Propane Market Update and Prospects - Late November 2019

By Gregg Ibendahl and Dan O'Brien – November 22, 2019

Introduction

There has been a lot of chatter among farmers the last several weeks about the availability and price of propane. Propane is used by many U.S. farms as the primary source of fuel to dry wet grain – being critical to farmers' efforts to keep their grain from spoiling.

In several parts of the U.S. Corn Belt, propane has been difficult to find and when available, the price is much higher than it was in late summer. To help address this shortage of propane, the **Federal Motor Carrier Safety Administration** passed a regional emergency declaration (https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/emergency/484821/notice-enforcement-discretion-regional-emergency-declaration-2019-008-11-01-2019.pdf). This declaration relaxes some of the rules on transporting propane to make it easier for drivers to transport propane gas where it's needed. Seven states are under this federal declaration - Illinois, Wisconsin, Iowa, Missouri, Minnesota, Kansas, and Nebraska.

How bad is the situation?

The current tight supply situation in the propane market is a result of a spike in demand in propane use for grain drying as well as other factors. Supplies of propane are actually within normal ranges in the geographic area of designated as "PADD 2". The Petroleum Administration for Defense Districts (PADDs) are geographic aggregations of the 50 States and the District of Columbia. The area "PADD 2" covers the Midwest from North Dakota down to Oklahoma and east through Ohio. Figure 1 shows the average supply level of propane in PADD 2 over the last

10 years as well as the typical range (shaded gray which represents a plus and minus 1 standard deviation of this 10 years of data).

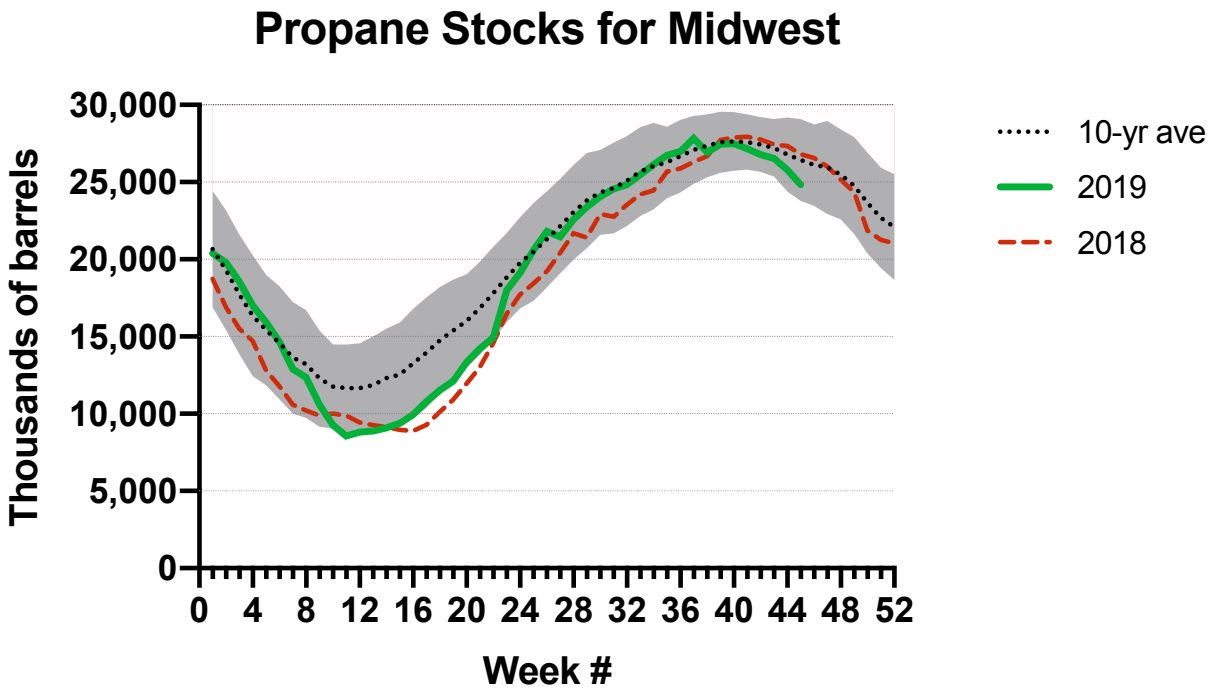

Figure 1. Stocks for PADD 2 with Recent, Normal, and Average Ranges

As the figure indicates, propane stocks have a strong seasonal tendency to vary from summer to winter – with lower total supplies of propane in the spring and larger supplies during the fall. To date in year 2019 (shown in green) Midwest propane stocks are within normal levels. However, this is for the entire PADD 2 area. There are likely states and areas within states where the supply is much lower than normal. Still, the region as a whole seems to have adequate total supplies of propane, it just needs to get to be logistically distributed to the areas where demand is highest at this time.

