NOVEL SYSTEM OF GRADING SYSTEM OF GRADING FRESH FRUIT BUNCHES (FFB) OF OIL PALM FRUIT

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ABSTRACT

This research concerns about the analysis pertaining the relation between forces (injection) with the ripeness level of palm oil fruit depending on two different fields where the FFB are being harvested. The injection force from the samples were taken by a digital force gauge that can measures compression forces with a customized tool tip that is designed solely for injecting the fruitlets of an FFB. The ripeness levels of the sample will first being determined by the previous grading standard before the measurement can be initiated. This study revealed that there is positive correlation between injection forces with the ripeness level of FFB. The useful of the study can be used in the future to improve the efficiency of grading of oil palm fresh fruit bunches (FFB).

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CHAPTER 1

INTRODUCTION

Recent practice shows that the grading system in palm oil mill is done manually. To point out some advantages, this method gives a liberty to the person in charge in grading the FFB depending on how much the fruitlet has detached from the FFB, the operator based their assessment by the standard that first has been set up by MPOB. Ironically, the disadvantages outdo the advantages. The long-practiced routine proved to be so tedious and a little bit time consuming. The inconsistencies are also another "de facto" why a search for another method to grade the FFB perfectly is needed. This very research is just the beginning where it is meant to find the correlation between force (injection) and ripeness level of FFB. The finding of this research in the form of force range that represents the ripeness level of FFB should be a good start for the future efficient-palm oil fruit grading system.