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GI ASSOCIATED WITH BLACK PEPPER (PIPER
NIGRUM, LINN.) CACAO (THEOBROMA
CACAO, LINN.) AND CUCUMBER
(CUCUMIS SATIVUS, LINN.) SEEDS:
THEIR ISOLATION AND
IDENTIFICATION

THESIS

DIVINA R. DE VILLA

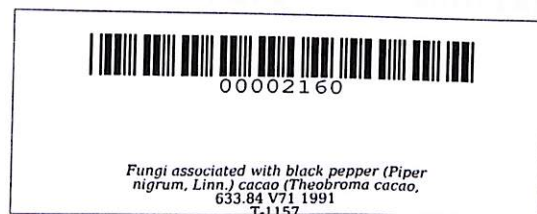
Department of Biological Science
DON SEVERINO AGRICULTURAL COLLEGE
Indang, Cavite

April 1991

✓^a FUNGI ASSOCIATED WITH BLACK PEPPER (PIPER NIGRUM, LINN.)
CACAO (THEOBROMA CACAO, LINN.) AND CUCUMBER
(CUCUMIS SATIVUS, LINN.) SEEDS: THEIR
ISOLATION AND IDENTIFICATION

An Undergraduate Thesis
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In Partial Fulfillment
of the Requirements for the Degree of
Bachelor of Science in Agriculture
(Major in Crop Protection)



by

DIVINA R. DE VILLA

April 1991

A B S T R A C T

DE VILLA, DIVINA RELACION, "Fungi Associated with Black Pepper (Piper nigrum, Linn.), Cacao (Theobroma Cacao Linn.) and Cucumber (Cucumis sativus, Linn.) Seeds: Their Isolation and Identification". B.S. Thesis, BSA, Crop Protection. Don Severino Agricultural College, April 1991. Adviser: Mrs. Angelina S. Ordoñez.

Fungi associated with the seeds of cacao (Theobroma cacao, Linn.), cucumber (Cucumis sativus, Linn.) and black pepper (Piper nigrum, Linn.) were identified using agar and blotter tests. Both methods were found to be equally efficient for the detection of fungi. Three petri plates from both tests were used and seeded at the rate of 10 and 25 seeds per plate, respectively.

Cacao seeds which had been stored for 379 days and had a moisture content of 7% were found infected with Rhizopus, Penicillium and Lasiodiplodia using agar and blotter tests. Rhizopus and Fusarium were commonly found on black pepper seeds which had been stored for 440 days and with a moisture content of 25% and 9% for agar and blotter tests, respectively. Cucumber seeds stored for 310 days were infected with Rhizopus, Fusarium, Geotrichum and Colletotrichum. The cucumber seeds used in agar and blotter tests had a moisture content of 38% and 24%, respectively.

The most predominant genera of fungi invader were Rhizopus and Penicillium for cacao seeds and Rhizopus and

Fusarium for black pepper and cucumber seeds. Rhizopus was consistently present on the seeds of cacao, cucumber and black pepper.

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INTRODUCTION

Black pepper (Piper nigrum, Linn.) as well as cacao (Theobroma cacao, Linn.) and cucumber (Cucumis sativus, Linn.) are more popular than other crops grown in the Philippines since they possess a tremendous cash potential for both local and export market and they have varied uses.

Pepper is used by food manufacturers as seasoning in the preparation of both exquisite and everyday dishes. Ground black pepper is used in salad dressings and marinades. In some countries, black pepper is also used in cakes and cookies (Day, 1987).