BLADE FOR PINEAPPLE LEAF FIBER EXTRACTOR MACHINE

PATENT PCT/MY2020/050087 & NO. PI2019005430

WASTE

FIBER

WEALTH

USEFULNESS & APPLICATION

The fiber produces are high in demand as nowadays the industires were shifting from using synthetic materials to environmental friendly materials such as in research and development centers, composites, automotive parts, textile industries and etc.

IMPACT OF THE PRODUCT

- Reduce agriculture waste (no open burning)
- Fasten-up fiber extraction time
- Enhance fiber quality
- Boost locals income
- More eco-friendly product will be developed from the fiber
- Replace plastic materials

TECHNOLOGY

- The objectives of the design improvements are to fasten up the extraction process and having more fine fiber where finer fiber gives better properties.
- The impact on this improvement surely will help local farmers to gain extra income by converting waste from their crops into wealth.

1 Hectar → 49 Tonne Agri-waste → 20 Tonne Leaf

MARKET POTENTIAL

Primary

MPIB — Malaysia, 15,000 Hectare

the great Great Giant Pineapple — Indonesia, 34,000 Hectare

Thailand, 100,000 Hectare

Philipines, 66,200 Hectare

Secondary

Food Packaging

Textile

PROBLEM STATEMENT & CURRENT ISSUES

- Industries are shifting from using synthetic materials to environmental friendly materials.
- Pineapple leaf's fibers in its leaf have been scientifically proven to be very strong.
- The problem that lead to the innovation are as follows:
  a. Existing machines used to extract fibre from pineapple leaf are not efficient, as it is time consuming.
  b. The quality of extracted fibre is compromised.

INVENTIVENESS & NOVELTY

- The innovation here is to optimize the contact area between the roller and the fiber. With this, it will helps to fasten up the fiber extraction process.
- The manual combing process of fiber after the extraction are not needed to be performed as now the fiber produce are finer (had skip a process towards achieving fineness fiber).

COLLABORATIONS

- Parliament for Kuala Langat, Selangor
- Kuala Langat community, Selangor
- Universiti Tun Hussein Onn Malaysia

TRL : 6 – Technology Demonstration

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