Crop Insurance and Corn, Soybean, and Cotton Price Outlook

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### Crop Insurance Prices, 2021

<table>
<thead>
<tr>
<th>Crop</th>
<th>Projected (Spring) Price</th>
<th>Price Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$4.58 ($3.88)</td>
<td>0.23 (0.15)</td>
</tr>
<tr>
<td>Cotton</td>
<td>$0.83 ($0.68)</td>
<td>0.20 (0.14)</td>
</tr>
<tr>
<td>Soybean</td>
<td>$11.87 ($9.17)</td>
<td>0.19 (0.12)</td>
</tr>
<tr>
<td>Wheat</td>
<td>$5.54 ($4.86)</td>
<td>0.15 (0.16)</td>
</tr>
</tbody>
</table>

- Sales closing March 15.
- Premiums will be higher than last year.
- Revenue guarantees will be higher than last year at the same coverage level.
- Creates a different in-season risk profile than last year.

- Work with a qualified crop insurance agent to determine the most suitable coverage for your operation.
Evaluate Your Crop Insurance Protection

• Soybean Example:
  – Revenue Guarantee = $11.87/bu x 45 bu/acre x 75% = $400/acre.
  – Cost of Production = $450.
• Can I increase my APH?
• Should I increase my buy-up? What is the added premium cost?
• Do I have the correct unit structure?
• What other crop insurance options are available for my operation? (area products, SCO, ECO, trend adjustments, yield exclusion etc.)
Crop insurance is not a substitute for marketing, it is a compliment in a risk management plan.

Crop Insurance should work with your marketing plan to mitigate revenue risk during the growing season.

Minimum crop insurance protection is known after the sales closing date (can go up with harvest price adjustment).

Example: Unprotected Revenue Exceeding the Crop Insurance Guarantee

- Crop Insurance (75%; 45 BPA APH; $11.87)
- Estimated Revenue (45 BPA)
- Cost of Production (45 BPA)
“Doing nothing all season is a strategy. It avoids up-front option premiums and possible futures margin calls. But the cost of this strategy is bearing the risk of lower prices all season. In that sense doing nothing is the ultimate form of speculation.”

John Robinson – Texas A&M
## Factors Effecting Supply

### Positive for Prices
- Tight US and global ending stocks / low stocks-to-use ratios.
- High prices for many crops make acreage decisions competitive and regional.
- Concerns in South America (second crop corn).
- Reduced Argentina production (soybean).
- Limited number of export competitors.
- Brazil logistics / export market timing.

### Negative/Uncertain for Prices
- Planted acres 2021
- 2021 weather – can we grow our way out of a rally in one production cycle?
- Record Brazil production (soybeans)
- Added acres/global production regions - high prices often cure high prices.
- Rising input costs.
- Near record long managed money positions in corn, cotton, soybean, and wheat futures.
Factors Effecting Demand

Positive for Prices
• Record US beef, pork, and broiler production forecast for 2021.
• Ethanol bounce back (exports and carbon policy).
• Strong domestic crush.
• Near 5-year low in the US dollar index (stimulates export demand).
• Exports (China purchases) are projected to remain strong in 2021.
• Increased global protein demand/meat consumption.

Negative/Uncertain for Crop Prices
• COVID-19 uncertainty.
• African swine fever other animal infectious disease outbreaks.
• High prices can limit demand and result in substitution.
• China (policy, geopolitics etc.)
• Global economic uncertainty.
• Global / U.S. trade / policy uncertainty.
Global Corn Production, Consumption, and Ending Stocks, 2006-2020

Consumption exceeding demand and stocks falling 4 years in a row.

Data Source: USDA FAS
Global Soybean Production, Consumption, and Ending Stocks, 2006/07-2020/21

Consumption exceeding production.
Decline in ending stocks for two consecutive years.

Data Source: USDA FAS
Global Cotton Production, Consumption, and Ending Stocks, 2006-2020

Consumption exceeded production and a decline in ending stocks year-over-year. COVID-19 disruptions/long term demand drag has not been as severe as anticipated.

Data Source: USDA FAS
“IT IS DEMAND THAT MAKES RELEVANT OTHER FACTORS LIKE PRODUCTION AND STOCKS”
US Corn Exports to China, 2017/18 to 2020/21

- Marketing Year is Sept-Aug
- 6.57 MMT or 259 Million Bushels

Very strong sales to China this marketing year. No sales for the next marketing year at this time.

