OUTLOOK FOR US AGRICULTURE

Joe Glauber
Chief Economist
20 February 2014
Real commodity prices

Source: USDA Agricultural Projections to 2023 and OCE, February 2014
Real commodity prices

Source: USDA Agricultural Projections to 2023 and OCE, February 2014
Global consumption of grains and oilseeds at record levels

Source: USDA PSD database
FY 2014 US ag exports expected to top $142 billion; China remains top market

FY 2014 exports: $142.6 b
FY 2014 imports: 110.0 b
Net trade bal: 32.6 b

Source: USDA-ERS Outlook for U.S. Agricultural Trade
Global trade

Wheat

Soybeans and products

Coarse Grains

Source: USDA Agricultural Projections to 2023
US corn used in ethanol to grow modestly

Source: USDA Agricultural Projections to 2023
US ethanol exports

Mil gals

Source: DOE-EIA
Farm bill presents farmers with new choices

Title I: Commodities
- Area Revenue Coverage (ARC)
  - ARC County Coverage
  - ARC Individual Coverage
- Price Loss Coverage (PLC)

Title XI: Crop Insurance
- Program Crops
  - Crop Insurance
  - Supplemental Coverage Option (SCO) *(if not in ARC)*
- Upland Cotton
  - Stacked Income Protection Plan (STAX)
Drought lingers in West
Short run outlook for crops
Global grain ending stocks remain tight

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Days of use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Wheat</td>
<td>120</td>
<td>76</td>
<td>96</td>
<td>112</td>
<td>111</td>
<td>105</td>
<td>93</td>
<td>96</td>
</tr>
<tr>
<td>Corn</td>
<td>89</td>
<td>62</td>
<td>69</td>
<td>65</td>
<td>55</td>
<td>56</td>
<td>56</td>
<td>61</td>
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<tr>
<td>Rice</td>
<td>115</td>
<td>69</td>
<td>77</td>
<td>79</td>
<td>81</td>
<td>83</td>
<td>84</td>
<td>81</td>
</tr>
<tr>
<td>Soybeans</td>
<td>74</td>
<td>83</td>
<td>71</td>
<td>93</td>
<td>102</td>
<td>76</td>
<td>83</td>
<td>99</td>
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<tr>
<td>Cotton</td>
<td>193</td>
<td>187</td>
<td>208</td>
<td>144</td>
<td>160</td>
<td>261</td>
<td>305</td>
<td>322</td>
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Source: USDA, PSD database
Feed grain plantings expected to fall reflecting lower prices

<table>
<thead>
<tr>
<th>Crop</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014F</th>
<th>Percent change</th>
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<tbody>
<tr>
<td>Corn</td>
<td>86.0</td>
<td>86.4</td>
<td>88.2</td>
<td>91.9</td>
<td>97.2</td>
<td>95.4</td>
<td>92.0</td>
<td>-3.5%</td>
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<tr>
<td>Soybeans</td>
<td>75.7</td>
<td>77.5</td>
<td>77.4</td>
<td>75.0</td>
<td>77.2</td>
<td>76.5</td>
<td>79.5</td>
<td>3.9%</td>
</tr>
<tr>
<td>Wheat</td>
<td>63.2</td>
<td>59.2</td>
<td>53.6</td>
<td>54.4</td>
<td>55.7</td>
<td>56.2</td>
<td>55.5</td>
<td>-1.2%</td>
</tr>
<tr>
<td>All cotton</td>
<td>9.5</td>
<td>9.1</td>
<td>11.0</td>
<td>14.7</td>
<td>12.3</td>
<td>10.4</td>
<td>11.5</td>
<td>10.5%</td>
</tr>
<tr>
<td>Minor feed grains</td>
<td>15.8</td>
<td>13.6</td>
<td>11.4</td>
<td>10.5</td>
<td>12.6</td>
<td>14.6</td>
<td>12.4</td>
<td>-14.8%</td>
</tr>
<tr>
<td>Rice</td>
<td>3.0</td>
<td>3.1</td>
<td>3.6</td>
<td>2.7</td>
<td>2.7</td>
<td>2.5</td>
<td>2.9</td>
<td>16.5%</td>
</tr>
<tr>
<td>Total 8 crops</td>
<td>253.1</td>
<td>248.9</td>
<td>245.2</td>
<td>249.4</td>
<td>257.7</td>
<td>255.5</td>
<td>253.8</td>
<td>-0.7%</td>
</tr>
<tr>
<td>CRP</td>
<td>34.6</td>
<td>33.7</td>
<td>31.3</td>
<td>31.1</td>
<td>29.5</td>
<td>26.8</td>
<td>26.0</td>
<td>-3.1%</td>
</tr>
<tr>
<td>8 crops + CRP</td>
<td>287.7</td>
<td>282.6</td>
<td>276.5</td>
<td>280.5</td>
<td>287.2</td>
<td>282.3</td>
<td>279.8</td>
<td>-0.9%</td>
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Source: USDA-World Ag Outlook Board
Corn, wheat, and soybean prices expected to fall from recent high levels

