



اُنْبُوْا سِيَّتِيْ بِاَنْ تَكُوْنُوْا لِيْ فِىْ اِمَارَا
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Six Slide

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BLUEPRINT: TRETRACTOR

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CHAPTER 1

1.0 PRODUCT DESCRIPTION

1.1 Introduction

- The team is developing a Multi-purpose Plantation Extractor. We have contributed an idea to produce this machine called TRETRACTOR.
- This TRETRACTOR is designed with combination of three different types of extractor of different plantation types into one innovation.
- This Multi-purpose Plantation Extractor can harvest oil palm bunch, latex from rubber tree and coconut for food production and business purposes.
- Nowadays, plantation industry in Malaysia is still using manual harvesting equipment which is time consuming.
- This machine is specially invented for huge industry also small industry for high yield of product in short period of time.
- This multipurpose extractor is able to detect the types of plant to be harvested automatically.
- This machine is safe to use and can avoid from any injuries as the blade is located within the machine.
- Our machine is also sell at the market with affordable price.

1.1.2 Background study

- The current way of plucking of palm, latex and coconut from tree:

Rubber tapping and Drainage Knife

- V –shaped front edge which used to apply on the tree trunks through which rubber fluid slowly flows out.
- Manually tapping by human.

Palm oil and coconut tree

- Manually harvesting by using chisel and sickle as cutting tool which required more energy and need an accurate angle to cut.

- Problem synchronized with commercialization
 - Increase in demand
 - Improvement and changes in eating habits spurred by the growth of economy also contributed to the supply inadequacy of locally produced oils.
 - Challenges for the sustainable development of palm oil
 - Report forecasted that the world's demand for palm oil will double by 2020 and Malaysia been estimated to have a new plantations of 300 square miles.

- Size of (hectares) land for rubber, coconut and palm oil tree in Malaysia.
 - Total land for planted area in Malaysia in 2012 is 5.1 million hectares.
 - The oil palm planted usually yields 4.0 tonnes in 1 hectares.
 - Each company use 1 machinery.

1.2 Purpose of development

- The main purpose of treextractor is to harvest 3 types of tree which are palm oil tree, rubber tree and.
- The device is focusing in these type of tree because these tree are consider as the main plantation in our country.
- There is no technology that can harvest multiple tree with just only one device. In fact, small farmer that work in the rubber farm still using the old method when tapping and collecting the rubber.
- This situation also same when we want to extract palm oil tree and coconut tree.
- Therefore, the purpose of device development is to help the plantation company as well as farmers to harvest farm in an easier way, at the same time save time and reducing the labour workforce.

1.3 Product Concept

- The concept of the device known as “treextractor” is able to harvest 3 types of tree such as palm oil tree, coconut tree and rubber tree.
- It is small size device that is portable and can be carry anywhere. The device come in diagonal shape so that it is more stable when harvesting the tree.
- The material used is stainless steel so that it can withstand to the corrosion. The device will be equipped with varieties of blades that are suitable to harvest the trees.
- A controller will be use to move the device from one tree to another.
- To generate the device, it can be charged to the power supply or with the help of battery
- With all these concept, harvesting tree become easier with the technology that will be invented in this device.