



# Scientists turn brewing waste into fresh yeast to make more beer

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Aug. 29 (UPI) -- What's better than beer? More beer, of course. It's a motto scientists in Singapore have taken to heart.

Researchers at Nanyang Technological University have found a way to turn brewing waste into nutrients for feeding yeast. That yeast can be used to brew -- you guessed it -- more beer.

Yeast is essential to fermentation, the conversion of grain sugars into alcohol. Meanwhile, the brewing process produces a significant amount of waste.

By using waste to produce more of an essential ingredient, researchers at NTU have managed to make the brewing process significantly more efficient.

"We have developed a way to use food-grade microorganisms to convert the spent grains into basic nutrients that can be easily consumed by yeast," William Chen, a food scientist at NTU, [said in a news release](#). "About 85 percent of the waste in brewing beer can now be turned into a valuable resource, helping breweries to reduce waste and production cost while becoming more self-sustainable."

Food-grade microbes could ultimately help scientists integrate waste-to-nutrient conversion technologies into other food and beverage production processes.

Spent grains left over from the brewing process are stripped of their essential nutrients. What's left is lignin. It is tough and largely unusable. But microbes can help break down lignin's tough fibers into smaller, more nutritious fragments. These fragments can be mashed into a liquid and fed to yeast.

Researchers described the process [in the journal AMB Express](#).

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