

## **Brazil's Success with Ethanol Cannot be Duplicated in the United States**

In a seemingly desperate attempt to convince Americans that using ethanol is not just another massive farm subsidy, but a way to lower the cost of automobile fuel, and lower dependence on foreign oil, ethanol proponents are pointing to Brazil. For many years, Brazil has been distilling ethanol and mixing it in high proportions (20-25%) with gasoline.

Brazil's success has lowered the cost of auto fuel at the pump, and helped it become much more energy independent. Sounds great, but the facts and the numbers make it clear that no similar success can occur in the U.S.

First, there is the problem of scale: Brazil has a much smaller population than the United States, and many Brazilian families do not own one car, let alone two or three, as we do in the U.S. Second, cars in Brazil are small and get much higher average mpg than cars in the U.S. Third, Brazil has vast areas of very cheap land available for agriculture. Fourth, the cost of labor in Brazil is only a small fraction of the cost of labor in the U.S. Finally, Brazil has long been one of the world's major producers of sugar cane, a cheap agricultural product that is nearly perfect for distilling ethanol; while the U.S. has expensive corn which is not an ideal agricultural product to distill into ethanol.

In 2005, the U.S. ethanol industry produced 4.3 billion gallons at 95 distilleries around the country. To do so, they used 14% of the total U.S. corn production.<sup>1</sup> In a year the U.S. consumes about 146 billion gallons of gasoline.<sup>2</sup> So the gallons of ethanol we produced in 2005 represent 2.9% of the gallons of gasoline that we consumed. By 2010, at the expected rate of increased production, the U.S. ethanol industry will be producing 6.9 billion gallons of ethanol using about 22% of the U.S. annual corn. At that point, the gallons of ethanol we produce will equal about 4.7% of the gallons of gasoline that we consume.<sup>3</sup> Now, we have to adjust these percentages because the recent federal government tests show that ethanol gets 25% fewer miles per gallon than gasoline in the same flex-fuel vehicle.<sup>4</sup> So in 2010, using 22% of our corn, we will replace only 3.5% of the gasoline we burn! To put this in perspective, we can achieve about the same reduction in gas consumption (3.3%) just by keeping our tires properly inflated, according to the US Department of Energy.

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<sup>1</sup> Statistics are from the US Department of Agriculture and the University of Iowa Center for Agricultural and Rural Development.

<sup>2</sup> US Energy Information Administration, [http://tonto.eia.doe.gov/dnav/pet/pet\\_cons\\_top.asp](http://tonto.eia.doe.gov/dnav/pet/pet_cons_top.asp)

<sup>3</sup> If we used all of the country's corn production to produce ethanol (no feed for cattle, and no high fructose corn syrup to sweeten our food and beverage products) we would still be critically dependent on foreign oil, and still be plagued by the fluctuation in foreign oil supply and prices.

<sup>4</sup> <http://www.fueleconomy.gov>

Brazil, on the other hand, can meet 50% of its fuel needs using ethanol from sugar cane (which by the way, unlike corn, grows year round) without disrupting its agricultural markets or animal or human food supplies.

One of the reasons that Brazil looked into ethanol in the first place was that its gasoline prices were so high. In 2005, a gallon of gasoline in Brazil cost between \$4.10 and \$4.30. In the United States, gasoline averaged about \$2.50 in 2005 (even with the spike after Katrina). Because land and labor are cheap in Brazil, and because sugar cane is an inexpensive crop to grow, and grows year round, and because sugar cane produces significantly more ethanol per ton than corn, *the wholesale price for ethanol in Brazil in October 2005 was \$1.38 per gallon*. In that same month, according to published commodities prices, *U.S. ethanol, wholesaled at \$2.47 per gallon* (sources: [www.nybot.com](http://www.nybot.com); [www.cbt.com](http://www.cbt.com)). Today, the ratio is slightly higher, with U.S. ethanol costing almost twice as much as Brazilian ethanol (\$1.40 in Brazil vs. \$2.79 in the U.S.).

So it is obvious why ethanol works in Brazil: when you're paying \$4.20 a gallon for gas, ethanol with a wholesale price of around \$1.40 and a retail price of less than \$2.00 is a great deal. Even though Brazil blends its ethanol with gasoline, the tremendous difference between the cost of gasoline and the cost of ethanol dramatically lowers the cost at the pump.

Now let's travel back to the United States, and check commodity pricing on the internet: ethanol doesn't cost less than half of what gasoline costs as it does in Brazil – it costs the same or more than gasoline! In April of 2006, gasoline was selling wholesale for between \$2.00 and \$2.21 per gallon, while ethanol was selling wholesale at between \$2.47 and \$2.79 per gallon.<sup>5</sup> Now for the kicker -- according to the most recent EPA studies, (confirmed by real-world experience) E85 ethanol which costs at least as much as gasoline, and often more, gives you 20% to 30% less miles per gallon than straight gasoline in the same automobile!

But if we make more, won't the price go down? That's what the ethanol industry has been saying since the Carter Administration, when the U.S. government began to provide the current \$.51 per gallon incentive to ethanol distilleries. Since that time, ethanol production has increased significantly, but the price vs. gasoline prices has gone up. This is true in the U.S., even when gas prices spike.

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<sup>5</sup> When you add the high cost of U.S. ethanol to the high cost of trucking it (it can't be shipped in gas pipelines) and the added cost of blending it with gasoline, ethanol can result in raising the pump price of not only the gas-ethanol blends, but the pump price of straight gas, as the oil companies and distributors have to recover those costs, and appear to find it convenient (and/or politically correct) to spread them out over their entire product line.

So why do companies like Archer Daniels Midland and farm cooperatives keep building ethanol plants? The answer is: because you pay for it. First, the taxpayers subsidize corn production; second, the taxpayers subsidize the construction of the plants; and finally, the taxpayers subsidize a \$.51 per gallon tax credit for each gallon of ethanol distilled in the United States. Despite all those subsidies, the U.S. simply can't produce a cheap gallon of ethanol. In fact, even with all of those subsidies, *and* \$.54 per gallon tariff that our government imposes on ethanol imported from Brazil, Brazil's ethanol exports to the United States are increasing—because our ethanol is so expensive.

Another reason the U.S. does not import more ethanol from Brazil is that our government has imposed limits on the amount of cheap ethanol we can import from Brazil and Caribbean Basin countries. Currently, to ease fuel prices in the United States, Congress is considering lifting the import quantity restrictions and the \$.54 per gallon duty (gifts to ethanol and big agriculture lobbies) in order to create a cheaper supply in the U.S.

In order to make U.S. ethanol viable, we could: 1) increase your taxes to provide even more subsidies to agri-business and ethanol distilleries; and 2) ask the government set gasoline prices at the levels they are in Brazil, Europe and elsewhere – at about \$4.25 to \$4.50 per gallon. Then, even our high priced ethanol would seem like a great deal. We could blend it with gasoline at a 20% to 25% level as they do in Brazil, and reduce our auto fuel cost to *only* \$3.75 to \$3.90 per gallon. And, if we took those two steps, our dependence on foreign oil would be even further reduced by the fact that only corn farmers and ethanol distillery owners could afford to drive cars!

The only real solution to dependence on foreign oil and the high cost of driving is—as the President recently recognized—is to burn less gasoline. We can do that by raising the US auto industry's average miles per gallon required under the CAFÉ law, developing more and better hybrid electric/gas cars, and keeping tires inflated for good mileage.

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