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Seaweed-based veggie noodle

UMS SEEKS INDUSTRY PARTNER

KOTA KINABALU: Veggie noodles made from seaweed are familiar to health buffs and vegetarians in countries like Japan and the Philippines.

They understand the health benefits of this marine algae and have been producing it for quite some time.

Now, Universiti Malaysia Sabah (UMS) has come up with an innovation of its own, and one that boasts a high dietary fibre content of more than 30 percent compared to ordinary noodles.

"The ordinary noodle normally has around 0.5 percent of high dietary fibre," says UMS Food Scientist Dr Patricia Matanjun, who led her group, consisting of Foo Tiang Kit, Md Ismail Asmawi Kassim, Chan Pei Teng and Norhafizah Ismail, winning a silver award in the BioMalaysia Conference and Exhibition 2010.

Their product was the result of two years of research sponsored by a grant from the Ministry of Science, Technology and Innovation (MOSTI).

Red Kappaphycus alvarezii and green Caulerpa lentillifera seaweeds that thrive in Sabah waters, especially on the east coast, were chosen for the project due to their health-promoting content.

"Besides dietary fibre, they are rich sources of minerals, proteins and vitamins. They are low in lipid content, but contain a significant amount of Omega-3," she told Bernama here.

World studies have found that Omega 3, which is essential fatty acids, can help lower triglycerides and increase HDL cholesterol (good cholesterol). They can also act as anticoagulants and prevent blood clotting.

Studies have also suggested that Omega 3 may help lower high blood pressure.

Dr Patricia, who is also a Food Technology and Bioprocess senior lecturer at the university, said their veggie noodle does not contain additives or preservatives.

"There is no salt - it is very low in sodium, as that aggravates hypertension. There is no monosodium glutamate either. The flavouring is from the amino acid and is natural. And there is no artificial colouring - the colour you see is from the seaweeds' chlorophyll and carotenoid pigments," she explained.

Dr Patricia showing the silver award and samples of the seaweed noodle

She believes that what makes the product attractive is its high anti-oxidant properties.

"Antioxidants, as we know, promote cardio-vascular health. Our study showed that the anti-oxidants in it increase after boiling."

The noodle must be boiled for five to seven minutes to be made edible. The other nutrients also remained stable in spite of the heat, according to Dr Patricia.

Given that about 30 percent of Malaysia's current population of almost 28 million are vegetarians (Buddhists, Hindus and others), the market potential is obvious.

Dr Patricia hopes to see research findings be used by the country's businesses.

Tourism, Culture and Environment Minister Datuk Masidi Manjun, in his capacity as State Education EXCO, concurred with her at the UMS' Research Appreciation Night recently.

"We are ready for commercialisation," says Matanjun, but our pilot plant and machinery can only produce on a small scale sufficient for a cottage or backyard industry.

"Hence, we need a business partner. UMS will provide the technology and formulation, while the partner sees to the production and marketing", she said.

She further revealed to Bernama that UMS has developed 50 seaweed-based formulations that were ready to be commercialised.

"So the range of products that the industry can capitalise on is not limited to the veggie noodle," she said.

A "food taste survey" involving 100 consumers at local shopping complexes, she said, received very encouraging feedback.

Meanwhile, Leong Kun Lan, a Buddhist in her 50s and a health-conscious vegetarian, said she would, of course, prefer veggie noodles to the usual types.

"I certainly appreciate that it is a product of our own local university.

But the taste must also be good and the price competitive. There has to be a lot of advertising to promote it, especially on the nutrient aspect."

Mohammed Ismail, 20, a sales assistant at a shopping mall, said he eats noodles almost every other day.

"It's my favourite dish and easy to prepare. I know it's not really healthy, but if you say this seaweed noodle is more nutritious I would opt for it, provided the taste is good and it is not too expensive," he said.

Meanwhile, UMS Deputy Vice Chancellor (Research and Innovation) Prof Dr Rosnah Ismail, said the university currently has more than 20 patented innovations.

"I am happy our academia focus is not just on lecturing, but on research, aswell. They complement each other. We need to have drive and motivation, otherwise that (teaching) is all we do."

"We received a lot of support for our research, in terms of grants from the relevant ministries and international organisations. What we urgently need is industry support so that we can translate our innovations and inventions into community or consumer-viable returns," she added.