FAPRI-MU Baseline Outlook

Food and Agricultural Policy Research Institute
University of Missouri
www.fapri.missouri.edu

2015 Abner Womack Missouri Agriculture Outlook and Breimyer Policy Seminar
Bradford Research Farm, Columbia, MO
March 11, 2015
Market volatility will continue

- Last decade has been characterized by volatile world agricultural commodity prices
- We expect this to continue, and with the new farm bill government expenditure has the potential to show more variation
- That’s why we run the model 500 times – and report the average
- What use is the Outlook, if we know the actual outcome is going to be different?
## Outlook for the global economy

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<tbody>
<tr>
<td><strong>Real GDP Growth</strong> (%) per year</td>
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<td></td>
<td></td>
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<tr>
<td>World</td>
<td>2.6</td>
<td>2.7</td>
<td>3.0</td>
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<td>3.5</td>
<td>3.6</td>
<td>3.7</td>
<td>3.8</td>
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<tr>
<td>U.S.</td>
<td>2.2</td>
<td>2.2</td>
<td>2.7</td>
<td>2.5</td>
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<td>2.4</td>
<td>2.7</td>
<td>2.8</td>
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<tr>
<td>EU</td>
<td>0.1</td>
<td>1.3</td>
<td>1.7</td>
<td>2.0</td>
<td>2.0</td>
<td>1.9</td>
<td>1.8</td>
<td>1.9</td>
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<tr>
<td>China</td>
<td>7.7</td>
<td>7.3</td>
<td>6.5</td>
<td>6.7</td>
<td>6.8</td>
<td>7.1</td>
<td>7.3</td>
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</table>

| **Exchange Rate** (national currency per U.S. $) |      |      |      |      |      |      |      |      |
| Euro          | 0.75 | 0.75 | 0.83 | 0.81 | 0.77 | 0.76 | 0.75 | 0.74 |
| Yuan          | 6.15 | 6.16 | 6.23 | 6.27 | 6.25 | 6.20 | 6.12 | 6.05 |
| Rouble        | 31.9 | 38.1 | 52.0 | 49.0 | 46.1 | 47.2 | 48.6 | 49.9 |

| **Population** (million) |      |      |      |      |      |      |      |      |
| World          | 7,137| 7,219| 7,300| 7,380| 7,459| 7,536| 7,613| 7,688|
| U.S.           | 317  | 319  | 321  | 324  | 326  | 329  | 332  | 334  |
| China          | 1,361| 1,369| 1,376| 1,384| 1,390| 1,397| 1,402| 1,407|
| India          | 1,252| 1,267| 1,282| 1,297| 1,311| 1,326| 1,340| 1,353|
| Africa         | 1,107| 1,134| 1,161| 1,188| 1,216| 1,244| 1,272| 1,301|

Source: IHS Global Insight, December 2014
Demographics important

Source: Index Mundi/CIA Factbook
Demographics important

Source: Index Mundi/CIA Factbook
Growth in export markets

Exports/production

Corn  Soybeans  Wheat  Rice  Cotton  Beef  Pork  Chicken


Page 6 of the U.S. Baseline Briefing Book
Important sources of uncertainty in world markets

- China
  - What are the prospects for growth?
  - Erratic behavior has moved markets
- Russia
  - Embargo’s impact limited thus far
  - Ukraine conflict continues
- Impact of oil price fall
  - Increases disposable incomes for importers
  - Hurts oil producers
Oil price outlook uncertain

Dollars per barrel


IHSGI W. Texas Intermediate June futures, 3/3/2015

Page 11 of the U.S. Baseline Briefing Book
Lower feed, fuel prices reduce 2015 production costs

All production items

Feed

Fuel

Page 11 of the U.S. Baseline Briefing Book
U.S. livestock and dairy outlook

- Provided by:

Agriculture Markets and Policy (AMAP) at the University of Missouri

www.amap.missouri.edu

Scott Brown
Daniel Madison
U.S. meat prices

Dollars per hundredweight

Fed steer  Feeder steer  Barrow and gilt

Page 5 of the U.S. Baseline Briefing Book
U.S. meat production

![Graph showing percent change vs. prior year for beef, pork, and chicken from 2001-08 to 2017-24.]

Page 5 of the U.S. Baseline Briefing Book

Food and Agricultural Policy Research Institute (FAPRI)
U.S. meat demand

Pounds per person


Domestic meat consumption

Page 41 of the U.S. Baseline Briefing Book
U.S./international milk prices

Dollars per hundredweight

- U.S. all milk
- International dairy products (avg.)

Page 5 of the U.S. Baseline Briefing Book
U.S. dairy herd

Million head


Dairy cow inventory

Page 43 of the U.S. Baseline Briefing Book
U.S. crops, government costs and farm income

- Scott Gerlt
Our baseline

- Assumes continuation of new 2014 farm bill
  - Requires assumptions about participation rates
- 500 outcomes for every year
  - Generally report average
  - Helps account for known unknowns
  - Still unknown unknowns
2014 corn and soybean crops set records

- **World soybean production**: 10.9%
- **U.S. soybean production**: 18.1%
- **U.S. soybean yield**: 8.5%
- **World corn production**: 0.2%
- **U.S. corn production**: 2.8%
- **U.S. corn yield**: 4.0%
Large crops result in lower prices
Corn prices depend on weather and much more.

Dollars per bushel

- 90th percentile
- Average of 500 outcomes
- 10th percentile

Corn prices depend on weather and much more.
Net farm income declines from 2013 record
Fuel, feed and fertilizer expenses decline in 2015
Corn production sets record again in 2014
Corn stocks increase again, other use remains flat

- Feed & residual
- Ethanol & coproducts
- Exports
- Ending stocks
Corn returns decline for a second straight year
Soybean production sets record in 2014

![Graph showing Soybean production and total use from 2008/09 to 2024/25 with a peak in 2014.](image-url)
Soybean ending stocks increase sharply
Soybean returns dip in 2014/15
Wheat production falls in 2014/15
Wheat area

Year

Million acres


Wheat

Winter wheat
Wheat net returns drop for three straight years
Cotton profit margins remain tight
12 crop planted area likely to fall

Million acres

Year crops harvested

12 crops

12 crops + hay + CRP - double-crop
PLC and ARC replace DCP and ACRE

Marketing year

Billion dollars

DCP, ACRE
PLC
ARC
Marketing loans

08/09  10/11  12/13  14/15  16/17  18/19  20/21  22/23  24/25

Marketing year

Billion dollars

DCP, ACRE
PLC
ARC
Marketing loans
Net indemnities exceed Title I payments after 2016
CCC net outlays could vary greatly from averages.
Net farm income likely to stay below 2011-14 levels
Thanks!

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  - gerlts@missouri.edu