Emerging Issues: Uncertainty in U.S. Ag Policy and Trade

Ohio Soybean Association - August 29, 2018

Ben Brown
Most Common Questions

• The U.S. can sell more soybeans to other buyers, right?
  • Example: would be the European Union

• Even with the 25% tariffs, China still has to buy soybeans from the U.S., right?

• This will get fixed before the Mid-Term, right?

• President Trump is working to increase soybean export sales to China, right?

• Implications: We can store our way out of the problem, right?
  • Will the big yield counteract the loss in price? (No basis $\Delta$- maybe)
Understanding the Chinese Deficit

Trade with China

- U.S. Exports: $130
- U.S. Imports: $506
United States
(Large Exporter)

China
(Large Importer)

Brazil/ ROW
(Exporters)

What China’s price would be without trade
Can World Soybeans just be Reallocated?

- China accounts for 63% of world soybean trade
- Mathematically if China sources all their soybeans from Non-U.S. suppliers and U.S. backfills, there would be little world trade change.
- In the short-run this is almost impossible and local prices in Brazil, China and U.S. will adjust.

<table>
<thead>
<tr>
<th>2017/18 Trade (Million Metric Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China’s Soybean Imports</td>
</tr>
<tr>
<td>All Other Countries Imports</td>
</tr>
<tr>
<td>U.S. Soybean Exports</td>
</tr>
<tr>
<td>Non-U.S. Soybean Exports</td>
</tr>
<tr>
<td>Brazil Exports</td>
</tr>
<tr>
<td>Other Soy Exporters</td>
</tr>
</tbody>
</table>

Data Source: WASDE August Update
This will not lead to a 1 for 1 substitution

**United States**
(Large Exporter)

**China**
(Large Importer)

**Brazil/ ROW**
(Exporters)

Reduction in U.S. Exports (Market Share)

Increase in Exports (Market Share)
This will not lead to a 1 for 1 substitution
Change in Chinese Producer/Consumer Behavior

- While the production and import changes from 2017 are small, what is the potential in future years?
- All else equal, we can expect U.S. crush to increase and Chinese crush to decrease.
- Will China change their production policies?
  - Away from subsidies for corn and wheat to soybean production.

<table>
<thead>
<tr>
<th>Chinese Soybean Behavior (Million Metric Tons)</th>
<th>2017/18</th>
<th>2018/19</th>
<th>% Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>14.2</td>
<td>14.5</td>
<td>2%</td>
</tr>
<tr>
<td>Imports</td>
<td>96.0</td>
<td>95.0</td>
<td>-1%</td>
</tr>
<tr>
<td>Ending Stocks</td>
<td>23.5</td>
<td>20.78</td>
<td>-12%</td>
</tr>
</tbody>
</table>

Data Source: WASDE August Update
USDA increased their 2017/18 export number 25 mil. Bu. in August to 2,110 mil. Bu.

- Need to average 26.5 mil bu./week
- Last two weeks: 20.3 mil bu.

Outstanding sales for 2018/19 are down 30% from this point last year.

Emerging Markets - Volume (Percentage Change from 2016/17)
- Egypt: +1.6 million metric tons (213%)
- Pakistan: +877,395 metric tons (148%)
- Mexico: +430,986 metric tons (12%)
- Netherlands: +505,878 metric tons (26%)

Data Source: USDA-FAS
U.S. + Tariff = Brazilian Price

**United States**
(Large Exporter)

**China**
(Large Importer)

**Brazil/ROW**
(Exporters)

- **Black** = Free Trade
- **Red** = Discriminatory Tariff

**World Price**

**Reduction in U.S. Exports** (Market Share)

**Increase in Exports** (Market Share)

CFAES
Selling Soybeans into China

- U.S. Price of $342 * 1.25 = Brazil Price of $427/MT
- $342 divided by $427 is a price ratio of 80%
- Lower than 80% encourages U.S. Exports whereas higher than 80% encourages Brazilian Exports

Data Source: USDA - FAS Oilseed World Markets and Trade
How dependent are we? - Soybeans

U.S. Soybean Export Portfolio: Average Annual Percentages 1998-2002

- China: 54%
- Mexico: 14%
- Japan: 13%
- ROW: 18%


- China: 39%
- Mexico: 11%
- Japan: 13%
- ROW: 38%

U.S. Soybean Export Portfolio: Average Annual Percentages 2008-2012

- China: 27%
- Mexico: 8%
- Japan: 5%
- ROW: 59%

U.S. Soybean Export Portfolio: Average Annual Percentages 2013-2017

- China: 61%
- Mexico: 4%
- Japan: 7%
- ROW: 29%

Data Source: USDA-FAS; author calculation
How Dependent are we?

