



UNIVERSITI
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College of
Built Environment

Poster Book

IIIDBEE X 2023
20 JANUARY 2023
*International Invention, Innovation & Design Exposition
for Built Environment and Engineering 2023*

**College of Built Environment
UiTM Puncak Alam**
20 January 2023 | Friday

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**Unleashing Potentials
Shaping the Future**

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INTRODUCTION

Mangifera indica Disease for Smart Agriculture Monitoring (MiDSAM) is an advance technology implementing geospatial and machine learning approaches to provide an early disease identification in *Mangifera indica* crops, utilizing image datasets from unmanned aerial vehicle (UAV).

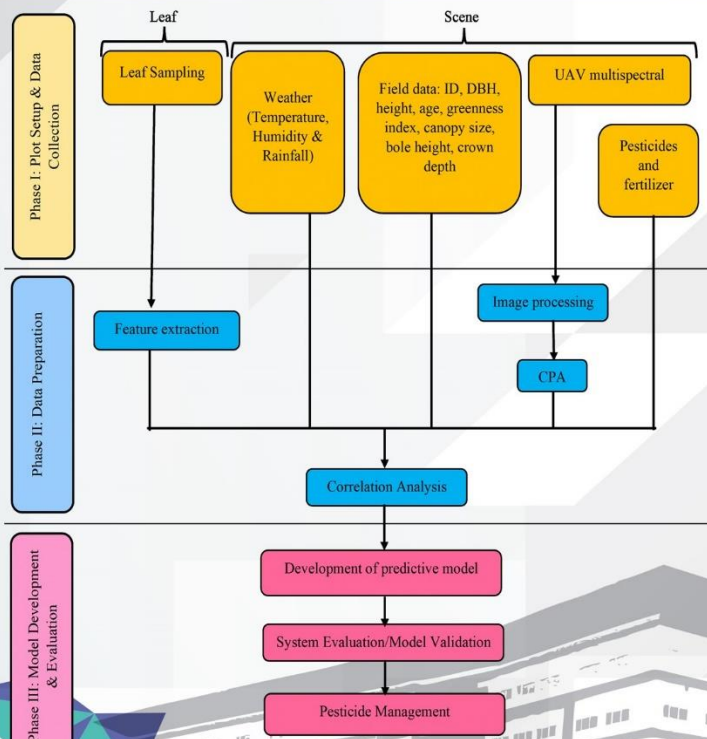
ISSUES/ PROBLEM STATEMENT

- Harumanis fruit is threatened by insidious fruit rot disorder, pest and disease attack.
- The production of mango is insufficient to fulfil the local demand (Per Capita Consumption 2021: 1.8 kg/year)
- Manually taking care of harumanis crops can be laborious.
- Disease symptoms are generally found later in the disease's progression
- The need of trained and experienced manpower capable of correctly assessing the crops' condition

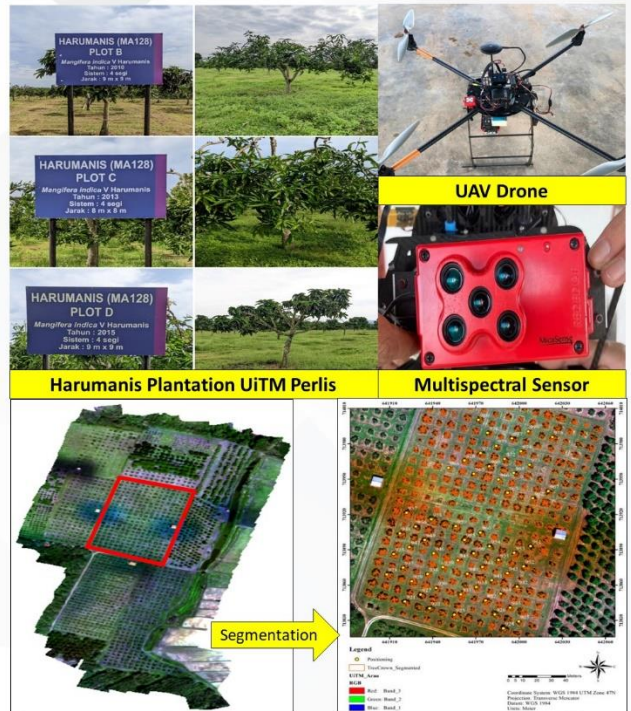
OBJECTIVES

- To model the disease identification and application of pesticides to the harumanis tree using geospatial and machine learning approaches.

METHODOLOGY



PRELIMINARY RESULT



NOVELTY

- Provide an early assessment of the disease-related to harumanis crops using geospatial and machine learning approaches.
- Assist the farmers to plan and advise the optimum usage of pesticides for disease management in harumanis crops.

CONCLUSION

This smart system will ensure the **crops' productivity can be maximized**, in line with the **Malaysia National Agro-Food Policy 2011-2020**, simultaneously help the environment by **reducing waste from excess input applications**.

COMMERCIALIZATION

Market size value in 2021: USD 5.49 billion

Market forecast value in 2030: USD 19.24 billion

Key countries covered in precision agriculture: North America, Australia, Japan, China, South Korea, India, etc

ACKNOWLEDGEMENT

This research is partially supported by a grant from Research Management Centre (RMC), Ref: 600-RMC/GIP 5/3 (036/2022) Universiti Teknologi MARA (UiTM)