Row Crop Outlook and Disaster Impacts

Florida Agricultural Policy Outlook Conference
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Apopka, FL

Dr. Adam N. Rabinowitz
Assistant Professor & Extension Economist
Auburn University
Big Picture on Row Crops: Increasing Prices

Soybeans

Cotton

Corn

Source: Macro trends
Big Picture on Row Crops: Rising Input Costs

Selected U.S. farm production expenses, 2020–22F

- Feed purchases
- Labor
- Livestock/poultry purchases
- Fertilizer
- Seed purchases
- Interest
- Net rent
- Pesticides
- Property taxes/fees
- Fuel/oil

Note: F = forecast.
Data as of February 4, 2022.
Big Picture on Row Crops: Less Government Payments

**Direct government payments to U.S. farm producers, 2018–22F**

<table>
<thead>
<tr>
<th>Year</th>
<th>USDA pandemic assistance 1/</th>
<th>Non-USDA pandemic assistance 2/</th>
<th>Market Facilitation Program payments</th>
<th>All other payments</th>
<th>Payments that are a function of crop prices 3/</th>
<th>Conservation payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2019</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2020</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2021F</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2022F</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Notes: F = forecast.
1/ Includes payments from the Coronavirus Food Assistance Program and other USDA pandemic assistance for producers.
2/ Includes loans from the Paycheck Protection Program.
3/ Includes Price Loss Coverage, Agriculture Risk Coverage, loan deficiency payments (excluding grazeout payments), marketing loan gains, certificate exchange gains, and dairy payments.
Data as of February 4, 2022.
Big Picture on Row Crops: Drought Expands

December 28, 2021

U.S. Drought Monitor

March 15, 2022
(Released Thursday, Mar. 17, 2022)
Valid 8 a.m. EDT

Drought Impact Types:
- Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g., agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g., hydrology, ecology)

Intensity:
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/about.aspx
droughtmonitor.unl.edu
Big Picture on Row Crops: Risk Management

- Production
- Legal (Policy)
- Marketing
- Personal
- Financial

Risk Management Diagram
Deep Dive into Peanut Fundamentals

• Supply
  ➢ Increased production in 2021 due to higher yields

• Demand
  ➢ Food consumption increasing
  ➢ Export challenges

• Competition for acres
  • High prices of competing crops

• Rising cost of production
  • Increased chemical costs
## Peanut Acreage Planted (1,000 acres)

Data source: USDA-NASS; Updated January 2022

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>175</td>
<td>200</td>
<td>175</td>
<td>195</td>
<td>165</td>
<td>160</td>
<td>185</td>
<td>185</td>
<td>0%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>11</td>
<td>16</td>
<td>24</td>
<td>30</td>
<td>26</td>
<td>34</td>
<td>39</td>
<td>36</td>
<td>-8%</td>
</tr>
<tr>
<td>Florida</td>
<td>175</td>
<td>190</td>
<td>155</td>
<td>195</td>
<td>155</td>
<td>165</td>
<td>175</td>
<td>170</td>
<td>-3%</td>
</tr>
<tr>
<td>Georgia</td>
<td>600</td>
<td>785</td>
<td>720</td>
<td>840</td>
<td>665</td>
<td>675</td>
<td>810</td>
<td>755</td>
<td>-7%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>32</td>
<td>44</td>
<td>39</td>
<td>44</td>
<td>25</td>
<td>20</td>
<td>23</td>
<td>18</td>
<td>-22%</td>
</tr>
<tr>
<td><strong>Southeast</strong></td>
<td>993</td>
<td>1,235</td>
<td>1,113</td>
<td>1,304</td>
<td>1,036</td>
<td>1,054</td>
<td>1,232</td>
<td>1,164</td>
<td>-5%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>5</td>
<td>5</td>
<td>8</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>83%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>12</td>
<td>10</td>
<td>13</td>
<td>21</td>
<td>16</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>7%</td>
</tr>
<tr>
<td>Texas</td>
<td>130</td>
<td>170</td>
<td>305</td>
<td>275</td>
<td>155</td>
<td>165</td>
<td>190</td>
<td>180</td>
<td>-5%</td>
</tr>
<tr>
<td><strong>Southwest</strong></td>
<td>147</td>
<td>185</td>
<td>326</td>
<td>305</td>
<td>177</td>
<td>185</td>
<td>211</td>
<td>207</td>
<td>-2%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>94</td>
<td>90</td>
<td>101</td>
<td>120</td>
<td>102</td>
<td>104</td>
<td>108</td>
<td>115</td>
<td>6%</td>
</tr>
<tr>
<td>South Carolina</td>
<td>112</td>
<td>112</td>
<td>110</td>
<td>125</td>
<td>87</td>
<td>65</td>
<td>85</td>
<td>69</td>
<td>-19%</td>
</tr>
<tr>
<td>Virginia</td>
<td>19</td>
<td>19</td>
<td>21</td>
<td>27</td>
<td>24</td>
<td>25</td>
<td>28</td>
<td>30</td>
<td>7%</td>
</tr>
<tr>
<td>Virginia-Carolina</td>
<td>225</td>
<td>221</td>
<td>232</td>
<td>272</td>
<td>213</td>
<td>194</td>
<td>221</td>
<td>214</td>
<td>-3%</td>
</tr>
<tr>
<td><strong>US</strong></td>
<td>1,365</td>
<td>1,641</td>
<td>1,671</td>
<td>1,881</td>
<td>1,426</td>
<td>1,433</td>
<td>1,664</td>
<td>1,585</td>
<td>-5%</td>
</tr>
</tbody>
</table>
## Peanut Yields (lb/ac)

