KEMENTERIAN PERUSAHAAN PERLADANGAN DAN KOMODITI

MPOB

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TRANSFER OF TECHNOLOGY
SEMINAR & EXHIBITION



TOT 678

MOBILE LIFTER A DEVICE TO ASSIST FRESH FRUIT BUNCH (FFB) LOADING OPERATION

Practical Solution to Boost Productivity

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NOVELTY / HIGHLIGHTS

- Most of small size in-field transporters usually drop their loads on the ground.
- Currently, there is no technology available to assist the manual transferred of FFB into a bin/ trailer.
- The technology comprises of a simple chassis design and hydraulic system to receive loads from a transporter.
- Easy to be attached or detached from a small infield transporter for towing purposes.
- Able to lift up approximately 400 kg of loads.
- 35% faster as compared to the manual loading.
- Possibility to be utilised in other operations or crops.

ADVANTAGES

✓ A significant increase of productivity for infield FFB evacuation activity.
✓ Potential to reduce burden of human workers.
✓ Better oil quality by reducing multiple handlings of FFB.
✓ Reduces energy required to load the FFB.
✓ Promotes green technology (battery powered).



Prototype in tipping position during field test.

Manual loading to automatic



With a single press of a switch, the device will lift the bucket to transfer the FFB into the trailer or bin.

BASIC SPECIFICATIONS OF HYDRAULIC TYPE FFB LOADER

Dimension, L X H X W (mm)	1900 X 1800 X 1400
Hydraulic power pack	DC 24V, 2.2kW
Working height (m)	1.8

ECONOMIC ANALYSIS

- Estimated operational cost of the device is about RM2.26 t^{-1} FFB.
- Based on economic analysis conducted, the device has proven its feasibility with most of the parameters showed positive signs.
- Net present value (NPV) at 10% discount rate is RM35 821.
- Profitability index (PI) is 1.65.
- Internal rate of return (IRR) is 16.5%.

Sawit ANUGERAH TUHAN