

2016 U.S. ETHANOL EXPORTS AND IMPORTS

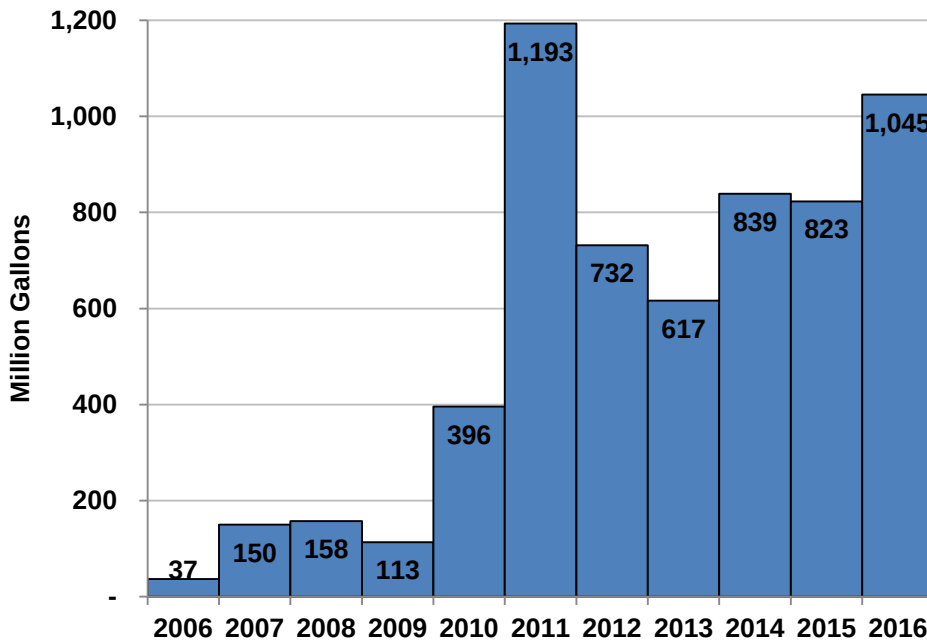
STATISTICAL SUMMARY



2016 U.S. ETHANOL EXPORTS



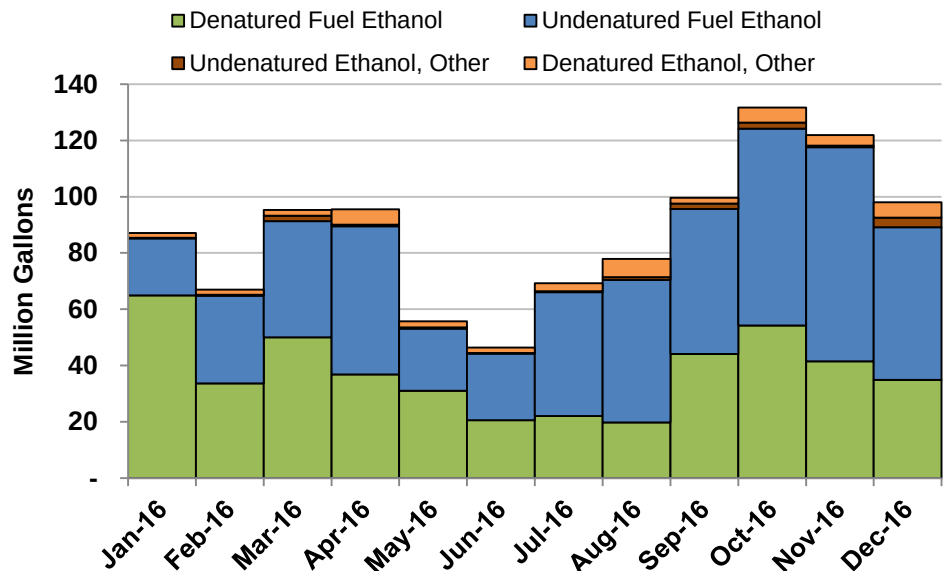
U.S. Ethanol Exports, 2006-2016



In 2016, the U.S. exported **1.05 billion gallons** of ethanol—the second-highest annual total on record. In 2016, American-made ethanol was exported to **more than 50 countries** on all six inhabited continents around the world.

