Soybean Meal Outlook

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The darker the color, the more severe the drought
September Soy Meal Futures Daily Close, 2012

Source: CMEGroup
SOYBEANS

U.S.
U.S. Soybean Acres Planted, 1970-12

78.6 million acres expected in 2013

Source: USDA/NASS
U.S. Average Soybean Yield, 1970-12

42.7 bu/acre expected in 2013

Source: USDA/NASS
U.S. Soybean Production, 1970-12

3.302 billion bushels expected in 2013

Source: USDA/NASS
U.S. Soybean Exports, 1975-13

1.461 billion bushels expected in 2013

Source: USDA/NASS
$12.05/bu expected in 2013

Source: USDA/NASS
<table>
<thead>
<tr>
<th></th>
<th>2010/11</th>
<th>2011/12</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2012/13</td>
</tr>
<tr>
<td>Planted area (mil. ac.)</td>
<td>77.4</td>
<td>75.0</td>
<td>77.2</td>
</tr>
<tr>
<td>Harvested area (mil. ac.)</td>
<td>76.6</td>
<td>73.8</td>
<td>75.7</td>
</tr>
<tr>
<td>Yield (bu./ac.)</td>
<td>43.5</td>
<td>41.9</td>
<td>39.3</td>
</tr>
<tr>
<td>Beginning stocks(mil bu.)</td>
<td>151</td>
<td>215</td>
<td>169</td>
</tr>
<tr>
<td>Production</td>
<td>3,329</td>
<td>3,094</td>
<td>2,971</td>
</tr>
<tr>
<td>Imports</td>
<td>14</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Total supply</td>
<td>3,495</td>
<td>3,325</td>
<td>3,160</td>
</tr>
<tr>
<td>Crush</td>
<td>1,648</td>
<td>1,703</td>
<td>1,560</td>
</tr>
<tr>
<td>Seed, residual</td>
<td>130</td>
<td>90</td>
<td>115</td>
</tr>
<tr>
<td>Total domestic use</td>
<td>1,778</td>
<td>1,793</td>
<td>1,675</td>
</tr>
<tr>
<td>Exports</td>
<td>1,501</td>
<td>1,362</td>
<td>1,345</td>
</tr>
<tr>
<td>Total use</td>
<td>3,280</td>
<td>3,155</td>
<td>3,021</td>
</tr>
<tr>
<td>Ending stocks</td>
<td>215</td>
<td>169</td>
<td>140</td>
</tr>
<tr>
<td>Stocks/use ratio</td>
<td>6.6%</td>
<td>5.4%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Farm price</td>
<td>$11.30</td>
<td>$12.50</td>
<td>$14.90</td>
</tr>
<tr>
<td>Loan rate</td>
<td>$5.00</td>
<td>$5.00</td>
<td>$5.00</td>
</tr>
</tbody>
</table>
U.S. Monthly Average Soybean Price

Thru Nov 2016 all soybean futures contracts are above $12.40 per bushel
Gross Revenue by Crop, 1981-12*

*Excluding government’s fixed, countercyclical, deficiency and crop insurance payments
Breakeven Land Rent by Crop, 1981-12*

*Excluding government’s fixed, countercyclical, deficiency and crop insurance indemnities
Iowa Farm Real Estate Values, 1940-2012*

*Includes all land, buildings, and dwellings on farms.
U.S. Soybean/Corn Price Ratio, 1975-13
U.S. Corn Acres Planted, 1970-12

2012: most since 1937

97.3 million acres expected in 2013

Source: USDA/NASS
SOYBEANS

- U.S.
- World
## Soybean Production (mmt)

<table>
<thead>
<tr>
<th></th>
<th>2011-12</th>
<th>2012-13</th>
<th>change</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.A</td>
<td>84.19</td>
<td>80.86</td>
<td>- 4.0%</td>
</tr>
<tr>
<td>Brazil</td>
<td>66.50</td>
<td>81.00</td>
<td>+ 21.8%</td>
</tr>
<tr>
<td>Argentina</td>
<td>41.00</td>
<td>55.00</td>
<td>+ 34.1%</td>
</tr>
<tr>
<td>China</td>
<td>14.48</td>
<td>12.60</td>
<td>- 13.0%</td>
</tr>
<tr>
<td>EU-27</td>
<td>1.29</td>
<td>1.10</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>0.22</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>239.22</td>
<td>267.60</td>
<td>+ 11.9%</td>
</tr>
</tbody>
</table>
SOYBEAN MEAL

