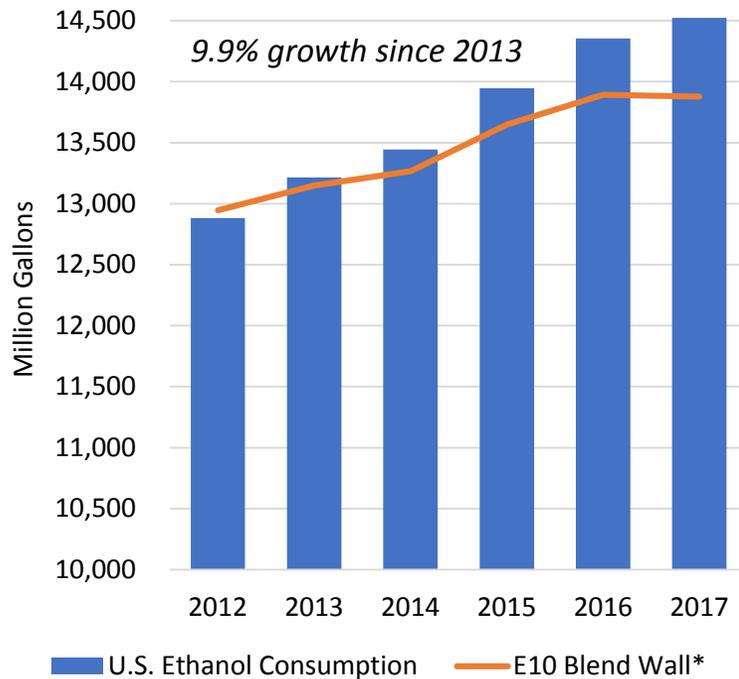


**Do RINs support corn prices? Yes!** RINs facilitate discounting of higher ethanol blends, which stimulates increased ethanol demand, which stimulates increased corn demand, which supports higher corn prices.



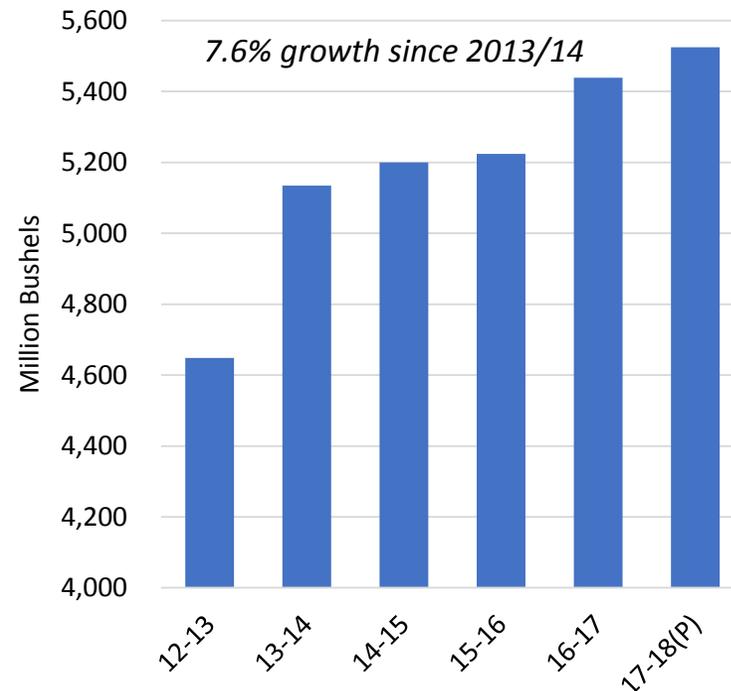
**U.S. Ethanol Consumption vs. "Blend Wall"**



