# UNIVERSITI TEKNOLOGI MARA

# TECHNICAL REPORT

## OPTIMIZING THE PROFIT OF PALM OIL FARM USING LINEAR PROGRAMMING

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## ABSTRACT

Minimizing the cost is one of the main keys to gaining the highest profit. Thus, the main objective of this study is to build a linear programming model for small farms to represent the production of profit and maximize the profit using linear programming. The problem of palm oil production that will be solved by linear programming based on the general problem involves several variable costs such as fertilization costs, harvesting costs, insect and disease control costs, pruning costs and transportation cost. The results are obtained by using the Excel Solver, where the results are used to find the gross profit of palm oil production per year. Some conclusive observations have been drawn based on the report from the Excel Solver in determining the best value for cost minimization. This study will provide the small farmer of palm oil and other palm oil farmers with exposure to the linear programming method in making decisions to determine the optimization profit for difference costs.