

Seasonal Price Patterns in Corn

By Sal Gilbertie – 2017

Teucrium Trading, LLC

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Seasonal Price Patterns and how they relate to the Northern Hemisphere's Autumn Corn Harvest

A seasonal influx of supply is why harvest time in the Northern Hemisphere is watched closely by investors to gauge the potential balance of supply and demand for corn in the crop year. Because the autumnal corn harvest is an immutable fact of nature, **cyclical price lows are often established during these critical harvest months.** Analysis of historical data illustrates that **this seasonal corn harvest pattern can potentially provide opportunities for investors.**

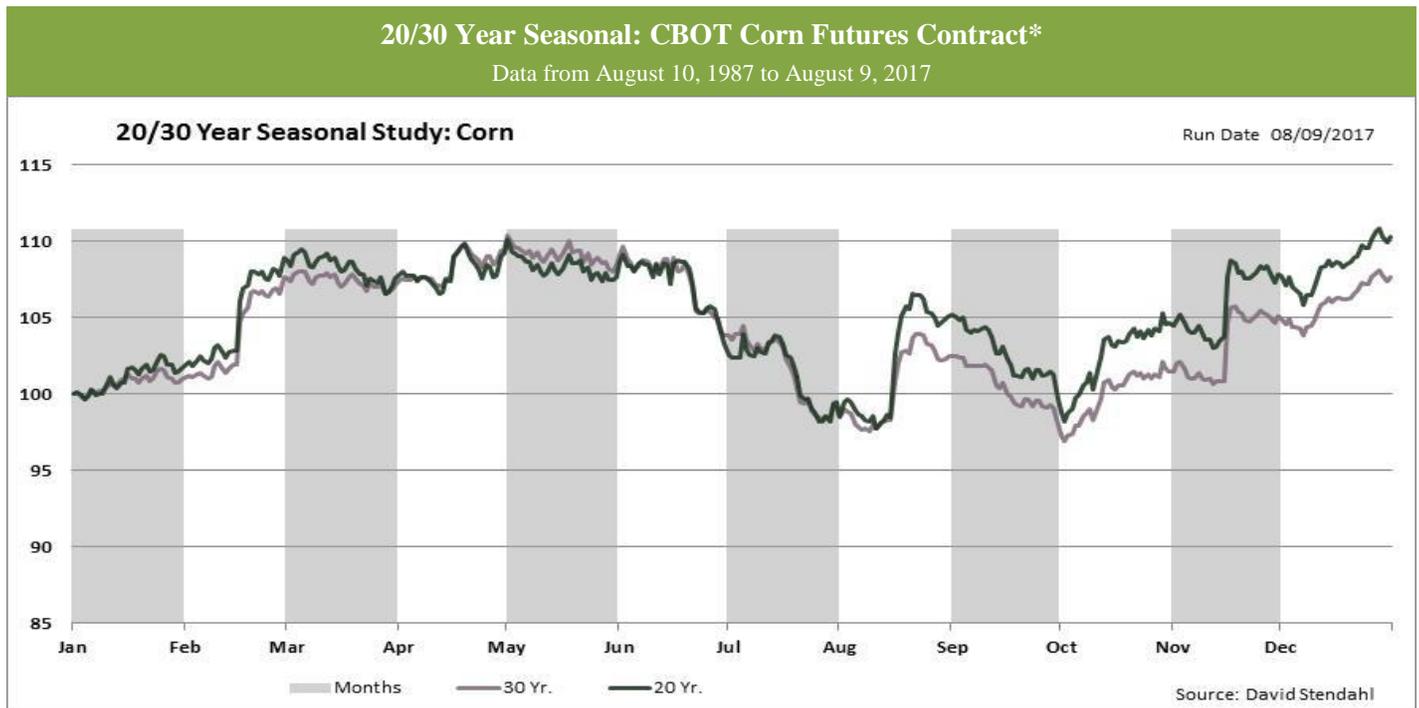
The chart below, provided by our friend David Stendahl of Signal Trading Group, illustrates the long term seasonal price pattern of spot continuation corn futures prices for the past 20 and 30 years. One can see that during the Northern Hemisphere's corn harvest, which is generally in full swing by the start of the fourth calendar quarter, there has historically been a clear seasonal pattern in the first nearby corn futures markets.