An extremely slow developing and maturing 2019 U.S. corn crop is a primary cause of this U.S. propane price spike in prices that farmers are now facing. Figure 2 (from the EIA and NASS) shows that as of mid-November, corn harvest was only 50% completed. That's not surprising giving how late developing the U.S. corn crop was this year. Historically, crop development patterns in year 2009 were comparable to this year 2019.

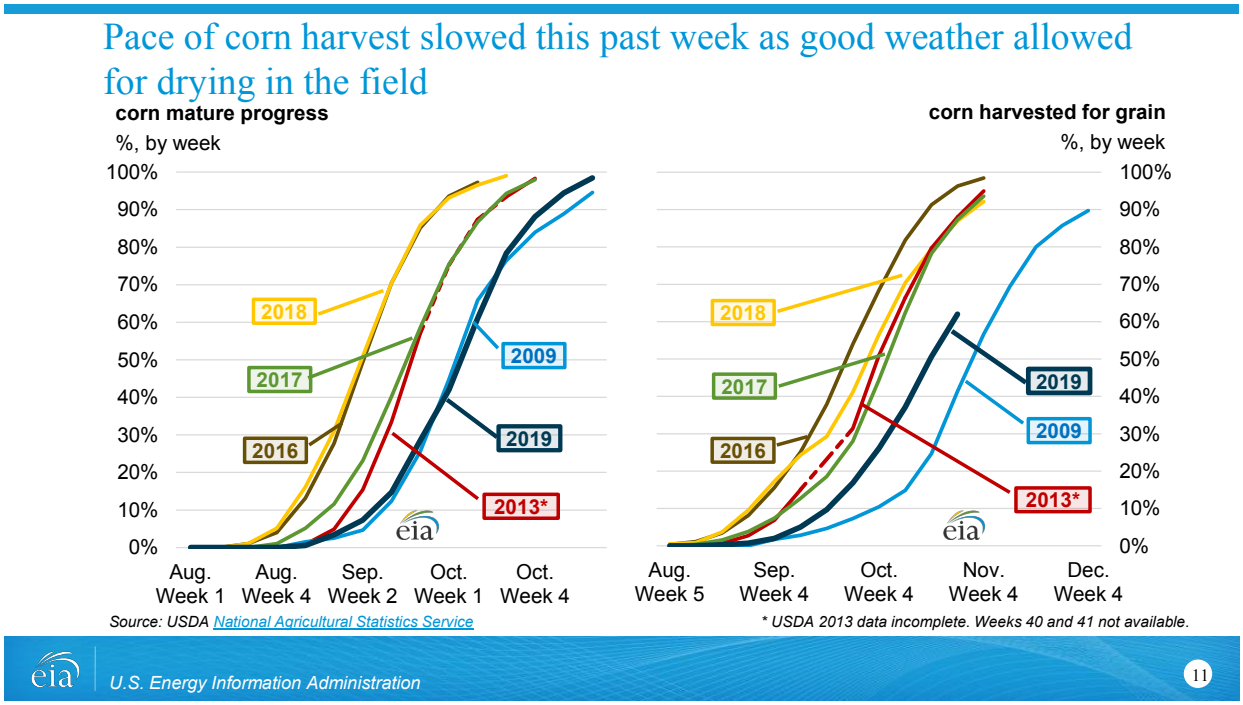

Figure 2. Corn Progress by Year

In many years, corn harvest would normally have been 30 percent further along in development through late summer and fall months. As a result, many U.S. farmers – particularly those in the states of Iowa, Illinois, North Dakota, South Dakota, Minnesota, Wisconsin and Michigan, and other parts of the U.S. Corn Belt are seeking to dry wetter than

normal harvested grain all at the same time in fall 2019. Thus, there has been a sharp increase in demand for propane from the farm sector during the month of November 2019.

