COMPARATIVE STUDY OF POPULATION DENSITIES OF *FUSARIUM* SPECIES FROM CULTIVATED AND NON-CULTIVATED SOILS IN SELECTED TOWNS OF CAVITE

Undergraduate Thesis
Submitted to the Faculty of the
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Agriculture
(Major in Crop Protection)

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March 2000

ABSTRACT

DELA CRUZ, MEDWILL I. Cavite State University Indang, Cavite March 2000. Comparative Study of Population Densities of *Fusarium* Species From Cultivated and Non-Cultivated Soils in Selected Towns of Cavite. Adviser: Dr. Adelaida E. Sangalang

Composite soil samples were collected from cultivated and non-cultivated soils from Alfonso and Tanza to compare the population density of *Fusarium* species. *Fusarium* species were isolated using the soil dilution plate technique in peptone PCNB agar, carnation-leaf agar, potato dextrose agar.

Out of 91 isolates six species of *Fusarium* were identified from cultivated and non-cultivated soils. These were *Fusarium solani* (Mart) Appel & Wollenw, *Fusarium oxysporum* Schlecht, *Fusarium semitectum* Berk & Rav., *Fusarium proliferatum*, (Matsushima) Nirenberg, *Fusarium equiseti* (Cda) Sacc and *Fusarium moniliforme* Sheldon.

The population densities of all species in cultivated and non-cultivated soils were significantly different. However the frequency of *Fusarium* isolates showed no significant differences between cultivated and non-cultivated soils.

Fusarium solani and *F. oxysporum* were the two most abundant and frequently isolated in cultivated and non-cultivated soil from Alfonso and Tanza. *F.semitectum, F.proliferatum* and *F.equiseti* had lesser population densities. *Fusarium moniliforme* was present only in cultivated soils planted with rice and vegetable from Tanza soil sample.

Results indicate that cultivation, soil type, soil moisture, presence of other pathogens, and the inherent characteristics of each species determine the nature and population density of *Fusarium* species that reside in the soil.

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