The Corn Harvest Seasonal

Statistically, the absolute price for corn traded for delivery in the *following crop year* - as measured by the corn futures contract expiring in December of the following calendar year - has most often bottomed in the last half of the calendar year. More specifically, historical analysis of corn's price history shows us that at this particular time of year - harvest time in the Northern hemisphere - **corn prices for delivery representing next year's harvest, i.e., prices for delivery at least one year into the future, have typically bottomed in the last four months of the prior calendar year.**¹

A closer look at the seasonal price patterns of December corn futures, in particular the December contract representing next year's corn crop expectations, which is the "anchor" contract in the Benchmark Index of the Teucrium Corn Fund (NYSE/Arca ticker: "CORN"), displays **seasonal characteristics that can potentially benefit both opportunistic short-term traders as well as long-term buy-and-hold investors.**

Figure 1



Source: Signal Trading Group (www.signaltradinggroup.com).

Used with permission. Past performance is not indicative of future results.

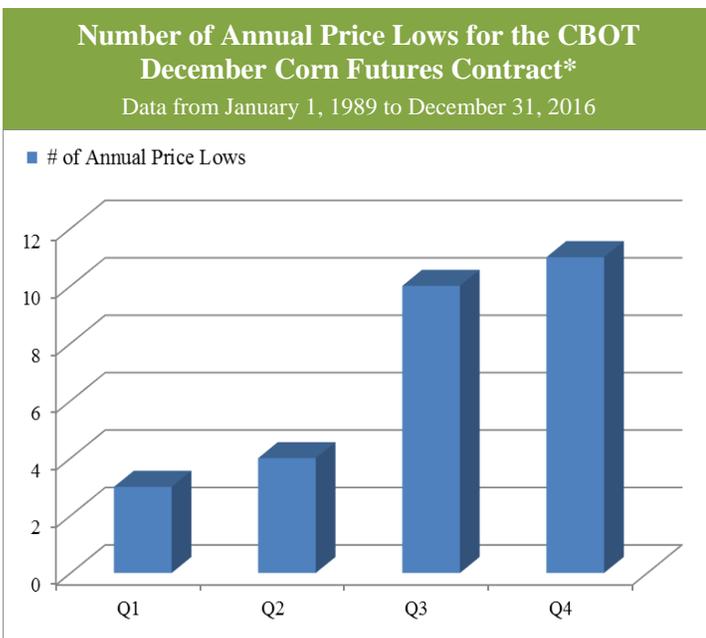
*About the Data: The seasonal chart above provides a historic reference of past trends for the corn market. Average prices over the 20 and 30 year periods are reflective of daily 1st month (spot month) contract data from August 10, 1987 to August 9, 2017.

¹ Analysis & corresponding charts were prepared by Teucrium Trading, LLC, using Bloomberg Professional, January 9, 2017. All supporting detail available upon request.

Eleven of the last twenty-eight December corn futures price lows in the calendar year prior to expiry have occurred in the fourth quarter; if one counts two lows set in calendar September, a full **46% of corn's last 28 seasonal price lows have been set in the last one-third of the calendar year**. The calendar month of December has produced the greatest number of price bottoms (with 7) in the past 28 years.

Figure 2, displayed below, illustrates the 28-year history (1989–2016), grouped by calendar quarters, of the annual price lows established by the CBOT December corn futures contract for the following crop year. The chart illustrates the **power of the harvest seasonality and the opportunity it can potentially bring to investors and asset allocators** looking to add corn to their investment portfolios.

