

MAINTAIN AMERICAN ACCESS TO CLEAN, ADVANCED BIOFUELS



The Issue

To enhance America's energy security and improve the environment, Congress created a program requiring increasing volumes of renewable fuel in the U.S. energy supply. The law – known as the Renewable Fuel Standard (RFS) – calls for Americans to use more renewable fuel each year, incrementally growing the requirement to 36 billion gallons by 2022. Congress capped conventional corn ethanol at 15 billion gallons to stimulate innovation and development of advanced biofuels that offer superior environmental benefits.

The U.S. Environmental Protection Agency (EPA) administers the RFS and determines which fuels qualify as advanced biofuels. The key condition for this designation is reducing lifecycle greenhouse gas emissions by at least 50% compared to fossil fuels. EPA identifies Brazilian sugarcane ethanol as an advanced biofuel because it reduces greenhouse gases by at least 61% compared to gasoline.



The EPA determined that **sugarcane ethanol reduces greenhouse gases at least 61%** compared to gasoline.

Our Position

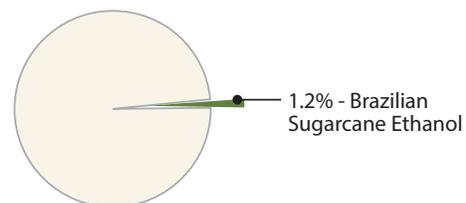
Americans deserve continued access to sugarcane ethanol, one of the cleanest and most commercially ready advanced biofuels available today.

This advanced biofuel from an American ally plays a modest but important role supplying the United States with clean renewable fuel. Over the past six years, nearly 1.3 billion gallons of sugarcane ethanol imported from Brazil flowed into American vehicles. During this time, sugarcane ethanol comprised only one percent of all renewable fuels consumed by Americans, but has provided more than six percent of the entire U.S. advanced biofuel supply.

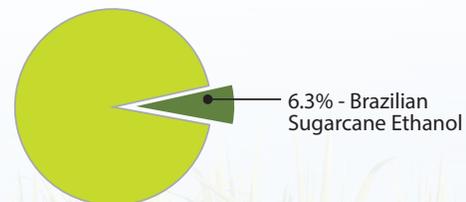
Congress designed the RFS to stimulate superior renewable fuels like sugarcane ethanol. This advanced biofuel is a reliable option for diversifying energy supplies and improving U.S. energy security so Americans are not dependent on any one source or country. Americans deserve access to cleaner fuels, and Brazilian sugarcane producers support efforts by EPA and others to preserve a strong role for advanced and cellulosic biofuels under the RFS.

Sugarcane Ethanol Plays a Modest but Important Role Supplying U.S. with Clean Renewable Fuel

Renewable fuel consumption by Americans (2012 - 2017)



U.S. supply of advanced biofuels (2012 - 2017)



Sources: UNICA analysis of Environmental Protection Agency data

Background

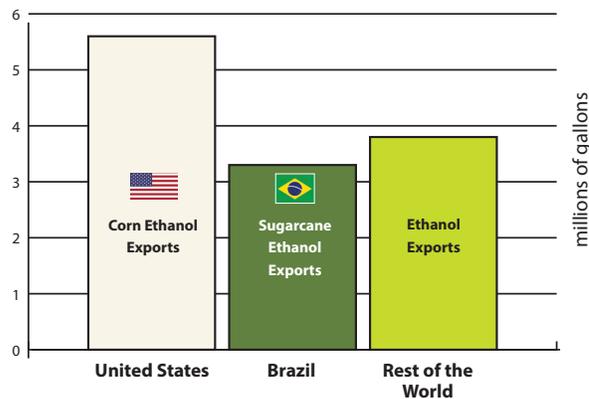
As the world's largest ethanol producers and exporters, the United States and Brazil enjoy the benefits of trading renewable fuels. Together, the two countries have built a global biofuels market providing clean, affordable and sustainable solutions to our planet's growing energy needs.

Brazilian sugarcane producers are making investments to expand production, and Americans can depend on more advanced biofuel from sugarcane. Brazil currently produces more than seven billion gallons of sugarcane ethanol each year and typically makes between 400 million and 800 million gallons of its annual production available for other countries to import.

The benefits of using sugarcane ethanol are cleaner air and enhanced energy security. Those benefits will grow as Americans consume more advanced biofuels.