What is happening with propane prices?

Consistent with the principles of economic supply-demand, sharply greater than normal demand combined with the logistical difficulties of shifting propane to those higher demand areas in the U.S. Corn Belt has helped to cause propane prices to spike higher in some areas. Figure 3 shows the weekly prices from Illinois while Figure 4 shows the weekly prices from Kansas. (The EIA only tracks propane prices from October through March).

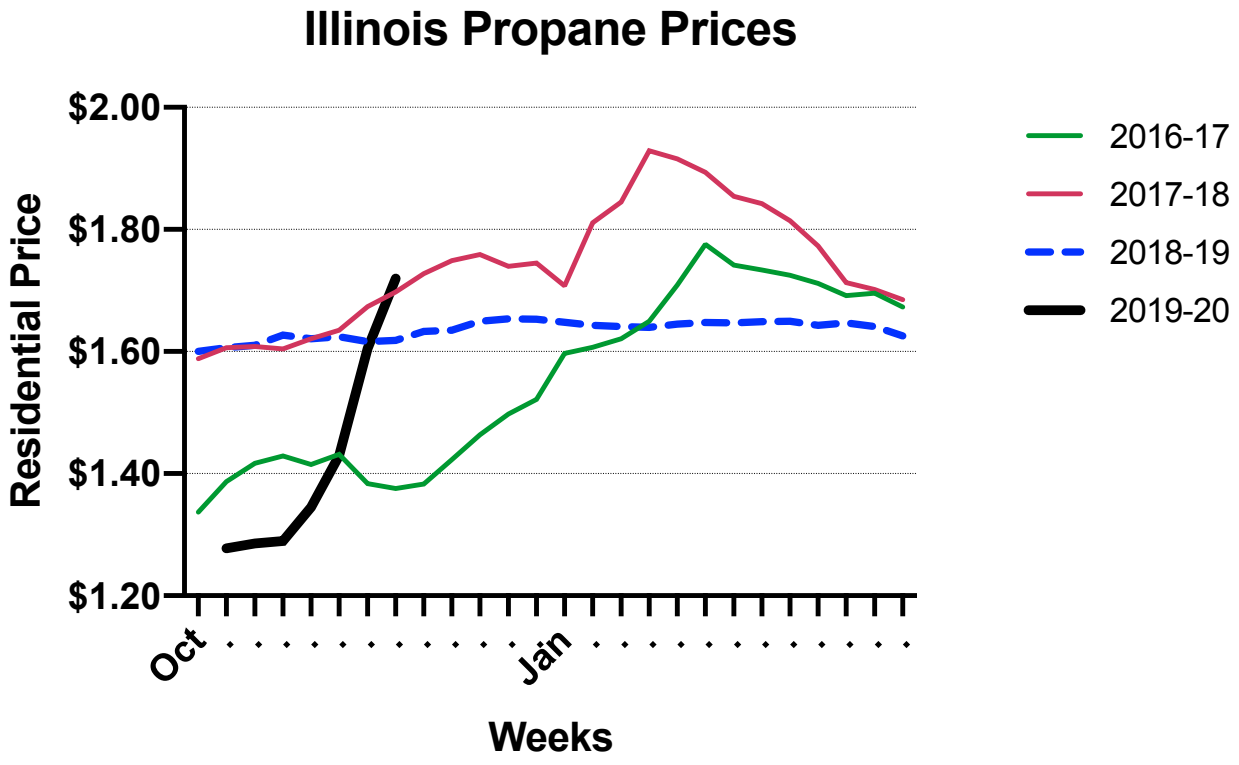

Figure 3. Weekly Illinois Propane Prices from October Through March

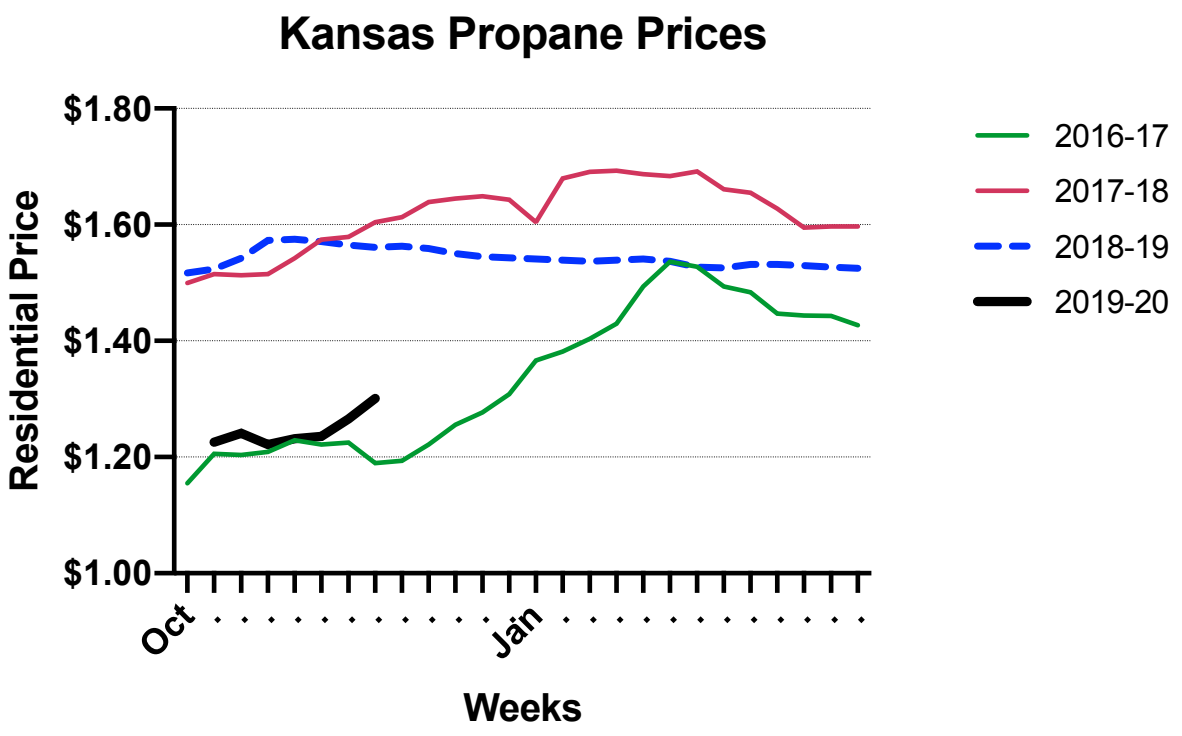

Figure 4. Weekly Kansas Propane Prices from October Through March

Prices have spiked much more in Illinois than in Kansas which should not be unexpected given that Illinois is one of the leading corn production states – and which had a greater proportion of late harvested "wet corn" than Kansas in 2019.

How long will the situation last?

Given that propane supply levels in the region are within typical ranges for this time of year, once demand returns back to normal, prices would be expected to follow suit. That likely means a return to typical levels of corn drying as harvest winds down. Until that happens, prices are likely to remain above normal levels. That said, other market factors or events could also occur that would impact propane prices – such as transportation disruptions in Canada affecting heating oil and other energy markets, etc.

What options do farmers have (besides drying grain with propane)?

Profit margins for corn in 2019 are already very thin so any extra expenses for propane will definitely be felt by farmers. One possible option is to delay harvest – leaving a crop such as corn in the fields to dry naturally. That strategy provides two advantages. First corn is expected to naturally dry as it sits in the field, and consequently will not need as much propane to expedite drying in storage. Second, propane will likely be cheaper if harvested outside of or after this peak demand period in coming months. However, delaying harvest has its risks as well, as increased harvest losses can occur if crops standing in the field are buffeted by severe weather conditions in late fall – early winter. Generally, harvest losses of corn are expected to increase to at least some degree as crops are left standing in the field to dry over increasingly long periods of time.

The 2019 crop year has certainly been an interesting and challenging year to be a for U.S. grain producers in many parts of the U.S. Corn Belt. Although many farmers are probably ready to put this one in the books and try again in the spring – there is a continuing need to manage wet, late maturing corn either in storage or still standing in the field awaiting harvest.

Gregg Ibendahl	email: ibendahl@ksu.edu	twitter: @ibendahl
Dan O'Brien	email: dobrien@ksu.edu	twitter: @KSUGrains