

2016 U.S. ETHANOL CO-PRODUCT EXPORTS AND IMPORTS

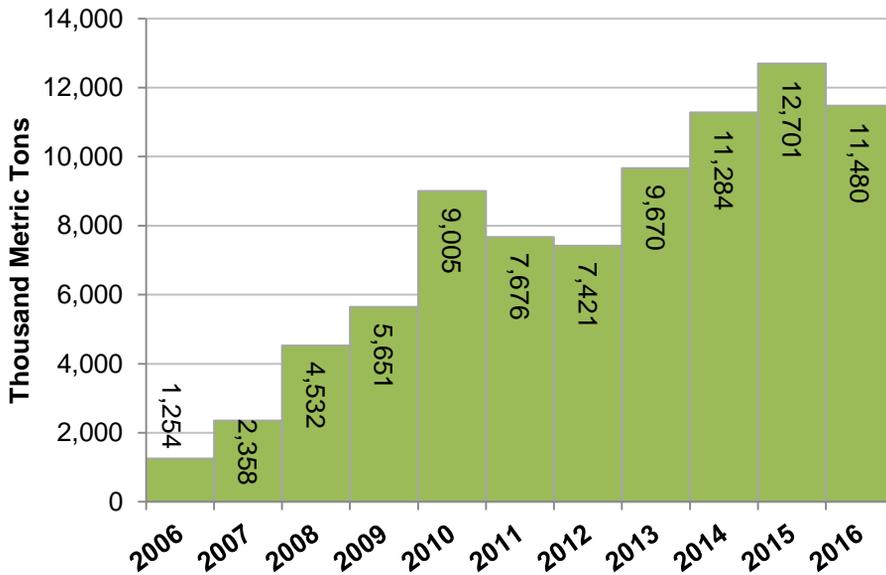
STATISTICAL SUMMARY



2016 U.S. DISTILLERS GRAINS EXPORTS

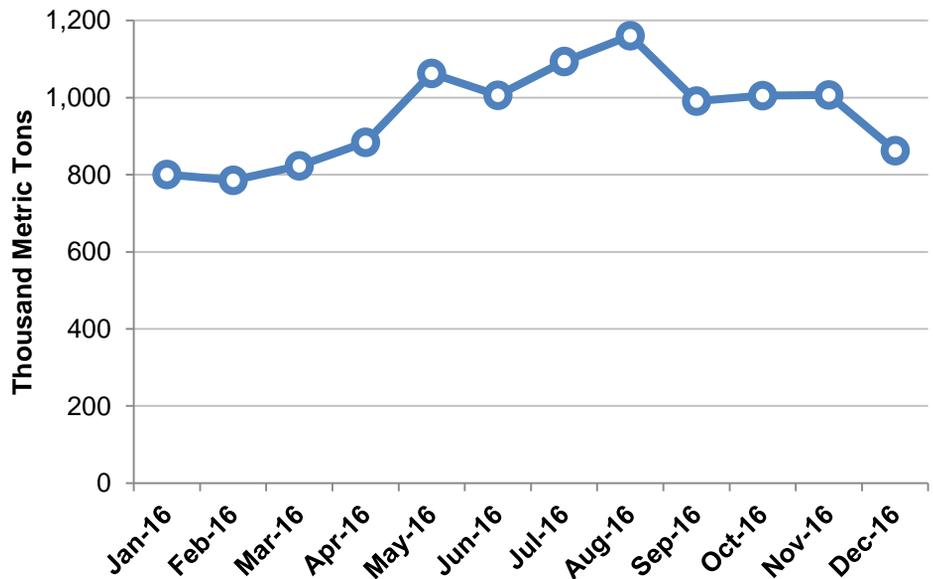


Annual U.S. Distillers Grains Exports, 2006-2016



U.S. exports of distillers grains (DG)—a co-product of dry mill ethanol production—totaled **11.48 million metric tons (MMT)** in 2016, down 10% from 2015's record high but still the second-highest ever. Exports were shipped to **50 countries** on **five continents** last year, demonstrating the global reach of U.S.-produced DG.

