

**A SURVEY ON THE REPAIR AND MAINTENANCE COST OF  
MACHINERY AT SIME DARBY PLANTATION, SERKAM-KEMENDORE  
DIVISION FOR THE YEAR 2015**

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## ABSTRACT

As the population of the world increases, the demand for cooking fat has steadily increases. One of product that can cope with the demand is palm oil. Although there is no problem with the demand, there is a problem with production. The main factors that limit the production are the availability of land for oil palm planting. One of the available options is to increase efficiency of oil palm production. This make the task is very labor intensive and has very low coverage per working day. In the plantation level, to increase the efficiency of production is with the implementation of mechanization and with the implementation of mechanization, the efficiency could be improved. The ratio of work done is said to be 1 to 1.83. Machine efficiency is crucial to maintain high level of output. Properly maintained and adjusted machine also reduces field breakdown. The more field downtime incurred the higher the operating cost and ultimately decrease profit level. The research is done in three parts which are the satisfaction level survey, the repair and maintenance cost model and the division between the internal and external repair done on the machine. The results are illustrated in the form of a graph and table displaying the skewness test result. Efficiency of the machine must be improve and the cost must lowered to increase the profit level of plantation

**(Key words: mechanization, field downtime, efficiency.)**

## **Introduction**

As the population of the world increases, the demand for cooking fat has steadily increases. One of product that can cope with the demand is palm oil. Although there is no problem with the demand, there is a problem with production. One of the limiting factors is the availability of land for oil palm planting. The only available option is to increase efficiency of oil palm production. With the advancement in technology, the production of oil palm has increase from 19.12 metric ton to 19.59 metric ton (media release). In the plantation level, to increase the efficiency of production is with the implementation of mechanization particularly in the evacuation of fresh fruit bunch (FFB). According to Rakhine and Fairhurst,(1998), any delay will reduce the quality of FFB cause by increasing FFA content in oil within the bunch.

The other limiting factor is the dependency of the plantation sector to foreign labor workforce. These incur huge liability to the plantation and decrease their profitability. Currently most plantation still uses wheelbarrow for transporting the cut bunch to the collection point before finally transporting it to the platform using tractor fitted with a trailer. This make the task is very labor intensive and has very low coverage per working day. With the implementation of mechanization, the efficiency has increase. Ismail and Abu Hassan (1998) reported there are 34% reductions in labour. The ratio of work done is said to be 1 to 1.83. This means that 1 machine is