2016 Monthly Ethanol Exports, by Type

Undenatured ethanol for fuel use accounted for **51%** of total exports in 2016, overtaking denatured fuel ethanol as the leading ethanol export product for the first time ever. Meanwhile, denatured ethanol for fuel use made up **43%**. Denatured and undenatured ethanol for industrial uses totaled **5%**.

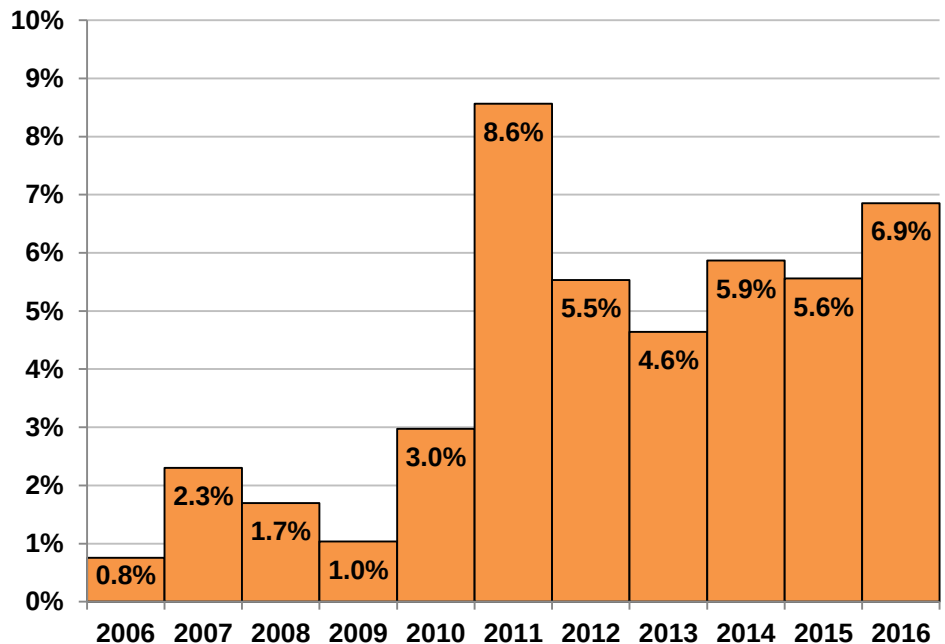


2016 U.S. ETHANOL EXPORTS

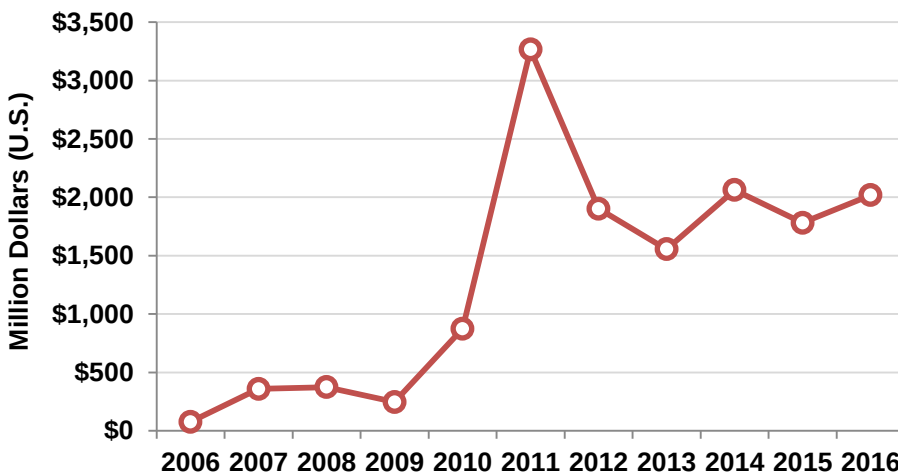


Export Share of U.S. Ethanol Production

An estimated **6.9%** of total U.S. ethanol production was exported in 2016, the second-highest share in history and highest in five years.



