Overview

• Marketing information should be obtained from:
  – Futures and options markets
  – U.S. and global supply and demand estimates (public and private)
  – Local / farm data (weather forecasts, yield estimates, cost of production etc.)
“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
Nearby Cotton Futures and Net Managed Money Positions Reported by the Commitment of Traders

“If Managed Money wants to add to its long position, prices are going to go up. If it exits, they're going to go down.”

Data Source: Barchart
December Cotton Futures

Data Source: Barchart

Real. Life. Solutions.
### December Cotton Futures Contract (January 1-Expiration) Compared to MYA Price

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</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>81.0</td>
</tr>
<tr>
<td>Min</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>Max</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>Range (max-min)</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>MYA Price</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.
Futures and Options Market Summary

• Nearby futures rallied from a low of 48.35 on April 1, 2020 to high of 95.60 on February 25, 2021 (+47.25 cents).
• December 2021 cotton futures peaked at 89.28 on February 25, but have retreated to 80-84 cents.
• Options are expensive; near the money 5-9 cent premium cost (reflects volatility).
• Cotton on-call positions provide some bullish optimism.
• Managed money positions are long over 65,000 contracts.
• Money flows will continue to create volatility/unpredictability in cotton futures markets.
Factors Affecting Supply

Positive for Prices

• Global cotton stocks dropped year-over-year.
• 2020/21 U.S. stock estimates have dropped from 8 million bales in June 2020 to 4.2 million in March 2021.
• High prices for many crops make acreage decisions competitive and regional.
• Drought concerns in Southern plains.
• Concerns in Brazil for planting/production.
• Limited number of machine picked export competitors.

Negative/Uncertain for Prices

• Planted acres 2021
• 2021 weather – what will abandonment be Texas? Hurricane season?
• Added acres/global production regions - high prices often cure high prices.
• Rising input costs.
• Strong spring crop insurance price will encourage acres.
Factors Effecting Demand

Positive for Prices
- Strong export demand from multiple countries.
- Near 5-year low in the US dollar index.
- Phase One trade agreement / export purchases by China are projected to remain strong in 2021.

Negative/Uncertain for Crop Prices
- COVID-19 uncertainty.
- Price competitiveness with synthetic fibers. High prices can limit demand and result in substitution.
- China (policy, geopolitics etc.)
- Global economic uncertainty.
- U.S. trade / policy uncertainty.
Global Cotton Production, Consumption, and Ending Stocks, 2006-2020

Consumption exceeded production and ending stocks declined year-over-year. COVID-19 disruptions/long term demand drag was not been as severe as anticipated.
Cotton Exports by Country (1,000 480-lb bales), 2020/21

- **United States**, 15,500, 35%
- **Row**, 11,942, 27%
- **Brazil**, 10,000, 22%
- **India**, 5,700, 13%
- **Australia**, 1,400, 3%

• Brazil continues to expand market share.
• Many producers and exporters, but consideration needs to be paid to production methods/quality.

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

Marketing Year is Aug-Jul

127,160 outstanding sales for 2021/22 marketing year.

Data Source: USDA FAS
China, 11,000, 25%
Bangladesh, 7,200, 16%
Vietnam, 6,800, 15%
Pakistan, 5,200, 12%
Turkey, 4,800, 11%
Indonesia, 2,400, 5%
ROW, 7125, 16%

• China is an important market.
• The continued emergence of other large import markets is appositive for demand and price.

Data Source: USDA FAS
Crop Insurance Prices, 2021

<table>
<thead>
<tr>
<th></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.
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.
If West Texas is dry and we can't get the crop planted/harvested, prices will move higher.
Tennessee Average Yield, 1980-2020

Data Source: USDA NASS

\[ y = 15.888x + 388.01 \]
\[ R^2 = 0.7711 \]

- 2020, 1,065 lbs/acre
Input Prices on the Rise

Dry Fertilizer Price, 2014-2021

Fertilizer prices highlight the increase but many inputs have moved higher!
Cotton - Net Return Table ($/acre); Cost f Production ($850/acre)

