INVESTIGATION OF CRAWLER'S EFFICIENCY ON PEATLAND DURING RAINING SEASON IN LADANG DELIMA, ROMPIN, PAHANG, MALAYSIA

AHMAD KAMSYAKH NAWI BIN MUSA

Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Plantation Management and Technology
in the Faculty of Plantation and Agrotechnology
Universiti Teknologi MARA

JULY 2019

ACKNOWLEDGEMENTS

In the name of Allah, the most gracious and the most merciful with Selawat and Salam to Prophet Muhammad S.A.W. Alhamdulillah, praises and thanks to Allah for blessings me with His mercifulness for my health, strength and life all this time, I was able to finish this research within the time duration given.

Firstly, I want to specific my deepest feeling and thanks to Prof. Madya Dr. Mohammad Hudzari Bin Hj. Razali, my supervisor for the support and giving necessary advices, guidance as well as ideas in assisting me with this project. I choose this moment to acknowledge his contribution gratefully. I also want to thanks to Dr Darius El Pebrian, for his guidance and time teach me about machine and give a lot of information during providing the implementation of this research.

Special thanks to my beloved parents for the vision and determination to support and educate me. This piece of victory is dedicated to both of you. Finally, thanks to my friend for supporting me during my project activity.

AHMAD KAMSYAKH NAWI BIN MUSA

TABLE OF CONTENTS

ABSTRACT

INVESTIGATION ON CRAWLER'S EFFICIENCY ON PEAT LAND DURING RAINING SEASON IN LADANG DELIMA, ROMPIN, PAHANG, MALAYSIA

Harvesting oil palm is one of important process in oil palm production. This is because the main objective in harvest the Fresh Fruit Bunches is to obtain maximum yield potential per round. Currently, in Malaysia, most of the estate uses a simple machine such as wheelbarrow because it is easier to use. But in peat soil, harvesting using a wheelbarrow or any mechanical that using tires are less suitable and spongy structure itself made the harvester harder to access and evacuate FFB. Moreover, during the raining season, it is harder to evacuate FFB in peat. Harvesting and the collection of FFB need to execute quickly and properly to maintain oil production. Malaysia consist of approximately 2.6 Mha and about 30% (~1.0 Mha) are in Peninsular. This study is done to prove the effectiveness of the raining season throughout a year to mechanization efficiency in peat soil. Ladang Delima consists of 90% peat and 10% and soil. So, it is the best place to test how efficient the transporter is. SPSS was used and the result shows that the rainfall throughout the year is significantly not affecting the crawler's efficiency in peat soil. The more rain in that estate, the more productivity the machine will be. So, with this study, it is proven that rain not affecting the productivity of machinery in oil palm plantation.

Keyword: oil palm, collector, transport, mechanization, peat soil, rainfall season