2016 Monthly Distillers Grains Exports



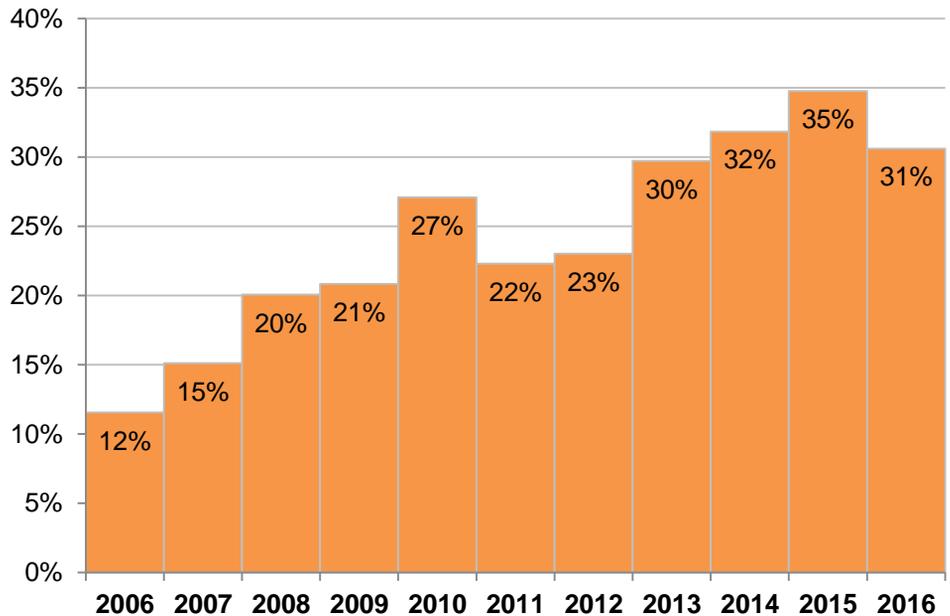
Monthly exports in 2016 followed **normal seasonal patterns**, with outbound shipments peaking in the summer months and receding in the winter. Exports hit a high mark of **1.16 MMT** in August.

2016 U.S. DISTILLERS GRAINS EXPORTS

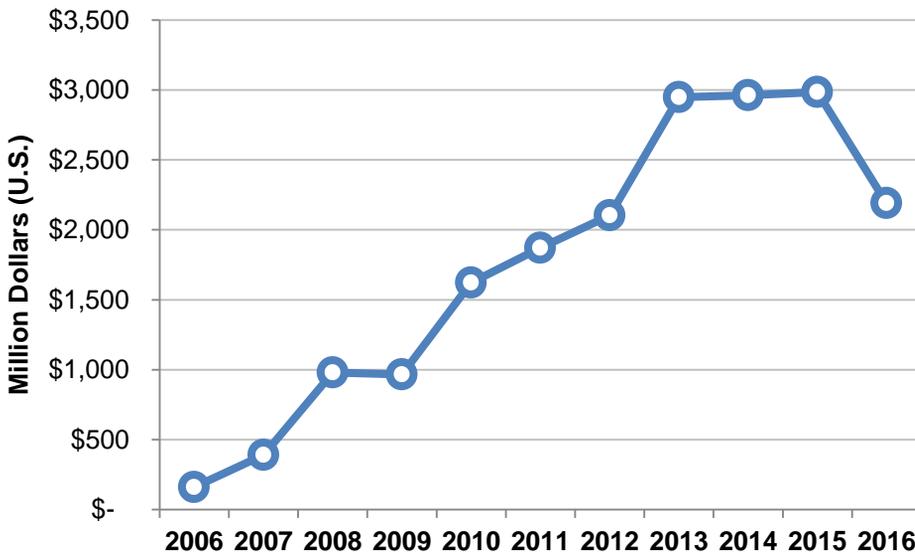


Export Share of U.S. Distillers Grains Production

An estimated **31%** of U.S. DG production was exported in 2016, meaning one out of every three tons produced was shipped to foreign markets. That was down from 35% in 2015 and the first annual decline in five years.



