

Green fertiliser ready for the market

UNIVERSITI Teknologi Petronas (UTP)'s revolutionary designer fertiliser is just about ready for the market and once the product is launched, it will herald a new era of improved yields from cash crops.

Known as OneBAJA, the evolution and design of this fertiliser has broken technology barriers in the making of fertiliser and is drawing in attention from global partners.

Brewing in the laboratories of UTP since 2011, the unique feature of OneBAJA is that the technology enables the fertiliser to be tailored to deliver the exact required nutrients needed at each step of growth for the specific crop and hence, the term "designer fertiliser".

By feeding the right nutrients at the right growth period, the development and maturity of the crops will be optimised and yields would naturally be better.

Formulated with slow-release technology, the project – funded by the Higher Education Ministry – has won the Malaysia Technology Expo Gold Medal for the innovative marrying of electromagnetic and nanotechnology to produce green urea.

The project recently won a gold medal and the Best Invention Award by the International Federation of Inventors' Association at the 2017 International Invention, Innovation and Technology Exhibition.

It has also won a gold medal and Best Green Invention Award at the recent Sirim Invention, Innovation and Technology Expo 2017.

The 70% uptake of nutrients in this designer fertiliser reduces the leaching process.

Hence, it is greener in nature while also allowing for a more efficient system compared to dependence on the human hand for fertilising efforts.

OneBAJA is the brainchild of Prof Dr Noorhana Yahya, who is leading the UTP



OneBAJA is a designer fertiliser that will deliver the exact amount of nutrients at each step of growth to increase crop yields.

team in a collaborative effort, which also saw the participation of Universiti Putra Malaysia (UPM), Universiti Sains Malaysia (USM) and Universiti Teknologi Malaysia (UTM).

"We are effectively ready for commercialisation and are looking at upscaling field tests. OneBAJA has been successfully tested in some rice fields in Selangor," explained Noorhana.

"While we are certain that it will be successful with results that were proven in our labs, it does take about two years for oil palm and rice yields to be realised. Nevertheless, we are confident that it will

produce the desired results as proven in our trials," she said.

She added that they are looking optimistically at an average of 20% increase in yield.

Meanwhile, it has attracted the attention of potential manufacturing partners from Australia and the United States who plan to collaborate with UTP on upscaling the prototype.

"This will take UTP's innovation and research product into the global arena, especially in keeping with our target 'Towards Global Prominence'," said Noorhana.

"We also have interested parties who are keen to help us promote the product to

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Prof Dr Noorhana Yahya

European and South American markets," she continued, adding that all that is left to do in this instance is the branding and pricing.

While the idea for OneBAJA was initially mooted with the primary purpose of increasing paddy yields, this technology would be applicable to various crops across the board.

According to Noorhana, this will not only increase crop yields but will also result in better use of land that is available for cultivation.

The first of its kind, OneBAJA has tremendous global potential. Being a green product from the manufacturing activities right through to the final product, it augurs well for a future where environmental concerns would be high on the list of priorities.

Additionally, the increased yields, both in terms of quality and quantity, would pave the way for the increase in food production and consequently, alleviate some of the concerns on food security as the world faces the dichotomy of arable land versus development requirements.

■ For more information, look out for the advertisement in this *StarSpecial*.