Value of U.S. Ethanol Exports

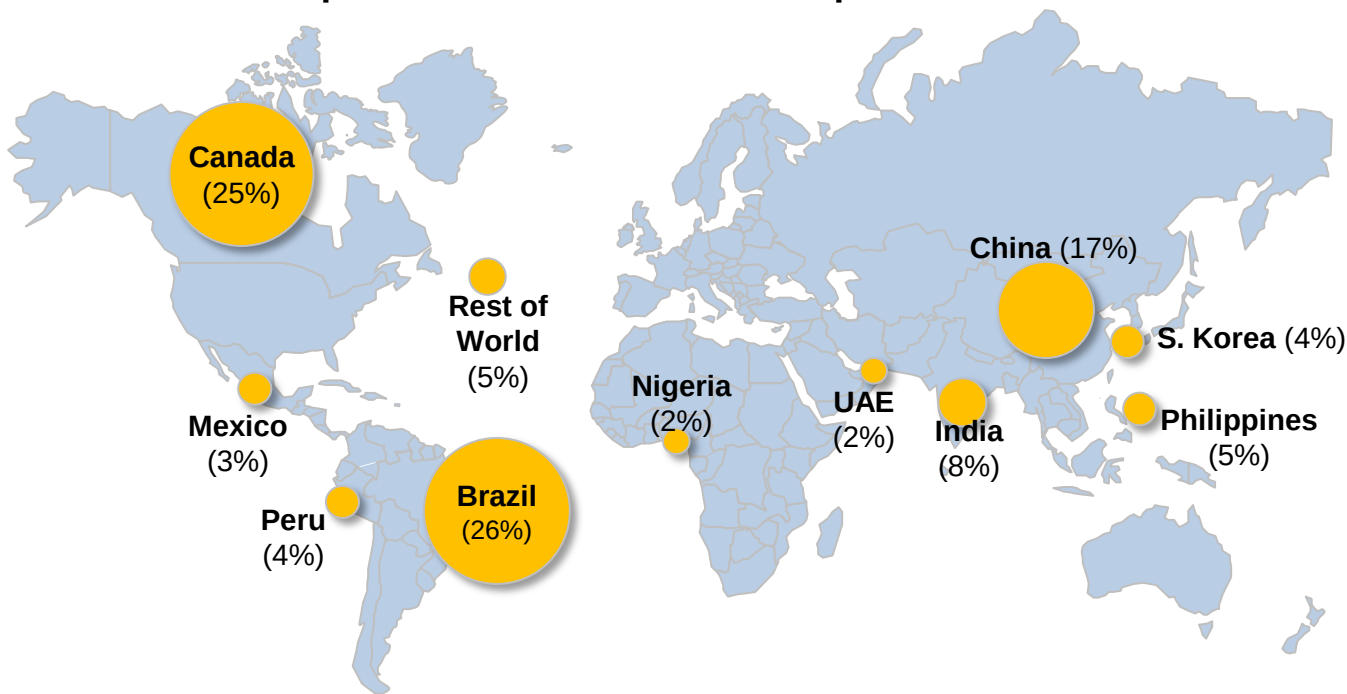


U.S. ethanol exports were valued at **\$2.02 billion** in 2016, up 13% from 2015 and the third-highest on record.

2016 ETHANOL EXPORTS: TOP MARKETS



Top markets for U.S. ethanol exports in 2016



2016 ethanol export volumes to the Top 10 markets are shown in the table below, along with a comparison to 2015 volumes. All figures shown in millions of gallons, unless otherwise noted.