Value of U.S. Distillers Grains Exports

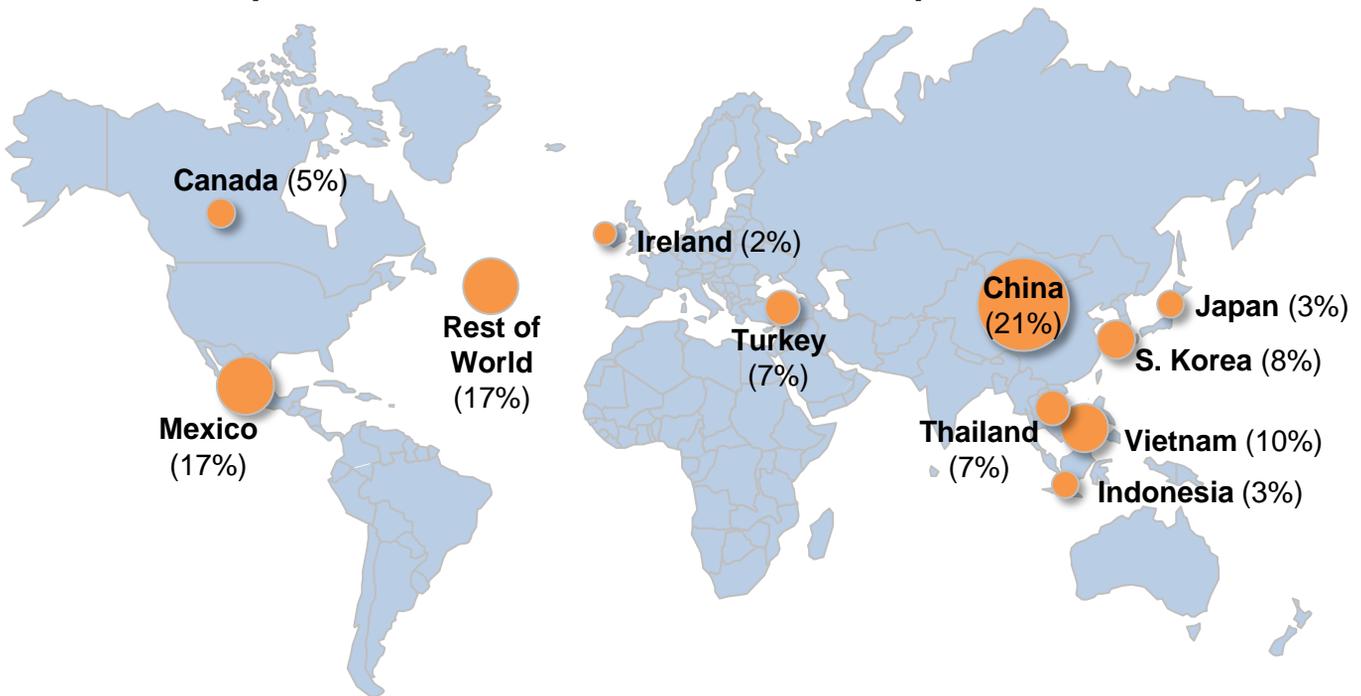


U.S. DG exports had a total value of **\$2.19 billion** in 2016, **down 27%** from 2015 and the lowest in four years. Export prices averaged **\$191 per MT**, **down 19%** from 2015 and the lowest in six years.

U.S. DISTILLERS GRAINS EXPORTS: TOP MARKETS



Top Markets for U.S. Distillers Grains Exports in 2016



| Country | 2016 Total | 2015 Total | Change |
|-----------|-------------|------------|--------|
| | Thousand MT | | |
| China | 2,373 | 6,462 | -63% |
| Mexico | 1,910 | 1,650 | +16% |
| Vietnam | 1,197 | 650 | +84% |
| S. Korea | 924 | 637 | +45% |
| Turkey | 790 | 208 | +280% |
| Thailand | 781 | 399 | +96% |
| Canada | 515 | 512 | +1% |
| Indonesia | 357 | 231 | +55% |
| Japan | 318 | 241 | +32% |
| Ireland | 256 | 248 | +3% |

