World Grains Use

Source: USDA December PSD

- **Feed Use**
- **Food, Seed and Indus. Less US Corn Ethanol**
- **US Corn Ethanol**
Change in grain domestic use between 2005/06 and 2007/08
Change in grain domestic use between 2005/06 and 2007/08
Corn Production by Major Producers

[Bar chart showing corn production by the US, Argentina, Brazil, and South Africa from 1998/99 to 2016/17 in million metric tons.]

- **US**: Dominant in production, showing a significant increase over the years.
- **Argentina**: Shows a steady increase, though less pronounced than the US.
- **Brazil**: Starts with a lower production but increases notably in recent years.
- **South Africa**: Exhibits a relatively low and consistent production throughout the period.
World corn feed, food use and per-capita consumption
Corn net imports by major regions

<table>
<thead>
<tr>
<th>Year</th>
<th>Latin America</th>
<th>Asia</th>
<th>Middle East</th>
<th>Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000/01</td>
<td></td>
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<tr>
<td>2003/04</td>
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<td>2006/07</td>
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<tr>
<td>2009/10</td>
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<tr>
<td>2012/13</td>
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<tr>
<td>2015/16</td>
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<tr>
<td>2018/19</td>
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</tbody>
</table>

[Graph showing corn net imports by major regions for different years.]
Corn net imports by major regions
Commodity exports expanded even at substantially higher prices

<table>
<thead>
<tr>
<th>Commodity Prices</th>
<th>2006/07</th>
<th>2007/08</th>
<th>2008/09</th>
</tr>
</thead>
<tbody>
<tr>
<td>(dollars per bushel)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>corn</td>
<td>3.04</td>
<td>4.20</td>
<td>3.89</td>
</tr>
<tr>
<td>soybean</td>
<td>6.43</td>
<td>10.10</td>
<td>9.37</td>
</tr>
<tr>
<td>wheat</td>
<td>4.26</td>
<td>6.48</td>
<td>6.72</td>
</tr>
<tr>
<td>Rice</td>
<td>9.96</td>
<td>12.80</td>
<td>16.93</td>
</tr>
<tr>
<td>Soyoil</td>
<td>31.02</td>
<td>52.03</td>
<td>35.32</td>
</tr>
<tr>
<td>Soymeal</td>
<td>205.44</td>
<td>335.94</td>
<td>297.02</td>
</tr>
</tbody>
</table>
Policy Comparison

• RFS (corn is conventional, sugar and biodiesel are advanced
• Baseline
  ▫ Ethanol and biodiesel credits extended
  ▫ Ethanol tariff extended
  ▫ RFS enforced (cellulosic ethanol RFS reduced)
• Scenario
  ▫ Ethanol credits end Dec31, 2010, biodiesel credits end Dec31, 2009 (cellulosic maintained)
  ▫ Ethanol tariff ends Dec31, 2010
  ▫ RFS eliminated 2009/10
Corn Price
dollars per bushel

dollars per bushel


current policy  policies expire
Corn Price (real)
dollars per bushel

- The graph shows the real corn price per bushel from 1985 to 2018.
- Two lines are plotted: one for the current policy and one for policies expiring.
- The price fluctuations range from approximately $0.50 to $4.50 per bushel.
- Notable peaks and drops indicate economic and policy influences on corn prices.
Soybean Price

dollars per bushel

[Graph showing the price of soybeans from 1985 to 2018, with two lines indicating different policy scenarios: current policy and policies expire.]
Soybean Price (real)

dollars per bushel

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The graph shows the historical trend of the real soybean price from 1985 to 2018. It indicates that the soybean price has fluctuated significantly over time, with peaks in 1988, 2008, and 2012, and a general trend of decline after 2012. The graph includes two lines: one representing the current policy and the other showing the scenario if policies expire, indicating potential future impacts on the soybean price.
Corn export volume and value
with RFS and extended tariff/credits vs. no RFS and tariff/credits expire
Major crop\(^1\) export volume and value with RFS and extended tariff/credits vs. no RFS and tariff/credits expire

\(^1\) Corn, soybeans, wheat, rice, soybean oil and soybean meal
Food and general inflation

Source: www.bls.gov
Food expenditures: farm value and marketing bill, 2006

Source: USDA Economic Research Service
Context remains important
Petroleum Price Uncertainty

Refiners' acquisition price, September-August year

Dollars per barrel

- 90th percentile
- Average of 500 outcomes
- 10th percentile
Corn yield effects on corn price
2015/16 crop year

The diagram shows the policy price effect per bushel for different yield levels. The x-axis represents the bushels per acre, with categories from Under 150 to Over 180. The y-axis measures the policy price effect in dollars per bushel, ranging from 0.00 to 1.00. The blue bars represent the Base scenario, the red bars represent the Expire scenario, and the yellow line represents the policy price effect.

For example, under a yield of 150 to 155 bushels per acre, the Base scenario shows a policy price effect of around 0.75 dollars per bushel, while the Expire scenario shows a slightly lower effect. As yield increases, the policy price effect decreases, with the highest effect observed under the Base scenario for yields under 150 bushels per acre and the lowest effect seen for yields over 180 bushels per acre.
Corn yield effects on corn exports
2015/16 crop year

![Graph showing the effects of corn yield on exports, with different yield classes and associated export losses.](image-url)
Petroleum price effects on corn price
2015/16 crop year

![Graph showing petroleum price effects on corn price](image-url)
Petroleum price effects on corn exports
2015/16 crop year

Policy export loss mmt.

Dollars per barrel

Under 60 60 to 70 70 to 80 80 to 90 90 to 100 100 to 110 over 110

Million metric tons

0 500 1,000 1,500 2,000 2,500 3,000 3,500

Base  Expire  policy export loss
Petroleum price effects on Brazilian imports
2015/16 crop year

[Bar chart showing the effect of different price ranges on policy import loss in millions of gallons.]
Corn yield effects on meat\textsuperscript{1} exports
2015/16 crop year

\textsuperscript{1} Beef, pork and poultry exports
Assumptions may be incorrect
EPA has not released rules, CARB

- If assumptions are correct, CARB may have limited effect on the market place
- If some assumptions are incorrect, CARB may alter feedstock mix, as would the ethanol tariff removal
- If other states follow, additional acreage competition is likely to
- Higher cellulosic ethanol production could produce additional land competition
For more information

• For more on the FAPRI global outlook, go to http://www.fapri.org and click on “FAPRI 2009 U.S. and World Agricultural Outlook Now Online”

• For more on the FAPRI US stochastic outlook, go to http://www.fapri.missouri.edu/ and click on the March 5 “FAPRI US Baseline Briefing Book”

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