U.S.
Soy Meal Prices, Illinois,

Source: USDA/AMS
Soy Meal Price as % of Beans monthly

Source: USDA/AMS
Soy Oil Prices, Illinois, $/Cv

Source: USDA/AMS
U.S. Soy Component Value

Source: USDA/ERS Oil Crops Yearbook
U.S. Soybean Meal Supply

Source: USDA/ERS
U.S. Soybean Meal Usage

Source: USDA/ERS
U.S. Protein Meal Prices

Source: USDA/FAS, Oilseeds: World Markets and Trade

Diagram showing the price trends of Soybean, Cottonseed, and Sunseed from 2001/02 to 2011/12.
SOYBEAN MEAL

- U.S.
- World
World Protein Meal Production

Source: USDA/FAS, Oilseeds: World Markets and Trade
World Soy Meal Production

Source: USDA/FAS, Oilseeds: World Markets and Trade
Soybean Meal Share of World Protein Meal Production

Source: USDA/FAS, Oilseeds: World Markets and Trade
World Protein Production

Source: USDA/FAS, Oilseeds: World Markets and Trade
World Soybean Production

Source: USDA/FAS, Oilseeds: World Markets and Trade
World Soy Meal Production

Source: USDA/FAS, Oilseeds: World Markets and Trade
World Soy Meal Consumption

Source: USDA/FAS
Soybean Meal Exports

Source: USDA/FAS
Soybean Meal Demand

Domestic
2013 meat production lowest since 2006

Source: LMIC
Source: USDA/ERS
2013 per capita meat consumption lowest since 1990
<table>
<thead>
<tr>
<th>Type</th>
<th>2011-12</th>
<th>2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>-2.3%</td>
<td>-4.2%</td>
</tr>
<tr>
<td>Pork</td>
<td>+2.2%</td>
<td>-1.4%</td>
</tr>
<tr>
<td>Chicken</td>
<td>-0.8%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Turkey</td>
<td>+3.3%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>All Meats</td>
<td>-0.3%</td>
<td>-2.2%</td>
</tr>
</tbody>
</table>

Source: USDA-OCE WASDE, November 2012
U.S. Average Corn Price, 1908-2011

1908-1942
35 years
Avg $0.78

1942-1972
30 years
Avg $1.26

1973-2006
34 years
Avg $2.37

Source: USDA/NASS
Corn Milled for Ethanol

% corn for ethanol:
2000-01: 6%
2005-06: 14%
2007-08: 23%
2009-10: 35%
2012-13: 42%

Forecast

Source: USDA/NASS
Corn for ethanol needs to increase 220 million bushels/year
U.S. Corn Price, 1970-12

$5.07/bushel expected in 2013

Source: USDA/NASS
Value of U.S. Corn Crop, 1970-12

$72.7 billion expected in 2013

Source: USDA/NASS
Thru Dec 2015 all corn futures contracts are above $5.80 per bushel
Grains: Feed and Resid

Source: USDA/NASS
Meat Demand
Index of Retail Meat Demand
Base Elasticity = -0.75

Source: Ron Plain, MU
Gasoline Prices & Meat Demand, 1999-2012

Correlation = -0.37

Source: U.S. Energy Information Administration
In October 2012, U.S. 17.5 million jobs under trend.

Source: Bureau of Labor Statistics, household survey, seasonally adjusted & MU, 1.00143/month
Growth in Real GDP

Source: U.S. Commerce Department
Change in Real GDP from Previous Year
Seasonally Adjusted, Annual Rate, 1950-2011

Source: U.S. Department of Commerce, Bureau of Economic Analysis
Change in Real GDP from Previous Year
Seasonally Adjusted, Annual Rate, 1950-2011

Source: U.S. Department of Commerce, Bureau of Economic Analysis
Boneless Retail Meat Prices as % of Bologna, Monthly, 2007-2012

Source: USDA/ERS
Soybean Meal Demand

- Domestic
- Foreign
Source: USDA/FAS, Oilseeds: World Markets and Trade
KEY SOY MEAL ISSUES

● Short run
  ● South American crop
  ● China’s purchases
  ● 2013 acreage and weather

● Longer term
  ● South American acreage
  ● U.S. livestock & poultry inventory
  ● Next farm bill
  ● Renewable fuels policy
Questions?