Global Ethanol Trade Benefits the U.S. & Brazil

The United States and Brazil are the world's top two ethanol exporters (Annual average, 2012 - 2017)



Sources: SECEX, LMC International

Sugarcane Ethanol Helps Create a Healthier, Cleaner Planet

The one billion gallons of sugarcane ethanol Americans used since 2012 avoids 30 million tons of carbon dioxide emissions...



... the same reduction as **planting 430 million native trees and growing them for 10 years.**

Source: UNICA analysis of Environmental Protection Agency and International Trade Commission data

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Those benefits will grow as Americans consume more advanced biofuels.

FREQUENTLY ASKED QUESTIONS



What is sugarcane ethanol?

Ethanol is the general term for alcohol-based fuels produced by fermenting many different plants. Sugarcane ethanol is biofuel derived from sugarcane, a plant cultivated in the United States, Brazil and more than 100 other countries. This clean and affordable renewable fuel helps cut U.S. dependence on Middle East oil and improves the environment.

Why would the United States want to use sugarcane ethanol?

It's good for energy security. Sugarcane ethanol is a reliable option for diversifying energy supplies and improving U.S. energy security so Americans are not dependent on any one source or country.

It's also good for the environment. Sugarcane ethanol emits significantly less heat-trapping greenhouse gases than gasoline and other types of ethanol. It is one of the few fuels designated by the U.S. EPA as an "advanced renewable fuel" because it reduces carbon dioxide emissions by more than 60 percent compared to gasoline on a full lifecycle basis.

I don't have a car that runs on ethanol. Why should I care?

You probably put ethanol in your tank the last time you filled up at a gas station. Most gasoline sold in the United States today contains at least 10% ethanol, and vehicles built after 2001 can use gasoline containing up to 15% ethanol. American cars and trucks consumed around 19 billion gallons of renewable fuel in 2017, making ethanol an important part of the U.S. fuel supply.

What's the difference between corn ethanol and sugarcane ethanol?

Ethanol is made by fermenting sugars. Most ethanol manufactured in the United States comes from corn, while Brazilian ethanol is made from sugarcane. Generally, ethanol produced from one crop or another has no chemical differences. However, starchy crops like corn must first be broken down into simple sugars before they can be used to produce ethanol (a two-step process). Since sugarcane produces these simple sugars naturally, the production process for sugarcane ethanol is more efficient (a one-step process) and creates important benefits compared to other plants.

What does it mean to be an advanced biofuel?

The term comes from the Renewable Fuel Standard (RFS), a law requiring increasing volumes of renewable fuel in the U.S. energy supply. The U.S. EPA designates which fuels qualify as advanced

biofuels, and the key condition for such designation is demonstrating lifecycle greenhouse gas reductions of at least 50% compared to gasoline. EPA identified Brazilian sugarcane ethanol as an advanced biofuel in 2010 after determining it reduces greenhouse gas emissions by 61%. Stimulating innovation and development of advanced biofuels is a primary goal of the RFS.

Are there other advanced biofuels besides sugarcane ethanol?

Biodiesel and biofuels produced from cellulosic material (any plant fiber, including the non-starch parts of corn plants such as stalks and cobs) also qualify as advanced biofuels. The United States consumes around two billion gallons of biodiesel and renewable diesel annually, and several manufacturing sites designed for commercial production of cellulosic biofuels are now operating in the U.S. and Brazil. The U.S. EPA maintains a list of approved renewable fuel pathways that can be used to produce biofuels that qualify as advanced under the RFS.

How much sugarcane ethanol do Americans use? Can Brazil supply enough to meet our advanced biofuel needs?

Sugarcane ethanol plays a modest but important role supplying the United States with clean renewable fuel. Over the past six years, nearly 1.3 billion gallons of sugarcane biofuel imported from Brazil flowed into American vehicles. During this time, sugarcane ethanol comprised only one percent of all renewable fuel consumed by Americans, but provided more than six percent of the U.S. advanced biofuel supply.

In terms of future supply, Brazilian sugarcane producers are making investments to expand production, so Americans can depend on more advanced biofuel from sugarcane. Brazil currently produces more than seven billion gallons of sugarcane ethanol each year and typically makes between 400 million and 800 million gallons of its annual production available for other countries to import.

What is RenovaBio?

Brazil is poised to launch a government program that will support the continued development and use of low-carbon, clean biofuels. This new initiative, dubbed RenovaBio, will play a key role in meeting Brazil's ambitious commitments made under the Paris climate agreement.