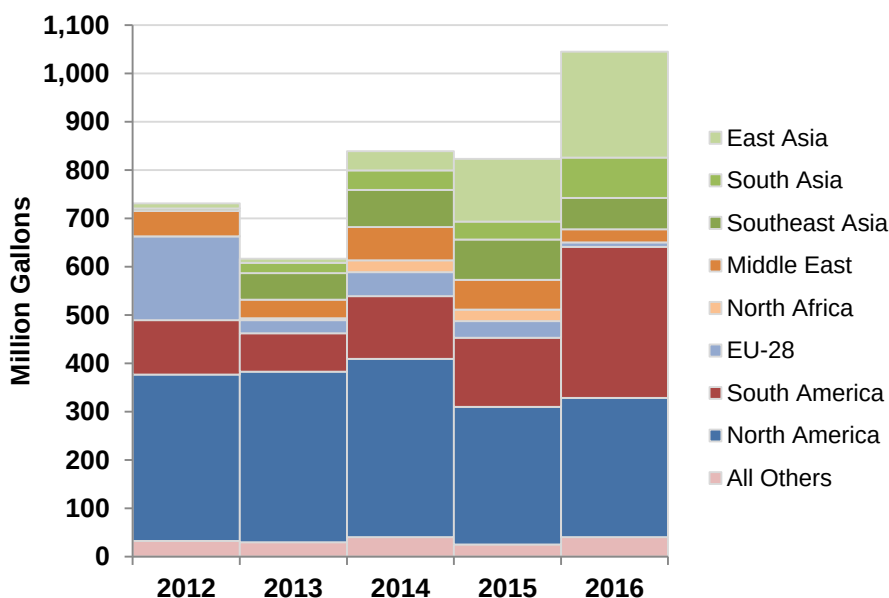
Country	Den. Fuel	Und. Fuel	Den. Other	Und. Other	2016 Total	2015 Total	Change
Brazil	21.2	245.8	-	0.1	267.0	112.6	+137%
Canada	235.5	-	23.6	0.2	259.3	251.3	+3%
China	144.2	34.8	-	0.1	179.1	73.9	+142%
India	-	83.2	-	0.4	83.6	37.2	+125%
Philippines	-	54.1	-	0.2	54.3	73.0	-26%
Peru	21.6	20.5	-	-	42.1	27.5	+53%
South Korea	7.2	25.5	0.1	6.7	39.5	55.1	-28%
Mexico	-	26.3	0.5	2.2	29.0	33.7	-14%
Nigeria	3.6	2.7	15.8	-	22.1	6.7	+230%
U. Arab Emir	8.1	12.0	-	-	20.2	28.6	-29%

U.S. ETHANOL EXPORTS: SHIFTING MARKETS

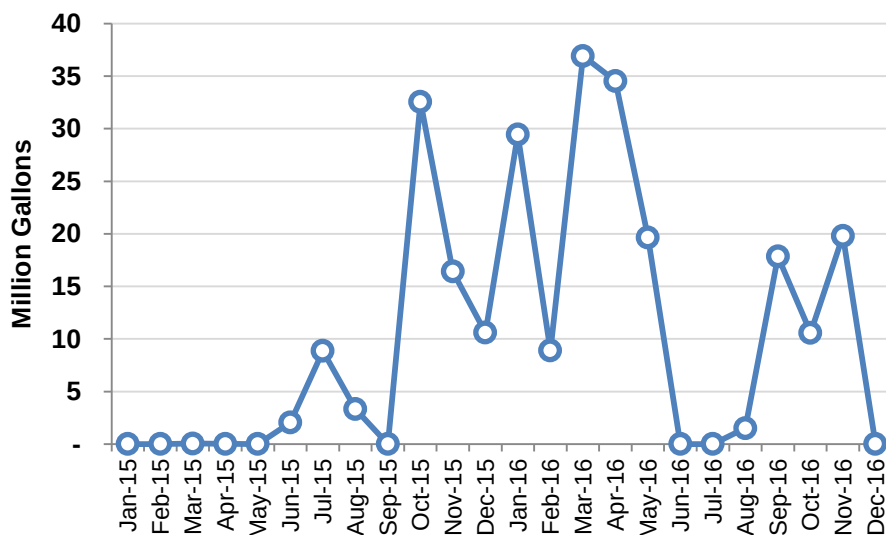


Exports to **South America** and **East Asia** boomed in 2016, growing 118% and 69%, respectively, over 2015 levels. Meanwhile, exports to **Southeast Asia**, the **Middle East**, and **North Africa** slumped. After importing 174 million gallons in 2012, the **EU-28** brought in just 10 million gallons in 2016.