✓ The U.S. soybean market has become more demand concentrated than corn and pork.

✓ Did market concentration expose the U.S. soybean industry?

✓ We can assume that the trade war will diversify U.S. soybean exports.
  ✓ Some will argue for government regulation to prevent again in the future.

U.S. Commodities (Volume-Based) Annual Herfindahl-Hirschman Index

- Soybeans
- Corn
- Pork

Data: USDA- FSA; Calculated by Author
Case Study of Market Share- Beef

✓ More than 300 countries banned U.S. beef on scare of BSE, including Japan, in 2003.

✓ U.S. Beef market share in Japan dropped to 0 and 14 years later has not regained its original status.

✓ Market share is hard to regain once lost unless variables change.

Japanese Beef Imports

Value in US Dollars (Millions)

Source: Author Calculation using UN COMTRADE Data
Comparative Advantage?

- Assuming same quality of soybean, the total U.S. comparative advantage over Brazil in soybean production is shrinking.

- Transportation remains a nontrivial factor for the Mato Grosso State.

- Chinese infrastructure investment in Brazil will be critical to U.S. future competitiveness, all else equal.

*Produced by The Ohio State University CFAES

**Calculated from The Ohio State University and Federal University of Mato Grosso enterprise budgets.

** USDA and Gavilon transportation estimates
Feedback: Is this year a record for Ohio?

- Current Ohio Record was 2016 at 54.5 bu./acre
- My estimate for 2018 was at 55.5 bu./acre, which is based on an ending crop condition of 73% in good or excellent condition.
Projecting Final Ohio Soybean Yield and Production

Substituting a crop condition of 73% in for x: 
\[(0.24 \times 73) + 38.3 = 55.7 \text{ bu./acre}\]

Using 4,950,000 acres for harvested acres: 
4,940,000 * 55.7 bu./acre = **275,158,000 bushels** for 2018 Ohio Production

Subtracting May WASDE Price ($10.00) from Aug. WASDE Price ($8.90) = -$1.10/bu. 
$1.10 * 275,158,000 = **$302.7 million in lost value**

However if we assume 42% of soybean crop was sold early 
only 58% was left unprotected = **$175.6 million in lost value**
Soybean Export Bids
08/10/15 - 08/08/18

- US Gulf - Spot
- US PNW - Spot
- Paranagua BR - Spot

Data Source: Bloomberg
Trade Relief Program

The Administration announced on July 24, that USDA would implement 3 programs totaling no more than $12 billion to offset the “Impact of the unjustified retaliatory tariffs on U.S. agricultural goods”. On August 27, details of the programs were announced.

1. Market Facilitation Program- $4.7 billion
   - FSA will make payments to producers of soybeans, sorghum, corn, wheat, cotton, dairy and hogs
   - Payments will be based on actual 2018 production, but only 50% at first
   - Payment limits: less than $900,000 Adjusted Gross Income and a total payment of $125,000/ active farmer or legal entity.
   - Producers can enroll starting September 4, 2018 at www.farmers.gov/MFP.

2. Food Purchase and Distribution Program- $1.2 billion
   - Agricultural Marketing Service will purchase surplus commodities, such as: beef, blueberries, dairy, grapes, pork and others for distribution through The Emergency Food Assistance Program (TEFAP) and child nutrition programs.

3. Agricultural Trade Promotion Program- $0.2 billion
   - Foreign Agricultural Service will administer program “with the private sector to assist in developing new export markets”
   - “The ATP is meant to help all sectors of U.S. agriculture, including fish and forest participants in early 2019.”

