

# WHAT IS SUGARCANE ETHANOL?



Sugarcane ethanol is a renewable, low-carbon fuel produced from sugarcane. It is renewable because, unlike coal or oil, it is produced from a plant and can be continually harvested and re-grown. Compared to other types of ethanol available today, sugarcane ethanol is usually the least expensive option and offers the greatest reduction in greenhouse gas emissions.

Sugarcane ethanol would help Americans save money at the pump, cut U.S. dependence on Middle East oil and improve the environment.

The U.S. Environmental Protection Agency recently confirmed sugarcane ethanol's superior environmental performance by categorizing it as an "Advanced Renewable Fuel" – an important category of superior biofuels that is mandated to make up 21 billion gallons of America's fuel supply by 2022. This is equal to about 15% of today's gasoline market.

## WHAT ARE THE KEY ATTRIBUTES OF SUGARCANE ETHANOL?

- **Clean** – Compared to gasoline, sugarcane ethanol cuts greenhouse gases by more than 60%. That's better than any other liquid biofuel produced in large quantities today. Sugarcane is also highly sustainable, as it only needs to be replanted every 5-7 years. And it is energy intensive, producing seven times more energy compared to corn in ethanol production.
- **Affordable** – Sugarcane ethanol is typically less expensive than other renewable fuels currently available in large quantities, at a historical average price of \$0.45 less per gallon compared to corn ethanol over the past five years.
- **Secure** – Sugarcane ethanol is one more good option for diversifying U.S. energy supplies and improving energy security, so Americans are not reliant on any one source or country and less reliant on oil.
- **Unavailable due to an Unfair Tax on Imported Ethanol** – Unfortunately, Americans are not fully benefitting from this affordable alternative because the U.S. government places a 54-cents-per-gallon import tax on ethanol from other countries – effectively making it too expensive to import and sell sugarcane ethanol in the United States.



Mechanized harvesters have helped increase sugarcane ethanol production and yield. Sugarcane ethanol cuts greenhouse gases by more than 60% compared to gasoline.

## WHAT DIFFERENTIATES SUGARCANE ETHANOL FROM OTHER ETHANOL?

The main difference between sugarcane ethanol and other sources of ethanol is that it offers the greatest reduction in greenhouse gas emissions and has a more efficient production process.



Sugarcane ethanol is made by fermenting sucrose, the basic building block of sugars, from plants.



It takes less energy to manufacture ethanol directly from sugarcane (a one-step process) than from starch in corn (a two-step process).



Starch first must be broken down into simple sugars before it can be used to produce ethanol. Sugarcane already contains the necessary sugars, so the production process is more efficient.

## WHY DO WE BLEND ETHANOL IN GASOLINE?

Most gasoline sold today in the U.S. has been blended with up to 10% ethanol to help achieve:

- **Cleaner Air** – Ethanol adds oxygen to gasoline fuel therefore reducing air pollution and harmful emissions in tailpipe exhaust. Compared to gasoline, sugarcane ethanol cuts greenhouse gas emissions by at least 60%.
- **Better Performance** – Ethanol is a high-octane fuel that helps prevent engine knocking and generates more power in higher compression engines.
- **Reduced Oil Consumption** – Ethanol reduces America's dependence on fossil fuels and Middle East oil. Sugarcane ethanol is one more good option for diversifying energy supplies and improving U.S. energy security.



Photo Credit: Vishal Majithia