

# Bioethanol from Sugar: The Brazilian Experience

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The Brazilian ethanol program (Proalcool) is the oldest of such programs and started in 1975, producing ethanol from sugarcane. A similar program using corn was initiated around the year 2000.

The 2009 world's ethanol production was 76 billion liters – of which 41 billion is in the United States and 26 billion comes from Brazil – equivalent to 34.8 million tons of oil equivalent or 1.5% of total world oil consumption. The rest of it comes from different countries, mainly Europe and China. Ethanol production is increasing in several regions of the world: Of the 24 producing countries, there are 14 countries in Europe and 5 countries in Asia and the Pacific area.

Since transportation is almost entirely dependent on petroleum products, liquid biofuels represent an option to address this challenge in the transportation sector, where there is no other renewable energy commercially available. It should be emphasized that 14% of the world greenhouse gases emissions come from transportation sector.

The main increased importance of biofuels is closely related to the current energy challenges, which are energy security, global warming, and the increasing energy needs of developing countries. This entry presents an overview of the Brazilian experience, lessons learned, and current policies to guarantee the production of biofuels in a sustainable way, as well as perspectives for replicating it in other developing countries.

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