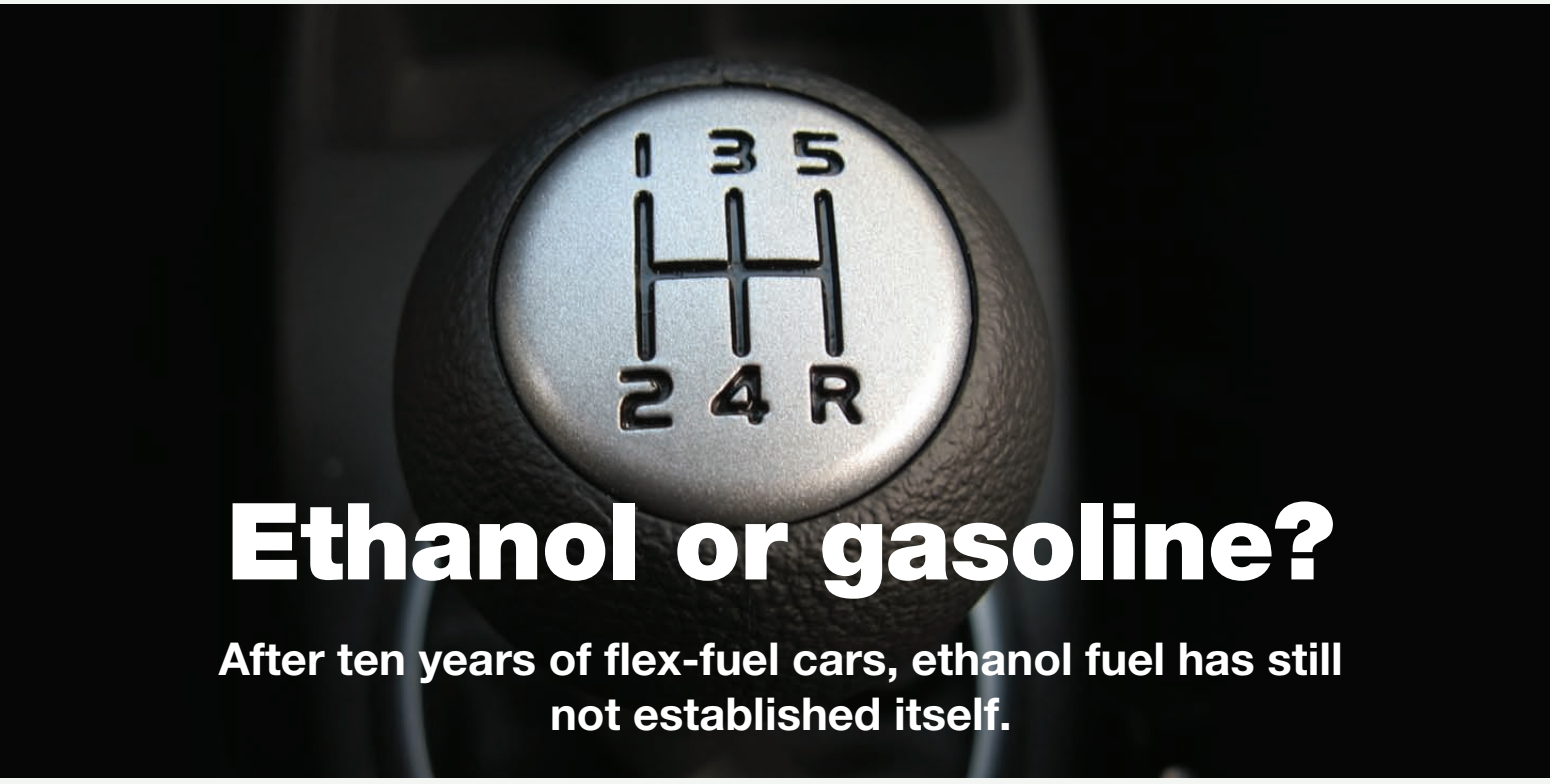


Ethanol or gasoline?

