

1ST EDITION

E-EXTENDED  
**ABSTRACT**

**INTERNATIONAL  
AGROTECHNOLOGY  
INNOVATION  
SYMPOSIUM (i-AIS)**



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### INTERNATIONAL AGROTECHNOLOGY INNOVATION SYMPOSIUM (i-AIS)

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Faculty of Plantation and Agrotechnology UiTM Cawangan Melaka Kampus Jasin

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## ABOUT FACULTY OF PLANTATION AND AGROTECHNOLOGY

The Faculty of Plantation and Agrotechnology was established in 2010 at Universiti Teknologi MARA (UiTM). The mission of the faculty is to play the vital role of producing well-trained professionals in all areas of plantation and agriculture-related industries at national and international levels.

Bachelor of Science (Hons) Plantation Technology and Management is a three-year program that strongly emphasizes the various aspects of Production Technology, Management, and Information Technology highly sought after by the agricultural and plantation sectors. Students in this program will be fully trained to serve as professionals in the plantation sector and related industries. They will have ample opportunities to fulfill important positions in the plantation industry such as plantation executives. This program provides a strong balance of technology and management courses essential for the plantation industry such as management of plantation crops, soil fertility, plantation management operation, plantation crop mechanization, and agricultural precision. As an integral part of the program, students will be required to undergo industrial attachment to gain managerial skills in the plantation industry.

The faculty is highly committed to disseminating, imparting, and fostering intellectual development and research to meet the changing needs of the plantation and agriculture sectors. With this regard, numerous undergraduate and postgraduate programs have been offered by the government's intention to produce professionals and entrepreneurs who are knowledgeable and highly skilled in the plantation, agriculture, and agrotechnology sectors.

## PREFACE

International Agrotechnology Innovation Symposium (i-AIS) is a platform to be formed for students/lecturers/staff to share creativity in applying the knowledge that is related to the world of Agrotechnology in the form of posters. This virtual poster competition takes place on the 1st of December 2022 and ends on the 8th of January 2023. This competition is an assessment of students in determining the level of understanding, creativity, and group work for the subject related to agrotechnology and being able to apply it to the field of Agrotechnology. The i-AIS 2022 program takes place from December 1, 2022, to January 8, 2023. The program was officiated by the Dean of the Faculty of Plantation and Agrotechnology, namely Prof. Madya Ts. Dr. Azma Yusuf. The program involves students from faculties of the Faculty of Plantation and Agrotechnology (FPA) and HEP participating in i-AIS 2022, namely, the Faculty of Education and Pre-Higher Education. This program involves the UiTM student and some of the non-UiTM students which come from the international university and the local university. Two categories are contested, namely UiTM and non-UiTM. To date, students from these programs have shown remarkable achievements in academic performance and participation in national as well as international competitions.

This competition is an open door for the students and lecturers to exhibit creative minds stemming from curiosity. Several e-content projects have been evaluated by esteemed judges and that has led to the birth of this E-Poster Book. Ideas and novelties are celebrated, and participants are applauded for displaying ingenious minds in their ideas.

It is hoped that such an effort continues to breed so that there is always an outlet for these creative minds to grow.

Thank you.

Dean  
On behalf of the Organizing Committee  
Conference Chair  
Universiti Teknologi MARA  
Faculty of Plantation and Agrotechnology  
<http://fpa.uitm.edu.my>

## TABLE OF CONTENTS

<b>1.</b>	<b>COPYRIGHT .....</b>	<b>2</b>
<b>2.</b>	<b>ORGANIZING COMMITTEE.....</b>	<b>3</b>
<b>3.</b>	<b>STUDENT COMMITTEE.....</b>	<b>4</b>
<b>4.</b>	<b>EDITORIAL BOARD.....</b>	<b>5</b>
<b>5.</b>	<b>ABOUT FACULTY OF PLANTATION AND AGROTECHNOLOGY .....</b>	<b>6</b>
<b>6.</b>	<b>PREFACE.....</b>	<b>7</b>
<b>7.</b>	<b>TABLE OF CONTENTS .....</b>	<b>8</b>
<b>8.</b>	<b>GOLD AWARD .....</b>	<b>1</b>
	ABELMOSCHUS ESCULENTUS FACIAL MASK .....	2
	ECO ENZYME .....	6
	COFFEE GROUNDS AS A GROWING MEDIUM FORMUSHROOM .....	8
	HYDRAULIC RAM PUMP .....	11
	DIETARY MUSHROOM NOODLES .....	15
	JACKY FLORENTINE .....	19
	AMARANTHUS VIRIDIS - BASED GRAIN SNACK BAR .....	22
	PALLET FROM COCONUT HUSK.....	30
	ORGANIC COCO PEAT POT SUPLEMENTED WITH BLACK SOLDIER FRASS (BSFF) .....	35
	MANAGING WASTE PRODUCT OF PALM OIL MILL (DECANTER CAKE) AS COMPOST.....	40
<b>9.</b>	<b>SILVER .....</b>	<b>44</b>
	MULTIFUNCTIONAL TOOLS .....	45
	MANAGING WASTE PRODUCT OF AVOCADO (SKIN & STONE) AS INK/DYE .....	48
	HARVERTING: EASY SEPERATE .....	51
	BRIQUETTES OIL PALM FRONDS.....	54
	REPLACEABLE SHOE SOLES.....	58
	EXTRACT OF NATURAL DYES FROM BUTTERFLY PEA ( <i>CLITORIA TERNATEA</i> ) TO MAKE A MARSHMALLOW CUBE .....	61
	DIY SPRAY NEEM LEAVES PROTECT PLANTS FROM INSECT .....	68
	HAND SANITIZER FROM FRUIT WASTE .....	71
	MANAGING WASTE FROM DURIAN (DURIAN PEELS) AS FOOD PALLET FOR LIVESTOCK .....	77
	PORTABLE ELECTRIC POWER FEIST TILLER .....	79
<b>10.</b>	<b>BRONZE.....</b>	<b>83</b>
	CENTRALISE FRUIT NETTING SENSOR.....	84
	BIO – BRICKS.....	86



