

# Transforming oil palm trunks into high-quality and sustainable materials



Inspiring the next “material revolution” by creating sustainable and high-performance materials from oil palm waste, **Peter Fitch** together with IOI have set up IOI Palm Wood to commercialise this untapped potential.

Some have tried and failed. Others find it way too difficult, troublesome and a hassle, preferring to rely on subsidies. But not Hans Peter Fitch. With a love for projects and innovation, coupled with his personal motto of “Where there is a will, there is always a way to succeed”, he has held on to the belief that oil palm trunks (OPT) can be economically developed into value-added wood products. More than that, his concern about the environment and desire to make a positive difference to the world has driven him to keep on trying for the past 25 years. But a viable system has still not been found. Until three years ago...

## **LIGHTER, STRONGER AND ECO-FRIENDLY**

Although Malaysia has almost 10 million acres of total plantation area for oil palm, and an abundance of palm trees that are felled due to replanting, it is painstakingly challenging to recycle them into usable timber-like materials. Unlike commercial rubberwood or solid woods such as tropical timbers and temperate lumber, oil palm has vast structural differences because of its monocotyledon nature. Palm wood has high moisture content, ranging from 150% to 600% that is four to five times higher than other timbers like rubberwood. As for density, it varies from 150 kg/m<sup>3</sup> to 700 kg/m<sup>3</sup>.



As rubber plantations are declining along with the decrease in the usage of rubberwood as a sustainable material in the furniture, construction and building materials industries, it seems necessary that someone should find a way to use OPT as the next option.

With a 25-year experience in the rubberwood industry and a love for projects, the avid explorer finally discovered a commercially viable system to harvest and process OPT by thinking out of the box and working alongside a consortium of European machinery manufacturers. This innovative business model won first prize in the AmBank BizRACE 2018 Challenge and is the backbone of a joint venture with IOI Corporation Berhad (IOIC) called IOI Palm Wood Sdn Bhd.

#### MAKING PROFIT WITH A PURPOSE

IOI Palm Wood will be the first and only corporation in the world to commercially and sustainably produce engineered wood panels from unused OPT. With a 20-acre factory equipped with kiln drying and panel production expertise and technology, located at Johor, Malaysia, this facility will be able to produce high-performance lumber and panel products that are environmentally sustainable, lightweight, dimensionally stable,

with a high strength and good screw holding, and comparatively higher fire resistant than traditional timber.

Fitch, who is the Chief Executive Officer of IOI Palm Wood, emphasised the positive impact of OPT on the environment, “For every cubic metre of palm wood produced, we are in effect capturing approximately 250 kg of carbon, which would otherwise be released into the atmosphere as carbon dioxide or methane. Furthermore, when we utilise the otherwise redundant OPT and substitute them for traditional timber, we are in effect preventing the logging of natural forests.”

“We are also contributing to the circular economy by eliminating waste as we are using practically everything from a palm tree,” added Fitch. “This scalable, sustainable and profitable business model is in line with Group Managing Director & Chief Executive Dato’ Lee Yeow Chor’s diversification strategy and vision to increase our non-crude palm oil segment. Through IOI Palm Wood, we expect to produce 80,000m<sup>3</sup> of premium grade kiln dried palm lumber, blockboards and palm wood panels under our OnCore brand to be marketed to an expanding market of office and household furniture.”

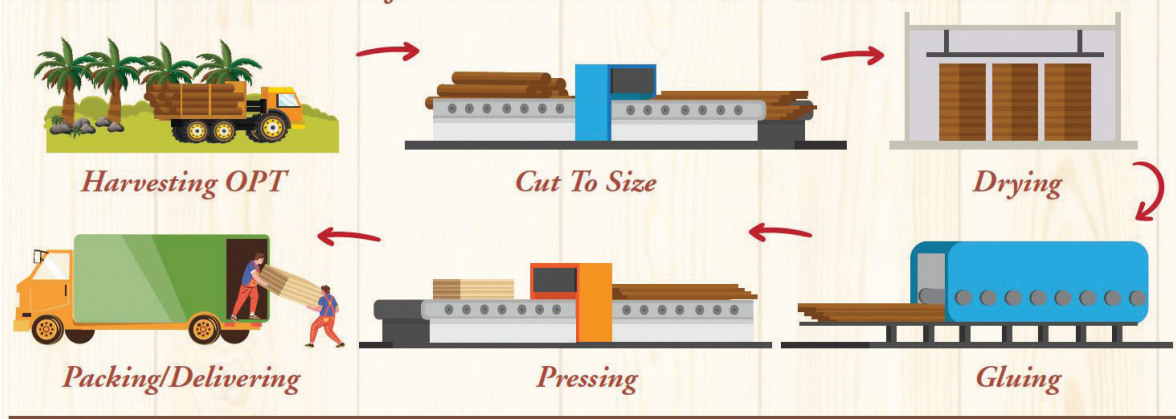


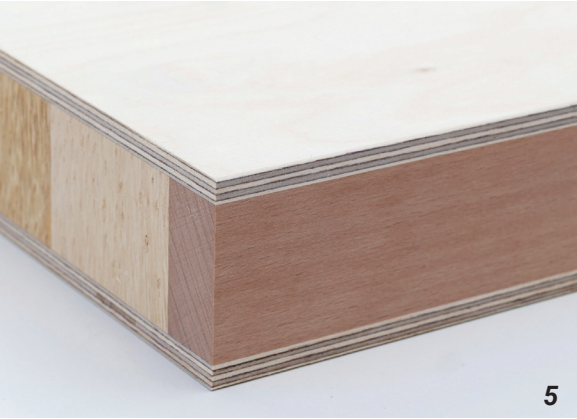
Fitch looks forward to the completion of the factory which targets to open by the first quarter of 2022 and envisions to replicate this model to their other plantation estates.

*Fitch said, “Palm wood’s core material makes it a viable material for lightboards which are a great element for the production of furniture.”*

As his effort finally bears fruit, this risk taker sums up his passion to persist, “I live to perform to the best of my ability in all aspects of my life. It is worth it and I believe it is worthwhile because I just enjoy what I do.”

#### How IOI Palm Wood Transforms Oil Palm Trunks (OPT) Into Sustainable Materials





- Legend**
- 1 Three-layered palm wood panel
  - 2 Three-layered palm wood panel (thick)
  - 3 Three-layered palm wood panel with beech veneer
  - 4 Palm wood blockboard with beech veneer
  - 5 Palm wood door panel with hard wood frame and plywood face
  - 6 Palm wood door panel with hard wood frame and plywood face (vertical)
  - 7 Palm wood core panel (planned)