After ten years of flex-fuel cars, ethanol fuel has still not established itself.

Solange Monteiro, *Rio de Janeiro*

WHEN THE FIRST FLEX CAR HIT the streets in March 2003, it was a real innovation that the driver could choose between gas and ethanol without having to change the car. Ten years later, however, although spurred by tax reductions considerably more flex cars have been sold in recent years, the large fleet has not been able to establish a solid position for ethanol as a fuel because it costs more than gasoline.

Government price controls on gasoline were a major factor in ethanol's fall from grace. Without a clear policy that defines the share of ethanol in the fuel market and maintenance of the relative price between ethanol and gas, the ethanol industry will not be able to invest in more sugarcane processing capacity, which could be exhausted in two years.

"If the rules of the game had not changed, Brazil would not be importing gasoline, investments would continue, and the sector would be producing a few billion more gallons of ethanol," says Antonio de Padua Rodrigues, technical director, Union of the Brazilian Sugarcane Industry (UNICA). Between 2004 and 2008, the sector attracted US$60 billion in investments. At that time, gasoline prices in Brazil and in the international market were somewhat equivalent and there were domestic taxes on importing and marketing oil and oil products. When it was created in 2001, the gas tax was US$0.25 a gallon, but starting in

2004 it was gradually reduced to US$0.14, and by June 2012 the tax on both gasoline and diesel oil had disappeared in order to offset the high fuel prices and tamp down inflation. "Now," says Rodrigues, "we need to know . . . which public policies will be adopted to ensure that the ethanol share is preserved. The policies must be defined so that an entrepreneur who invests R$ 1 billion in an ethanol plant will know that in 20 years the investment will be repaid."



Photo: Tadeu Fessel/Unica.

GOING BACKWARD

Plinio Nastari, president, Datagro Consulting, illustrates the fluctuation in the ethanol share of the fuel market: "In 1988, the share of ethanol in automobile fuel consumption was 57%; from 1988 to 1996, the share fell to 37%. From 1996 to 2010, it rose to 45%, mainly because of the flex car fleet. But in 2012 the average fell to 32%." He says other countries using ethanol have



Photo: Tadeu Fessel/Unica.

Flex-fuel cars account for 87% of all sales.

Sales of light commercial vehicles by type of fuel, in thousand units.

	Gasoline	Ethanol	Flex-fuel	Diesel
2002	1,283	56	-	64
2003*	1,152	36	48	55
2004	1,077	51	328	66
2005	697	32	812	77
2006	316	2	1,430	83
2007	246	0.1	2,003	92
2008	217	0.1	2,329	125
2009	222	0.1	2,652	135
2010	281	0.1	2,876	172
2011	377	0.1	2,848	200
2012	274	0.1	3,162	197

Source: National Association of Vehicle Manufacturers (Anfavea).
* Flex-fuel cars began to be produced in 2003.

not seen a decline. "In the United States, the goal is to reach an alcohol share of 20% in 2022, against the current 10%. In Europe, the goal is to increase alcohol share from the current 3.4% to 10%."

Today, because the price of ethanol is not competitive, its market is limited to the states of São Paulo, Goiás, and Mato Grosso, where state tax incentives make its pump price attractive. Unica's Rodrigues points out that the global financial crisis in 2008 affected the sector: "At that time, investments were maturing. The crisis hit the extremely indebted ethanol industry hard. To survive, companies had to reduce farming expenses, which meant less agricultural activity." In addition, adverse weather caused crop failures, and mechanized harvesting further reduced productivity. Exchange rate appreciation and price rises for the carbon steel used in ethanol plants also raised production costs. Nastari offers an illuminating comparison: "Ten years ago production cost US$0.17 cents a liter, today it's about US$0.50 cents."

