

## Environmental Benefits of High-Octane Low-Carbon Fuel



#DYK ethanol is a renewable, environmentally friendly octane booster that reduces greenhouse gases and other harmful tailpipe emissions?

High-octane fuel made from corn provides a cleaner source of octane compared to petroleum-based products that have been shown to contribute to thousands of mortalities in the United States.<sup>1</sup>

Ethanol today reduces greenhouse Gas (GHG) emissions by 40%-45%. Additionally, high-octane fuels unlock increased gains in vehicle efficiency, equating to more miles per gallon, and a further reduction of GHG emissions.

Mid-level ethanol blends (15%-40%) used in high-octane fuels are capable of reducing carbon dioxide emissions by 4% – 10%.<sup>2</sup>

Studies have shown mid-level ethanol blends, such as E30, would lower GHG emissions from oil refineries between 12%-27% due to lower crude oil throughput and by limiting the intensive refining processes needed to produce petroleum-based octane additives.<sup>3</sup>

#DYK higher ethanol blends are recognized as a Clean Air Choice® by the American Lung Association?

1. Source: <https://ethanolrfa.org/environment/>
2. (page 3 first paragraph - <https://ethanolrfa.org/wp-content/uploads/2018/10/Final-SAFE-ProposedRule-Comment-Letter.pdf>) & Thomas L. Darlington et al., Modeling the Impact of Reducing Vehicle Greenhouse Gas Emissions with High Compression Engines and High Octane Low Carbon Fuels, SAE Tech. Paper 2017-01-0906, at 4, 6 (Mar. 28, 2017)
3. (Kwasniewski, Vincent & Blieszner, John & Nelson, Richard. 2015. Petroleum refinery greenhouse gas emission variations related to higher ethanol blends at different gasoline octane rating and pool volume levels. Biofuels, Bioproducts and Biorefining. 10. n/a-n/a. 10.1002/bbb.1612.)

Learn more about the benefits of high-octane low-carbon fuel at [ncga.com/octane](http://ncga.com/octane)

