Near record farm cash income in the U.S. and throughout the world

Source: USDA - ERS
World population growth and changing diets is projected to increase food consumption by 60 percent between 2007 and 2050

“… (yet) world production would need to increase at rates much lower than in the past”

Source: FAO
But what are we really talking about?
A shift in demand and/or a shift in supply

And why is this important for farm income?
Fairly wide consensus around global production increase for commodities, so pricing and income all hinges on demand.

Source: IMF, DataMapper
More affluent populations

+ Changing food preferences

Global population growth

- Increased demand for meat and feed grains
Consumption upgrade powered by a larger portion of middle income households

<table>
<thead>
<tr>
<th>Class by Annual Income</th>
<th>Urban Households (million)</th>
<th>Increase from 2002 to 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Affluent &gt;$ 34,000</strong></td>
<td>1 (2002) 3 (2012) 9 (2022E)</td>
<td>29</td>
</tr>
<tr>
<td><strong>Upper middle income $16,000- $34,000</strong></td>
<td>2 (2002) 14 (2012) 54 (2022E)</td>
<td>188</td>
</tr>
<tr>
<td><strong>Mass Affluent $9,000- $16,000</strong></td>
<td>7 (2002) 54 (2012) 22 (2022E)</td>
<td>66</td>
</tr>
<tr>
<td><strong>Poor &lt;$9,000</strong></td>
<td>90 (2002) 29 (2012) 16 (2022E)</td>
<td>-92</td>
</tr>
</tbody>
</table>

*Source: McKinsey Insights China macroeconomic model update (April 2012)*
Food consumption growth in China...

Kilograms per person

- Pork
- Poultry
- Beef

Projections


Source: USDA - ERS
... with increasing reliance on imports

Source: OECD
Chinese GDP slowing, but does it matter?

Source: World Bank
A smaller workforce will lead to more productivity gains and higher wages

Chinese demographic shift

Source: United Nations
China’s challenge is to rebalance their economy.
Expansion of biofuels overall been positive for farm cash income

Source: US Energy Information Administration
Consumer food preferences are evolving

- Food safety
- Health and nutrition
- Values-based purchasing
- Ethnic preferences
## Sources of growth in crop production

<table>
<thead>
<tr>
<th></th>
<th>Annual growth (%)</th>
<th>Contributions to growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Harvested land</td>
</tr>
<tr>
<td>Wheat 1961-2007</td>
<td>3.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Wheat 2007-2050</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td>World 1961-2007</td>
<td>3.6</td>
<td>1.1</td>
</tr>
<tr>
<td>World 2007-2050</td>
<td>1.4</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Source: FAO
# Sources of growth in developing countries

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<tr>
<th></th>
<th>Annual growth (%)</th>
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<td></td>
<td>2007-2050</td>
<td>1.4</td>
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</table>

Source: FAO
Big data in ag
Policy response to the drivers of farm income – not about subsidies anymore.
The trade policy environment now focuses on bilateral deals

<table>
<thead>
<tr>
<th>Period</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>1990-1994</td>
<td>24</td>
</tr>
<tr>
<td>1995-1999</td>
<td>33</td>
</tr>
<tr>
<td>2000-2004</td>
<td>48</td>
</tr>
<tr>
<td>2005-2009</td>
<td>77</td>
</tr>
<tr>
<td>2010-2015</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: WTO
This is perhaps the biggest success story in the U.S.

Source: USDA-ERS
CETA

TTIP
Australia – Japan
Agricultural subsidies are not distributed equal

Figure 2. Regional Distribution of Agricultural Subsidies (in millions)

© Worldwatch

Source: OECD
The Future

NEXT EXIT
U.S. 13/14 stock to use ratio has tightened as year progressed

Source: USDA - WASDE
Looking into next year… 2014-15 average price between $3.85 – $4.55 – market’s more optimistic

Source: USDA - WASDE
Red meat consumption expected to stabilize in western nations

* Includes pork, beef, and lamb

Source: AAFC Medium Term Outlook
Red meat consumption still has upside in developing nations

* Includes pork, beef, and lamb

Source: AAFC Medium Term Outlook
Cattle numbers declining, contributing to price pressures

Thousands of Beef Cattle

Canada

U.S. (right axis)
Breeding and market hog inventory (seasonally adjusted)

Market hog inventory - decline from peak -14.8%
Breeding hog inventory - decline from peak -26.1%

Source: Statistics Canada
G&O prices expected to stabilize in the long-run above historical average

U.S. farm-level prices: Corn, wheat, and soybeans

Source: USDA Agricultural Projections to 2023
Livestock prices settling at higher plateau

Source: USDA Agricultural Projections to 2023
TAKEAWAYS
Consumers rule!
Bilateral trade agreements are important to sustain farm income.
Grain and oilseed prices cooling-off
Positive outlook, but what is the appetite for risk?
Where does this leave farm profitability?

Source: USDA Agricultural Projections to 2023