Could Veggie Burgers of the Future be Made from Food Waste?

Typically, veggie burger patties are made from a mixture of soybeans, chickpeas and various sorts of seeds. Future recipes for these "alt meat" products could drive down environmental impacts even further by upcycling waste products from the production of these foods. Essentially, it's about making nutritious food from what's usually seen as trash.

It's not uncommon to make broths from carrot peels or to fry potato or sweet potato peels. So what other ways could food waste be used to make new dishes or products? Rest assured, no one is going to start making burgers from the contents of your garbage can. However, scientists have found a way of upcycling waste from the production of soybeans, chickpeas, peas or wheat — the kinds of ingredients that typically make up plant-based alternatives to animal protein.

In New Zealand, this is an avenue of research being pursued by the Off-Piste Provisions brand, which has approached a scientific university in Singapore — Nanyang Technological University — which has in turn developed a technique to cultivate a fungi-based food product using food waste. It reproduces the texture, but also the taste and protein content of a plant-based meat. If the idea seems totally crazy, it makes perfect sense to the scientists, who used fermentation techniques to produce edible fungi. Indeed, the nutrient-rich food industry byproducts can be used to grow fungus containing essential nutrients like amino acids, iron and proteins. For the owner of this New Zealand company, this fungi-based food product could even be more nutritious than those currently used to make plant-based meat alternatives.

This process could foreseeably include fruit skins or beer brewers' spent grains. Indeed, flour is already produced from these cereal remnants. By also recycling soybean skins or wheat stalks, manufacturers could obtain a product that could be used to make high-protein foodstuffs that would require less energy and water to produce. According to the Singapore-based scientists, their research findings offer a real opportunity to give a second life to food refuse. In addition to reducing food waste, this new process could also put an end to the greenhouse gas emissions generated by byproducts from soybean or various cereal crops, which add to the carbon footprint of these agricultural outputs when they decompose in landfill.