2024 Agricultural Outlook

Seth Meyer
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USDA
United States 2023 Principal Crop Area
Planted Acreage Change (000) from 2022

- Corn, 5,517.0
- Winter Wheat, 3,734.0
- All Hay, 2,430.0
- Sorghum, 480.0
- Rice, 465.0
- Barley, 414.0
- Other Spring Wheat, 305.0
- Rye, 170.0
- Peanuts, 127.7
- Canola, 70.0
- Proso Millet, 68.0
- Potatoes, 48.0
- Chickpeas, 33.9
- Sugarcane, -8.2
- Tobacco, -8.5
- Sugarbeets, -31.0
- Dry Edible Beans, -39.0
- Oats, -73.0
- Durum Wheat, -149.0
- Sunflower, -346.0
- All Cotton, -2,674.0
- Soybean, -3,945.0

Source: USDA
Record corn yield despite drought

Source: USDA-NASS, U.S. Drought Monitor
Soybean yields near trend as well

Bushels per Acre

Source: USDA-NASS, U.S. Drought Monitor
Global Carryout Stocks Less China

Source: USDA
Corn, Soybean, and Wheat Futures

*nearby futures in cents per bushel*
Acreage mix expected to respond to current prices

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>million acres</td>
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<td></td>
</tr>
<tr>
<td>Corn</td>
<td>90.2</td>
<td>88.8</td>
<td>89.4</td>
<td>90.4</td>
<td>92.9</td>
<td>88.2</td>
<td>94.6</td>
<td>91.0</td>
<td>-3.6</td>
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<tr>
<td>Soybeans</td>
<td>90.2</td>
<td>89.2</td>
<td>76.1</td>
<td>83.4</td>
<td>87.2</td>
<td>87.5</td>
<td>83.6</td>
<td>87.5</td>
<td>3.9</td>
</tr>
<tr>
<td>Sorghum</td>
<td>5.6</td>
<td>5.7</td>
<td>5.3</td>
<td>5.9</td>
<td>7.3</td>
<td>6.3</td>
<td>7.2</td>
<td>7.0</td>
<td>-0.2</td>
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<tr>
<td>Wheat</td>
<td>46.1</td>
<td>47.8</td>
<td>45.5</td>
<td>44.5</td>
<td>46.7</td>
<td>45.8</td>
<td>49.6</td>
<td>47.0</td>
<td>-2.6</td>
</tr>
<tr>
<td>Upland Cotton</td>
<td>12.5</td>
<td>13.8</td>
<td>13.5</td>
<td>11.9</td>
<td>11.1</td>
<td>13.6</td>
<td>10.1</td>
<td>10.85</td>
<td>0.75</td>
</tr>
<tr>
<td>Rice</td>
<td>2.5</td>
<td>2.9</td>
<td>2.6</td>
<td>3.0</td>
<td>2.5</td>
<td>2.2</td>
<td>2.9</td>
<td>2.9</td>
<td>0.0</td>
</tr>
<tr>
<td>6-crop total</td>
<td>246.9</td>
<td>248.3</td>
<td>232.3</td>
<td>239.0</td>
<td>247.8</td>
<td>243.5</td>
<td>248.0</td>
<td>246.3</td>
<td></td>
</tr>
</tbody>
</table>

Source: USDA
Long term declining trend of U.S. export share

**Global Corn Exports**
- United States
- Brazil
- ROW

**Global Soybean Exports**
- United States
- Brazil

**Global Wheat Exports**
- United States
- European Union
- Russia
- Ukraine
- ROW

Data: USDA
Brazil, Argentina and Paraguay Soybean Production and China’s import demand

Source: USDA
Expanding Area and Port improvements in Northern Brazil

Soybean production density, 2013

- Export volume
- Major road
- Major river
- Amazon ecoregion

Metric tons per square kilometer
- < 30
- 31 - 90
- 91 - 150
- 151 - 350
- > 350

5.3 million metric tons exported from northern ports (12% of total soybean exports)

37.5 million metric tons exported from southern ports (88% of total soybean exports)

Biodiesel production drawing in feedstocks and imports

Source: EIA and Census
Lower Brazil Corn Prices Expected to Limit Area Expansion; Critical Phase of Growing Season Ahead

Source: CME, St. Louis Federal Reserve Economic Database
US facing strong competition for corn sales into China

China Imports of Feed Grains
U.S. products in red

Source: TDM
Corn Stocks In Exporting Countries Rebound; Low Prices Expected to Spur Global Demand Growth

Source: USDA. Other exporters are Argentina, Brazil, Ukraine, and Russia. Trade Year basis.
U.S. Wheat Acreage Resumes Long-Term Decline in 2024/25
Ukraine agricultural exports

million metric tons

Source: USDA-FAS using data from Ukraine Ministry of Agrarian Policy and Food’s Public Dashboard of Exports
The Black Sea continues to dominate wheat trade

