UNIVERSITI TEKNOLOGI MARA

ASSESSMENT OF RICE CROP GROWTH AND YEILD FORECASTING AS INFLUENCED BY PONDING WATER DEPTH

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AUTHOR'S DECLARATION

I declare that the work in this 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

Paddy yield and productivity can be affected by various factors. Soil fertility is one of the factor that are now believe as one of reason for yield fluctuation associated with proper water management and supply at every stage of the plant's growth. The aim of this study is to investigate the influence of ponding water depth towards the growth of the plant as well as the net primary production of the cultivation area. The data was collected using Unmanned Aerial Vehicle (UAV) as to produce the heights models of the study areas. Two study areas selected were based on the net primary productions of good and poor amount of productions. To achieve the aim, researcher have set a few objectives which are: i) to produce elevation models from UAV images at different paddy ponding area, ii) to extract height data as to estimate ponding water depth and land levelling of the selected plot and, iii) to analyse the relationship between different ponding water depth and crop growth as well as its net primary productivity. This research was conducted at Universiti Teknologi MARA Kampus Perlis's paddy fields. Other additional data were obtained through past season paddy yield data from the paddy's contractor. This study will later help in managing and improving water soil management towards optimum net primary production of the yield.

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