

**ANTAGONISTIC POTENTIAL OF ENDOPHYTIC FUNGI FROM DIFFERENT
FRUIT TREES AGAINST *Sclerotium rolfsii*, CAUSAL AGENT OF SOUTHERN
BLIGHT DISEASE IN PEANUT**

CHRISTINE JOY LORENZO CORPUZ

An undergraduate thesis manuscript presented to the faculty of the Department of Crop Protection, College of Agriculture, Central Luzon State University in partial fulfillment of the requirements for the degree of Bachelor of Science in Agriculture

**BACHELOR OF SCIENCE IN AGRICULTURE
(Crop Protection – Plant Pathology)**

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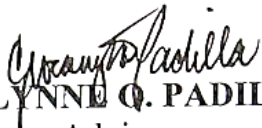
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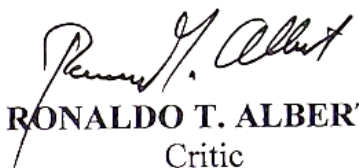
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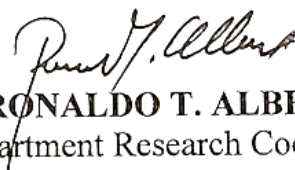
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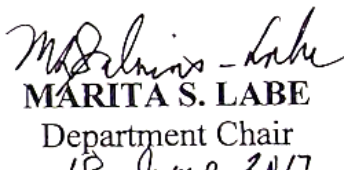
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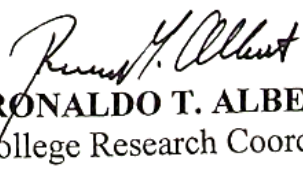

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BIOGRAPHICAL SKETCH

The author, CHRISTINE JOY L. CORPUZ was born on September 28, 1997 in Urdaneta City, Pangasinan. She is the eldest of the three children of Mr. Richard T. Corpuz and Mrs. Loida L. Corpuz.

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by

CHRISTINE JOY L. CORPUZ

ABSTRACT

The study was conducted to isolate fungal endophytes from 10 fruit trees namely: custard apple, avocado, cashew, java plum, soursop, guava, jackfruit, mango, star apple and pomelo. A total of 182 isolates were tested *in-vitro* against *Sclerotium rolfsii*. Only 6 EF were selected from preliminary *in-vitro* test and further tested for the 1st trial of dual culture test. Out of the six fungal endophytes, only 3 potential EF showed a significant antagonistic activity and subjected to the 2nd trial of DCT. The potential antagonistic endophytic fungi were Sterile mycelia Sa7Sc1, Sterile mycelia Lk3Sc2 and *Aspergillus* sp. Sh4Sc2. The highest growth inhibition was recorded by *Aspergillus* sp. Sh4Sc2 with 66.33% followed by Sterile mycelia Lk3Sc2 with 36.18%. Additionally, zone of inhibition was observed using Sterile mycelia Sa7Sc1 with 9.38 mm.

Pot experiment revealed that bio-formulation of Sterile mycelia Lk3Sc2 recorded the highest % germination of peanut seeds. Moreover, 0% disease incidence, % damping-off, % post-emergence rotting and % post emergence wilting was also observed on seeds treated with Sterile mycelia Lk3Sc2. Additionally, bio-formulation of Sterile mycelia Sa7Sc1 and *Aspergillus* sp. Sh4Sc2 had 90% and 80% germination with 10% disease incidence accounted to each treatment, respectively. Bio-formulation of Sterile mycelia Lk3Sc2 and Sterile mycelia Sa7Sc1 provided good and vigorous growth of peanut.

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