



**UNIVERSITI TEKNOLOGI MARA**

**DETECTION OF RUBBER TREE USING IMAGE  
CLASSIFICATION AND VEGETATION INDICES**

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Thesis submitted in fulfilment of  
requirements for the degree of  
**Bachelor of Surveying Science and Geomatics (Hons)**

**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

The rubber tree (*Hevea brasiliensis*) is a tree of the Euphorbiaceae family and the most important member of the genus *Hevea*. The growth of rubber trees should be considered when making land-use decisions. The conventional way of obtaining this information is time-consuming, expensive, and imposes restrictions on access to certain locations. The information on existing rubber cultivation acreages and tree growth conditions is critical for plantation management functions such as field management planning and decision-making. Therefore, the aim of this study is to detect the rubber trees using image classification and vegetation indices. The objectives of this study were i) to determine the accuracy of using supervised classification and ii) to identify the range of vegetation index for rubber trees using NDVI. The method used in this study is by using supervised classification and the use of the method is the maximum possibility. The study identified vegetation indices using NDVI. This study is very important to farmers because it can show the area of rubber trees using remote sensing methods as well as to know the concentration of rubber trees area. The result will be demonstrated through an assessment of the accuracy of image classification and production of an NDVI map.

**Keywords:** Rubber Tree, Supervised Classification, Vegetation index, Remote Sensing

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