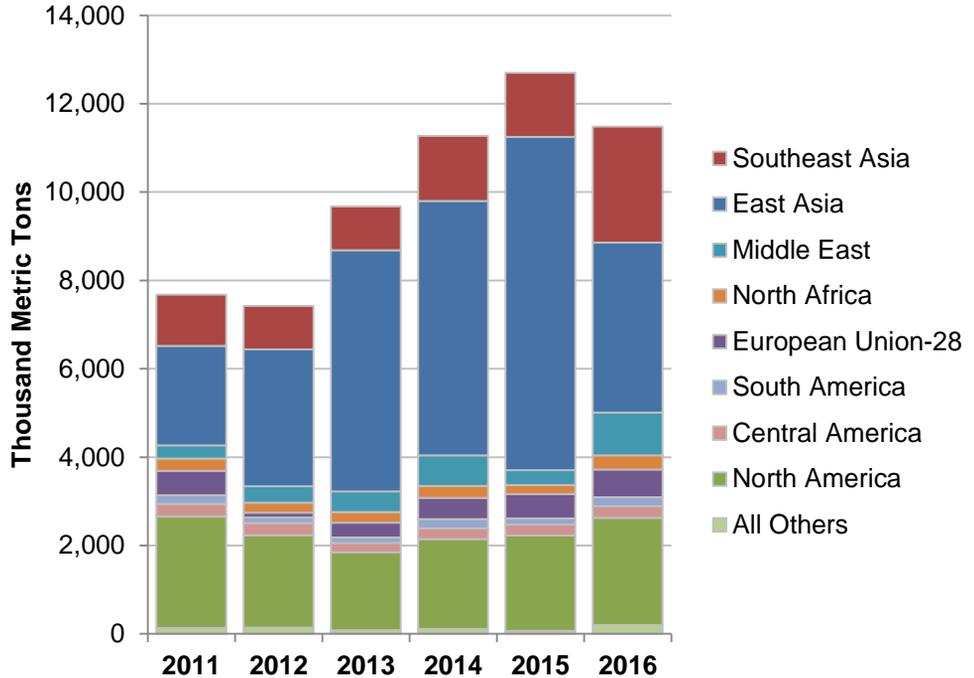
DG export volumes to the Top 10 markets in 2016 are shown in the table at left, along with a comparison to 2015 volumes. **China received 21%** of 2016 exports, while **Mexico (17%)**, **Vietnam (10%)**, and **South Korea (8%)** were other top markets. Exports to China plunged 63% compared to 2015, while shipments to the other nine countries in the Top 10 experienced growth.

U.S. DISTILLERS GRAINS EXPORTS: SHIFTING MARKETS



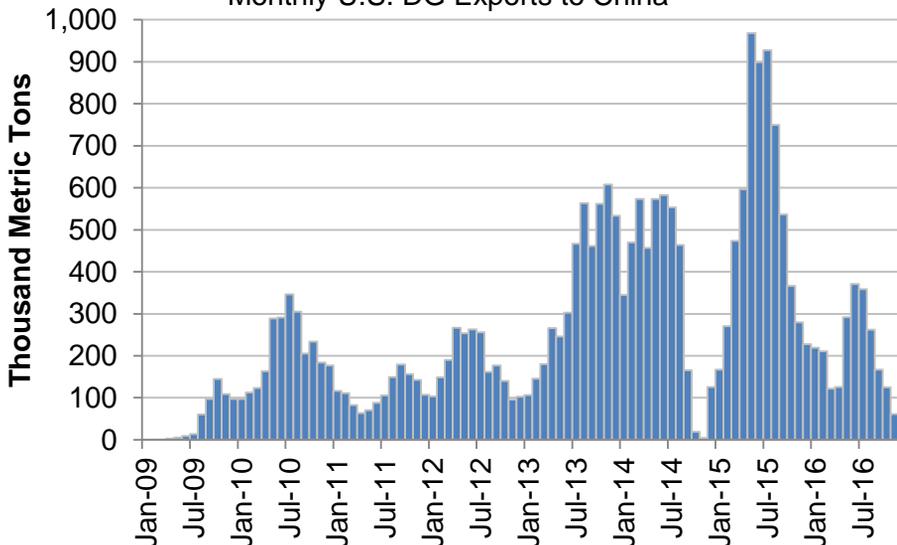
U.S. Distillers Grains Exports by Region

DG exports to East Asia fell dramatically, as **China reduced imports**. Meanwhile, export growth was experienced in all other regions, with Southeast Asia and the Middle East showing the biggest increases in U.S. DG imports.



