Soybeans offer possible plastic film alternative

Marie Donlon | December 03, 2019

A professor from Singapore's Nanyang Technological University has developed a biodegradable food wrap plastic alternative from soybeans.

William Chen, professor of food science and technology at the university, gathered soybean pulp-like residue leftover from the production of soy milk and bean curd, and fermented it to create a cellulose to develop a food wrap that is an alternative to plastic wrap.

Made from food waste, the new bio-inspired wrap is biodegradable, curbing both plastic and food waste. It also disappears entirely within a short time frame as once it is discarded, the material is digested by microbes.

Soybeans, which are also used in the production of miso soup and tofu, are not the only unexpected ingredient being considered for plastic alternative packaging. As the global plastic crisis grows, with untold amounts of plastics and microplastics invading the world's oceans and ecosystems, startups and researchers from all over the world are exploring a host of materials to stand in for plastic.

One startup in London has been attempting to turn lobster shells into a plastic alternative while a research team from the University of Canterbury in New Zealand are turning food waste into chemical components for making bioplastics. Meanwhile a student from London's Central Saint Martins University has created shampoo and other personal hygiene product packaging made entirely of soap, eliminating plastic packaging altogether.

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