U.S. Ethanol Exports by Region



2015-2016 Monthly U.S. Ethanol Exports to China

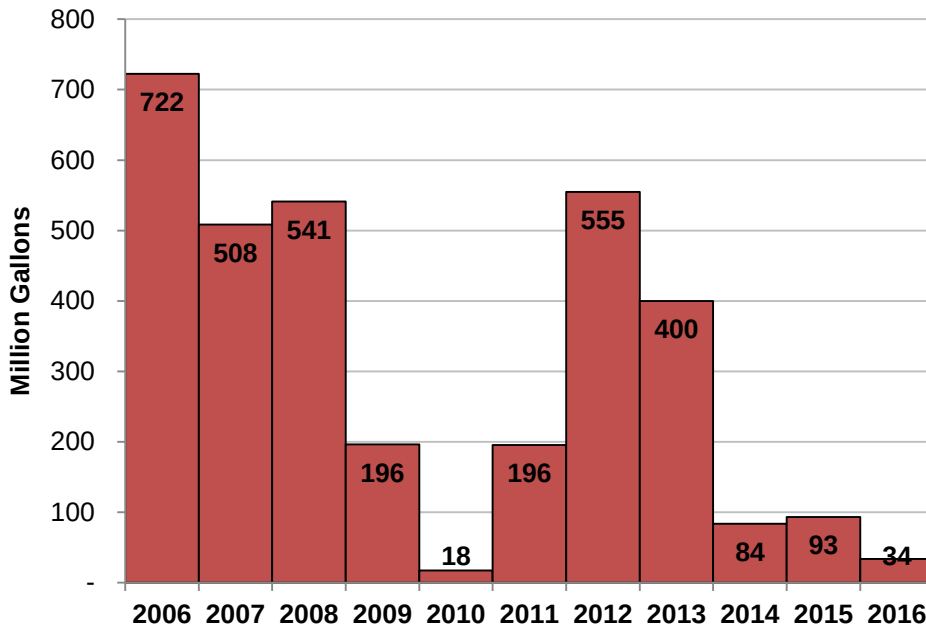


U.S. ethanol exports to China remained **highly volatile** in 2016. China imported 110 million gallons in the first four months of the year, dropped out of the market in June and July, returned in the fall, then exited again in December.