Data Source: USDA FAS

Legend:
- 2017/18
- 2018/19
- 2019/20
- 2020/21

Week of the Marketing Year

Data Source: USDA FAS
**US Soybean Exports to China, 2017/18 to 2020/21**

- **Marketing Year is Sept-Aug**
- **34 MMT or 1.247 billion bushels**
- **74 million bushels in sales for 2021/22 marketing year.**

*Data Source: USDA FAS*
US Cotton Exports to China, 2017/18 to 2020/21

113,960 outstanding sales for 2021/22 marketing year.

Marketing Year is Aug-Jul

Data Source: USDA FAS
Corn - U.S. Production, Consumption, Exports, and Ending Stocks, 2006-2021

Data Source: USDA FAS and USDA NASS

Consumption  Exports  Production  Ending Stocks

* = Estimated  ** = Projected
Soybeans - U.S. Production, Consumption, Exports, Ending Stocks and MYA Price, 2006/07 to 2020/21

Domestic Consumption  Exports  Production  Ending Stocks

Data Source: USDA FAS and USDA NASS

* = Estimated  ** = Projected
Projected Planted Acres 2021

- Nationally (USDA Ag Outlook Forum)
  - Soybeans: 90 million acres (+6.9 million)
  - Corn: 92 million acres (+1.2 million)
  - Cotton: 12 million acres (-90,000)

- Tennessee (Aaron)
  - Soybeans: 1.7 million acres (+50,000)
  - Corn: 965,000 acres (+95,000)
  - Cotton: 325,000 acres (+45,000)

- Planting weather / prevented planting will influence crop allocations.
- Incentive to plant for most commodities.
Input Prices on the Rise

Dry Fertilizer Price, 2014-2021

Fertilizer prices highlight the increase but many inputs have moved higher!
### December Corn Futures Contract (January 1-Expiration) Compared to MYA Price

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</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>$4.37</td>
<td>$6.43</td>
<td>$6.53</td>
<td>$5.07</td>
<td>$4.20</td>
<td>$3.92</td>
<td>$3.68</td>
<td>$3.75</td>
<td>$3.84</td>
<td>$3.97</td>
<td>$3.68</td>
<td>$4.53</td>
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<tr>
<td>Min</td>
<td>$3.44</td>
<td>$5.42</td>
<td>$5.05</td>
<td>$4.12</td>
<td>$3.21</td>
<td>$3.58</td>
<td>$3.16</td>
<td>$3.36</td>
<td>$3.43</td>
<td>$3.54</td>
<td>$3.20</td>
<td>$4.30</td>
</tr>
<tr>
<td>Max</td>
<td>$5.90</td>
<td>$7.75</td>
<td>$8.39</td>
<td>$5.94</td>
<td>$5.13</td>
<td>$4.52</td>
<td>$4.49</td>
<td>$4.15</td>
<td>$4.27</td>
<td>$4.69</td>
<td>$4.27</td>
<td>$4.77</td>
</tr>
<tr>
<td>Range (max-min)</td>
<td>$2.46</td>
<td>$2.33</td>
<td>$3.34</td>
<td>$1.82</td>
<td>$1.92</td>
<td>$0.94</td>
<td>$1.33</td>
<td>$0.79</td>
<td>$0.83</td>
<td>$1.14</td>
<td>$1.06</td>
<td>$0.47</td>
</tr>
<tr>
<td>MYA</td>
<td>$5.18</td>
<td>$6.22</td>
<td>$6.89</td>
<td>$4.46</td>
<td>$3.70</td>
<td>$3.61</td>
<td>$3.36</td>
<td>$3.36</td>
<td>$3.61</td>
<td>$3.56</td>
<td>$4.20</td>
<td>$4.30</td>
</tr>
</tbody>
</table>

- Examine how the MYA price compares to the harvest futures contract average price and price range.
- 2010-2020 average price range $1.63 (max-min).
- Make basis adjustments to determine reasonable cash price estimates.
Identify basis opportunities and delivery points.
Can you store?
### November Soybean Futures Contract (January 1-Expiration) Compared to MYA Price

