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Weekly Outlook: Exports of Ethanol and Distillers' Grains Remain Strong

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U.S. exports of fuel ethanol were generally small prior to 2010. For 2010, the U.S. Energy Information Administration (EIA) estimated exports at 398.5 million gallons. Exports peaked at just under 1.2 billion gallons in 2011 when Brazilian ethanol supplies were in short supply. Exports declined to 619 million gallons in 2013, but recovered to 846 million gallons in 2014.

EIA data are not yet available for December 2015, but based on EIA data through November and Census data for December, it appears that fuel ethanol exports in 2015 were near 844 million gallons, about equal to exports in 2014. Canada is the largest importer of U.S. ethanol, accounting for about 30 percent of the total in 2015. Other large importers in 2015 included Brazil (14 percent), the Philippines (9) percent, China (8 percent), and South Korea (7 percent). In all, 77 countries are identified as importing some U.S. ethanol in 2015.

Imports of fuel ethanol, as reported by the EIA, totaled less than 16 million gallons in 2010, reached a peak of 494 million gallons in 2012 when the U.S had a relatively small corn crop and high corn prices, and declined to just under 75 million gallons in 2014. Based on EIA data through November and Census data for December, it appears that imports of fuel ethanol were near 93 million gallons in 2015. Almost all of those imports were from Brazil.

Based on EIA monthly data for January through November and weekly EIA data for December, domestic ethanol production in 2015 was record large near 14.76 billion gallons, about three percent more than the previous record production in 2014. Based on weekly ethanol stocks estimates, it appears that domestic inventories grew by about 95 million gallons during 2015. Based on these estimates, and the estimates of exports and imports described above, domestic ethanol consumption totaled about 13.914 billion gallons in 2015. That calculation is about 3.5 percent larger than consumption in 2014. Monthly EIA data for December is scheduled for release on February 29 and that data will allow for a more accurate estimate of production, trade, stocks, and consumption for 2015.

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Exports of U.S distillers grains first exceeded one million short tons in 2005. Exports grew to about 9.9 million tons in 2010, declined in 2011 and 2012, but reached a record 13.8 million tons in 2015. China was the largest importer of U.S. distillers grains in 2015, accounting for 50 percent of the total. Other large importers included Mexico (13 percent), Vietnam (5 percent), and South Korea (5 percent). A total of 45 countries are identified as importing some U.S. distillers grains in 2015.

The USDA began estimating ethanol co-product production in October 2014 with the release of the first *Grain Crushings and Co-Product Production* report in February 2015. The report released on February 1, 2016 contained production estimates for December 2015 and provided the first full calendar year of dry mill and wet mill co-product production estimates. Those co-products include a number of categories, including distillers dried grains (DDG) and distillers dried grains with solubles (DDGS). Production of those two products in 2015 is estimated at 27.7 million tons. Based on Census estimates, exports (13.8 million tons) accounted for about half of total production of distillers grains in 2015 with the other half accounted for by domestic consumption. Domestic consumption also included large quantities of other co-products, including distillers wet grains (DWG), corn germ meal, corn gluten feed, corn gluten meal, and wet corn gluten feed.

Exports of fuel ethanol accounted for about 5.7 percent of estimated U.S. ethanol production in 2015, representing about 300 million bushels of ethanol feedstock, mostly corn. The recent sharp decline in gasoline prices that has resulted in ethanol prices being much higher than gasoline prices has raised concerns about the demand for ethanol in both the domestic and export markets. We argued in a recent farmdoc daily article that domestic ethanol consumption will be supported by the RFS mandate even with ethanol prices at a premium to gasoline prices. In fact, with expanding domestic gasoline consumption, the enforcement of the RFS mandate will likely result in growing domestic consumption of ethanol. What about exports? Several importers of U.S. ethanol, including Canada and Brazil, also have mandates for domestic biofuels consumption which will support ethanol consumption in those countries. In addition, the role of ethanol as a low cost octane enhancer (see the recent farmdoc daily article) is likely to support consumption of ethanol even with low gasoline prices. As a result, U.S. ethanol exports are expected to remain large in 2016.

Exports represent a large share of the market for U.S. distillers grains and the export market is dominated by China. U.S. distiller grains represent a low cost feed ingredient for Chinese livestock producers given the high domestic price of corn and restrictions on corn imports. However, as experienced during the period from September 2014 through February 2015, Chinese imports can be influenced by unpredictable import restrictions. Such restrictions could become an issue again in 2016 if China pursues policies to protect domestic interests. Restrictions on Chinese imports, along with expanding U.S. production of distillers grains associated with expanding ethanol production, would increase the domestic supply of distillers' grains and could provide some downward pressure on prices.

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