## DIY SPRAY NEEM LEAVES PROTECT PLANTS FROM INSECT

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**ABSTRACT** - Neem trees have many uses, and the neem tree, the part of fruit seeds, is widely used commercially to extract the oil neem. The neem can be used as a traditional treatment or product, dental, and the most important use for neem products are to fight against crop pests and diseases [1]. Here, the research aims to describe how neem leaves a natural control to help overcome the problem of controlling insects and pests with the economic user. The method to produce the product is using the neem leaves as the main product and mixing the neem leaves with water to do the extraction. After leaving the three days of water neem leaves, add extracted neem with detergent and oil and keep it in the spray bottle. Using a sprayer to apply the neem water straight to the plant. We need to include oil and detergent to ensure that the pesticide sticks to the plant and does not just run off. The role of the detergent is to break down the oil, and the role of the oil is to make it stick to the leaves. In conclusion, the final product of extraction leaves should smell like onion/urea to produce a good extract of water neem.

**Keywords:** Neem Leaves, Natural Insecticide Control

### INTRODUCTION

The scientific name of the neem tree is (*Azadirachta indica*). The common name is known as neem. Neem extracts contain a natural chemical called azadirachtin [2]. These chemicals are helpful because easily to remove from the neem without expensive and complicated equipment. The chemical can be found in every part of the tree. The leaves are effective, but the chemical is more concentrated in the fruit, particularly the seeds. The Environmental Protection Agency (EPA) states that neem oil is safe for use around pets and indoor plants [3].

### MATERIAL AND METHOD

#### Materials



Neem leaves, cooking oil, detergent, water, spray bottle, bucket.

#### Method

1. Collect the green leaves and chop up the neem leaves.
2. Chopped-up leaves were put in the bucket and filled half full of water.
3. Leave it for three days to brew.
4. To prepare the pesticide spray, add the neem water oil and detergent. Add the same amount of cooking oil and dish soap to the mixture neem.

### RESULTS AND DISCUSSION

Name of Researcher & Source of Content	Fruit from the Neem Tree ( <i>Azadirachta indica</i> )
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<p>Author: Irfan Muhd Blog Cilibangi. Extract (Semambu), Control Pests Organically.</p>	<p>Successfully carried out an organic pest control spray using the leaves and twigs of the neem tree [4].</p> 
<p>Author: Irfan Muhd Blog Cilibangi. Neem Oil Extract (Neem Oil) Acts as Anti-Fungal And Insect Repellent.</p>	<p>Successfully taken or extracted from all parts of the tree. The seeds hold a high concentration of insecticides. Gardeners use it for its anti-fungal and insecticidal properties. [5]</p> 
<p>Author: Kamarul-prof Romatech Agro Supplier of Agricultural &amp; Fertigation Equipment</p>	<p>Studies have confirmed that it is able to control 400-500 species of insect pests to plants, especially grasshoppers, beetles, and sap-sucking insects [6].</p>

## DISCUSSION

After this study and results have been implemented in the form of *Azadirachta indica* leaf extract, it has produced good effectiveness in controlling the rate of pest attacks on plants. Therefore, there are also some suggestions about the production of this product. One of them is the need for further research using the whole neem plant in the future not only from the leaves but also from the stems, seeds, and

fruits so that the extract concentration may be more concentrated. Therefore, the effectiveness may be better and more effective.

## CONCLUSION

In conclusion, research findings indicate that neem extracts will not instantly eliminate pest insects in most cases. They change the insect's eating or life cycle until it can no longer survive or reproduce. Besides, if the insect attack is severe, the neem extract may take a long time because other insects will avoid a plant treated with neem extracts. In addition, when neem products are exposed to light, their effectiveness in controlling pests begins to decline.

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