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**COVID-19 Impacts on Arkansas’ Agricultural and Rural Economies**

**UPDATE: Gasoline Price Situation and Outlook**

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According to the U.S. Department of Energy, Energy Information Administration (EIA), retail gasoline prices in the third week of July averaged $3.247 for the U.S. as a whole. This was the highest weekly average gasoline price since the second week of October 2014. Gasoline prices have fallen slightly in the past week but remain among the highest in several years. Of course, prices are far above last summer levels, when COVID restrictions sharply curtailed travel and, by extension, demand for gasoline. But prices are also up from pre-COVID levels: July retail gasoline prices have averaged about 15% higher than July 2019 (and over 40% higher than last July). Figure 1 shows weekly national average retail gasoline prices for the past ten years.

Data Source: U.S. Department of Commerce, Energy Information Administration

**Figure 1.** Weekly U.S. Retail Gasoline Price: All Grades, All Formulations,

January 2011 through July 2021

So far this year, gasoline prices have been supported by factors on both the demand and supply sides of the market. Strong demand is clearly related to a resumption of more normal travel behavior following the disruptions of the pandemic. EIA reports weekly product supplied of finished motor gasoline. While this data is collected from suppliers, it essentially measures weekly gasoline consumption and is the closest thing to real-time demand information that exists for this market. Figure 2 shows weekly product supplied volumes for the past four years, illustrating both the massive shock of the pandemic as well as the recovery in demand so far this year.

Gasoline off-take lagged behind pre-pandemic levels from the beginning of widespread shutdowns in late-March/early-April 2020 through just a few weeks ago. A close look at figure 2 reveals that gasoline consumption in 2021 has been notably strong. Gasoline consumption virtually always increases from January (when demand is seasonally weak) to July (when demand is at or near its seasonal peak). This year, consumption increased 23% from January to July. This is the largest seasonal increase in gasoline consumption in EIA data going back to 1992. Over the past ten years, the seasonal increase has averaged right at 10%, less than half of this year’s seasonal gain. Prior to 2021, the largest January-to-July increase in consumption occurred in 2017, when consumption rose by 19%. Notably, in that year, retail gasoline prices fell a couple of percent between January and July. This year, the sharp seasonal increase in off-take has occurred despite the fact that prices have risen by over 30%.

Data Source: U.S. Department of Commerce, Energy Information Administration

**Figure 2.** Weekly U.S. Product Supplied of Finished Motor Gasoline: 2018 through 2021

Higher consumption in spite of higher prices is an unmistakable sign of strong demand. We can get a bit clearer view of what has gone on with summer gasoline demand over the past couple of years by digging deeper into EIA’s product supplied data. Plotting July average weekly product supplied against the real (i.e., inflation-adjusted) retail gasoline price illustrates the inverse relationship between consumption and price characteristic of product demand functions. This is shown in figure 3 below.

The relationship between summer gasoline consumption and price was reasonably stable from 2009 to 2018: lower prices led to higher consumption (and vice versa) in a fairly consistent pattern. Consumption in 2019 was also very much in line with that consistent pattern. Obviously, that price/quantity relationship broke down in 2020: not only were prices very low but consumption was also low despite the lower price. In other words, demand had declined; the whole price/quantity relationship was thrown off so that consumers did not respond to market price in the same way they had been. This was clearly an effect of the pandemic, including both the impact of restrictions that made consumers unable to respond as they might otherwise would have and the voluntary risk-avoidance behavior that changed what consumers were willing to do.

It appears that for 2021, gasoline demand has recovered to something close to the 2009-2018 period. Demand appears to be actually a bit stronger than it was in the pre-pandemic year of 2019. The evidence for this is clear in figure 3: consumption in 2019 and 2021 are almost exactly the same despite the fact that the real retail price of gasoline is almost 10% higher this year compared to 2019.

2019

2020

Data Source: U.S. Department of Commerce, Energy Information Administration and U.S. Bureau of Labor Statistics

**Figure 3.** July Weekly Average Gasoline Consumption vs. Real Retail Gasoline Price:

2009 through 2021

While summer gasoline demand seems to have recovered to pre-pandemic levels, the same can’t be said for supply. Weekly net production of finished motor gasoline is presented in Figure 4.

Data Source: U.S. Department of Commerce, Energy Information Administration

**Figure 4.** Weekly U.S. Refiner/Blender Adjusted Net Production of Finished Motor Gasoline: 2018 through 2021

Weekly production of gasoline has made a strong comeback in 2021, but for the most part, it has continued to lag compared to pre-pandemic production levels. With demand recently out-stripping pre-pandemic levels and supply not quite matching that pace, the difference should show up in changes in gasoline stocks; and that is, in fact, the case. Figure 5 reports weekly ending stocks of gasoline for the past four years.

Data Source: U.S. Department of Commerce, Energy Information Administration

**Figure 5.** Weekly U.S. Ending Stocks of Finished Motor Gasoline: 2018 through 2021

Stocks were on the high side of recent averages in 2020 but have fallen quickly. Gasoline ending stocks for the week ending July 16 (most recent data) were the lowest in EIA data going back to 1992.

Looking ahead, fundamental support for gasoline prices should begin to soften, at least a little. Demand should already be weakening seasonally, a tendency that should accelerate as we move from summer into fall. Unfortunately, we may also see demand soften even more if the current increase in COVID cases leads to a return of restrictions and/or widespread risk avoidance behavior by consumers. Gasoline production should have room to expand. In mid-July, refineries were making use of about 91% of operable capacity. Capacity utilization can hit 97% or better in late-Summer/early-Fall. That would likely be sufficient to relieve current price pressure, though prices are unlikely to fall too much until gasoline stocks recover to something like 2018/2019 levels.