Neil Chan

KOTA KINABALU: University Malaysia Sabah (UMS) and Tumau Gayo Sdn Bhd, a Malaysian-US joint venture company, signed a Memorandum of Understanding (MoU) to do research into improving energy efficiency and recovery for palm oil mills at 1Borneo.

The agreement was signed between UMS Chancellor Prof. Datuk Dr Kamaruzaman Ampon and Datuk Henrynus Amin for Tumau Gayo.

According to UMS Chancellor Prof. Datuk Dr Kamaruzaman Ampon, the main objective of the MoU is to pool both parties' expertise and resources to do research and development into improving the energy efficiency for palm oil mills using advanced patented waste heat recovery technology.

'In view of the escalating challenges posed by other palm oil producing countries, Malaysia has to change its objective of just being a world producer of palm oil to among others, a leader in converting biomass waste into value-added products,' he said.

Dr Kamaruzaman said in Sabah there are about 464,000 hectares of oil palm and government-owned plantations accounted for about one quarter of this. With this size of oil palm plantations, Sabah is positioned as among the largest palm oil producer states in Malaysia.

'The oil extracted from the palm consists only 10pc of the total biomass produced in the plantation. The balance 90pc consists huge amounts of lignocellulosic materials such as oil palm fronds, trunks and empty fruit bunch (EFB) which were often treated as wastes.

He said according to the Malaysian Palm oil Board, annually there are seven million tonnes of oil palm trunks, 26.2 million tonnes of oil palm fronds and 15 million tonnes of EFB.

'Researchers at UMS have been conducting research into the use of EFB and technologies are available to convert EFB into paper composite wood and biodegradable packaging material.

However, the major challenge in translating all these technologies into commercial success lies in the processing of the EFB into fibre and power is the limiting factor that prohibits the processing of EFB at the mills.

Dr Kamaruzaman said with the collaboration, UMS engineers will be working closely with Tumau Gayo to design the heat exchanger and stimulate its performance in a palm oil mill belonging to Sawit Kinabalu.

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