Supply and Demand for Field Crops
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Supply and Demand

The primary components of market conditions that determine prices for U.S. field crops are the supply and demand situation for each crop and the value of the dollar. Supply and demand conditions are indicated by stocks-to-use (S/U) ratios which are reported monthly (USDA, WASDE 2016). Stocks are the ending quantity of a crop in the final month of the market year. Use is total distribution for the market year and includes total domestic consumption and exports. Measures of S/U represent the percentage of annual use that is available for the period between the end of the current crop market year and the time when production from the subsequent market year enters the industry supply. Crop prices attempt to ration supply with anticipated demand to achieve equilibrium stocks-to-use throughout the market year.

Crops are traded in global markets with U.S. currency as the common medium of exchange. Fluctuations in the value of the dollar relative to other currencies impacts U.S. crop prices. Increased value of the dollar leads to increased expenditures in terms of currencies for international purchasers of U.S. crops. This results in downward pressure for U.S. prices and could provide incentives for purchases from foreign competitors producing crops.

Figure 1 presents the dollar index for the previous year with a comparison to the 2006-2014 annual average (FSR 2016). Figures 2-16 present S/U measures with a comparison to the average for the 2006-2015 period (USDA, ERS 2016; USDA, FAS 2016). Market years are September-August for corn and soybeans, August-July for rice, cotton, and peanuts, and June-May for wheat. Current price forecasts are compared to historical average prices that correspond to historical S/U measures (USDA, NASS 2016).

The dollar index has been above the 2006-2014 annual average for the previous 13 months. Increasing strength of the dollar results in downward pressure for U.S. commodity prices. The dollar index increased in September but is less than the high of January 2016.
U.S. corn S/U for 2016 is projected greater than the average for 2006-2015 which results in downward pressure for price that is below the corresponding average of $4.50/bu. The current USDA price forecast is $3.25/bu. for the crop harvested in 2016. Historically, U.S. corn price is significantly responsive to S/U.

S/U in the rest of the world for 2016 is projected greater than the average for 2006-2015 which results in downward pressure for price that is below the corresponding average of $4.50/bu. The current USDA price forecast is $3.25/bu. for the crop harvested in 2016. Large foreign supply limits export potential for relieving excessive supply in the U.S. Ending 2016 S/U is projected lower than 2015 S/U.

The October projection for August 2017 U.S. corn S/U decreased from the September projection.
U.S. soybean S/U for 2016 is projected greater than the average for 2006-2015 which results in downward pressure for price that is below the 2006-2015 average price of $10.65/bu. The current USDA price forecast is $9.05/bu. for the crop harvested in 2016. Historically, U.S. soybean price is significantly responsive to S/U.

S/U in the rest of the world for 2016 is less than the 2015 S/U and less than the long-term average. ROW S/U indicates potential for increased exports to relieve excessive U.S. supply. However, the current USDA price forecast of $9.05/bu. for the crop harvested in 2016 is less than the 2006-2015 average U.S. soybean price.

The October projection for August 2017 U.S. soybean S/U increased from the September projection.
U.S. long-grain rice S/U for 2016 is projected greater than the average for 2006-2015 which results in downward pressure for price that is below the corresponding average of $5.70/bu. The current USDA price forecast is $4.37/bu. for long-grain rice harvested in 2016. Projected S/U for 2016 represents an increase from 2015 ending S/U.

S/U in the rest of the world for 2016 is greater than the average for 2006-2015 which results in downward pressure for price that is below the corresponding long-grain rice average of $5.70/bu. Recent projections of ROW S/U for 2016 are not as short as earlier estimates. The current USDA price forecast is $4.37/bu. for long-grain rice harvested in 2016.

The October projection for the 2016-2017 ending long-grain rice S/U increased from the September projection. Projections for the current market year are significantly greater than ending S/U for the previous market year.
U.S. all wheat S/U for 2016 is greater than the average for 2006-2015 which results in downward pressure for price that is below the corresponding average of $6.10/bu. The current USDA price forecast is $3.70/bu. for the crop harvested in the 2016 market year. Historically, U.S. wheat price is significantly responsive to S/U. Ending stocks in Figure 11 correspond to beginning stocks for winter wheat planted in 2016 and harvested in 2017.

S/U in the rest of the world for 2016 is greater than the average for 2006-2015 which results in downward pressure for price that is below the corresponding average of $6.10/bu. The current USDA price forecast is $3.70/bu. for the crop harvested in 2016. Ending stocks in Figure 12 correspond to beginning stocks for winter wheat planted in 2016 and harvested in 2017.

The October projection for May 2017 U.S. all wheat S/U increased from the September projection. Ending stocks in Figure 13 correspond to beginning stocks for winter wheat planted in 2016 and harvested in 2017.

Soft red winter wheat ending S/U for the current 2016-2017 market year is projected as 55.0 which compares to a long-term average of 36.0. This exerts downward pressure on prices for Arkansas wheat potentially planted in the fall of 2016 for harvest in 2017.
U.S. cotton S/U for 2016 is projected slightly less than the average for 2006-2015.

Cotton S/U in the rest of the world for 2016 is projected greater than the average for 2006-2015. 2016 ROW S/U is projected to decline for the second consecutive year.


The U.S.D.A. October estimate for 2015 peanut use was increased from the estimate in the September report (USDA, FAS 2016). Consequently, beginning stocks for 2016 were decreased. This leads to a decrease in the October S/U projection for the 2016 crop year to a level that is less than the 2006-2015 average.
Table 1. U.S. Annual Animal Product Production

<table>
<thead>
<tr>
<th>Year</th>
<th>Beef</th>
<th>Pork</th>
<th>Broiler</th>
<th>Turkey</th>
<th>Total Red Meat &amp; Poultry</th>
<th>Egg</th>
<th>Milk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million Pounds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>23,698</td>
<td>24,501</td>
<td>40,048</td>
<td>5,627</td>
<td>94,630</td>
<td>7,975</td>
<td>208.6</td>
</tr>
<tr>
<td>2016 Projected</td>
<td>24,967</td>
<td>24,912</td>
<td>40,742</td>
<td>6,060</td>
<td>97,439</td>
<td>8,376</td>
<td>212.7</td>
</tr>
<tr>
<td>2017 Projected</td>
<td>25,880</td>
<td>25,865</td>
<td>41,650</td>
<td>6,135</td>
<td>100,319</td>
<td>8,570</td>
<td>217.3</td>
</tr>
</tbody>
</table>

Table 2. U.S. Annual Prices for Animal Products

<table>
<thead>
<tr>
<th>Year</th>
<th>Steers</th>
<th>Barrows and Gilts</th>
<th>Broilers</th>
<th>Turkeys</th>
<th>Eggs</th>
<th>Milk, All</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>148.12</td>
<td>50.23</td>
<td>90.50</td>
<td>116.20</td>
<td>181.80</td>
<td>17.12</td>
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<tr>
<td>2016 Projected</td>
<td>121.94</td>
<td>46.15</td>
<td>83.80</td>
<td>118.50</td>
<td>85.30</td>
<td>15.85</td>
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<tr>
<td>2017 Projected</td>
<td>116.50</td>
<td>41.00</td>
<td>81.50</td>
<td>115.50</td>
<td>96.50</td>
<td>16.00</td>
</tr>
</tbody>
</table>

References


