

Ethanol fuels large-scale expansion of Brazil's farming land

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Credit: University of Queensland

A University of Queensland-led study has revealed that future demand for ethanol biofuel could potentially expand sugarcane farming land in Brazil by five million hectares by 2030.

UQ School of Earth and Environmental Sciences researcher Milton Aurelio Uba de Andrade Junior said that because Brazil produced ethanol from sugarcane, future biofuel demand would directly impact land use.

"Our study has modeled scenarios forecasting future ethanol demand based on different trajectories for [gross domestic product](#), population growth, [fuel prices](#), blending policies, fleet composition and efficiency gains," he said.

"A high demand scenario fueled by strong economic and [population growth](#), soaring gasoline prices, and ambitious blending targets, could mean that current demand for ethanol in Brazil will be doubled by 2030.

"If this scenario occurs, then Brazil will need an additional five million hectares of land for sugarcane crops to meet this high demand."

Mr de Andrade Junior said that most of the additional sugarcane farms were likely to expand into pasturelands, minimizing impact on native forests.

"A key assumption of our modeling is that Brazil's land-use policies, such as the [sugarcane](#) agro-ecological zoning, will continue to promote the increase of agricultural yields while minimizing environmental impacts," he said.

"However, in the current context of high uncertainty on the environmental agenda, such land use policies need to be closely monitored and supported to ensure that the country's natural ecosystems and biodiversity remain protected."

More information: Milton Aurelio Uba de Andrade Junior et al. Exploring future scenarios of ethanol demand in Brazil and their land-

use implications, *Energy Policy* (2019). [DOI: 10.1016/j.enpol.2019.110958](https://doi.org/10.1016/j.enpol.2019.110958)

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