2016 U.S. ETHANOL IMPORTS



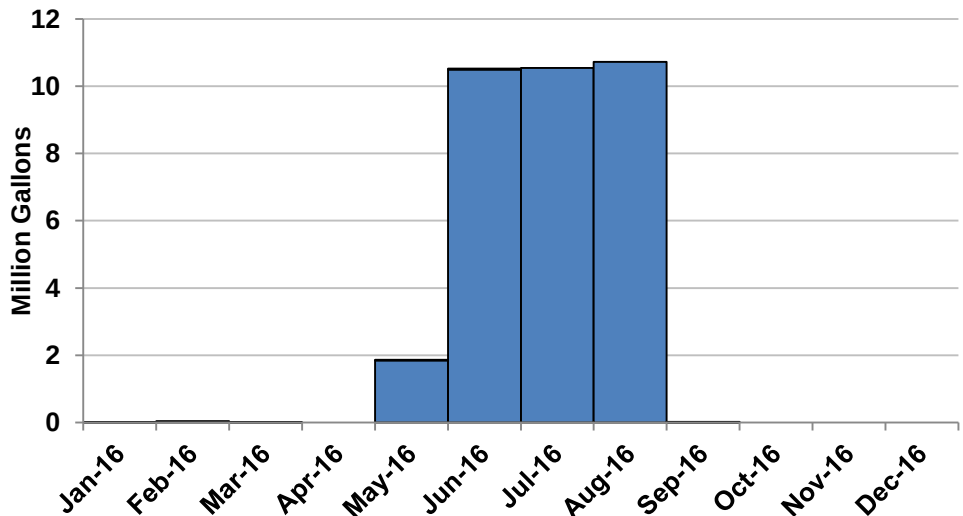
U.S. Fuel Ethanol Imports, 2006-2016



In 2016, the U.S. imported just **34 million gallons** of fuel ethanol, down **64%** from 2015 and the lowest annual total in six years. U.S. ethanol imports have averaged just **70 million gallons** annually over the past three years.

2016 Monthly Ethanol Imports, by Type

■ Undenatured Fuel Ethanol ■ Denatured Fuel Ethanol



Undenatured ethanol for fuel use accounted for **more than 99%** of total imports in 2016, while denatured ethanol for fuel use made up less than **1%**. More than 99% of 2016 imports were received in the May-August period.

2016 U.S. ETHANOL IMPORTS



Top Suppliers of U.S. Ethanol Imports (million gallons)

Country	2016 Total	2015 Total
Brazil	31.8	85.4
Netherlands	-	3.2
Spain	-	1.9
Guatemala	1.8	1.8
All Others	0.1	0.9
TOTAL	33.7	93.2

Brazil saw its shipments to the U.S. **fall by 63%** in 2016, but it remained as the leading source of U.S. fuel ethanol imports. Guatemala was the only other supplier to register meaningful volumes in 2016. Top suppliers of U.S. fuel ethanol imports are shown in the table at left, along with a comparison to 2015 volumes.

Top Ports of Entry for 2016 U.S. Ethanol Imports

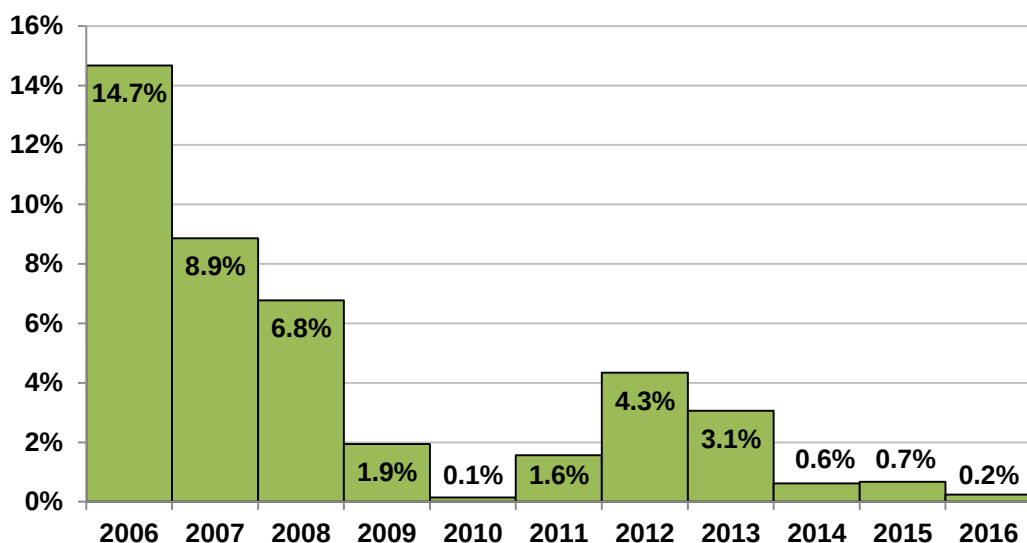
California ports received **99.7%** of U.S. fuel ethanol imports in 2016, compared to just **38%** in 2015. The share of imports received through the port of New York fell from 13% in 2015 to less than 1% in 2016. Historical import hubs like Miami, Tampa, and Houston recorded no fuel ethanol imports in 2016.