<table>
<thead>
<tr>
<th>State</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>Record Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>3,650</td>
<td>3,550</td>
<td>3,350</td>
<td>3,500</td>
<td>3,400</td>
<td>4,000 ('12)</td>
</tr>
<tr>
<td>Arkansas</td>
<td>5,300</td>
<td>4,900</td>
<td>5,200</td>
<td>4,800</td>
<td>5,000</td>
<td>5,300 ('17)</td>
</tr>
<tr>
<td>Florida</td>
<td>3,550</td>
<td>3,950</td>
<td>3,800</td>
<td>3,400</td>
<td>3,650</td>
<td>4,000 ('14)</td>
</tr>
<tr>
<td>Georgia</td>
<td>4,380</td>
<td>4,390</td>
<td>4,170</td>
<td>4,100</td>
<td>4,450</td>
<td>4,580 ('12)</td>
</tr>
<tr>
<td>Mississippi</td>
<td>4,100</td>
<td>3,900</td>
<td>4,000</td>
<td>4,400</td>
<td>4,200</td>
<td>4,400 ('12)</td>
</tr>
<tr>
<td>New Mexico</td>
<td>3,500</td>
<td>2,850</td>
<td>3,210</td>
<td>3,000</td>
<td>2,600</td>
<td>3,600 ('06)</td>
</tr>
<tr>
<td>North Carolina</td>
<td>4,100</td>
<td>3,870</td>
<td>4,400</td>
<td>4,000</td>
<td>4,350</td>
<td>4,400 ('19)</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>3,700</td>
<td>3,070</td>
<td>4,000</td>
<td>4,200</td>
<td>4,400</td>
<td>4,400 ('21)</td>
</tr>
<tr>
<td>South Carolina</td>
<td>4,000</td>
<td>3,400</td>
<td>3,800</td>
<td>3,400</td>
<td>4,200</td>
<td>4,200 ('27)</td>
</tr>
<tr>
<td>Texas</td>
<td>3,600</td>
<td>3,200</td>
<td>3,050</td>
<td>2,800</td>
<td>3,600</td>
<td>3,750 ('05)</td>
</tr>
<tr>
<td>Virginia</td>
<td>4,550</td>
<td>4,200</td>
<td>4,650</td>
<td>4,100</td>
<td>4,700</td>
<td>4,700 ('21)</td>
</tr>
<tr>
<td><strong>US Total</strong></td>
<td>4,074</td>
<td>4,001</td>
<td>3,934</td>
<td>3,796</td>
<td>4,135</td>
<td>4,211 ('12)</td>
</tr>
</tbody>
</table>

