

Tween's creation bags gold in Canada



By **T.N. Alagesh** - September 9, 2021 @ 9:15am



Maryam Muzamir and her father, Associate Professor Dr Muzamir Hasan, showing the medal and certificates she received from the 6th International Invention Innovation Competition via post at their home in Indera Mahkota, Kuantan, yesterday. PIC BY FARIZUL HAFIZ AWANG

KUANTAN: Every time she had a meal at seafood restaurants here, Maryam Muzamir would notice sea snail (*siput sedut*) and shrimp shells being disposed of in large quantities.

The 11-year-old was eager to tackle the waste issue and soon began collecting, cleaning and grinding the shrimp shells and seashells last year to produce a sustainable animal feed known as Yam 2.0.

Her innovation did not go unnoticed as Maryam recently won three awards, including the Canadian Special Award at the 6th International Invention Innovation Competition (iCAN 2021) in Toronto, Canada last month.

The SK Perempuan Methodist Year Five pupil, who was inspired by the work of Swedish activist Greta Thunberg on climate change, said she knew there would be a method to put the shells to good use.

"I read articles about avoidable food waste and shells containing chitin, which is an important chemical for the production of animal feed. So, I thought why not give it a try and see if the shells could serve as an alternative livestock feed.

"In June last year, I informed my father and we spoke to the restaurant operators here to give the shrimp and sea shell waste to us instead of throwing them away. The operators agreed and I was determined to make it a success," she said at her home in Indera Mahkota here yesterday.

The eldest of two siblings, Maryam said they collected about 30kg of shrimp and sea snail waste before washing and drying it under the hot sun.

"Once it was completely dried, I separated the shrimp and sea snails before grinding them into fine powder. Initially, there were some trial and error. As time progressed, I made some modifications, especially on the size for livestock consumption," she said, adding that she consulted her father for advice on the product.

Maryam, who loves to watch videos on YouTube, said it took about a week to process the animal feed and the free samples were distributed to a dairy cattle farm here.

"It did not affect the cow's milk quality. Based on our observation, the cost to produce Yam 2.0 is lower compared with conventional animal feed products and it can be used to feed chicken, goats, fish and pigs.

"Since the product is cost-effective, it will help control the production cost in the supply chain. For example, prices of chicken go up when there is a spike in chicken feed price. So Yam 2.0 is an affordable and a high-quality solution," she said.

Maryam, who won the Gold Medal, Canadian Special Award and Best Young Inventor Award at iCAN 2021 last month, said it was her first victory abroad.

"I had won two gold medals at the Citrex (Creation, Innovation, Technology & Research Exposition) last year and this year, along with a third gold at I-RIE (International Research Invention and Innovation Exhibition 2021). Since the product had a lot of potential, my father encouraged me to give it a try at the international stage.

"It was a new experience to prepare posters related to the product for the preliminary selection in June before the product was picked to progress to the final. For the final, I had to provide more information, including images and the advantages of the product," she said, adding that the winner was announced online on Aug 28.

Her father, Associate Professor Dr Muzamir Hasan, who is attached to the Engineering college at Universiti Malaysia Pahang, said he and his wife, Noor Nazihah Ma'amor, 35, had always encouraged their daughter.

"When I was young, I do not remember trying new innovations but my daughter seems to be following in my footsteps at an early age. We do not want her to stop and maybe the next step will be to get a research grant to commercialise the product," he said, adding that the medal and certificates arrived in the post yesterday.

Maryam was the youngest winner at iCAN21, which is described as the largest invention competition in North America. There were 600 participants from 70 countries this year.