IMPORTS RELATIVE TO USE & NET EXPORTS



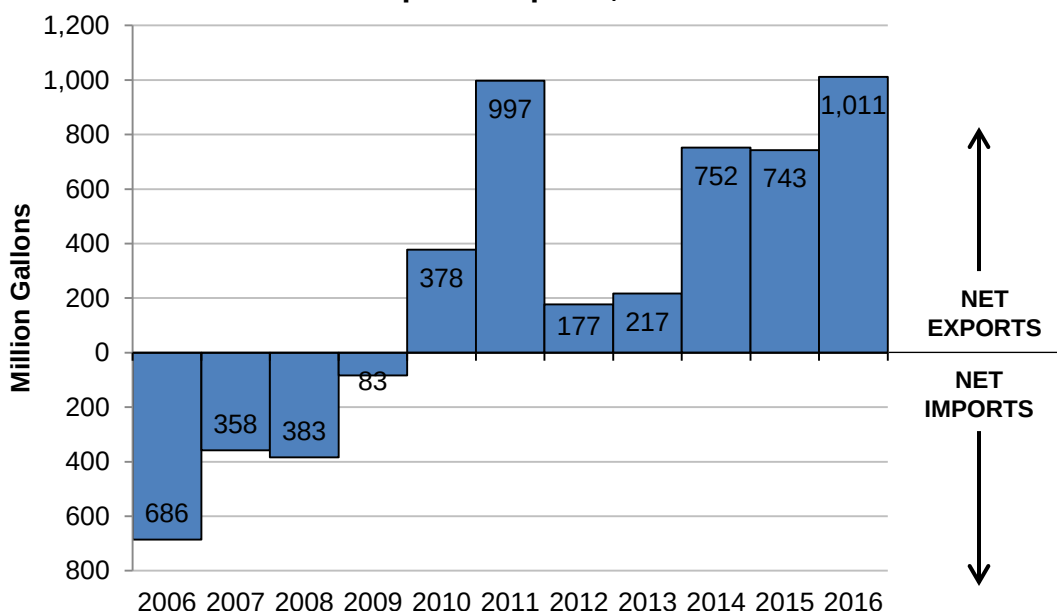
U.S. Ethanol Imports: Share of Total U.S. Ethanol Consumption



Imports accounted for **far less than 1%** of U.S. ethanol consumption in for the third year in a row. Ethanol import reliance is down dramatically from the 2005-2008 timeframe.

U.S. Net Ethanol Imports/Exports, 2005-2015

The U.S. set a **new record for net exports in 2016**, barely edging out 2011's total. The U.S. extended its streak as a net exporter of ethanol to seven years.



ABOUT THE DATA IN THIS REPORT



U.S. Ethanol Export Data

- The export data in this report includes exports classified under the following Harmonized Tariff Schedule (HTS) codes:
 - **2207200010**: Ethyl alcohol and other spirits, denatured, of any strength: For fuel use
 - **2207106010**: Undenatured ethyl alcohol of an alcoholic strength by volume of 80 percent vol. or higher: For non-beverage purposes: For fuel use
 - **2207200090**: Ethyl alcohol and other spirits, denatured, of any strength: Other
 - **2207106090**: Undenatured ethyl alcohol of an alcoholic strength by volume of 80 percent vol. or higher: For non-beverage purposes: Other
- 2207200090 and 2207106090 are included in this report because there is some anecdotal evidence that exports of ethanol intended for fuel use are sometimes classified under these codes. In any case, ethanol classified under these codes represented just 5% of the 2016 U.S. exports discussed in this report.

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Sources

- All data in this report comes from the U.S. Census Bureau, U.S. Department of Commerce, U.S. Department of Agriculture, U.S. International Trade Commission, and U.S. Energy Information Administration

The Renewable Fuels Association publishes **monthly** summaries of export and import data for ethanol and distillers dried grains on its award-winning [E-Blog](#).

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