Farm sector outlook

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What’s FAPRI?

- Food and Agricultural Policy Research Institute at the University of Missouri (FAPRI-MU)
  - Now in our 31st year
  - Mission: provide objective analysis of agricultural markets and policies
  - Educate, not advocate—we don’t make recommendations, but try to help policy makers and others make more informed decisions

- Our website: www.fapri.missouri.edu
Some FAPRI-MU products

- Baseline projections for the farm economy
  - Full set of 10-year projections released around March 1
  - Covers crops, livestock, farm income, farm program costs, food prices and more
  - Partial update at least once a year (typically August)

- Analysis of alternative scenarios
  - Farm bills, other legislation, regulations
  - Changes in macro economy, energy prices, technology...

- Decision aids
  - Farm bill program choices and more

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Farm commodity prices have declined

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Peak year</th>
<th>Peak level</th>
<th>Recent year</th>
<th>Recent level</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn price/bu.</td>
<td>2012/13</td>
<td>$6.89</td>
<td>2015/16</td>
<td>$3.60</td>
<td>-48%</td>
</tr>
<tr>
<td>Wheat price</td>
<td>2012/13</td>
<td>$7.77</td>
<td>2015/16</td>
<td>$5.00</td>
<td>-36%</td>
</tr>
</tbody>
</table>

Input costs

Dec. 2016 corn futures

Source: Barchart.com
The corn market

- 2016 U.S. acreage higher
- Projected 2015 world stocks highest on record
  - 2015 third largest international corn crop
  - Chinese policies encouraged high domestic production
- Domestic use growth limited
- Where to send surplus abroad?
- Difficult to find short-run optimism for prices

Corn returns

![Bar chart showing corn returns from 2009/10 to 2015/16 marketing years.](chart.png)
The soybean market

- 2016 U.S. acreage third highest on record
- Projected 2015 world stocks highest on record
- Export potential limited
  - Brazil not seeing lower prices
  - Chinese import growth slowing
- Limited domestic growth opportunities
- Weak price prospects

Soybean returns

<table>
<thead>
<tr>
<th>September-August marketing year</th>
<th>Dollars per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/10</td>
<td>400</td>
</tr>
<tr>
<td>11/12</td>
<td>500</td>
</tr>
<tr>
<td>13/14</td>
<td>600</td>
</tr>
<tr>
<td>15/16</td>
<td>700</td>
</tr>
<tr>
<td>17/18</td>
<td>800</td>
</tr>
<tr>
<td>19/20</td>
<td>900</td>
</tr>
<tr>
<td>21/22</td>
<td>1000</td>
</tr>
<tr>
<td>23/24</td>
<td>1100</td>
</tr>
<tr>
<td>25/26</td>
<td>1200</td>
</tr>
</tbody>
</table>

Legend:
- Blue: Market
- Red: Program payments
- Green: Ins. net indemnities
- Orange: Variable expenses
Missouri planted acreage (million acres)

<table>
<thead>
<tr>
<th></th>
<th>2014 actual</th>
<th>2015 actual</th>
<th>2016 intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybeans</td>
<td>5.65</td>
<td>4.55</td>
<td>5.50</td>
</tr>
<tr>
<td>Corn</td>
<td>3.50</td>
<td>3.25</td>
<td>3.60</td>
</tr>
<tr>
<td>Wheat</td>
<td>0.88</td>
<td>0.76</td>
<td>0.69</td>
</tr>
<tr>
<td>Upland cotton</td>
<td>0.25</td>
<td>0.19</td>
<td>0.27</td>
</tr>
<tr>
<td>Rice</td>
<td>0.22</td>
<td>0.18</td>
<td>0.21</td>
</tr>
<tr>
<td>Sorghum</td>
<td>0.09</td>
<td>0.16</td>
<td>0.08</td>
</tr>
<tr>
<td>6-crop total</td>
<td>10.59</td>
<td>9.09</td>
<td>10.35</td>
</tr>
</tbody>
</table>


Livestock sector in one slide

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef production (bil. lbs.)</td>
<td>24.32</td>
<td>23.76</td>
<td>24.60</td>
</tr>
<tr>
<td>Pork production (bil. lbs.)</td>
<td>22.86</td>
<td>24.52</td>
<td>25.04</td>
</tr>
<tr>
<td>Broiler production (bil. lbs.)</td>
<td>38.15</td>
<td>39.62</td>
<td>40.66</td>
</tr>
<tr>
<td>Milk production (bil. lbs.)</td>
<td>206.1</td>
<td>208.6</td>
<td>211.6</td>
</tr>
<tr>
<td>5-area direct steers per cwt.</td>
<td>$154.56</td>
<td>$148.12</td>
<td>$133-$142</td>
</tr>
<tr>
<td>51-52% lean hogs per cwt.</td>
<td>$76.03</td>
<td>$50.23</td>
<td>$46-$49</td>
</tr>
<tr>
<td>All milk per cwt.</td>
<td>$23.97</td>
<td>$17.08</td>
<td>$14.95-$15.55</td>
</tr>
</tbody>
</table>

U.S. livestock prices

Source: MU Agricultural Markets and Policy (AMAP) team baseline, March 2016

U.S. cow-calf and hog costs and returns

Source: MU Agricultural Markets and Policy (AMAP) team baseline, March 2016
U.S. net farm income

Missouri farm income and crop values


Value of crop production

Source: FAPRI-MU estimates from NASS data.
*Corn, soybeans, wheat, sorghum, cotton & rice
Asset values and debt have both increased sharply in recent years.

### Farm assets
- **Total**
- **Real estate**

### Farm debt
- **Total**
- **Real estate**

**Source:** USDA ERS, Feb. 2016. Figures for 2015 and 2016 are forecasts.

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**U.S. farm debt-asset ratio is much lower than in the 1980s**

- U.S. farm debt-asset ratio peaked in 1985
- While debt levels have risen sharply, debt-asset ratios are much lower than in the 1980s
- Many farms have little or no debt, but those with debt are vulnerable

**Debt-asset ratio**

**Source:** USDA ERS, Feb. 2016. Figures for 2015 and 2016 are forecasts.
Several recent years of high farm income have helped some farmers weather the current downturn. However, the status quo is not sustainable in many parts of the country:
- Either income needs to increase
- Or costs need to be reduced
- If our commodity outlook is correct...
  - Many producers will need to reduce costs
  - This could mean pressure on rental rates, land values
  - Higher interest rates could also pressure land values
Thanks!

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