Production of food wrap from soybeans

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Soybeans have been a staple of Asian meals for hundreds of years. Now, this bean can become an alternative to plastic wrap.

William Chen, professor of food science and technology at Namyang University of Technology (Singapore), has invented this latest type of biodegradable food wrap. It is made from cellulose, extracted from the by-products of soybeans when making tofu or soy milk.

The leftovers are usually thrown away, but Mr. Chen collected them and fermented them. Bacteria during the fermentation process break down the nutrients, leaving cellulose fiber.

Although cellulose films have been on the market for a few years, Professor Chen said most of them are made from wood or corn. In contrast, his plastic wrap is made from waste products so it doesn’t take up more land and is more sustainable.

CNN said that Chen’s technology can help solve two problems at once: reducing plastic waste and reducing food waste from being dumped in landfills. “In Singapore, the amount of food being removed each year can fill up to 15,000 Olympic standard swimming pools,” Mr. Chen said. Because soy products are so popular in this country, up to 30 tons of waste products are dumped every day.

F&N Soybean Beverage Company has teamed up to supply soybean meal to William Chen’s lab. F&N is also studying the feasibility to assess the commercial competitiveness of soybean food wrap compared to other conventional products.