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Singapore's NTU Develops Highly Nutritious Fungi-Based Solution to National Food Insecurity

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Researchers at NTU Singapore's Food Science and Technology (FST) program have developed a new method for growing nutritious fungi-based solutions to address

Singapore's national food security issues.

> *"Nature, in the form of fungi, is a powerful tool to [...] help improve human diets."*

With more than 90% of its food currently being imported, Singapore is highly dependent on international food imports and highly affected by food security issues. In light of the complexity around Singapore's food security, NTU FST was established as a cross-disciplinary effort to develop solutions for the issues arising in the city-state.

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Together with the prestigious Wageningen University and Research (WUR) from the Netherlands, Nanyang Technological University and NTU FST created the Food Science and Technology Program in 2014.

Highly nutritious cultivated products

According to the research program, the fungi that are utilized to produce the product are cultivated on a basis of nutrient-rich common food waste, which provides the fungi with additional vital nutrients, such as protein, iron, and amino

acids. As a result, the product is claimed to offer benefits in terms of nutritional profile and sustainability.

For the commercialization of its fungi-based product, the NTU team reached out to the FOODBOWL, a national network of open-access food processing facilities supported by the New Zealand government. FOODBOWL and NTU are currently working together to upscale the innovative fungi-cultivation method, aiming for national commercialization in 2024.

Professor William Chen, Director of NTU's Food Science and Technology (FST) programme, who led the development of the food product, said: "Our fungi-based food product is yet another triumph for NTU, as we look to find successful ways to find new uses for products that would otherwise be left to waste. Upcycling these products to cultivate fungi, a food source familiar to Asian consumers, is an opportunity for enhancing processing efficiency in the food supply chain, as well as potentially promoting a healthier non-animal protein alternative to enrich diets."