Figure 2



Past performance is not indicative of future results

Source: Analysis & corresponding charts were prepared by Teucrium Trading, LLC, using Bloomberg Professional, January 9th, 2017

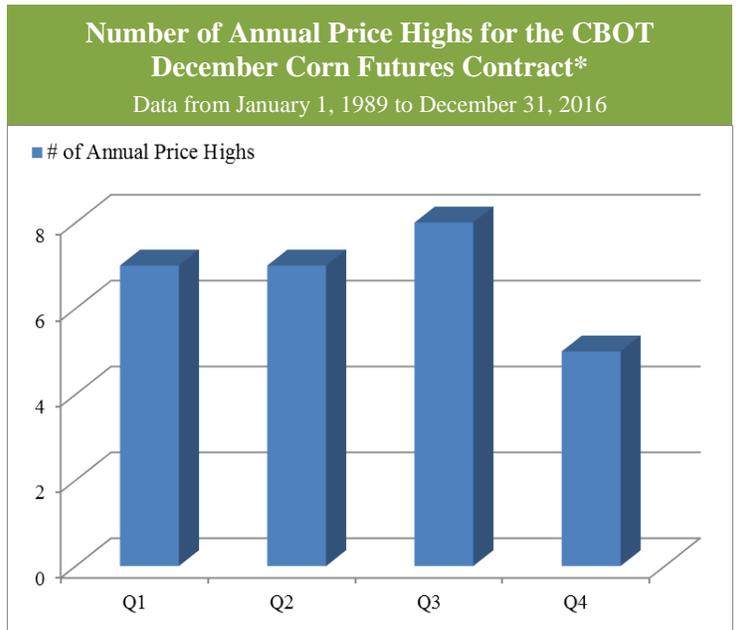
***About the Data:** The data reflects the total number of calendar year price lows set over a 28-year period, by quarter, for the corn futures contract expiring in December of the following calendar year, i.e. for the December corn futures contract expiring in 2016, we analyze the low price from 2015.

Other Seasonal Considerations – Midsummer Weather Uncertainty

It is worth noting that the midsummer can also be a pivotal time for corn prices, because price activity during this time is driven primarily by weather patterns, which are highly unpredictable. In fact, 9 of the last 28 price lows have occurred in only two calendar months – 4 in June and 5 in July. However, the unpredictability of summertime weather has also resulted in 8 of the last 27 *highs* occurring in the very same two months of June and

July; June with 4 and July with 4, thus creating a statistical offset to any discernable seasonal summertime pattern.²

Figure 3



Past performance is not indicative of future results

Source: Analysis & corresponding charts were prepared by Teucrium Trading, LLC, using Bloomberg Professional, January 9th, 2017

***About the Data:** The data reflects the total number of calendar year price highs set over a 27-year period, by quarter, for the corn futures contract expiring in December of the following calendar year, i.e. for the December corn futures contract expiring in 2016, we analyze the high price from 2015.

Lack of Non-Harvest Price Seasonality

Statistically, there is a lack of seasonality across the calendar when attempting to determine a seasonal corn price high. This has to do with many factors fundamental to farming, such as spring planting weather, early summer pollination conditions, and heat and moisture levels in late summer. Figure 3, shown above, illustrates the obvious: **seasonal patterns for corn price highs are somewhat more difficult to recognize or predict.**

Conclusion

Clearly, **no one factor seems to be as predictable or as reliable for corn pricing as the autumn harvest seasonal price low**. For traders seeking short or medium term opportunities, and for asset allocators looking to layer corn into a portfolio of commodity holdings, knowledge of seasonal price low patterns could prove quite beneficial. For those seeking sell signals or seasonal price high patterns, things are less clear, at least from a seasonal patterning perspective. One thing is certain: there are historical patterns in the corn markets that can potentially be advantageous to Investors and Investment Advisors, at least from the perspective of the calendar.

² Analysis & corresponding charts were prepared by Teucrium Trading, LLC, using Bloomberg Professional, January 9, 2017. All supporting detail available upon request.

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