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Wheat</td>
<td>6.78</td>
<td>4.87</td>
<td>5.70</td>
<td>7.24</td>
<td>7.77</td>
<td>6.80</td>
<td>5.30</td>
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<tr>
<td>Corn</td>
<td>4.06</td>
<td>3.55</td>
<td>5.18</td>
<td>6.22</td>
<td>6.89</td>
<td>4.50</td>
<td>3.90</td>
</tr>
<tr>
<td>Cotton</td>
<td>47.80</td>
<td>62.90</td>
<td>81.50</td>
<td><strong>88.30</strong></td>
<td>72.50</td>
<td>76.00</td>
<td>68.00</td>
</tr>
<tr>
<td>Rice</td>
<td><strong>16.80</strong></td>
<td>14.40</td>
<td>12.70</td>
<td>14.50</td>
<td>14.90</td>
<td>16.00</td>
<td>15.90</td>
</tr>
</tbody>
</table>

Wheat, corn and soybeans in dollars per bushel; rice in dollars per hundredweight; cotton in cents per pound. Numbers in red denote record levels.

Source: USDA-NASS, Feb 2014 WASDE, and USDA-World Ag Outlook Board
Specialty crop revenues to fall in 2014 but subject to much uncertainty due to CA drought.

Source: USDA-ERS
Livestock outlook
Feed price ratios improve in 2013

Source: USDA-NASS
Meat exports

Source: USDA PSD database
Jan 1 cattle and calf numbers lowest since 1951

Source: USDA-NASS Cattle Report
January 2014 Cattle Inventory
Percent of PY & Change-All cattle and calves

US:
Jan 2013: 89,299.6
Jan 2014: 87,730.0
Change: 98.20
% Change: -1.1%

NC=No Change

Source: USDA-NASS Cattle report
Decline in cattle and calf inventory since 2011

Source: USDA-NASS Cattle report
PEDv affects litter rates

Pigs per litter

Source: USDA-NASS
Dairy feed cost margins improving

Source: Office of the Chief Economist, February 2014
Dairy exports

Source: USDA PSD database
Livestock, dairy and poultry prices expected to remain high in 2014

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<tbody>
<tr>
<td></td>
<td>Dollars per cwt</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Steers</td>
<td>83.25</td>
<td>95.38</td>
<td>114.73</td>
<td>122.86</td>
<td>125.89</td>
<td><strong>136.00</strong></td>
<td>8.0</td>
</tr>
<tr>
<td>Hogs</td>
<td>41.24</td>
<td>55.06</td>
<td><strong>66.11</strong></td>
<td>60.88</td>
<td>64.05</td>
<td>63.00</td>
<td>-2.0</td>
</tr>
<tr>
<td>Broilers</td>
<td>77.60</td>
<td>82.90</td>
<td>79.90</td>
<td>86.60</td>
<td><strong>99.70</strong></td>
<td>97.50</td>
<td>-2.2</td>
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<tr>
<td>Milk</td>
<td>12.83</td>
<td>16.26</td>
<td>20.14</td>
<td>18.51</td>
<td>20.01</td>
<td><strong>21.20</strong></td>
<td>6.0</td>
</tr>
</tbody>
</table>

Prices in red denote record levels.

Source: Office of the Chief Economist, February 2014
Food CPI remains low

ERS forecast:
2.5-3.5% for 2014

Source: BLS
Farm income and land values
Net cash income

Bil $

Source: USDA-ERS
Farmland values

$/acre

Source: USDA-NASS
10-year Treasury yield

Source: Federal Reserve Bank of St. Louis
Debt as a percent of assets

Held by all farms

Held by farm businesses, by age of operator, 2012

Source: USDA-ERS
Agricultural Outlook Forum
The Changing Face of Agriculture
February 20-21, 2014
Crystal Gateway Marriott Hotel • Arlington, Virginia