The Rise and Fall of China:

Monthly U.S. DG Exports to China

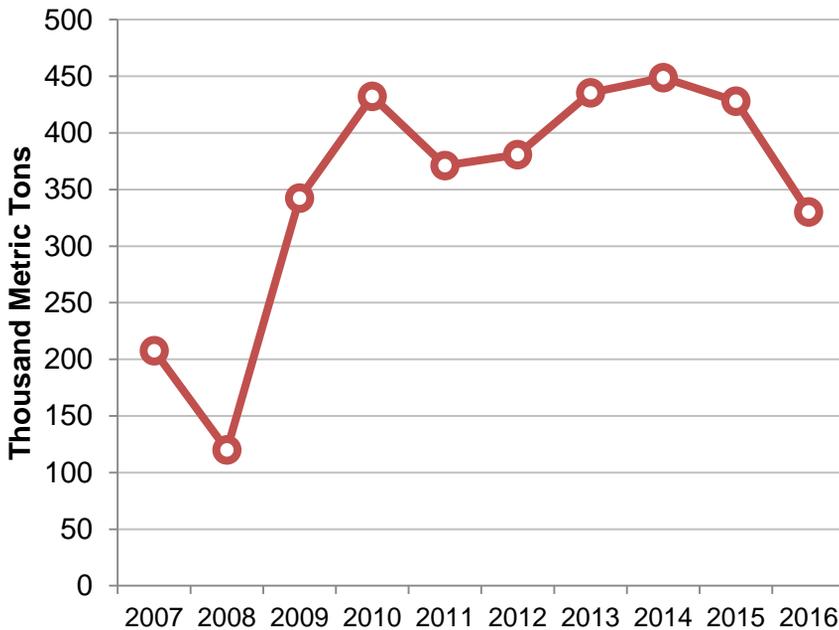


China remained the top market for U.S. DG exports in 2016, but it also remained the **most volatile**. China's dumping investigation and adoption of preliminary duties led to a major decline in imports from the U.S. in 2016. China's final duty rates were even higher than the preliminary rates, meaning DG exports to China are expected to fall further.

2016 U.S. DISTILLERS GRAINS IMPORTS



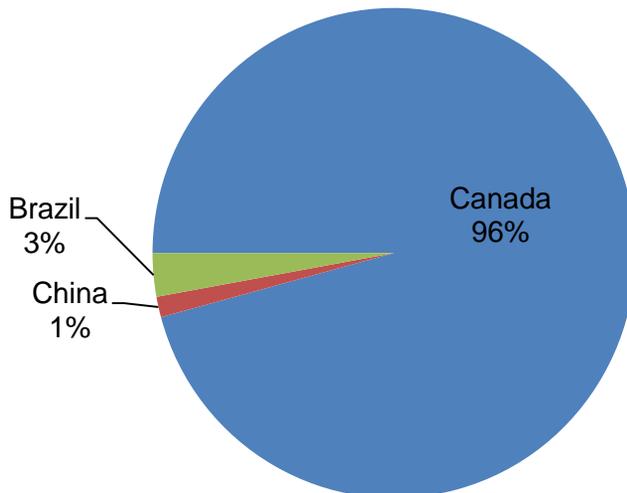
Annual U.S. Distillers Grains Imports



The United States imported **330,300 MT** of DG in 2016, **down 23%** from the 2015 total and the lowest in eight years. U.S. DG imports were equivalent to just **2.8%** of DG exports.

