

UNIVERSITI TEKNOLOGI MARA

**The Growth Analysis of Harumanis Mangoes at
Univesiti Teknologi MARA, Perlis**

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requirements for the degree of
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Faculty of Architecture, Planning and Surveying

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AUTHOR'S DECLARATION

I declare that the work in this thesis/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Crop growth and productivity are determined by a wide range of weather, soil and management variables, which vary significantly across space. Growth analysis of Harumanis Mangoes is crucial depend on its productivity and structural significance. This research aims is to map the growth distribution of Harumanis Mangoes in UiTM Perlis and analyse the significant of best farm management practice. The method of positioning has been used and processed by using Geographical Information System (GIS), namely ArcGIS software. The outcomes was established and used to control major location of the observed trees. This research generate map of mangoes tree according to ages variation and growth quality. It was plotted, registered, topologic and analysed. The most immediate analysis is on the growth and its factors distribution in the UiTM area. There area good growth and medium quality growth. The second output is the correlation mapping between growth and the soil series has been found that the Melaka series are the ones that support the most growth of the tree while the Terap Red series do not show a clear indication on the tree growth. The third output is the mapping analysis on the insect affected to the tree growth. There are about 8% of the total tree that are estimated to be at risk of the attack and it was found that all the tree situated 15 metre around are also affected. The study shows that GIS involvement in the agricultural sector can have a better and more manageable impact in supporting a better precise farming practice.

Keyword: Geographical Information System (GIS), Growth Analysis, Harumanis Mangoes
Mango

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