

Study finds people willing to pay more for new biofuels

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When it comes to second generation biofuels, Washington State University research shows that consumers are willing to pay a premium of approximately 11 percent over conventional fuel.

"We were surprised the premium was that significant," said Jill McCluskey, WSU professor in the School of Economic Sciences. "We wanted to study people in different regions of the country, to make sure we weren't just getting a local result, and people in all three cities we studied said they would pay more for these fuels."

The paper, "Consumer Preferences for Second-Generation Bioethanol," was published in November in the journal *Energy Economics*.

First generation biofuels use potential food sources, like corn, which can cause the price of food to rise. Second generation biofuels, on the other hand, are made from sustainable biological non-food sources. Recently, Alaska Airlines flew a plane from Seattle to Washington, D.C., fueled by second generation biofuel made from wood scraps.

McCluskey's study was part of a grant from the National Science Foundation headed by Shulin Chen, WSU professor in the Department of Biological Systems Engineering. Chen, who researches new biofuels, asked McCluskey to find out whether people would buy second generation biofuels.

"This new biofuel doesn't exist commercially yet, so we have to do these

studies to make sure there's a potential market for it," McCluskey said. "And this shows there clearly is a market."

McCluskey and her co-author, recent WSU Ph.D. graduate Tongzhe Li, conducted surveys in Portland, Ore., Minneapolis and Boston. In Portland, the average amount participants would pay for second generation biofuel over conventional fuel was 17 percent, while in Minneapolis and Boston the averages were 9 percent and 8 percent, respectively.

"People in the survey were concerned that the new fuel may put their car at risk, by not running the same as conventional fuel," she said. "But they also saw the added benefit to the environment."

The researchers asked participants if they would be willing to pay a certain amount for the product. If they said no, researchers offered a discount and asked if participants would pay that amount. However, if respondents said yes, researchers asked if they would be willing to pay a little more for the product.

Before they were surveyed, half of the participants were given information about second [generation](#) biofuels. Those [participants](#) were more willing to pay a greater premium, which suggests that marketing the benefits of the new biofuels would improve consumers' perceptions, McCluskey said.

More information: Tongzhe Li et al, Consumer preferences for second-generation bioethanol, *Energy Economics* (2017). [DOI: 10.1016/j.eneco.2016.10.023](https://doi.org/10.1016/j.eneco.2016.10.023)

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