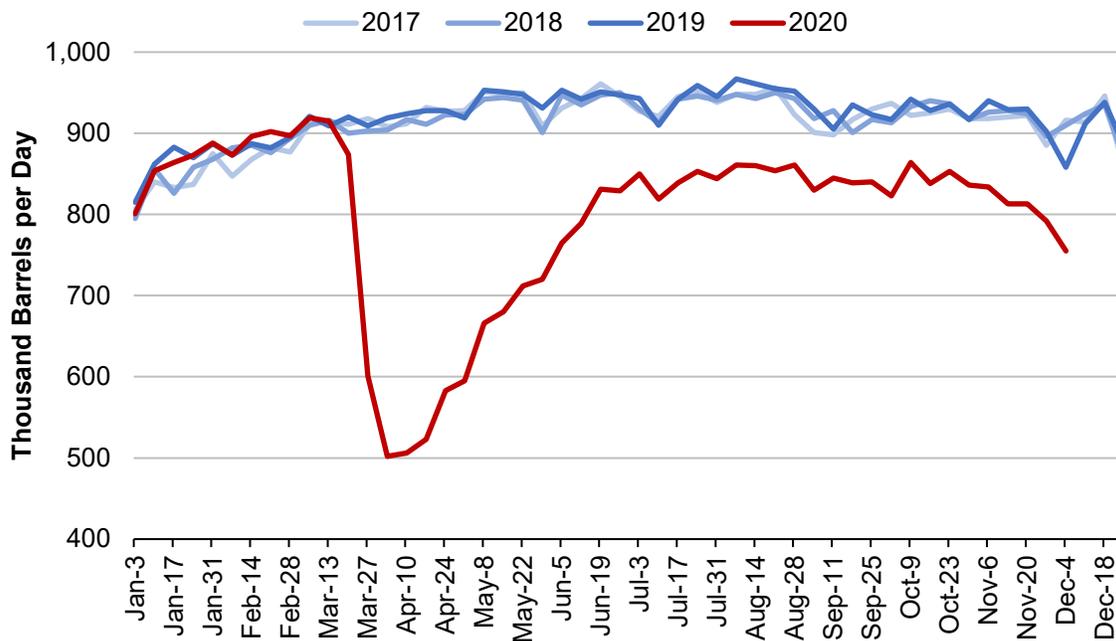


IMPACT OF COVID-19 ON THE ETHANOL INDUSTRY

December 9, 2020

The COVID-19 pandemic caused a dramatic reduction in the consumption of gasoline and ethanol beginning in the spring of 2020. The low point occurred in April, when ethanol production and consumption fell by nearly 50% compared to the last few years (Exhibit 1). Volumes rebounded but never reached normal levels, and they have declined again this fall as the pandemic has worsened. Some production facilities remain idle while others are running below capacity, and the economic impact to the industry has been severe.

Exhibit 1: Refiner & Blender Net Inputs of Ethanol



Source: U.S. Energy Information Administration

The cumulative decline in ethanol production is estimated to have been 2.0 billion gallons (BG) from March to November 2020. As a result, the output of coproducts such as distillers grains, a livestock feed ingredient, has fallen proportionally. Additionally, the industry's usage of corn has been reduced by 700 million bushels.

The reduction in demand has also had a dramatic negative effect on the prices of ethanol and other transportation fuels. Based on an analysis by the RFA, it is

estimated that the price of ethanol was reduced by more than \$0.30 per gallon (gal) in both March and April and \$0.08/gal in May, and as a result of worsening conditions this fall ethanol prices were impacted by \$0.11/gal in October and \$0.22/gal in November. This does not imply that the industry was not impacted during the intervening months. Rather, prices approached more typical levels only because inventories were held in check through production cutbacks.

Taking into account the volume and price effects of the pandemic, industry revenues have been reduced by \$3.8 billion to date (Exhibit 2). The decline in ethanol sales has accounted for a large majority of the total impact, as higher prices of coproducts have partially offset the decline in sales volume.

Exhibit 2: Impact on Industry Revenues (\$ Million)

Month	Ethanol Revenues	Distillers Grains Revenues	Total Revenues
March	-\$581	-\$24	-\$605
April	-\$925	-\$59	-\$984
May	-\$672	-\$56	-\$728
June	-\$335	-\$37	-\$372
July	-\$224	\$0	-\$224
August	-\$250	-\$5	-\$255
September	-\$149	-\$8	-\$157
October	-\$183	\$0	-\$183
November	-\$299	\$0	-\$299
Total	-\$3,619	-\$189	-\$3,808

Source: RFA

Gasoline and ethanol consumption are still substantially below pre-pandemic levels, and it is likely that this will persist for a number of months. Volumes are not expected to return to near-normal levels until late spring 2021 at the earliest, when vaccination becomes more prevalent. Moreover, the winter is typically a time when ethanol prices are weak, and the decline in demand has already started to intensify pressure on industry margins. As a result, the economic impact to the ethanol industry and, in turn, the agriculture sector is likely to deepen in the coming months.