Learning from Brazil’s Experience in Ethanol – Trends and Technologies

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Brasil Sugarcane Market

- Sugarcane: 657 million of tons
- Sugar: 38.691 million of tons (46.3%)
- Ethanol: 27.807 billion liters (53.7%)

Source: CONAB – Safra 2016/2017
Sugarcane Ethanol Fuel

Ethanol Benefits
✓ The rural development opportunities.
✓ Reduced Greenhouse.
✓ Better Performance.
✓ Lower Petroleum Usage.

Market Highlight

Ethanol already replaces around 40% of gasoline;

Source: UNICA & Nastari
Flex Fuel Engines Production
Flex Fuel Producers in Brazil
Prius Flex - made by Toyota is the first Hybrid Flex car in the world.
The Prius can run by three different fuels: ethanol, gasoline and energy.
Flex Motorcycles

2009 March, Honda launches the first flex motorcycle, the CG 150 TITAN MIX, and months later the second one, NX Bros Mix. At 2018 the CG160Flex debut it.
Advantages of green plastic:

• Biodegradable plastics are renewable
• Good for the environment
• Require less energy to produce
• Easier to recycle
• Not toxic
• Biodegradable plastics reduce dependence on foreign oil
Bioplastic
The airplane Ipanema (EMB 202ª) uses just sugar cane ethanol to fly, in 2015 this airplane model has completed 10 years being sold in Brazil. The first airplane in the world certificated to fly with biofuel.
Biodiesel

Sugarcane Diesel (B20) was used daily by approximately **400 public transit buses** in Sao Paulo and Rio de Janeiro, the country’s largest cities. These buses have logged **over 30 million kilometers** with a blend of Amyris Renewable Diesel.
Ethanol Stove
FIRST CASE - BARRALCOOL: INTRODUCTION OF THE CONCEPT TO THE WORLD MARKET AND FIRST WORLD SUPPLY/1st WORLD CONTINUOUS ETHYLIC PROCESS PLANT

BARRALCOOL MILL: 1st MILL IN THE WORLD PRODUCING THE 4 BIOS: BIOSUGAR, BIOETHANOL, BIOELECTRICITY AND BIODIESEL
100 countries could supply biofuels to 200 nations. Ethanol faces very high tariff and non-tariff barriers, while oil is traded almost freely. Nowadays just 20 countries can offer petrol to the world.