2016 Top Suppliers of U.S. DG Imports

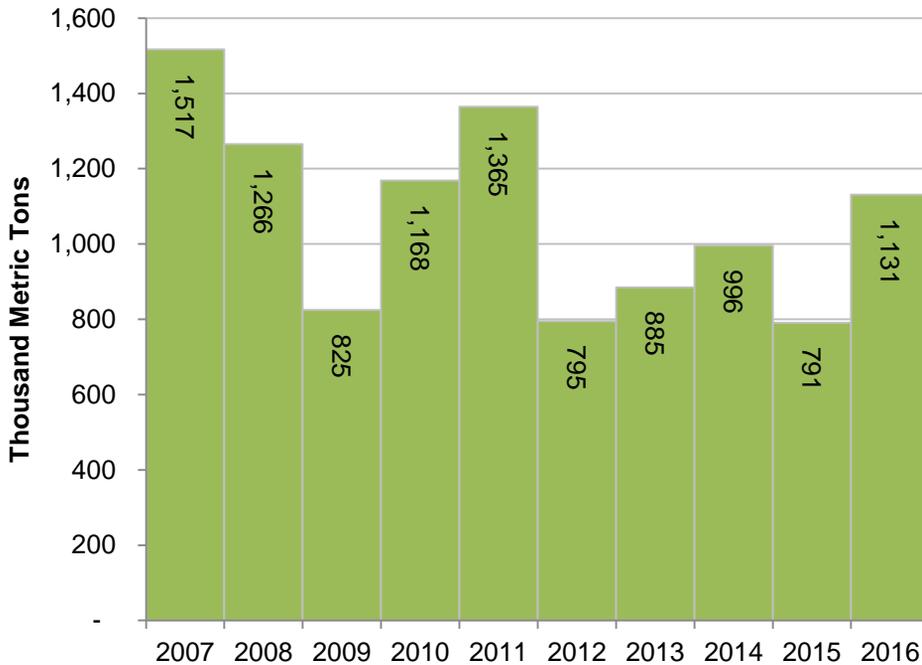
Canada was again the top supplier of U.S. DG imports in 2016, shipping **316,020 MT** to the United States. **Brazil** and **China** were the only other two DG exporters to the U.S. market in 2015.



2016 U.S. EXPORTS OF OTHER CO-PRODUCTS

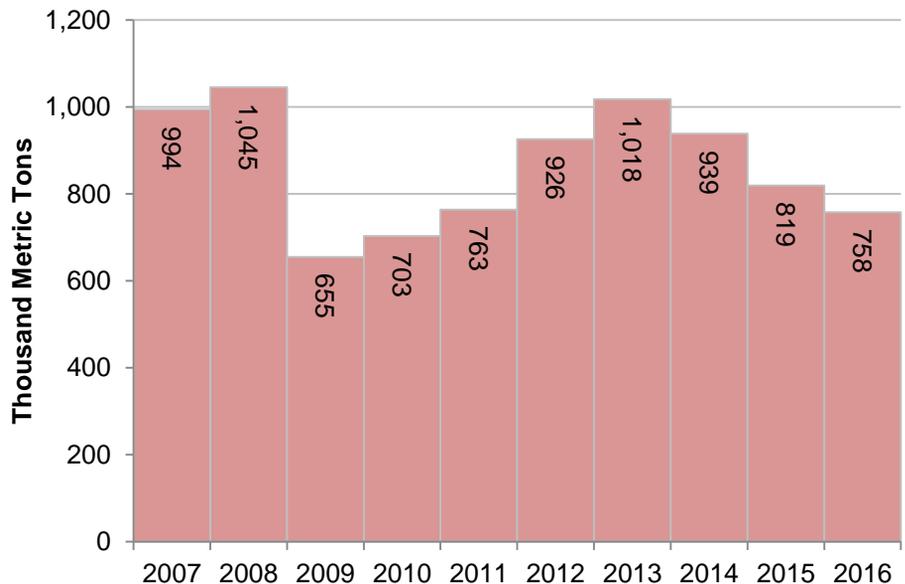


Annual U.S. Corn Gluten Feed Exports, 2007-2016



U.S. exports of **corn gluten feed (CGF)**—a co-product from wet mill ethanol—rebounded to a five-year high in 2016. CGF exports were **up 43%** over 2015 levels. **Ireland** was the top market, receiving **27%** of total U.S. CGF exports, while Turkey and Israel were other top markets.