<table>
<thead>
<tr>
<th>Yield (lb/acre)</th>
<th>900</th>
<th>950</th>
<th>1,000</th>
<th>1,050</th>
<th>1,100</th>
<th>1,150</th>
<th>1,200</th>
<th>1,250</th>
<th>1,300</th>
<th>1,350</th>
<th>1,400</th>
</tr>
</thead>
<tbody>
<tr>
<td>75.00</td>
<td>(175)</td>
<td>(138)</td>
<td>(100)</td>
<td>(63)</td>
<td>(25)</td>
<td>13</td>
<td>50</td>
<td>88</td>
<td>125</td>
<td>163</td>
<td>200</td>
</tr>
<tr>
<td>76.00</td>
<td>(166)</td>
<td>(128)</td>
<td>(90)</td>
<td>(52)</td>
<td>(14)</td>
<td>24</td>
<td>62</td>
<td>100</td>
<td>138</td>
<td>176</td>
<td>214</td>
</tr>
<tr>
<td>77.00</td>
<td>(157)</td>
<td>(119)</td>
<td>(80)</td>
<td>(42)</td>
<td>(3)</td>
<td>36</td>
<td>74</td>
<td>113</td>
<td>151</td>
<td>190</td>
<td>228</td>
</tr>
<tr>
<td>78.00</td>
<td>(148)</td>
<td>(109)</td>
<td>(70)</td>
<td>(31)</td>
<td>8</td>
<td>47</td>
<td>86</td>
<td>125</td>
<td>164</td>
<td>203</td>
<td>242</td>
</tr>
<tr>
<td>79.00</td>
<td>(139)</td>
<td>(100)</td>
<td>(60)</td>
<td>(21)</td>
<td>19</td>
<td>59</td>
<td>98</td>
<td>138</td>
<td>177</td>
<td>217</td>
<td>256</td>
</tr>
<tr>
<td>80.00</td>
<td>(130)</td>
<td>(90)</td>
<td>(50)</td>
<td>(10)</td>
<td>30</td>
<td>70</td>
<td>110</td>
<td>150</td>
<td>190</td>
<td>230</td>
<td>270</td>
</tr>
<tr>
<td>81.00</td>
<td>(121)</td>
<td>(81)</td>
<td>(40)</td>
<td>1</td>
<td>41</td>
<td>82</td>
<td>122</td>
<td>163</td>
<td>203</td>
<td>244</td>
<td>284</td>
</tr>
<tr>
<td>82.00</td>
<td>(112)</td>
<td>(71)</td>
<td>(30)</td>
<td>11</td>
<td>52</td>
<td>93</td>
<td>134</td>
<td>175</td>
<td>216</td>
<td>257</td>
<td>298</td>
</tr>
<tr>
<td>83.00</td>
<td>(103)</td>
<td>(62)</td>
<td>(20)</td>
<td>22</td>
<td>63</td>
<td>105</td>
<td>146</td>
<td>188</td>
<td>229</td>
<td>271</td>
<td>312</td>
</tr>
<tr>
<td>84.00</td>
<td>(94)</td>
<td>(52)</td>
<td>(10)</td>
<td>32</td>
<td>74</td>
<td>116</td>
<td>158</td>
<td>200</td>
<td>242</td>
<td>284</td>
<td>326</td>
</tr>
<tr>
<td>85.00</td>
<td>(85)</td>
<td>(43)</td>
<td>0</td>
<td>43</td>
<td>85</td>
<td>128</td>
<td>170</td>
<td>213</td>
<td>255</td>
<td>298</td>
<td>340</td>
</tr>
<tr>
<td>86.00</td>
<td>(76)</td>
<td>(33)</td>
<td>10</td>
<td>53</td>
<td>96</td>
<td>139</td>
<td>182</td>
<td>225</td>
<td>268</td>
<td>311</td>
<td>354</td>
</tr>
<tr>
<td>87.00</td>
<td>(67)</td>
<td>(24)</td>
<td>20</td>
<td>64</td>
<td>107</td>
<td>151</td>
<td>194</td>
<td>238</td>
<td>281</td>
<td>325</td>
<td>368</td>
</tr>
<tr>
<td>88.00</td>
<td>(58)</td>
<td>(14)</td>
<td>30</td>
<td>74</td>
<td>118</td>
<td>162</td>
<td>206</td>
<td>250</td>
<td>294</td>
<td>338</td>
<td>382</td>
</tr>
<tr>
<td>89.00</td>
<td>(49)</td>
<td>(5)</td>
<td>40</td>
<td>85</td>
<td>129</td>
<td>174</td>
<td>218</td>
<td>263</td>
<td>307</td>
<td>352</td>
<td>396</td>
</tr>
<tr>
<td>90.00</td>
<td>(40)</td>
<td>5</td>
<td>50</td>
<td>95</td>
<td>140</td>
<td>185</td>
<td>230</td>
<td>275</td>
<td>320</td>
<td>365</td>
<td>410</td>
</tr>
</tbody>
</table>

**Does not consider income from cotton seed**
### 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>80-92 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-$7.00</td>
</tr>
</tbody>
</table>

- 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.
- Over 90 cents is very unstable and risks demand erosion.
Closing Comments

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

• 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 over price and trade price risk for production risk.
  – Don’t price your way out of a potential extended rally, but protect the downside.
March 10, 2021

Dr. S. Aaron Smith
Associate Professor and Extension Economist
Department of Agricultural and Resource Economics
University of Tennessee Institute of Agriculture
Ph: 865-210-2024
Email: aaron.smith@utk.edu
Website: https://cropeconomics.tennessee.edu

THANK YOU!