CoBank Knowledge Exchange

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Grain Elevator Outlook: Tight Basis Squeezes Grain and Oilseed Margins

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Inside...

Key Points:

- Grain elevators are expected to have slimmer margins YoY from buying sharply higher basis on corn, soybeans, and wheat.
- Revenues will also be stressed for elevators as they incentivize farmers to sell by offering discounts on storage, free delayed pricing (DP), or free grain drying.
- Grain quality issues from high moisture problems at harvest and frost damage on immature fall crops will raise management costs for elevators and potentially result in greater losses to shrinkage and spoilage.
- Futures carries on corn and soybeans have been trending higher in recent months; however, carries are markedly smaller than last year, especially for wheat.
- While grain elevator margins generally are expected to be down in the year ahead, grain handlers can profit from blending new-crop supplies with existing old-crop inventories, and those with reliable access to propane can profit from drying grain.

Introduction

Grain elevators face a struggle in the year ahead as they buy expensive basis on corn, soybeans, and wheat at levels not seen in years. Basis for all three of the major grains is significantly tighter across the country from strong end-user bids, limited pipeline supplies caused by delayed harvests, and lack of farmer selling amid an uncertain fall harvest.

In addition to having to buy more expensive basis, grain elevators are offering farmers incentives to sell bushels such as lower rates on storage, free delayed pricing, and free grain drying, which are eating into the elevators' revenues. Lower-quality and high-moisture grain coming in from wet fields also raises management costs. A propane supply shortage in some regions is also driving up the cost of drying grain for many grain elevators. High-moisture grain could also mean more bushels are lost to spoilage or shrinkage.

Meanwhile, carry in the futures market for corn, soybeans, and wheat is trending smaller as basis strengthens. Futures carry on the Minneapolis soft red winter (SRW) wheat contract has fallen nearly to zero amid a shortfall in supplies, while

EXHIBIT 1: Corn Basis – Central Illinois

Source: USDA-AMS

the Kansas City hard red winter (HRW) wheat contract, which in recent years offered reliable profits for grain elevators, has also fallen sharply amid tight basis and the expectation for falling acreage.

Not all is bad news for grain elevators. Drying revenues are expected to be higher, and blending with old-crop grain still in storage will provide opportunities to increase margins. And in regions where farmers harvested record yields, elevators can use the greater volume to make up the loss in margin.

Corn

This year's tumultuous corn-growing season has led to a difficult and protracted fall harvest. Record rainfall during the 2019 planting season resulted in significantly delayed crop maturity, pushing harvest late into the season. In the last week of November, 84% of the U.S. corn crop had been harvested, versus the 5-year average of 96%.[1] Additionally, early October freezes damaged immature corn crops and wet and snowy weather delayed harvest. This led to a shortfall in bushels in some locations where farmers have waited for fields to dry or ground to freeze to support heavy machinery. Regions of the Corn Belt with high prevented plant acreage – particularly in the eastern Corn Belt and the Dakotas – are short on bushels while other areas will have surplus with record production. While most regions of the Corn Belt are expected to have significant losses on yield, some regions such as Kansas, Kentucky, Missouri, Tennessee, and Texas will have record yields. While no Corn Belt crop year has uniformity in crop production, the variability in local markets this year is more dynamic with basis being highly volatile.

The uncertainty of how many bushels would be in the bin this fall has caused farmers to refrain from pricing new-crop grain or to hold on to old-crop inventories they might need to fulfill contracts. Lower corn prices may also be discouraging some farmers from pricing new crop corn. In early June when the market was realizing the seriousness of this year's planting delays, December corn futures peaked at $4.73/bushel. But as of late November, the December 2019 futures contract was a dollar off the contract high made this summer.

Harvest basis for corn now is at multi-year highs *(Exhibit 1)*. In central Illinois, corn basis was -8.5 cents/bushel versus -31 cents/bushel a year ago and -27.5 cents/bushel in 2017. Elevators normally count on buying cheap corn basis in the fall when farmers price grain at harvest. Basis then typically strengthens over time, providing elevators profit margin for storing grain. However, because of the expensive corn basis elevators are buying this year, profit potential on basis appreciation is expected to be significantly compressed.

Elevators are also struggling to gain ownership of corn. To incentivize farmers to sell, elevators have offered farmers discounts on storage, free delayed pricing, or free grain drying. While these incentives might successfully increase the amount of grain in storage, it will mean reduced profit margins.

EXHIBIT 2: Soybean Basis – Central Illinois

Source: USDA-AMS Central Illinois Soybean Processor Report

While we expect grain elevator margins on corn to drop in the year ahead, some grain handlers have the opportunity to profit from drying grain and blending lower-quality new-crop supplies with higher-quality old-crop inventories already in storage.

Meanwhile, nearby bids from end users like ethanol plants and feed mills are often higher than deferred bids or cash prices for corn delivered at a later date. This inversion in the cash market not only raised harvest basis on elevators, but also reduced carry in the futures market. This is in sharp contrast to the big carries that elevators pocketed with last year's crop. As they are forced to buy expensive harvest basis and also accept reduced returns on storage from smaller carry, buying and storing corn this year has become a riskier endeavor for elevators.