\*E10 "blend wall" as defined by API: 9.7% of U.S. gasoline demand

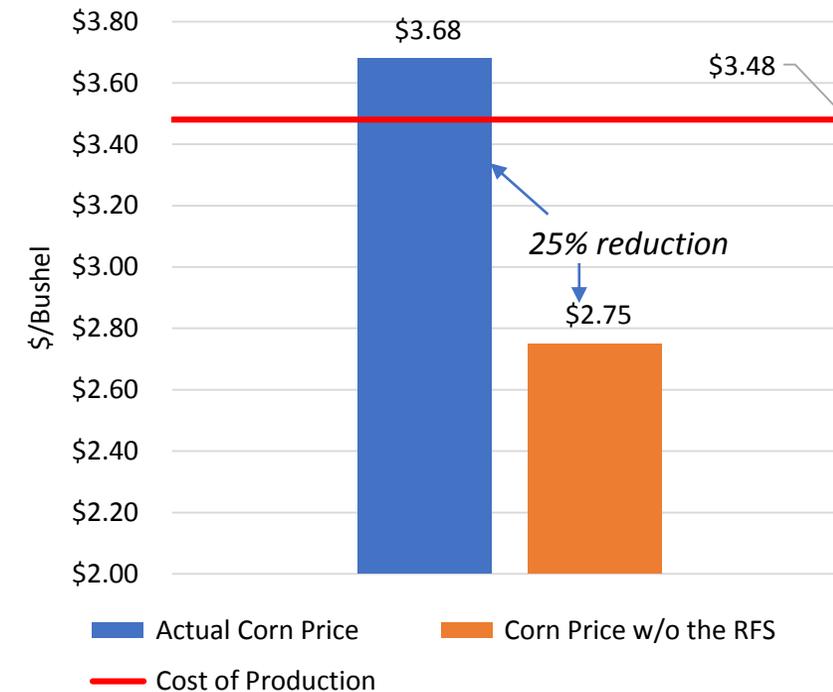
Source: EIA

**Corn Demand for Ethanol and Co-products**



Source: USDA

**2015 Corn Price: Actual vs. without RFS in Place**



Source: Corn price with and without RFS from: Moschini, Lapan, Kim; The Renewable Fuel Standard in Competitive Equilibrium: Market and Welfare Effects, *American Journal of Agricultural Economics*, Volume 99, Issue 5, 1 October 2017, Pages 1117–1142; Cost of production from: USDA.

**Do RINs support corn prices? Yes!** RINs facilitate retail discounting of higher ethanol blends, which stimulates increased ethanol demand, which stimulates increased corn demand, which supports higher corn prices.

### Actual market conditions

CURRENT BULK MARKET DYNAMICS	\$/gal.
Ethanol price (w/RIN attached)	\$1.45
RIN price (detached when ethanol blended)	\$0.65
<b>Net ethanol cost to blender</b>	<b>\$0.80</b>
Gasoline price	\$1.75
<b><u>COST TO MAKE E85</u></b>	
Ethanol (77% of blend)	\$1.12
Gasoline (23% of blend)	\$0.40
Sub-Total	\$1.52
RIN Value (77% of RIN)	\$0.50
Total after deducting RIN value	<b>\$1.02</b>
<b><u>COST TO MAKE E10</u></b>	
Ethanol (10% of blend)	\$0.15
Gasoline (90% of blend)	\$1.58
Sub-Total	\$1.73
RIN value (10% of RIN)	\$0.07
Total after deducting RIN value	<b>\$1.66</b>

In this case, **E85 wholesale price is 38% below E10 wholesale price.** Even after transportation costs and retail mark-up, a discount of this magnitude **drives increased consumption of blends above E10.\*** In turn, this **drives increased demand for corn and supports corn prices.**

\*Research shows that E85 demand increases dramatically when the fuel is discounted by 20% or more relative to E10.

In this case, **E85 wholesale price is 16% below E10 wholesale price.** After transportation costs and retail mark-up, a discount of this magnitude **is likely insufficient to drive significant demand for blends above E10.\*** In turn, the market is effectively capped at 10%, **flatlining demand for corn and undermining corn prices.** Any RFS requirements above E10 blend wall would be met with 10-ct waiver credits.

### Market conditions with 10-ct RIN cap

BULK MARKET DYNAMICS w/RIN CAP	\$/gal.
Ethanol price (w/RIN attached)	\$1.45
RIN price (detached when ethanol blended)	\$0.10
<b>Net ethanol cost to blender</b>	<b>\$1.35</b>
Gasoline price	\$1.75
<b><u>COST TO MAKE E85</u></b>	
Ethanol (77% of blend)	\$1.12
Gasoline (23% of blend)	\$0.40
Sub-Total	\$1.52
RIN Value (77% of RIN)	\$0.08
Total after deducting RIN value	<b>\$1.44</b>
<b><u>COST TO MAKE E10</u></b>	
Ethanol (10% of blend)	\$0.15
Gasoline (90% of blend)	\$1.58
Sub-Total	\$1.73
RIN value (10% of RIN)	\$0.01
Total after deducting RIN value	<b>\$1.72</b>