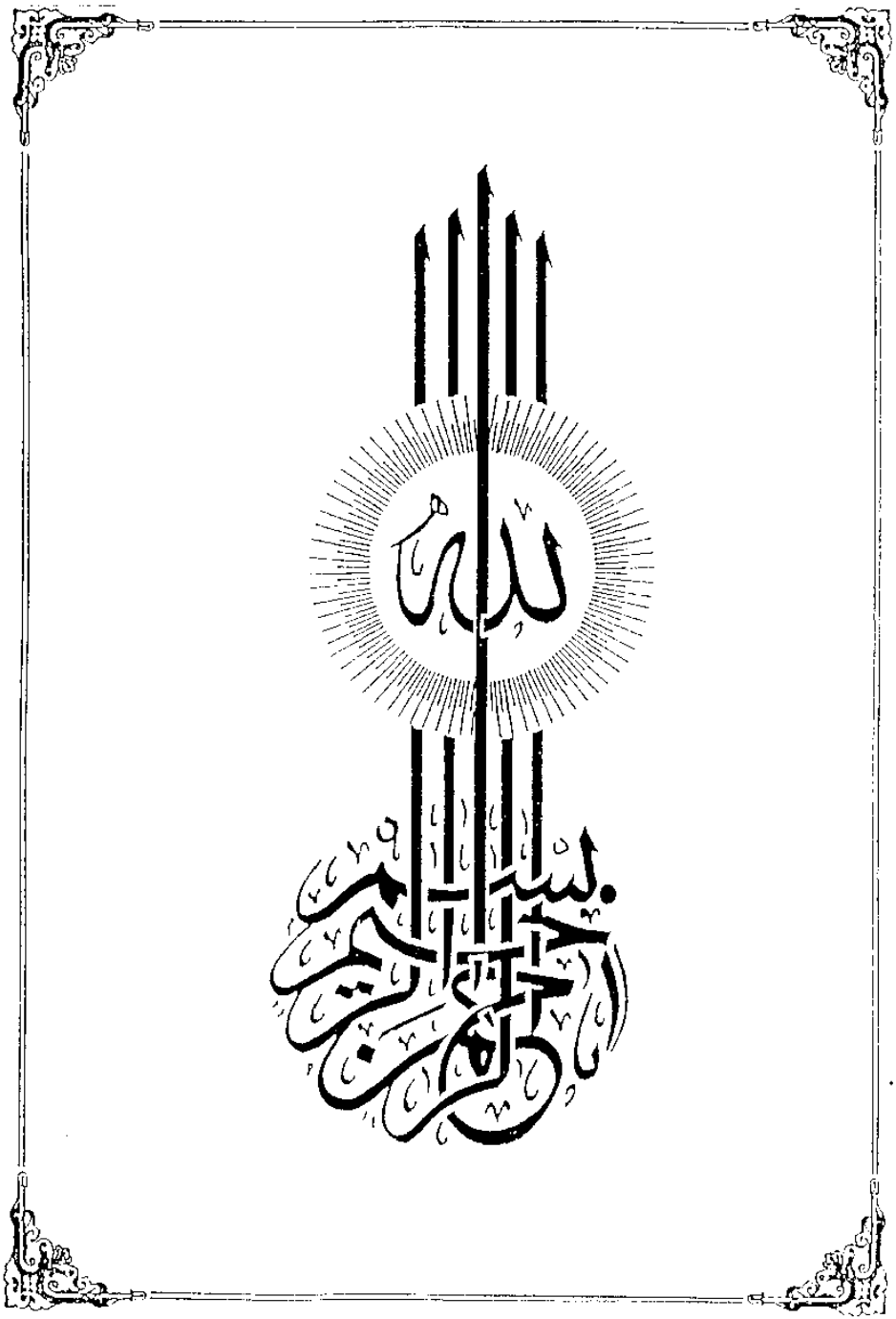

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Abstract

AYMAN FARRAG AHMED . On Th role of selenium in the development of *Fusarium tabacinum* root ro. of lupine and its biological control . Unpublished M. Sc. of Microbiology, University of Ain Shams , Microbiology department .

The work aims at studying a biochemical ways for controlling the root rot of lupinus termis by Fusarium tabacinum .

The pathogencity of Fusarium tabacinum has been carried out at the laboratory using soil pots, the pathogen exerted symptoms similar to that at the fieled ; dwarfness , yellowing , welting and seedling root rotting . The adventitous roots rotting was observed first then the main root of the plant.

The antagonistic activities of Streptomyces griseoplanus and Streptomyces murinus against the pathogen Fusarium tabacinum were studied . The results showed that booth organisms produced inhibitory metabolities against Fusarium tabacinum growth on synthetic solid medium . Moreover, selenium showed an inhibitory action against Fusarium tabacinum gross growth and coniniogenesis. Nevertheless, their antagonistic activities were

ncreased against the pathogen in the presence of low conceptration f selenium (5 and 10 ppm).

The application of 10 ppm selenium into an infested soil with he pathogen inhibited its pathogencity; no symptoms were bserved . Alternatively , the plant growth parameters as well as hlorophyll content were improved considerably. The presence of elenium inhibited the fungal productivities of pectinase and ellulase enzymes .

The fungal growth was drastically inhibited when cultivated n lupinus roots cell free extract in the presence of selenium .

Also, pectinase enzyme fractionation on Sephadex G 200 howed that fraction contain high pectinase enzyme activity contain ow selenium content at certain selenium concentrations.

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TO MY FAMILY ...
TO WHOM I OWE WITH
EVERY THING AND TO OMNIA
AYMAN