



## Weekly Outlook: Prospects for Corn Use for Ethanol Production

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The USDA will release a new forecast of the size of the 2016 U.S. corn harvest on October 12, reflecting updated forecasts of both acreage and yield. The new production forecast is expected to confirm prospects for a very large harvest, but perhaps slightly smaller than the September forecast of 15.093 billion bushels.

Corn prices following harvest will be influenced by the pace of consumption and the likely size of year-ending stocks. The September WASDE report projected that exports, feed and residual use, and corn use for ethanol production during the current marketing year will all be larger than during the 2015-16 marketing year. Projected increases are 13.6 percent for exports, 8.7 percent for feed and residual use, and 1.3 percent for ethanol use. The pace of export inspections and export sales during the first few weeks of the marketing year has been brisk. Cumulative export inspections as of the week ended September 29 were 77 percent larger than during the same period last year and unshipped export sales were nearly twice as large as unshipped sales of a year earlier.

The pace of feed and residual use of corn will not be known until the USDA's December 1, 2016 *Grain Stocks* report is released in the second week of January. Feed and residual use during the last quarter of the 2015-16 marketing year, however, exceeded that of a year ago by 90 million bushels (17 percent) and was the largest use for that quarter in seven years. Low corn prices and expanding livestock numbers should result in large feed and residual use during at least the first half of the current marketing year.

While the expected increase in corn used for ethanol production is relatively small, deviations from the projected level will still impact the magnitude of year ending stocks. Based on ethanol production estimates provided by the U.S. Energy Information Administration, U.S. fuel ethanol production during the 2015-16 corn marketing year totaled 15.136 billion gallons. That is a year-over-year increase of about 470 million gallons (3.2 percent). Imports of fuel ethanol of 47 million gallons were equal to those of the previous year and exports of 876 million gallons were 20 million gallons larger. Ethanol inventories increased by 56 million gallons and domestic use of 14.25 billion gallons was 440 million gallons (3.2 percent) larger than during the previous year.

While domestic ethanol production increased by 3.2 percent during the 2015-16 corn marketing year, the USDA's [Grain Crushings and Co-Products Production](#) reports indicate that corn used for fuel ethanol

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production totaled only 5.206 billion bushels, an increase of 0.1 percent from use during the previous year. The small increase reflects increased year-over-year use of other feedstocks, particularly sorghum. The USDA does not report sorghum use for every month in order to avoid disclosing data for individual operations. Reported use of sorghum for fuel ethanol production during the 2015-16 corn marketing year totaled 137 million bushels, compared to 18 million bushels during the previous year. Combined corn and sorghum use during the past year was 2.4 percent larger than reported use during the previous year. The increase was smaller than the increase in ethanol production as the implied yield of ethanol per bushel of feed stock increased 0.8 percent, from 2.81 gallons to just over 2.83 gallons.

The use of corn for ethanol production during the current marketing year will be influenced by a number of factors. These include the magnitude of domestic gasoline consumption; the rate of increase in the domestic consumption of higher ethanol blends; the magnitude of fuel ethanol trade; the change in the level of ethanol stocks; the use of other feed stocks, particularly sorghum, to produce ethanol; and the ethanol yield per unit of feedstock. Domestic gasoline consumption will be influenced by the price of crude oil and gasoline prices. If those prices remain near current levels, gasoline consumption would be expected to continue to increase, perhaps as much as two percent. The retail price of higher ethanol blends, particularly E85, appears to have become much more competitive with E10 in recent months. If prices remain competitive, some modest increase in consumption of those higher blends would be expected, but will not likely add substantially to total domestic ethanol consumption this year. Another small increase in ethanol production efficiency would moderate any increase in feed stock consumption this year. An increase of 300 million gallons in domestic ethanol consumption would add about 110 million bushels to feedstock consumption. An unchanged level of year-ending stocks would reduce ethanol production by 56 million gallons and reduce feed stock consumption by 20 million bushels.

The magnitude of ethanol imports and exports have been very stable the past two years and substantial changes are not expected this year. With a smaller sorghum crop in 2016 and higher sorghum prices relative to corn prices, use of sorghum for ethanol production might continue the decline seen in August. A decline of 25 to 50 million bushels for the year seems likely.

Taken together, these factors point to use of about 5.345 billion bushels of corn for ethanol production during the current marketing year, 70 million larger than the current USDA projection. Ethanol production is off to a fast start, with production in September about four percent larger than in September 2015.

## References

USDA, National Agricultural Statistics Service. *Grain Crushings and Co-Products Production* (October 2016). Released October 3, 2016.

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1899>