Data source: USDA-NASS; Updated January 2022
## Peanut Production (1,000 tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>310</td>
<td>352</td>
<td>286</td>
<td>261</td>
<td>319</td>
<td>311</td>
<td>-2%</td>
<td>0%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>55</td>
<td>77</td>
<td>56</td>
<td>86</td>
<td>91</td>
<td>88</td>
<td>-4%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Florida</td>
<td>277</td>
<td>319</td>
<td>282</td>
<td>295</td>
<td>281</td>
<td>296</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,377</td>
<td>1,786</td>
<td>1,438</td>
<td>1,376</td>
<td>1,640</td>
<td>1,669</td>
<td>2%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>76</td>
<td>86</td>
<td>47</td>
<td>38</td>
<td>48</td>
<td>36</td>
<td>-26%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Southeast</td>
<td>2,095</td>
<td>2,620</td>
<td>2,109</td>
<td>2,056</td>
<td>2,379</td>
<td>2,399</td>
<td>1%</td>
<td>3.7%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>11</td>
<td>13</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>14</td>
<td>99%</td>
<td>0%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>22</td>
<td>40</td>
<td>23</td>
<td>28</td>
<td>29</td>
<td>33</td>
<td>12%</td>
<td>0%</td>
</tr>
<tr>
<td>Texas</td>
<td>280</td>
<td>349</td>
<td>232</td>
<td>244</td>
<td>245</td>
<td>292</td>
<td>19%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Southwest</td>
<td>313</td>
<td>402</td>
<td>263</td>
<td>280</td>
<td>282</td>
<td>339</td>
<td>20%</td>
<td>5.0%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>175</td>
<td>240</td>
<td>190</td>
<td>224</td>
<td>212</td>
<td>248</td>
<td>17%</td>
<td>4.8%</td>
</tr>
<tr>
<td>South Carolina</td>
<td>170</td>
<td>236</td>
<td>136</td>
<td>118</td>
<td>139</td>
<td>139</td>
<td>-1%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Virginia</td>
<td>38</td>
<td>60</td>
<td>50</td>
<td>56</td>
<td>55</td>
<td>71</td>
<td>27%</td>
<td>0%</td>
</tr>
<tr>
<td>Virginia-Carolina</td>
<td>383</td>
<td>536</td>
<td>376</td>
<td>398</td>
<td>407</td>
<td>457</td>
<td>12%</td>
<td>0.5%</td>
</tr>
<tr>
<td>US Total</td>
<td>2,791</td>
<td>3,558</td>
<td>2,748</td>
<td>2,733</td>
<td>3,067</td>
<td>3,195</td>
<td>4%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

Data source: USDA-NASS; Updated January 2022
Peanut Food Consumption by Product and Marketing Year

Data source: USDA-NASS; Updated January 2022
US Peanut Supply and Disappearance

Data source: USDA-NASS; Updated December 2021
Dryland Peanut Variable Costs and Net Returns by Year

Source: ACES Peanut Enterprise Budget
https://www.aces.edu/blog/topics/farm-management/peanut-enterprise-budgets/
Key Takeaways for Peanuts

• Demand
  • Food & oil crushing demand
  • Export concerns remain
• Production increased in 2021
• What will farmers plant in 2022?
  • Higher input costs
  • Higher prices for competing acres
• Where will prices go?
Deep Dive into Cotton Fundamentals

• Increased cotton production in 2021
  • Strong yields
  • More harvested acres
• Demand picking back up
• High input prices (fertilizer and chemicals) pose a challenge
• High commodity prices across the board
2021 US Cotton Planted by State (1,000 acres)

Data source: USDA-NASS; Updated January 2022
US Cotton Acreage

- Higher harvested acreage in 2021
- Abandonment rate:
  - 2020: 32%
  - 5-yr avg: 19%
  - 2021: 11%

