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## Biodiesel in Brazil: Analysis of the First Decade of Production

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### Abstract

At the end of the 20<sup>th</sup> century and early 21<sup>st</sup> century, agricultural systems incorporated one more purpose: generating energy for a growing world population whose lifestyle demands not only food, but also increasing amount of energy with low environmental impact. In March 2005, Brazil produced its first 49 barrels of pure biodiesel (B100) and began its addition to mineral diesel, currently at 7%. The production of B100 in Brazil is obtained mostly from two sources: soy and animal fat. In 2013, the nominal capacity for industrial production of B100 was of about 8 million m<sup>3</sup> and national production was of 2.9 million m<sup>3</sup>, that is, equivalent to 36.4%. Brazil, like other countries, aims to promote biodiesel production due to social, environmental and technological aims. However, there is a growing concern about the sustainability of such programs. In the last ten years, the soybean planted area grew 8,872,134 ha, with a total area of 31,621,800 ha in 2014. In the period from 2005 to 2010, there was an increase of the area designated to B100 production, in comparison to total cultivated area. This estimated share has stabilised at around 20%. Despite sugarcane being used for sugar, planted area increased with 3,164,170 ha in the period from 2005 to 2014 – it too was stimulated by the renewable energy policy. In order to meet this new demand for land use (mounting up to 12,036,304 ha), the broadening of agricultural frontier and further expansion over areas previously used for other crops or animal production took place. The reduction of land used for others crop was 4,566,000 ha. Thus, 7,470,304 ha came from other agricultural activities, specially former livestock production areas and employment of previously unused land.

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