Grain quality issues complicate the corn storage profit outlook. Wet and snowy weather in parts of the Corn Belt during harvest has raised the moisture level in harvested grain, increasing the risk of corn spoiling in storage. Grain that sprouted in the field is at higher risk of mycotoxin contamination, and under-developed and frost-damaged corn likely has lower test weight. Light-weight grain is more expensive per pound for grain handlers to move and store and is less efficient for end users to process. Some elevators are refusing to accept corn that is above certain moisture levels or below test-weight thresholds. Elevators are also charging significant discounts on high-moisture or low test-weight corn, or are paying premiums on corn that tests below certain moisture thresholds.

Soybeans

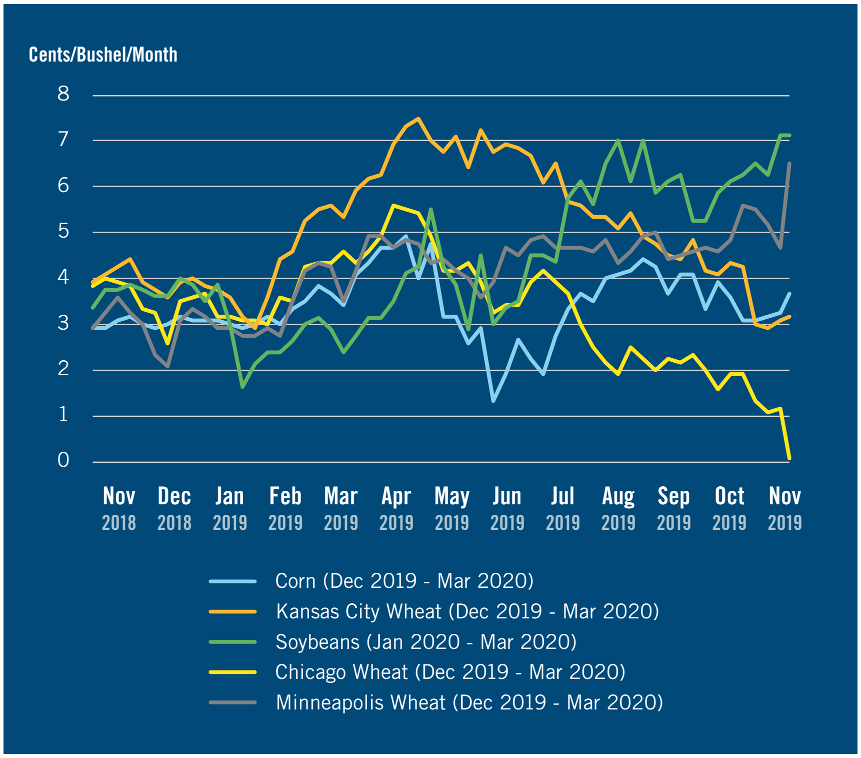
Like corn, the combination of soybean's delayed harvest progress, slow selling from the farmer, and a smaller new-crop harvest have strengthened soybean basis this fall. In the last week of November, 94% of the soybean crop was harvested versus the 5-year average of 97%.[2]

Even before the fall-harvest delays, surplus inventories from the trade war with China pulled soybean basis down to multi-year lows. Soybeans' lackluster export program since mid-2018 and the record-large inventories that resulted are keeping soybean basis from strengthening to the levels seen with corn. Old-crop soybean stocks on September 1 totaled an astounding 913 million bushels – more than double the prior year's level. The growing concerns of this year's fall harvest, though, have caused soybean basis to rebound. In central Illinois, soybean basis is -5 cents/bushel, compared to -55 cents/bushel last year and -18 cents/bushel in 2017 *(Exhibit 2)*.

While carry in the January 2019 - March 2020 soybean futures contracts has climbed steadily through most of 2019, the spread is now virtually break-even with full financial carry of about 8 cents/bushel/month.

Quality issues with this year's soybean harvest are also raising management costs for elevators with frost-damaged or high-moisture soybeans.[3] However, soybeans are more fragile than corn and more difficult to dry at high temperatures. To dry them, high-moisture soybeans must be stored in aerated bins over several weeks, raising the risk of losses to spoilage and shrinkage.

EXHIBIT 3: Futures Carry



Source: CME Group; Minneapolis Grain Exchange; CoBank

The loss in wheat's carry has been driven by the combination of strength in basis and the expectation for a significant drop in harvested wheat acreage in 2020 as farmers continue to replace wheat with row crops in crop rotations. In the 2019-20 crop year, all-wheat planted acreage fell to a record low of 45.2 million acres – the lowest since 1919 – with harvested acreage falling to the lowest level since 1891. Further losses in winter wheat acreage this fall portend a continuation of overall shrinkage in wheat production in 2020 with futures markets responding by removing carry.

Also helping to shrink the carry in the Kansas City HRW contract is the pending change to the variable storage rate (VSR), which goes into effect on Dec. 19, 2019. The new maximum premium storage charge on the Kansas City HRW wheat contract will decline to about 5 cents/bushel/month, down from 8 cents/bushel/month, according to the CME Group.