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<tbody>
<tr>
<td><strong>Max</strong></td>
<td>$13.30</td>
<td>$14.58</td>
<td>$17.68</td>
<td>$13.96</td>
<td>$12.71</td>
<td>$10.39</td>
<td>$11.63</td>
<td>$10.43</td>
<td>$10.54</td>
<td>$9.64</td>
<td>$11.43</td>
<td>$12.38</td>
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<tr>
<td><strong>Range (max-min)</strong></td>
<td>$4.36</td>
<td>$3.00</td>
<td>$5.98</td>
<td>$2.30</td>
<td>$3.61</td>
<td>$1.80</td>
<td>$2.93</td>
<td>$1.32</td>
<td>$2.40</td>
<td>$1.37</td>
<td>$3.04</td>
<td>$1.26</td>
</tr>
<tr>
<td><strong>MYA</strong></td>
<td>$11.30</td>
<td>$12.50</td>
<td>$14.40</td>
<td>$13.00</td>
<td>$10.10</td>
<td>$8.95</td>
<td>$9.47</td>
<td>$9.33</td>
<td>$8.48</td>
<td>$8.57</td>
<td>$11.15</td>
<td>$11.25</td>
</tr>
</tbody>
</table>

- Examine how the MYA price compares to the harvest futures contract average price and price range.
- 2010-2020 average price range $2.92 (max-min).
- Make basis adjustments to determine reasonable cash price estimates.
Identify basis opportunities and use seasonal trends to your advantage.
December Cotton Futures Contract (January 1-Expiration) Compared to MYA Price

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<thead>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Average</strong></td>
<td>88.0</td>
<td>113.2</td>
<td>79.3</td>
<td>83.8</td>
<td>72.3</td>
<td>63.9</td>
<td>65.3</td>
<td>71.3</td>
<td>80.4</td>
<td>67.6</td>
<td>63.9</td>
<td>80.7</td>
</tr>
<tr>
<td><strong>Min</strong></td>
<td>68.7</td>
<td>90.0</td>
<td>65.4</td>
<td>74.8</td>
<td>58.5</td>
<td>60.0</td>
<td>55.7</td>
<td>66.4</td>
<td>74.1</td>
<td>57.8</td>
<td>50.4</td>
<td>75.4</td>
</tr>
<tr>
<td><strong>Max</strong></td>
<td>151.2</td>
<td>142.0</td>
<td>97.3</td>
<td>93.3</td>
<td>84.5</td>
<td>67.9</td>
<td>76.7</td>
<td>75.7</td>
<td>93.0</td>
<td>77.4</td>
<td>72.7</td>
<td>87.7</td>
</tr>
<tr>
<td><strong>Range (max-min)</strong></td>
<td>82.5</td>
<td>52.0</td>
<td>31.9</td>
<td>18.5</td>
<td>26.0</td>
<td>7.9</td>
<td>21.1</td>
<td>9.3</td>
<td>18.8</td>
<td>19.6</td>
<td>22.3</td>
<td>12.3</td>
</tr>
<tr>
<td><strong>MYA Price</strong></td>
<td>81.5</td>
<td>88.3</td>
<td>72.5</td>
<td>77.9</td>
<td>61.3</td>
<td>61.2</td>
<td>68.0</td>
<td>68.6</td>
<td>70.3</td>
<td>59.6</td>
<td>63.2</td>
<td>75.0</td>
</tr>
</tbody>
</table>

- Examine how the MYA price compares to the harvest futures contract average price and price range.
- 2010-2020 average price range 26.9 cents (max-min).
- Make basis adjustments to determine reasonable cash price estimates.
Marketing Strategies that Protect downside but Allow for Price Increases

• Buy puts (with or without premium offsets)
• Forward contract / short hedge buy calls
Closing Comments

• Understand the current market environment and continue to evaluate price projections and yield potential throughout the marketing cycle.

• Evaluate storage capacity relative to anticipated production.

• The amount priced at different times of the year is operation specific but:
  – Have some 2021 production priced prior to planting ~25-50%.
  – Don’t price your way out of an extended rally!
  – It’s not too early to evaluate 2022 opportunities ($4.32 ½ and $10.98 ¾ futures as of 3/2/21).
Tennessee Cash Price Projections

<table>
<thead>
<tr>
<th></th>
<th>Old Crop</th>
<th>New Crop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>$5.00-$6.50</td>
<td>$4.25-$7.00</td>
</tr>
<tr>
<td>Cotton</td>
<td>85-94 cents</td>
<td>75-90 cents</td>
</tr>
<tr>
<td>Soybeans</td>
<td>$13.00-$15.00</td>
<td>$10.00-$15.00</td>
</tr>
<tr>
<td>Wheat</td>
<td>$6.00-$7.25</td>
<td>$5.50-$7.50</td>
</tr>
</tbody>
</table>

- Excluding cotton, old crop prices have been moving sideways for 1 ½ months.
- Very early in the 2021 production season, so prices are highly uncertain.
- Expect volatility in old and new crop futures.
- Planted acres will be the next major market mover.
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THANK YOU!