Source: USDA
Big volumes of ‘cheap’ Russian wheat on the world market

*Wheat FOB prices, $/mt*

Russia Invades Ukraine

Data: Bloomberg
Asian rice prices rise following India export restrictions

Timeline of Government of India Rice Restrictions
- Sept 2022, ban on broken rice exports and 20 percent export duty on non-Basmati rice except parboiled
- July 2023, export ban on non-Basmati white rice
- Aug 2023, 20 percent export duty on parboiled rice and minimum export price for Basmati rice

India exported 39 percent of global rice exports in marketing year 2021/22 (22 million tons):
- 34 percent parboiled rice
- 25 percent non-parboiled white rice
- 20 percent broken rice
- 19 percent Basmati rice
- 2 percent paddy and brown rice
World cotton consumption hasn't grown since 2004

competition from other fibers has been growing

Source: USDA
U.S. remains the world’s leading cotton exporter

Source: USDA
## Most crop prices continue their downward trend

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Corn ($ / bu.)</td>
<td>5.69</td>
<td>3.53</td>
<td>4.53</td>
<td>6.00</td>
<td>6.54</td>
<td>4.80</td>
<td>4.40</td>
<td>-0.40</td>
</tr>
<tr>
<td>Soybeans ($ / bu.)</td>
<td>12.80</td>
<td>9.15</td>
<td>10.80</td>
<td>13.30</td>
<td>14.20</td>
<td>12.65</td>
<td>11.20</td>
<td>-1.45</td>
</tr>
<tr>
<td>Sorghum ($ / bu.)</td>
<td>5.40</td>
<td>3.32</td>
<td>5.04</td>
<td>5.94</td>
<td>6.38</td>
<td>4.85</td>
<td>4.40</td>
<td>-0.45</td>
</tr>
<tr>
<td>Wheat ($ / bu.)</td>
<td>6.90</td>
<td>4.87</td>
<td>5.05</td>
<td>7.63</td>
<td>8.83</td>
<td>7.20</td>
<td>6.00</td>
<td>-1.20</td>
</tr>
<tr>
<td>Upland Cotton (¢/ lb)</td>
<td>80.1</td>
<td>64.8</td>
<td>66.3</td>
<td>91.4</td>
<td>84.5</td>
<td>77.0</td>
<td>80.0</td>
<td>3.0</td>
</tr>
<tr>
<td>All Rice ($ cwt)</td>
<td>14.65</td>
<td>12.52</td>
<td>14.40</td>
<td>16.10</td>
<td>19.80</td>
<td>18.40</td>
<td>16.80</td>
<td>-1.60</td>
</tr>
</tbody>
</table>

Source: USDA OCE-WAOB, Marketing Year prices, Barley and Oat prices not forecast for the Ag Outlook Forum.
Fertilizer Prices, \$/MT

- **DAP, U.S. Gulf**  590
- **Urea, U.S. Gulf**  355
- **Potash, U.S. Gulf**  320
Interest rates expected to decline 2024-26

Fed Funds Rate

Data: Bloomberg and U.S. Federal Reserve
Crop Output Prices Received vs Input Prices Paid

Data: USDA-NASS
Central Illinois Gross Revenues vs Production (non-land) Costs per Acre

Corn

Soybeans

Source: Nick Paulson and Gary Schnitkey @ UIUC-Farm Doc
Cattle remain in a contraction phase of the cycle forage and economic challenges extend the decline

Source: USDA
Forage conditions improved, but remain a concern
Growth in quarterly pigs per litter shifted toward pre-covid rates

Source: USDA
Livestock prices mixed with trends driven by disease and drought

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>Δ2024</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cattle</strong></td>
<td>dollars per hundredweight</td>
<td>117.12</td>
<td>116.78</td>
<td>108.51</td>
<td>122.40</td>
<td>144.40</td>
<td>175.54</td>
<td>180.00</td>
</tr>
<tr>
<td><strong>Hogs</strong></td>
<td>cents per pound</td>
<td>45.93</td>
<td>47.95</td>
<td>43.18</td>
<td>67.29</td>
<td>71.21</td>
<td>58.59</td>
<td>60.00</td>
</tr>
<tr>
<td><strong>Broilers</strong></td>
<td>cents per pound</td>
<td>97.8</td>
<td>88.6</td>
<td>73.2</td>
<td>101.2</td>
<td>140.5</td>
<td>124.4</td>
<td>127.0</td>
</tr>
<tr>
<td><strong>Turkeys</strong></td>
<td>cents per dozen</td>
<td>80.2</td>
<td>89.2</td>
<td>106.5</td>
<td>122.8</td>
<td>154.5</td>
<td>140.1</td>
<td>107.0</td>
</tr>
<tr>
<td><strong>Eggs</strong></td>
<td>cents per dozen</td>
<td>137.6</td>
<td>94.0</td>
<td>112.2</td>
<td>118.5</td>
<td>282.4</td>
<td>192.4</td>
<td>183.0</td>
</tr>
</tbody>
</table>

