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NEW ALTERNATIVE ANIMAL FEED TO EASE FOOD SECURITY ISSUES



STARPICKS

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(Clockwise from bottom right) UMT vice chancellor Datuk Prof Dr Mazlan Abd Ghaffar, USASK provost and academic vice president Prof Dr Airini, Saskatchewan Advanced Education minister Gordon S. Wyant and Higher Education Minister Datuk Seri Dr Noraini Ahmad at the signing of the memorandum of understanding in Saskatchewan.

RESEARCH by the Institute of Tropical Aquaculture & Fisheries (Akuatrop) under Universiti Malaysia Terengganu (UMT) found that black soldier flies (*Hermetia illucens*) make a viable alternative protein source for formulated food production.

At the signing of a memorandum of understanding between UMT and University of Saskatchewan (USASK) on Aug 21, UMT vice-chancellor Datuk Prof Dr Mazlan Abd Ghaffar said that the research project was what attracted USASK's cooperation to commercialise the results into products for the Canadian market.

Present at the signing was Saskatchewan Advanced Education minister Gordon S. Wyant and USASK provost and academic vice president Prof Dr Airini.

Prof Mazlan said the research will be applied to the aquatic livestock feed processing industry for aquaculture such as fish, shrimp and crab.

It will also be used as an alternative food source for farm animals such as chicken, duck, goat, rabbit and cow.

“Black soldier fly is a type of insect whose population distribution can be found almost all over the world with its own species,” said Prof Mazlan.

“The larvae of this insect are abundant sources of high quality protein, chitin and lipid content for daily needs based on studies.



The black soldier fly pellets contain high-quality protein, as well as essential vitamins, fats, amino acids, and chitin as a fibre source making it a popular protein source for livestock and farms.

“The use of black soldier fly larvae is an alternative method in reducing the dependency on protein sources based on current practices of using fish meal since the cost of raw materials from existing sources is becoming more expensive and unsustainable in the long run.”

He said that animals or livestock fed with black soldier fly larvae formulation have been scientifically proven to show accelerated growth and increased resilience against disease.

“This alternative source is able to meet the demands of a wide market while responding to the government’s call that emphasises the aspects of food security and future food,” he explained.

Higher Education Minister Datuk Seri Dr Noraini Ahmad said at the signing ceremony that our higher education sector must continue building international cooperation to tackle global food security issues – now a critical topic due to ongoing pandemics, climate change and international conflicts.

The dire straits emphasise the need for collaborative effort in the field of research to create innovative technological solutions that increase the productivity of the agricultural and fisheries sector – to safeguard the country's food security.

“Collaborations like this give us the opportunity to overcome these challenges in line with the United Nations Sustainable Development Goals (SDG),” said Noraini.

“We believe that the fourth SDG, which is quality education, is the basis for all other SDGs. So we must develop education programmes through international partnerships to produce holistic graduates.



Noraini visited USASK's Museum of Natural Sciences and discussed approaches to learning and teaching with academics.

“Collaboration between universities in Malaysia and the University of Saskatchewan is not new. Previously, there has been collaboration between Universiti Utara Malaysia and the University of Saskatchewan too.

“I hope that Universiti Malaysia Terengganu and University of Saskatchewan will enhance cooperation to develop programmes together.”

According to Noraini, this collaboration began with the development of the Joint Summer Curriculum for Internship Programme and the Joint Organisation of Academic Conferences to “establish initiatives on joint research, supervision (Masters and PhD programmes) and the students' mobility programme.”

These programmes previously ran for eight years and were funded by the Canadian International Development Agency (CIDA).



Noraini on a campus tour of USASK on Aug 21.

“Providing alternative animal feed sources will lower animal-based product prices while transforming agrofood waste into effective, sustainable animal feed using black soldier flies,” she added.

Noraini noted that the initiative has led to joint publications in reputable journals and successfully received funding in the process.

“The funds have been utilised to support other joint projects that aid in transforming traditional fishing into a circular-economy platform,” she said.

Higher Education Minister Noraini Ahmad will represent Malaysia at the 65th Commonwealth Parliamentary Conference in Halifax, Canada (Aug 20-26), organised by the Commonwealth Parliamentary Association.