

Electric E-Cutter can reach oil palm trees as high as 30 feet

March 7 2016, by Azman Zakaria



Credit: Mohd Hasrul Hamdan

Harvesting of oil palm fruits is now made easier and faster – thanks to Universiti Putra Malaysia and Malaysian Palm Oil Board which have jointly developed a new electric cutter innovation, known as E-Cutter.

Equipped with a specially-built generator that is light in weight, this electric cutter technology will also reduce manpower and enable harvesting of fruits and pruning of fronds to be done on trees as high as 30 feet.

"As it is easy, simple and very efficient to use, this tool will also enhance the process of harvesting of oil palm fruits, at the same time, increase the yields," Universiti Putra Malaysia (PM)'s Faculty of Engineering Researcher, Associate Prof. Ir. Dr. Norhisam Misron, said.

Associate Prof. Ir. Dr. Norhisam and MPOB Research Officer, Abdul Razak Jelani spent about five years on research into the technology.

"E-Cutter will complement the existing methods used in harvesting the fruits manually, such as long poles and sickles. This innovation will see an improvement to the "trimming" technology where the mechanical concept is being replaced with electric, making it to be more economical and environmental-friendly.

"The cutter will vibrate in cutting the oil palm fronds or fruits," Associate Prof. Ir. Dr. Norhisam said.

Unlike farmers who used mechanical tools and manual methods to harvest oil palm fruits or trim the fronds, he said E-Cutter used an electric concept to move it.

"This technology is developed via a system that combined an electric and motorised generator. A Double Standard Generator with high power density is used as the generator.

"It is lightweight and small but very powerful and it is portable for easy usage by farmers," he said.

He also said E-Cutter weighing less than 9kg, is generated by petrol and was developed using a research grant of RM300,000 provided by the Higher Education Ministry and RM180,000 by MPOB.

A demonstration on its use was held during the Show Case Produk

Inovasi UPM-MPOB dan Malaysia Innovation Hub (MIH) ceremony at Taman Pertanian Universiti UPM. The event was also attended by Higher Education Minister, Dato' Seri Idris Jusoh; UPM Vice-Chancellor, Prof. Datin Paduka Dr. Aini Ideris, and MIH Chairman, Tan Sri Dr. Ghauth Jasmon.

During the event, MIH as UPM industrial partner, also introduced an Oil Palm Harvester with Anti-brushing Collection System – a machinery that makes it easier for farmers to collect [oil palm](#) fruits from tall trees.

MIH Technical Consultant, Dr David Tan said the equipment could be run by just a single operator.

"The harvester also features a collection system to minimise bruising of fruits which could affect the quality of processed oil," he said.

Dato' Seri Idris, meanwhile, said both innovations could reduce dependence on foreign workers in the plantation sector.

Provided by Universiti Putra Malaysia (UPM)

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