Source: USDA
Dairy Prices rebounding in 2024

*Slow milk production growth and firm domestic/export demand*

National Prices of Dairy Products

<table>
<thead>
<tr>
<th>$/lb</th>
<th>2022</th>
<th>2023</th>
<th>2024F</th>
</tr>
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<tbody>
<tr>
<td>Butter</td>
<td>2.87</td>
<td>2.62</td>
<td>2.77</td>
</tr>
<tr>
<td>Cheese</td>
<td>2.11</td>
<td>1.76</td>
<td>1.69</td>
</tr>
<tr>
<td>Nonfat Dry Milk</td>
<td>1.69</td>
<td>1.19</td>
<td>1.24</td>
</tr>
<tr>
<td>Whey</td>
<td>0.61</td>
<td>0.36</td>
<td>0.48</td>
</tr>
<tr>
<td>All Milk</td>
<td>25.34</td>
<td>20.48</td>
<td>20.95</td>
</tr>
</tbody>
</table>

Source: AMS-NDPSR

*Weighted Average Blocks and Barrels

Source: OCE-WAOB
Rate of inflation slowing, but prices remain elevated

<table>
<thead>
<tr>
<th>Food Product</th>
<th>Price in 2020</th>
<th>Price in 2024</th>
<th>% Change Since 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loaf of White Bread</td>
<td>$1.35</td>
<td>$2.03</td>
<td>50%</td>
</tr>
<tr>
<td>Dozen Eggs</td>
<td>$1.46</td>
<td>$2.52</td>
<td>73%</td>
</tr>
<tr>
<td>All purpose Flour, per lb.</td>
<td>$0.44</td>
<td>$0.55</td>
<td>26%</td>
</tr>
<tr>
<td>Long Grain Rice, per lb.</td>
<td>$0.72</td>
<td>$1.00</td>
<td>40%</td>
</tr>
<tr>
<td>Spaghetti, per lb.</td>
<td>$1.23</td>
<td>$1.43</td>
<td>16%</td>
</tr>
<tr>
<td>Ground beef, per lb.</td>
<td>$3.89</td>
<td>$5.03</td>
<td>29%</td>
</tr>
<tr>
<td>Chuck roast, Choice, per lb.</td>
<td>$5.40</td>
<td>$7.26</td>
<td>34%</td>
</tr>
<tr>
<td>Ham, per lb.</td>
<td>$4.19</td>
<td>$5.53</td>
<td>32%</td>
</tr>
<tr>
<td>Bacon, per lb.</td>
<td>$5.51</td>
<td>$6.61</td>
<td>20%</td>
</tr>
<tr>
<td>Chicken breast, per lb.</td>
<td>$3.06</td>
<td>$4.09</td>
<td>34%</td>
</tr>
<tr>
<td>Whole Milk, per gal.</td>
<td>$3.25</td>
<td>$3.96</td>
<td>22%</td>
</tr>
<tr>
<td>Butter, stick, per lb.</td>
<td>$3.86</td>
<td>$4.66</td>
<td>21%</td>
</tr>
<tr>
<td>Sugar, white, per lb.</td>
<td>$0.60</td>
<td>$0.98</td>
<td>62%</td>
</tr>
<tr>
<td>Oranges, per lb.</td>
<td>$1.24</td>
<td>$1.55</td>
<td>25%</td>
</tr>
<tr>
<td>Strawberries, per 12 oz.</td>
<td>$2.88</td>
<td>$3.66</td>
<td>27%</td>
</tr>
<tr>
<td>Lettuce, romaine, per lb.</td>
<td>$2.16</td>
<td>$2.59</td>
<td>20%</td>
</tr>
<tr>
<td>Potatoes, per lb.</td>
<td>$0.80</td>
<td>$0.98</td>
<td>22%</td>
</tr>
<tr>
<td>Tomatoes, per lb.</td>
<td>$2.22</td>
<td>$2.15</td>
<td>-3%</td>
</tr>
<tr>
<td>Potato chips, per 16 oz.</td>
<td>$4.49</td>
<td>$6.39</td>
<td>42%</td>
</tr>
<tr>
<td>Malt beverages, per 16 oz.</td>
<td>$1.44</td>
<td>$1.76</td>
<td>22%</td>
</tr>
<tr>
<td>Soft drinks, per 12 oz.</td>
<td>$0.36</td>
<td>$0.61</td>
<td>70%</td>
</tr>
</tbody>
</table>

Data: BLS
The U.S. is not alone in having experienced food price inflation.
Some key points

• We have had 3 global ag commodity price spikes in 15 years.
• Globally rebuilding stocks for corn and soybeans, tighter stocks for wheat and rice.
• Output prices generally falling faster than input prices leading to tighter margins, reducing sector profitability.
• US facing strong export competition for crop exports.
• US livestock sector production and prices heavily impacted by weather and disease shocks.
• Food inflation expected to continue to moderate, but with levels remaining above the ‘trend’.
• Geopolitical uncertainties and transportation disruptions overhang the market.
• *Weather always has the last say.*
2024 Agricultural Outlook

Seth Meyer
Chief Economist, USDA

Questions? Seth.Meyer@usda.gov