

Potential 2019-20 Corn and Soybean Stocks-to-Use and Price Potential

Todd Davis—Extension Grain Marketing Specialist

In an atypical year, the August *Crop Production* report provides insight into the size of the corn and soybean crops. The historically late-planted corn and soybean crops have created uncertainty about the planted area and yield potential. Analysts surveyed before USDA released the August reports expected the 2019 corn crop to be 13.16 billion bushels. USDA surprised the corn market by estimating the 2019 corn crop at 13.9 billion bushels, which is 736 million bushels above the average analyst expectation. If realized, the 2019 corn crop would be 520 million bushels smaller than last year's crop.

Future USDA reports will adjust the estimated harvested area and yield for the corn and soybean crops. Table 1 and Table 2 provide a matrix of potential U.S. ending stocks-to-use ratios for varying harvested acres and yields for both crops. The objective of Tables 1 and 2 is to identify what harvested area and yield might support a higher U.S. marketing year average (MYA) farm price for both corn and soybeans.

Let us start this discussion with the corn market. Table 1 assumes a harvested area of 82 million acres from the August report with a reduction of 2 million and 3 million harvested acres from the August estimate. The reduction in the harvested area could be due to an increased amount of drowned out spots in fields this year. The matrix also assumes the August projected yield of 169.5-bushels with lower yields of 165-bushels and 162-bushels.

Table 1 is a matrix of potential ending stocks-to-use ratios for the 2019-20 corn market, assuming carry-in plus imports of 2.41 billion bushels from the August *WASDE*. Total use is held constant at 14.130 billion bushels, which is the total use from the August *WASDE*. The 2019-20 stocks-to-use ratio could be 10.5% if the harvested area is 80 million acres, and the yield is 165 bushels/acre. A 10.5% stocks-to-use ratio suggests the U.S. MYA farm price would be \$4.10/bushel, or \$0.50/bushel higher than the August 2019 estimate. A yield of 162 bushels/acre and harvested area of 79 million acres suggests a stocks-to-use ratio of 7.6% and a U.S. MYA farm price of \$4.75/bushel. A stocks-to-use ratio near 5% would increase the corn price to a level where demand would decline and market dynamics would adjust towards a final stock-to-use ratio closer to 7%.

The story from Table 1 is that the futures price could adjust higher if there is some concern of stocks declining steadily. If a price bump occurs, it could be fleeting, and

managers should be prepared to take advantage of pricing opportunities. The yield and acreage uncertainty will likely be debated all fall and into the final report in January.

Therefore, a pricing opportunity may not materialize for the December 2019 futures contract, but instead for a deferred futures contract. Vigilance is necessary to monitor pricing opportunities for the 2019 crops as well as opportunities for the December 2020 corn futures contract.

USDA also surprised the soybean market by estimating 2019 soybean planted area at 76.7 million acres, which is 12.5 million acres less than the 2018 crop. Analysts surveyed before the report release expected the 2019 soybean crop at 3.78 billion bushels, which would be 771 million bushels smaller than the 2018 crop. USDA currently pegs the 2019 soybean crop at 3.68 billion bushels, which would be 874 million bushels less than the 2018 crop if realized.

Table 2 provides a similar analysis for the 2019-20 soybean ending stocks-to-use ratio and potential U.S. MYA farm price. The 75.9 million harvested acres from the August report is adopted along with a harvested area that is 600 thousand acres higher or lower. The matrix uses the projected yield of 48.5 bushels/acre along with yields for 44 and 46 bushels/acre.

Table 2 assumes a carry-in plus imports of 1.09 billion bushels and total soybean use of 4.016 billion bushels. These estimates are from the August *WASDE*. If the harvested area is 75.9 million acres and the yield is 46 bushels/acre, the stocks-to-use ratio could decrease to 14.1%, which would correspond to a \$9.20/bushel U.S. MYA farm price. For comparison, a farm price of \$9.20 per bushel is \$0.80/bushel higher than the projections from the August report. Any combination of harvested area and yield that reduces the stocks-to-use ratio below 10% will provide the opportunity for \$10/bushel soybeans. However, current fundamentals suggest it is unlikely to reach 10% this year.

The takeaway message from Table 2 is that there could be a slightly more bullish story to tell for soybeans. However, the production loss is not likely to be significant enough to mitigate the impact of a 1.07 billion bushel carry-in. The bearish risk for the soybean market is that production might not decline significantly or even increase slightly from the August estimate.

The soybean market needs a production loss to whittle away at the mountain of stocks. Otherwise, the market will muddle through with lower prices to stimulate use and discourage production. The price dynamics needed to reduce soybean stocks to levels achieved before the trade dispute would require multiple crop years and

planted area to decline further from that planted in 2019. Mother Nature might be providing a quicker route to lower stocks and higher soybean prices. However, any solution provided by Mother Nature will only last one year as a trend or above trend crop will increase stocks. The solution requires improvement in the demand side of the balance sheet through stronger than projected exports.

Table 1. Projected 2019-20 U.S. Corn Stocks-to-Use Ratios for Varying Harvested Areas and Yields Assumptions.

| Ending Stocks (Million Bushels) | | | | Stocks-to-Use Ratio | | | |
|---------------------------------|-----------------|-------|-------|--------------------------|-----------------|-------|-------|
| Harvested Area (million) | Yield (bu/acre) | | | Harvested Area (million) | Yield (bu/acre) | | |
| | 162 | 165 | 169.5 | | 162 | 165 | 169.5 |
| 82 | 1,564 | 1,810 | 2,179 | 82 | 11.1% | 12.8% | 15.4% |
| 80 | 1,240 | 1,480 | 1,840 | 80 | 8.8% | 10.5% | 13.0% |
| 79 | 1,078 | 1,315 | 1,671 | 79 | 7.6% | 9.3% | 11.8% |

Source: USDA-World Agricultural Outlook Board and Author's Projections.

Table 2. Projected 2019-20 U.S. Soybean Stocks-to-Use Ratios for Varying Harvested Areas and Yields Assumptions.

| Ending Stocks (Million Bushels) | | | | Stocks-to-Use Ratio | | | |
|---------------------------------|-----------------|-----|------|--------------------------|-----------------|-------|-------|
| Harvested Area (million) | Yield (bu/acre) | | | Harvested Area (million) | Yield (bu/acre) | | |
| | 44 | 46 | 48.5 | | 45 | 46 | 48.5 |
| 76.5 | 440 | 593 | 784 | 76.5 | 11.0% | 14.8% | 19.5% |
| 75.9 | 414 | 565 | 755 | 75.9 | 10.3% | 14.1% | 18.8% |
| 75.3 | 387 | 538 | 726 | 75.3 | 9.6% | 13.4% | 18.1% |

Source: USDA-World Agricultural Outlook Board and Author's Projections.

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