



USDA Foreign Agricultural Service

GAIN Report

Global Agriculture Information Network

Template Version 2.09

Required Report - public distribution

Date: 2/8/2006

GAIN Report Number: BR6001

Brazil

Sugar

Ethanol Update – February

2006

Approved by:

Morgan Perkins, Director
U.S. Agricultural Trade Office

Prepared by:

Morgan Perkins, Director & Sergio Barros, Agricultural Specialist

Report Highlights:

This report gives an update on current trends in the Brazilian ethanol market. Strong demand and elevated gasoline prices have led to significant price increases for ethanol, which has now become too expensive for purchase by *flex* car owners in many of Brazil's larger states.

Includes PSD Changes: No
Includes Trade Matrix: No
Unscheduled Report
Sao Paulo [BR3]
[BR]

A great deal of attention has been given recently to the importance of ethanol in the Brazilian fuels matrix. While ethanol has long been an important automotive fuel, new market developments are bolstering demand and prices. This report provides an update on major trends in the ethanol market. For more detail, please see BR5020, *The Brazilian Sugar Semi-Annual Report*, October 7, 2005. ATO/Sao Paulo will be publishing its 2006 *Sugar Annual Report* in April.

Ethanol in the Brazilian Fuels Matrix

Ethanol use has now expanded to account for thirty-seven percent (by volume) of fuel used by passenger cars. It must be remembered, however, that Brazil requires that every gallon of gasoline sold contain an admixture of twenty-five percent ethanol. It is estimated that of the total of 9.4 billion liters of ethanol used in 2005 (Jan-Nov), 4.1 billion were purchased by owners of alcohol-powered or flex-fuel vehicles. Approximately 5.3 billion liters of alcohol were purchased as Brazilian drivers filled-up with gasoline.

In addition, it is important to keep in mind that ethanol is used almost exclusively for passenger cars. For the most part, trucks, buses and work vehicles are powered by diesel. Diesel consumption accounts for about 58.6 (Jan-Nov, 2005) of total fuels use. According to distributors' sales declarations received by ANP, sales of diesel, gasoline and ethanol for 2002-2005 were as follows:

Fuel type (Bil. It)	2002	2003	2004	2005*
Diesel	37.668	36.805	39.147	35.821
Gasoline	16.958	16.331	17.348	15.878
Ethanol**	9.442	8.685	10.081	9.376

Source: *Agencia Nacional de Petroleos*, www.anp.gov.br

* Data for 2005 includes only the period Jan-Nov.

** Includes both ethanol sold directly and ethanol mixed with standard gasoline.

Note: Figures based on distributors' declarations, do not represent 100 percent of fuel sales.

Market Factors Supporting Ethanol Consumption

Data on sales show a stable fuels matrix, despite several factors that support increased ethanol use. Chief among these is the overwhelming success of *flex-fuel* cars among Brazilian car buyers. These cars are able to gauge the ethanol:gasoline ratio in the tank and adjust fuel injection and cylinder compression automatically, allowing *flex-fuel* owners to use any mix of fuels without affecting automotive performance. Sales of *flex* cars began in April 2003 and totaled about 80,000 that year, 370,000 in 2004 and 905,000 in 2005. By year's end, more than 70% of monthly passenger car sales were of *flex-fuel* vehicles, and they are expected to reach 90% in the medium term.

Despite the overwhelming success of *flex* cars, they still represent only a very small portion of the national automotive fleet. The National Association of Automobile Manufacturers (ANFAVEA) estimates that *flex* cars accounted for 7.7% of the national fleet at the end of 2005. If sales were to continue at the December, 2005-level during all of 2006, the *flex* share of the national fleet would be roughly doubled.

Of course the popularity of *flex-fuel* cars and their success is made possible by the legacy of the GoB's *Proalcool* policy of the 1970's and 1980's. Thanks to that policy virtually all of Brazil's 32,000 gas stations offer pure ethanol for sale side-by-side with gasoline, and Brazil has a well-established distribution system and infrastructure for handling ethanol.

In addition to this legacy from the *Proalcool* program the Government of Brazil (GoB) maintains several programs designed to boost consumption of ethanol. As noted earlier, most ethanol is sold under the GoB's requirement for a 25% admixture of ethanol to gasoline. In addition, taxes on *flex cars* are lower than taxes on gasoline powered cars.

The biggest incentives for ethanol, however, are the result of favorable tax treatment at the pump. The GoB assesses significantly higher levies for gasoline than for ethanol under its CIDES and PIS/COFINS programs. The differential in these assessments was estimated by industry contacts at approximately R\$ 0.30/liter in October 2005. Moreover, differential treatment under state tax regimes may be even greater. In October of last year, it was estimated that ethanol enjoyed an advantage of approximately R\$ 0.50/liter on state assessments in Sao Paulo. As a result, while pump prices were R\$1.14/liter for ethanol and R\$ 2.22/liter for gasoline, these prices included a differential of R\$ 0.80 in taxation rates.

Market Factors Limiting Ethanol Consumption

Production

Over the past two months it has become clear that the large number of *flex cars* in Brazil have dramatically increased potential demand for ethanol. Nonetheless, the supply of ethanol can only be increased at a modest rate. While the share of Brazil's sugar cane harvest dedicated to ethanol production has increased this year to approximately 51% (versus an average of 48-49% in recent years), sugar cane production is expected to grow by only ten percent over the coming three years (see BR5020, *Brazilian Sugar Semi-Annual Report*, October 7, 2005).

Industry contacts estimate that cane producers have the potential to dedicate 54% of harvested cane to ethanol production; however, this is not seen as a significant limitation in the medium term. Ethanol production facilities continue to be built and additional production and storage facilities could be added easily. Planting of sugarcane and construction new sugar/ethanol mills generally require a start-up phase of 3-5 years.

Rationing of Demand

It is generally accepted that given an ethanol price of less than 70% of the gasoline price, consumers will choose to buy ethanol. Ethanol prices can vary substantially from state to state, and in addition to tracking world prices for petroleum and sugar, ethanol prices are heavily influenced by distance from major production areas and taxes. Gasoline prices tend to vary less, and are controlled by the government.

In the second half of 2005, monthly demand for ethanol began to increase noticeably, and as ethanol producers began drawing down stocks, prices began to rise sharply. By January of 2006, the average price of ethanol exceeded 70% of the average gasoline price in 5 of Brazil's 12 largest states. In general, ethanol prices had passed the 70% threshold in states lacking significant sugar cane production. By the first week of February, however, ethanol prices had passed 70% of the gasoline price even in Curitiba, capital of Paraná, the state with the second largest cane harvest in Brazil. As a result, in the final months before the 2006 sugar cane harvest, an ever-smaller base of consumers purchases ethanol.

Following talks between the sugar industry and the GoB, it appears that the 2006 cane harvest will be brought forward, to begin in Mid-March, in order to avoid further price hikes or ethanol shortages. What remains unclear is how industry and government will adjust to prevent possible

shortages in late 2006/early 2007 when potential demand for fuel ethanol is expected to be considerably stronger.