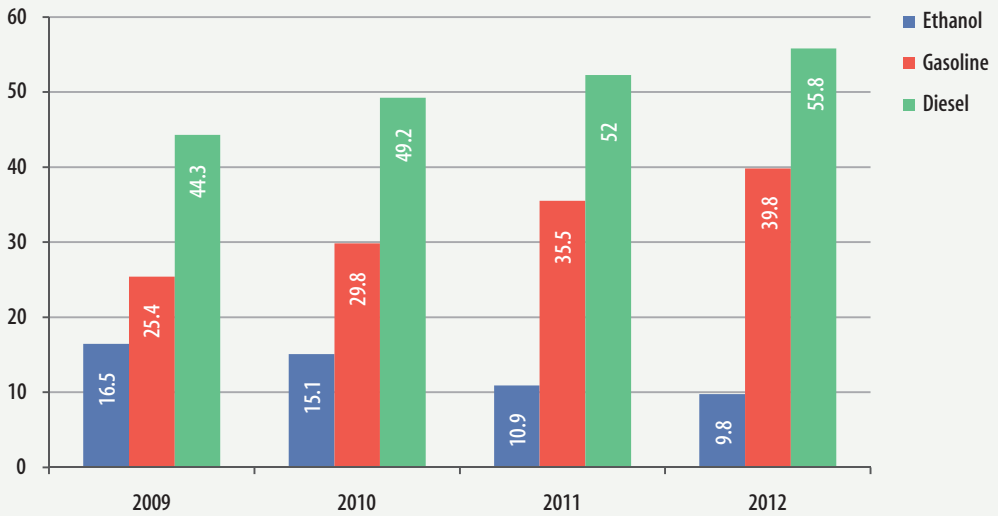
> **"If the rules of the game had not changed, Brazil would not be importing gasoline, investments would continue, and the sector would be producing a few billion more gallons of ethanol."**
>
> *Antonio de Padua Rodrigues*

Even with crop productivity gradually recovering and costs being reduced, the



Consumption of gasoline has increased by 26%, while ethanol has fallen by 40%.

Billions of liters



Sources: National Association of Distributors of Fuels and Lubricants (Sindicom) and National Petroleum Agency (ANP).

future of ethanol depends on the opportunity cost between ethanol and sugar, the price of which is set in the international market and can be hedged with contracts in the futures and commodities market.

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PRICE CONTROLS

Mirian Bacchi, researcher and professor, School of Agriculture Luiz de Queiroz (Esalq-University of São Paulo), points out that alcohol has not escaped price controls. She explains that "The government issued a resolution late in 2011 that 90% of purchases of anhydrous ethanol by distributors should be through contracts, establishing the price of hydrous ethanol as a price indicator plus a value premium of 13% on average depending on quality." She adds that ethanol profitability is very dependent on gas pricing policy.

Bacchi is aware of the concerns about inflation that motivates fuel price controls but says that "both the state-owned oil company and the ethanol producers are being penalized," and stresses that "the fact that society is benefiting from low fuel prices and inflation may mean that in future there will be no growth." Government incentives to support innovation, including in the sugar cane sector, are important, Bacchi says, but innovation takes time. She argues that the only way to reduce costs is to eliminate the taxes on ethanol production now.

According to Rodrigues, "We will not solve anything relieving three or four cents now without knowing what will happen after tomorrow." Dialogue with federal government officials continues, and Rodrigues says, "There is full knowledge in the various ministries; everyone knows that you need a solution, but the government makes the decisions. [Meanwhile,] we are working to reduce costs, increase productivity, and invest in logistics and research to double or even triple the amount of ethanol produced per hectare." Yields are starting to exceed 78,000 metric tons per hectare, compared to the previous 70,000.

The issue is delicate, since not all producers in the sector can afford to wait through the medium term for policy changes. In recent years, of the 400 sugar cane mills in Brazil, 40 were closed and another 10 will soon stop producing. "We have to find a solution to stop the closure of production units," Rodrigues says. To achieve these objectives, he knows, the market for ethanol should be strengthened—and that depends on a good relationship with the consumers who decide how to fuel their cars.