Annual U.S. Corn Gluten Meal Exports, 2007-2016

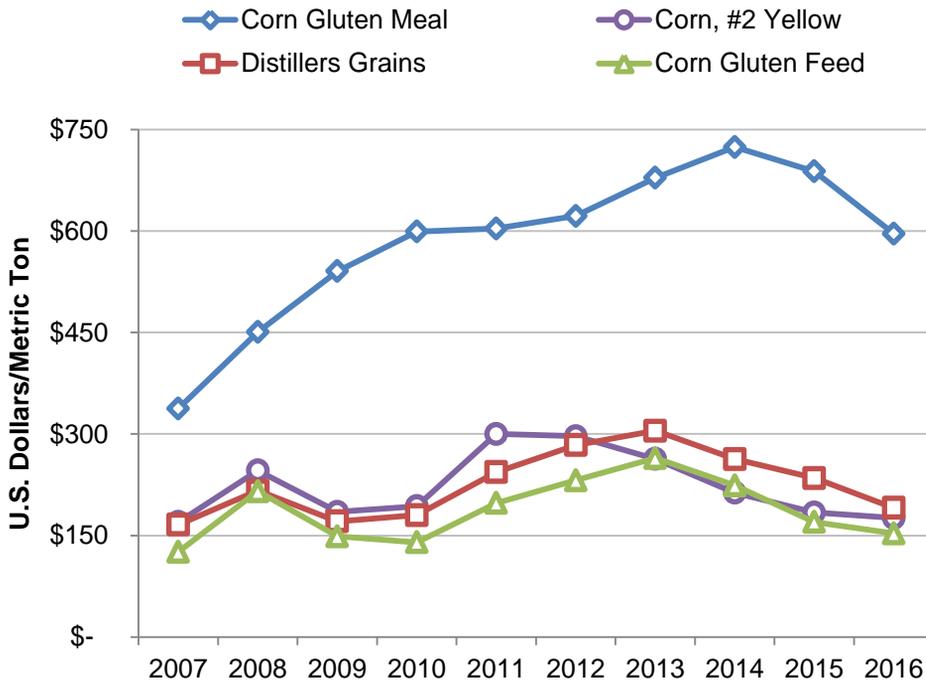


U.S. exports of **corn gluten meal (CGM)**—a co-product from wet mill ethanol production—**fell for the third straight year in 2016**. **Indonesia** was the top destination for U.S. CGM, receiving **28%** total U.S. exports.

CO-PRODUCT PRICES AND IMPACT ON CORN EXPORTS

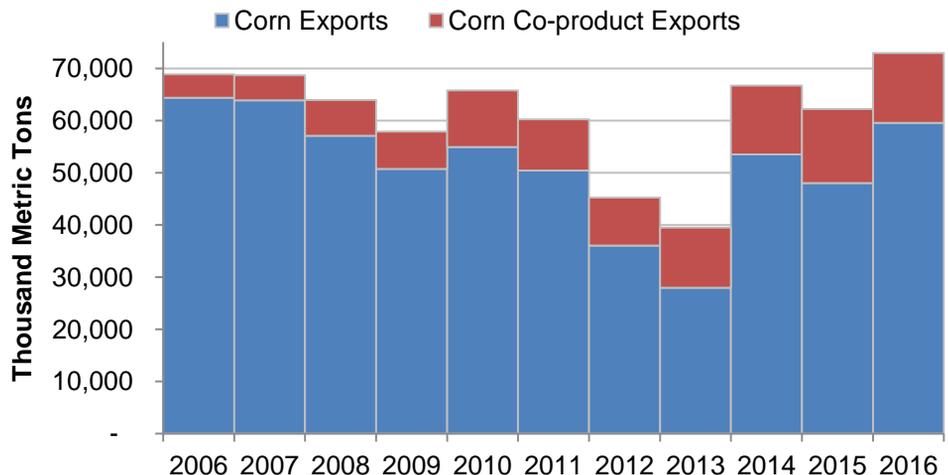


Co-product Export Prices Compared to Corn Export Price



Prices for all co-product exports **receded** again in 2016. The spread between corn and DG prices narrowed considerably during 2016, with DG export prices at 108% the price of corn exports. By comparison, DG prices were at 128% the price of corn in 2015.

Annual U.S. Corn + Co-product Exports, 2006-2016



When co-product exports are appropriately considered, total exports of corn and corn-derived co-products reached record heights of 73 million MT in 2016.

ABOUT THE DATA IN THIS REPORT



U.S. Co-product Export and Import Data

- The export and import data in this report include products classified under the following Harmonized Tariff Schedule (HTS) codes:
 - **2303300000**: Brewing or distilling dregs and waste (Distillers Grains)
 - **2303100010**: Residues of starch manufacture and similar residues: Corn gluten feed
 - **2303100020**: Residues of starch manufacture and similar residues: Corn gluten meal

Sources

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

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

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