FARMERS' AWARENESS AND MANAGEMENT OF COFFEE INSECT PESTS AND THEIR NATURAL ENEMIES IN SELECTED AREAS OF UPLAND CAVITE

THESIS

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ABSTRACT

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The study was conducted from March to April 2019 in Alfonso, Amadeo, and Silang, Cavite to: 1. describe the socio-demographic characteristics (age, sex, educational attainment, annual income from coffee farming, and number of years engaged in coffee farming) of the coffee farmers in Alfonso, Amadeo, and Silang, Cavite; 2. determine their level of awareness on coffee insect pests and their natural enemies; 3. determine the relationship between the socio-demographic characteristics of the participants and their level of awareness on coffee insect pests and their natural enemies; 4. compare the level of awareness of the participants per municipality to coffee insect pests and their natural enemies; 5. determine the insect pest management practices adopted by the participants; and 6. identify the sources of information of participants regarding their adopted insect pest management practices.

Descriptive correlational research design was employed in the study. The list of coffee farmers was obtained from the Office of Municipal Agriculturist in Alfonso, Amadeo, and Silang, Cavite. Interviews with participants were done through the use of survey questionnaires and brochures containing colored photographs of insects associated with coffee production.

A typical Caviteño coffee farmer is 64 years old. Most of the coffee farmers are male (71%), were able to reach college (47%), and have been engaged in coffee farming for an average of 37 years. Moreover, almost half of the farmer participants (44%) did

not earn any income at all from this year's coffee harvest. In general, majority of the participants are moderately aware ($\bar{x}$ = 3.01) of the insects related with coffee production. The participants are aware ($\bar{x}$ = 3.97) of the presence of coffee insect pests but are slightly aware ($\bar{x}$ = 2.04) of the presence of their natural enemies. Farmers with higher income tend to have higher level of awareness (P = .016) on insects associated to coffee production. Moreover, participants from different municipalities have the same level of awareness (P = 0.174) on insects associated with coffee production. Insect pest management practices such as planning of production schedules, crop rotation, intercropping, collection of berries remaining on trees and after harvest, pruning of dried-up branches and for shade regulation, sun-drying of coffee beans, and weeding are being implemented by all of the participants. Farmers source information regarding their adopted insect pest management practices from relatives, friends, own experience, journals, forums and agricultural supply stores. In addition, the farmers' own experience (100%) is found to be the highest contributory factor in choosing their adopted insect pest management practices.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL DATA	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	vi
LIST OF TABLES	xi
LIST OF APPENDIX TABLES	xii
LIST OF APPENDIX FIGURES	xiii
INTRODUCTION	1
Objectives of the Study	3
Significance of the Study	4
Scope and Limitation of the Study	4
Time and Place of the Study	5
REVIEW OF RELATED LITERATURE	6
METHODOLOGY	26
Research Design	26
Population and Sampling	26
Research Instrument	26
Validation of the Instrument	27
Data Gathering Procedure	28
Confirmatory Test for the Presence of Coffee Berry Borer	28

Statistical Treatment of Data..... 28

RESULTS AND DISCUSSION 30

Socio-demographic Characteristics of the Participants..... 30

Age..... 30

Sex..... 32

Educational attainment..... 33

Annual income from coffee farming..... 33

Years engaged in coffee farming..... 34

Level of Awareness of Participants on Coffee Insect Pests..... 35

Percent Infestation of Coffee Berry Borer (CBB)..... 37

Level of Awareness of Participants on Natural Enemies of Coffee Insect Pests..... 39

Overall Awareness of Participants on Coffee Insects..... 41

Relationship of the Socio-demographic Characteristics of the Participants to their Level of Awareness on Coffee Insect Pests and their Natural Enemies..... 41

Level of Awareness of Participants on Coffee Insect Pests and their Natural Enemies by Municipality..... 43

Insect Pest Management Practices Adopted by the Participants..... 43

Sources of Information of Participants Regarding their Adopted Insect Pest Management Practices..... 48

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 50

Summary..... 50

Conclusions..... 52

Recommendations..... 53

REFERENCES..... 53

APPENDICES..... 61

LIST OF TABLES

Table		Page
1	Distribution of participants by socio-demographic characteristics	31
2	Level of awareness of participants on coffee insect pests	35
3	Percent infestation of coffee berry borer in the three municipalities	38
4	Level of awareness of participants on natural enemies of coffee insect pests	40
5	Overall awareness of participants on coffee insects	40
6	Relationship between the socio-demographic characteristics of the participants and their level of awareness on coffee insect pests and their natural enemies	41
7	Level of awareness of participants on coffee insect pests and their natural enemies by municipality	42
8	Insect pest management practices employed by the farmers	43
9	Sources of information of participants regarding their adopted insect pest management practices	47

LIST OF APPENDIX TABLES

Appendix Table		Page
1	Total counts of coffee berry borer per infested berry in Alfonso	62
2	Total counts of coffee berry borer per infested berry in Amadeo	63
3	Total counts of coffee berry borer per infested berry in Silang	64

LIST OF APPENDIX FIGURES

Appendix Figure		Page
1	The researcher with the municipal agriculturist of Alfonso	65
2	The researcher with the municipal agriculturist of Amadeo	65
3	The researcher with the municipal agriculturist of Indang	66
4	The researcher with the municipal agriculturist of Silang	66
5	Status of the coffee farm of one of the participants	67
6	The researcher with one of the participants	67
7	Collection of berries remaining on trees by the researcher	68
8	Inspection of collected coffee berries for the presence of coffee berry borers	68
9	Adult coffee berry borers	69

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INTRODUCTION

Coffee is considered to be a high-value crop in both the local and foreign markets (Philippine Crop Insurance Corporation, n.d.). It ranks second to oil as the most valuable commodity and next to tea and water as the most popular beverage in the world (Bae, Park, Im, & Song, 2014; Stone, 2014). However, the Philippines, despite having favorable agro-climatic condition for the growth and development of coffee trees, cannot sustain the demand for coffee based on the report that the country's self-sufficiency ratio was only about 31.89 percent (Philippine Statistics Authority [PSA], 2016) This low self-sufficiency ratio can be attributed to the presence of different pests and diseases, old and less productive trees, and the dreaded climate change (Mambule, 2018).

Crop losses due to pests and diseases are a major threat, especially today that the world is experiencing climate change. According to Deutsch *et al.* (2018), warmer climate tends to increase the metabolic rate of insects, which in turn make the insects