

The findings demonstrate the capability of biofertilisers composted from EFB wastes to fulfil the needs and requirements of plant growth on a fully-orbed and holistic basis, in other words multifunctional.

In terms of costs and technological utilisation, oil palm biomass composting is – perhaps unsurprisingly – cheap and doesn't require sophisticated mechanisms. In fact, there are also various methods of composting to suit the needs of the individual enterprise.

In 2013, the Microbiology Research Group at University Malaysia Sabah Biotechnology Research Institute developed a simple and easy way to accelerate the composting period to within 40 days.

And there's not only a potentially huge domestic market, but also overseas market such as the European Union due to the latter's policy on organic waste management and sustainable farming practices.

Biofertilisers can also represent additional income for oil palm and palm oil companies as they sell the excess supply to (local and foreign) counterparts that need them.

What more too are the business opportunities for our SMEs, which would be enormous if they seek to also capitalise and harness the commercialisation of biomass products, specifically biofertilisers, to be converted into eco- and bio-composite products across a range of sectors and industries. This from agriculture through to food production and furniture manufacturing.

Therefore, it is time for the government to work closely together with players and other relevant stakeholders in the industry to ensure the country makes full use of this potential to drive the economy forward and carve out a niche in the global markets.

Lately, beyond the palm oil industry, a concrete example could be seen in a breakthrough with the conversion of lignocellulosic fibres from discarded pineapple leaves to make strong materials for use in building the frames of unmanned aircraft or drones by researchers from Universiti Putra Malaysia.

According to Professor Mohamed Thariq Hameed Sultan, "drones made out of the bio-composite material had a higher strength-to-weight ratio than those made from synthetic fibres and were also cheaper, lighter and easier to dispose of.

And should the drone be damaged, the frame could be buried in the ground and would degrade within two weeks".

Not least, this project will boost the income of pineapple farmers, especially in light of the ongoing economic impact of Covid-19.

In conclusion, biofertilisers should be integrated into a future 4th National Agricultural Policy for sustainable oil palm agriculture as well as agriculture as a whole including the agenda of making it more climate-change resilient and contributing to reduction in carbon emissions.

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