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Belgium

Brazilian biofuels can meet world's total gasoline needs - expert

Quicknote bioenergy potential

The business of projecting the technical biofuels potential of a given region is extremely complex because it is dependent on so many uncertain factors and sub-projections (population growth, GDP, food, meat, wood and fuel demand projections, advances in technology, effects of climate change on agriculture, and so on). All these factors determine how much land will ultimately be available for energy cropping.



Still, a handful of experts study the matter in-depth and arrive at projections and scenarios that may differ considerably from those of their colleagues. One of the new and highly optimistic [estimates](#) is made by professor Luis Cortez, Vice-Coordinator on a project for the expansion of ethanol production in Brazil and a professor at the State University of Campinas.

Currently, Brazil uses only 0.8% of its entire territory (8.5 million square kilometres) for the production of biofuels - an insignificant patch of land, so to speak. But if it were to cultivate energy crops for biofuels on a quarter of its territory (around 212 million hectares), the country could supply the entire world's current gasoline needs (which stand at around 24 million barrels per day).

This projection is based on the idea that second and third generation biofuels become viable. Such biofuels, based on the use of entire crops the lignocellulose of which is transformed via biochemical and/or thermochemical conversion techniques, would double the output per hectare of land for sugarcane. There are some indications that second generation biofuels may enter the market sooner than expected: Dedini SA, Brazil's main ethanol plant manufacturer recently announced a breakthrough in cellulosic ethanol production, which increased the output of a hectare of sugarcane by 30%. A doubling of the output is expected

in the coming years ([earlier post](#)). Moreover, such a scenario would also entail the introduction of new, high yielding energy crops designed specifically for particular environments, as well as new forms of livestock production (no grazing on pastures).

Even though his projections are in line with some of the most optimistic scenarios made by researchers from the IEA's Bioenergy Task 40 ([earlier post](#)), Cortez stresses that they merely point to the *technical* potential for Brazil, and that "another question is if we'd really want to do it - and would it be politically possible". The scientist was speaking on a panel at Europe's 500 "European Growth Summit: Growth is East and Green" [[*.pdf](#)] hosted at the Barcelona campus of IESE, one of the leading business schools. He criticized the production of ethanol from corn, a food crop with low yields, and called for responsible investments only, that is biofuel projects that limit environmental damage and promote social sustainability.

The map ([click to enlarge](#)) is a purely visual aid showing what an expansion of the hectareage to 212 million ha really means. It would be difficult to imagine that such an expansion could go without massive deforestation in the Amazon basin [entry ends here].