

**UNIVERSITI TEKNOLOGI MARA**

**OPTIMIZATION PLANTED AREA FOR MAXIMIZE  
PRODUCTION OF PALM FRUIT IN FELCRA  
SEBERANG PERAK USING GOAL  
PROGRAMMING MODEL**

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**Optimization Planted Area for Maximize Production  
of Palm Fruit in FELCRA Seberang Perak using  
Goal Programming Model**

## **STUDENT'S DECLARATION**

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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## **ABSTRACT**

After Indonesia, Malaysia is the second largest palm oil production. One of the famous agencies in agriculture sector of palm is Federal Land Consolidation and Rehabilitation (FELCRA). However, the palm fruit production in FELCRA was decreasing. Therefore in this study is focused on finding the optimal land area in FELCRA Seberang Perak. In FELCRA Seberang Perak, it has four palm planted areas. Palm is the major contributor in FELCRA Seberang Perak. In this research, goal programming model is used in finding the optimal palm planted area. There are three goals that are considered in this research which are to maximize each planted area, maximize the number of palm tree and to maximize the palm fruit production. Based on the result of analysis, the optimal planted area for four areas in FELCRA Seberang Perak is 5662.80 hectares. For the area in FSP 10&11 the planted area is 1121.48 hectare, FSP 12 1224.80 hectare, FSP 13 1135 hectares and FSP 14&15 2181.52 hectares. Hence, the number of palm trees is 845829 and the palm fruit production is 224120.20 tonnes in year. The result of this study is analyzed by using QM for Window version 5.3.

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