

1ST EDITION

E-EXTENDED  
**ABSTRACT**

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



## COPYRIGHT

### 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. COPYRIGHT .....</b>	<b>2</b>
<b>2. ORGANIZING COMMITTEE.....</b>	<b>3</b>
<b>3. STUDENT COMMITTEE.....</b>	<b>4</b>
<b>4. EDITORIAL BOARD.....</b>	<b>5</b>
<b>5. ABOUT FACULTY OF PLANTATION AND AGROTECHNOLOGY .....</b>	<b>6</b>
<b>6. PREFACE.....</b>	<b>7</b>
<b>7. TABLE OF CONTENTS .....</b>	<b>8</b>
<b>8. 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
<i>AMARANTHUS VIRIDIS</i> - 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. 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. BRONZE.....</b>	<b>83</b>
CENTRALISE FRUIT NETTING SENSOR.....	84
BIO – BRICKS.....	86



## ECO ENZYME

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### INTRODUCTION

Eco-enzyme is a natural alternative to synthetic chemicals. 70% of waste is disposed of in landfills is organic waste. Organic waste in landfills creates an unpleasant odor in the environment, reduces the recycling rate of plastic, and gives a risk of landfill explosion decay. Organic waste also produces gas methane. By creating eco-enzyme, we reduce synthetic chemical waste production and residual plastic waste from household product packaging manufacturers. Additionally, methane might endanger the health of those who reside close to a landfill by depleting the air's oxygen concentration. Environmental and health problems brought on by organic waste in landfills must be resolved by both limiting the production of organic waste and processing the trash that is already created, such as by using eco enzymes. By making eco-enzyme, we have participated in reducing the burden on the earth while adopting a minimal lifestyle synthetic chemistry. By creating eco-enzyme, we have processed most of it our trash and reduce the load of landfill.

### MATERIAL AND METHOD

For the material, we need to gather brown sugar, crop residue, and water. After that, this is the method of how to do an Eco-enzyme, we need clean the container from soap residue or materials chemical. Next, Measure the volume of the container. Enter the water net as much as 60% by volume receptacle. Then, put the sugar according to the measure, that is 10% by weight of water. Close tight and label the date manufacture and harvest date. For 1 week, open the lid of the container every day to get rid of the gas. Stir on the 7th day and stir on the 30th day (unless there is Mama enzymes). To avoid contamination, place the solution container ferment in a place not exposed to sunlight direct, has a good air circulation well, away from Wi-Fi, WC, barrels trash, incinerator trash and materials chemistry.

### RESULTS AND DISCUSSION

Eco-Enzyme after harvest can be used for eco fermented material-New enzymes (fraction), clean the toilet drain: blend it finely, poured into the toilet at night, repel rats: dried and put in a place where rats like to be, car perfume: dried and put in a small cloth bag and organic plant fertilizer. If the fermentation goes well, the solution fermentation will smell of alcohol after 1 month, and smells of fresh sourness like vinegar after 2 months. The appearance of mold layers and layers like jelly in fermented solution is fair thing. Eco Enzyme is able to fight parasites and germs that cause infections in the heart, leucorrhoea, inflammation of the brain, pneumonia, arthritis, skin infections and others. Due to its capacity to destroy bacteria and fungus, eco enzyme may serve as a disinfectant in place of the majority of cleaning solutions for a variety of home items, including air purification from airborne bacteria. Eco enzyme also has its own economic benefit because it lowers the cost of purchasing cleaning supplies for commercial use, in addition to reducing the consumption of chemical-based cleaning solvents. Additionally, the nutrients found in the leftover fruit and vegetable material after processing with an eco enzyme can be used as fertilizers.

## FIGURE

Pitera dan mama enzyme (me) is a bonus that is not always show up. Pitera and me are not quality standards and successful manufacture of eco enzymes. Figure 1 shows pitera from the process of fermentation.



(Figure 1)

Eco enzyme also can cure the illness like scald and wound, Figure 2 shows the effects of using eco enzyme on the wound for cure the illness.



(Figure 2)

## CONCLUSION

Reusing items saves the natural resources and energy needed to manufacture new ones as well as saving money. Recycling (or composting) enables your to be turned into something new, rather than just thrown away. The answer to restoring our ozone layer and bringing down the earth's temperature is eco enzyme. Learn about the countless advantages of this Earth-saving enzyme that you can produce at home. Healing the Earth is gratifying

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