Data source: USDA-NASS; Updated January 2022
2021 US Cotton Yields

Data source: USDA-NASS; Updated January 2022
# Upland Cotton Production by Year and State (1,000 bales)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alabama</strong></td>
<td>706</td>
<td>808</td>
<td>888</td>
<td>1,028</td>
<td>734</td>
<td>705</td>
<td>-4%</td>
<td>5.0%</td>
</tr>
<tr>
<td><strong>Arkansas</strong></td>
<td>840</td>
<td>1,074</td>
<td>1,133</td>
<td>1,506</td>
<td>1,277</td>
<td>1,250</td>
<td>-2%</td>
<td>15.7%</td>
</tr>
<tr>
<td><strong>Florida</strong></td>
<td>196</td>
<td>155</td>
<td>103</td>
<td>205</td>
<td>103</td>
<td>125</td>
<td>21%</td>
<td>-4%</td>
</tr>
<tr>
<td><strong>Georgia</strong></td>
<td>2,180</td>
<td>2,225</td>
<td>1,955</td>
<td>2,740</td>
<td>2,180</td>
<td>2,250</td>
<td>3%</td>
<td>1.3%</td>
</tr>
<tr>
<td><strong>Mississippi</strong></td>
<td>1,081</td>
<td>1,351</td>
<td>1,462</td>
<td>1,621</td>
<td>1,180</td>
<td>920</td>
<td>-22%</td>
<td>6.5%</td>
</tr>
<tr>
<td><strong>Missouri</strong></td>
<td>566</td>
<td>750</td>
<td>921</td>
<td>915</td>
<td>684</td>
<td>835</td>
<td>22%</td>
<td>5.9%</td>
</tr>
<tr>
<td><strong>North Carolina</strong></td>
<td>343</td>
<td>741</td>
<td>702</td>
<td>1,040</td>
<td>522</td>
<td>760</td>
<td>46%</td>
<td>8.0%</td>
</tr>
<tr>
<td><strong>Oklahoma</strong></td>
<td>617</td>
<td>1,020</td>
<td>682</td>
<td>659</td>
<td>636</td>
<td>710</td>
<td>12%</td>
<td>5.6%</td>
</tr>
<tr>
<td><strong>Tennessee</strong></td>
<td>575</td>
<td>732</td>
<td>770</td>
<td>960</td>
<td>611</td>
<td>600</td>
<td>-2%</td>
<td>21.1%</td>
</tr>
<tr>
<td><strong>Texas</strong></td>
<td>8,100</td>
<td>9,270</td>
<td>6,850</td>
<td>6,320</td>
<td>4,570</td>
<td>7,600</td>
<td>66%</td>
<td>6.9%</td>
</tr>
<tr>
<td><strong>United States</strong></td>
<td>16,601</td>
<td>20,223</td>
<td>17,566</td>
<td>19,227</td>
<td>14,401</td>
<td>17,257</td>
<td>20%</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

Data source: USDA-NASS; Updated January 2022
Clothing Sales

[Graph showing the trend of clothing sales from 1994 to 2020. The graph indicates a steady increase with a notable drop in 2020. Shaded areas indicate U.S. recessions. Source: U.S. Census Bureau, fred.stlouisfed.org]
Global Cotton Production, Use, and Prices

Note: 1 bale = 480 pounds.

Source: USDA, World Agricultural Supply and Demand Estimates reports.
Leading Cotton Importers

Million bales

Note: 1 bale = 480 pounds.

Source: USDA, World Agricultural Supply and Demand Estimates reports.
Global Cotton Stocks

Note: 1 bale = 480 pounds.

Sources: Cotlook and USDA, Interagency Commodity Estimates Committee.
US Cotton Supply and Use

Data source: USDA-NASS; Updated January 2022
Variable Costs and Net Returns by Year

Source: ACES Cotton South AL Reduced Till Cotton Budget
Cotton Cash Price

Source: Macrotrends
Key Takeaways for Cotton

• Cotton crop will depend on input cost/availability
  • Break-even prices are higher, but market prices higher too
  • Net returns could decrease

• 2022 cotton acreage likely increasing
  • Highest crop prices in a decade for most crops

• Continue to see strong demand for cotton
Disaster Impacts in Row Crops
Policy Response to Disasters

• Permanent legislation through the farm bill
  • Crop Insurance
    • Yield Protection
    • Revenue Protection
  • Supplemental Coverage Option / Stacked Income Protection Plan
  • Hurricane Insurance Protection - Wind Index (HIP-WI): 2020

• Supplemental (ad-hoc) appropriations
  • Wildfire and Hurricane Indemnity Program (WHIP): 2017
  • WHIP+: 2018 and 2019
  • WHIP+: 2020 and 2021 appropriated in Continuing Resolution 9/30/21
How to Estimate Losses

• Department of Agriculture
• Commodity Organizations
• University/Cooperative Extension
• American Farm Bureau Federation (for 2020 and 2021) using crop insurance data and “Billion Dollar Climate and Weather Disasters” methodology from National Oceanic and Atmospheric Administration’s National Climatic Data Center - Smith and Katz (2013)
Questions

What yield do we use?
What price do we use?
What are the objectives?
How quickly do we need the estimates?
Final Thoughts for 2022 Outlook

• Agriculture continues to face uncertainty
  • Global supply chain
    • Continued pandemic effects
    • Russia-Ukraine conflict
    • Canadian Pacific Railway labor dispute
  • White House priorities, next farm bill, and midterm elections
  • The role of government programs in farm income

• Risk management is essential
  • Know cost of production
  • Consider marketing opportunities
  • Awareness and engagement in policy
Thank you!

Sign up for the Ag Economic Update newsletter

Contact Information

Adam Rabinowitz
Adam.Rabinowitz@auburn.edu
Assistant Professor & Extension Economist
Agricultural Economics and Rural Sociology
Auburn University & Alabama Cooperative Extension System