

# It looks, feels and tastes like chicken, but it's made of soy

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The goal with the University of Missouri research is to create a product that has the same stringy texture as chicken. Credit: Christian Basi/University of Missouri

Sure, some delicacies might taste just like chicken, but they usually feel and look much different. Soy meat alternatives, such as the soy burger, have become more popular recently, with increased sales of eight percent from 2007 to 2008. Now, scientists at the University of Missouri have created a soy substitute for chicken that is much like the real thing. The new soy chicken also has health benefits, including lowering

cholesterol and maintaining healthy bones.

Fu-Hung Hsieh, an MU professor of [biological engineering](#) and [food science](#) in the College of Agriculture, Food and Natural Resources and the College of Engineering, is leading the project to create a low-cost [soy](#) substitute for chicken. His research, funded by the U.S. Department of Agriculture and the Illinois-Missouri Biotechnology Alliance, has led to a process that does more than just add color and flavor to soy. Hsieh has developed a process that makes the soy product simulate the fibrous qualities of a chicken breast.

"Early tests provided some of the fibrous texture to the final product, but it tasted more like turkey," Hsieh said. "In order to produce a more realistic product, we had to tweak the process and add extra fiber to give the soy a stringy feeling that tears into irregular, coarse fibers similar to chicken."

To create the soy chicken, Hsieh starts with a soy protein extracted from soy flour. The soy then goes through an extrusion cooking process that uses water, heat and pressure while pushing the mixture through a cylinder with two augers.

"This particular soy substitute is different because we are working with a higher [moisture content](#), which is up to 75 percent," Hsieh said. "The high moisture content is what gives the soy a very similar texture to chicken — in addition to the appearance."

Along with pleasing the senses, Hsieh's soy chicken provides health benefits for consumers. Soy foods contain important nutrition components, some of which help maintain healthy bones and prevent prostate, breast and colorectal cancers. Soy foods also are a good source of essential fatty acids and contain no cholesterol. The FDA has approved a claim that encourages 25 grams of [soy protein](#) in a daily diet

low in saturated fat and cholesterol to help reduce cholesterol that is at or above moderately high levels.

Hsieh's research has been published in the *Journal of Food and Agricultural Chemistry*, *Journal of Food Science*, and *Journal of the American Oil Chemists' Society*. The next step in Hsieh's research will be to taste-test various texture combinations and make final refinements to the formula.

Provided by University of Missouri-Columbia

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