Meanwhile, the trade row between the U.S. and China has had a much greater impact on soybeans' outlook than corn or wheat, with China historically being the chief export market for U.S. soybeans. Timing of a trade resolution is key, with another record Brazilian soybean harvest expected to reach the market in March 2020.

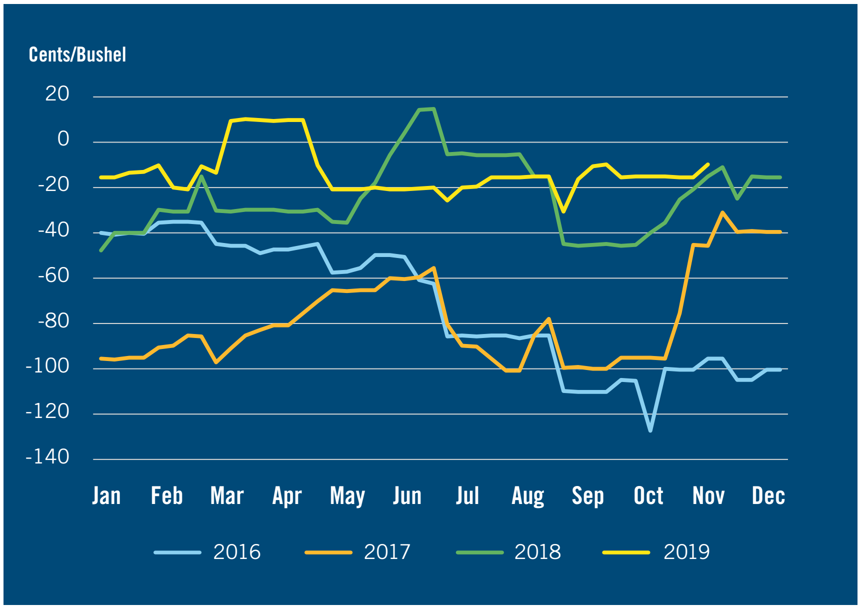
Wheat

Storing wheat has been a reliable revenue generator for grain elevators in recent years, but the profitability in wheat's storage hedge changed remarkably in 2019, especially for the Kansas City HRW and Chicago SRW contracts. The HRW and SRW spreads for the December 2019 and July 2020 contracts have steadily deteriorated since peaking this summer with the December 2019 to March 2020 spread on the Kansas City HRW contract topping in July at 24 cents/bushel and falling to 3 cents/bushel by late November while carry in the Chicago SRW wheat contract has virtually disappeared *(Exhibit 3)*.

Wheat basis, meanwhile, has strengthened alongside corn and soybeans. HRW wheat basis in Salina, Kansas, in July was -25.75 cents/bushel, but strengthened to -10 cents/bushel by late November *(Exhibit 4)*. Strong domestic demand and an improved shipping pace have been the fundamental drivers behind wheat's stronger basis. As of late November, all-wheat shipments for the current marketing year are running 25% faster than last year.[4]

In the northern plains, hard red spring (HRS) basis has skyrocketed on fears of reduced availability of quality milling wheat due to wet and snowy weather during harvest causing head sprouting in the field before harvest. SRW basis remains tight on significant reductions in production as farmers continue to cut acreage.

EXHIBIT 4: HRW Wheat Basis – Salina, Kansas



Source: AgManager.info

Conclusion

Weather continues to be the major challenge for both farmers and grain handlers. Corn and soybean harvest in some regions of the Corn Belt will likely last well into 2020 with total new-crop bushel inventories likely to remain unknown through winter. Grain elevators' margins will be compressed in 2020 by the tightness in basis, diminishing carries in the futures markets, lost revenues from free DP, reduced storage fees, free grain drying, and higher management costs with low test-weight or high-moisture grain.

However, grain elevators have an opportunity to improve margins in an otherwise stressful year. Basis will likely soften as more bushels come to market as harvest operations conclude, giving grain handlers an opportunity to potentially buy cheaper basis. Grain handlers can profit from blending new-crop supplies with existing old-crop inventories, and those with reliable access to propane can profit from drying grain. And in regions of the country where farmers harvested record crop yields, elevators can make up the loss in margin with greater volume.

Endnotes

[1,2] Crop Progress report. Released Nov. 25, 2019, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA). Accessed Nov. 29, 2019. https://downloads.usda.library.cornell.edu/usda-esmis/files/8336h188j/zk51vx10x/0r967j853/prog4819.pdf

[3] Staton, Michael, and Kenneth Hellevang. "Handling frost-damaged soybeans." Michigan State University, MSU Extension, Sept. 17, 2019. Accessed Nov. 29, 2019. https://www.canr.msu.edu/news/how_to_manage_frost_damaged_soybeans

[4] Wheat – hard red winter, Outstanding Export Sales and Exports by Country, Region and Marketing Year. As of Nov. 21, 2019. Accessed Nov. 29, 2019. https://apps.fas.usda.gov/export-sales/wheat.htm

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