Brazilian consumers have enjoyed subsidized gasoline prices for many years which weakens demand for ethanol. RenovaBio will alter this dynamic and encourage fuel distributors to boost sales of biofuels versus gasoline by requiring them to lend a hand meeting greenhouse gas reduction goals.

How will this program work?

RenovaBio will seem familiar to Americans because it is modeled on lessons learned from both the U.S. Renewable Fuel Standard and California's Low Carbon Fuel Standard. The program will assign a Carbon Intensity (CI) rating to the specific biofuel produced at each mill. This system will reward producers who invest in manufacturing biofuels as cleanly and efficiently as possible. Fuel distributors will then be encouraged to buy more of this clean biofuel through requirements to purchase Emissions Reductions Certificates (or CBIOs in Portuguese). Mills that produce fuels with low CI rankings will receive a larger allotment of CBIOs compared to mills producing fuels with higher carbon intensity.

Brazil's government will adjust the number of available CBIOs and distributor purchasing requirements each year. Fuel producers and distributors will then be allowed to buy and sell CBIOs on the open market – introducing a new price signal that places a value on low-carbon emissions. By providing more predictability for investors and incentives for technological innovation, RenovaBio should help stabilize Brazil's sugarcane sector and benefit global biofuels players.

Why has Brazil imposed a tariff on foreign ethanol?

UNICA views Brazil's tariff-rate quota (or TRQ) for ethanol as a temporary solution to what sugarcane producers hope will be a temporary problem. In the run-up to this decision, China and Europe closed their biofuel markets making Brazil the only market that was open to receive excess ethanol supplies. Because of this domino effect, ethanol imports to Brazil skyrocketed in 2017. Brazil received triple the amount of foreign ethanol last year compared to 2016 and five times more than 2015 imports.

Long term, UNICA wants to address this challenge by removing trade barriers and working with other international leaders to expand free trade of biofuels. But in the short term, Brazil's government needed to act for both environmental and economic reasons.

UNICA advocated and the Brazilian government adopted a temporary response that still allows a large volume of duty-free exports into Brazil. Up to 158.5 million gallons of foreign ethanol can still enter Brazil annually without paying any import tax. For two years starting last September, volumes above that amount – which equals Brazil's average annual imports from 2014 to 2016 – will pay a 20 percent tax. But there is no limit on the total volume of foreign ethanol that can be exported to Brazil.

In practice, the TRQ maintains what was the status quo before the 2017 spike, while protecting Brazil's environment and economy from such an unwelcome surge generated by other closed markets.

Does the production of Brazilian sugarcane ethanol contribute to deforestation in the Amazon rainforest?

No. The Amazon does not offer the proper climatic, economic or logistical conditions for commercial sugarcane production.

The Brazilian government has established an Agro-Ecological Zoning (AEZ) program for sugarcane that, among other things, prohibits sugarcane expansion on the country's most sensitive biomes, namely the Amazon and Pantanal wetlands and Upper Paraguay River basin. At the same time, the government established 64.7 million hectares that are suitable for sugarcane expansion, an equivalent to 7.5 percent of the Brazilian territory. Only one percent of Brazil's land is currently used for sugarcane production.

Most sugarcane for ethanol production (90%) is harvested in South-Central Brazil, over 1,500 miles from the outside edge of the Amazon. That distance is roughly equivalent to the mileage between Manhattan and Dallas. The remainder (10%) is grown in Northeastern Brazil, about the same distance from the Amazon's easternmost fringe.

What's your position on EPA's proposed Renewable Enhancement and Growth Support (REGS) rule?

EPA intends this lengthy rule to increase the economics and efficiency of producing biofuels, particularly advanced and cellulosic biofuels, a goal Brazil's sugarcane biofuel producers broadly support. However, categorizing undenatured imported ethanol as a "biointermediate" will impose significant and costly new obligations that may be infeasible for Brazilian sugarcane producers to meet. The unintended consequence may be blocking American access to this important source of advanced biofuel and unfairly treating foreign products differently from domestic biofuel supplies.

We urge EPA to clarify that the biointermediate definition does not include undenatured sugarcane ethanol fuel that is subsequently imported into the United States and denatured. This exception will not alter the status quo for foreign ethanol producers, but would allow EPA to provide the biointermediate provisions to the few US-based producers to which they should logically apply. Both the Renewable Fuels Association and the Advanced Biofuels Association agree that undenatured ethanol should not be treated like a biointermediate.



Learn more at www.sugarcane.org/rfs