### MFP Payment Rates

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Initial Payment Rate- 50%</th>
<th>Est. Initial Payment ($1,000)</th>
<th>% Share</th>
<th>Aug. WASDE-May WASDE Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>$0.03/lb.</td>
<td>$276,900</td>
<td>6%</td>
<td>+ $0.02/lb.</td>
</tr>
<tr>
<td>Corn</td>
<td>$0.005/bu.</td>
<td>$96,000</td>
<td>2%</td>
<td>- $0.20/bu.</td>
</tr>
<tr>
<td>Dairy (milk)</td>
<td>$0.06/cwt</td>
<td>$127,400</td>
<td>3%</td>
<td>- $0.25/cwt.</td>
</tr>
<tr>
<td>Pork (hogs)*</td>
<td>$4.00/head</td>
<td>$290,300</td>
<td>6%</td>
<td>- $14.00/head</td>
</tr>
<tr>
<td>Soybeans</td>
<td>$0.825/bu.</td>
<td>$3,629,700</td>
<td>77%</td>
<td>- $1.10/bu.</td>
</tr>
<tr>
<td>Sorghum</td>
<td>$0.43/bu.</td>
<td>$156,800</td>
<td>3%</td>
<td>- $0.20/bu.</td>
</tr>
<tr>
<td>Wheat</td>
<td>$0.07/bu.</td>
<td>$119,200</td>
<td>3%</td>
<td>+ $0.10/bu.</td>
</tr>
</tbody>
</table>

*For Pork (hogs) the February WASDE price was subtracted from the August WASDE since tariffs went on Mar 2. Based on 400 lb. pigs.

### Food Purchase Program through Agricultural Marketing Service

<table>
<thead>
<tr>
<th>Select Commodities</th>
<th>Target Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>$93,400,000</td>
</tr>
<tr>
<td>Beef</td>
<td>$14,800,000</td>
</tr>
<tr>
<td>Blueberries</td>
<td>$1,700,000</td>
</tr>
<tr>
<td>Dairy</td>
<td>$84,900,000</td>
</tr>
<tr>
<td>Grapes</td>
<td>$48,200,000</td>
</tr>
<tr>
<td>Pecans</td>
<td>$16,000,000</td>
</tr>
<tr>
<td>Pork</td>
<td>$558,800,000</td>
</tr>
<tr>
<td>Strawberries</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Sweet Corn</td>
<td>$2,400,000</td>
</tr>
</tbody>
</table>

Markets will and have reacted differently to this announcement.

Example Dairy:  
- **MFP**: Bearish in the long-term. Direct payments to farmers will incentivize more production  
- **FPDP**: Bullish Increased Demand (USDA caught on to the 10 gal. challenge)  
- **Market Assistance**: Neutral (spread out over all commodities)
Key Takeaways

✓ The tariffs can come and go at any time, but a trade agreement usually takes time (months/years)
  ✓ Example - NAFTA
    ✓ President Reagan proposed NAFTA in 1979
    ✓ Canada and the United States Free Trade Agreement in 1988
    ✓ NAFTA signed by all three countries in December of 1992
    ✓ Passed and Signed by Congress and President Bill Clinton on December 8, 1993

✓ There are a range of implications
  ✓ Short Term Implications
    ✓ Futures price reduction and higher levels of price volatility
    ✓ Basis implications - just like supply chains the cash market will have to adjust to grain flows from PNW to Gulf and the use of soybean crush
Key Takeaways

✓ Long Term Implications
  ✓ Loss of Market Share in Chinese Market
    ✓ The U.S. soybean industry will be less dependent on one country, at the expense of free market profitability.
    ✓ To regain market share without a similar shock internationally we will either need to reduce costs or produce a more “attractive bean”
  ✓ Stronger Domestic Crush Industry

✓ The 2018/19 U.S. Crop is likely to be very large
  ✓ Grain Marketing this Winter and Spring will be difficult
    ✓ Make the Smart Decision
    ✓ Be mindful of local basis
Save the Date: 2018 Agricultural Policy and Outlook Conference

November 2, 2018 – 8:30am - 2:30pm
Nationwide & Ohio Farm Bureau 4-H Center

Register at go.osu.edu/2018AGOutlook

Conference Speakers:

**Chris Hurt**, Professor, Agricultural Economics, Purdue University - “US Livestock Outlook”

**Ani Katchova**, Chair, Farm Income Enhancement Program - “Ohio Financial Conditions and Outlook”

**Barry Ward**, Director, OSU Extension Income Tax School Program - “Farm Management Update”

**Ian Sheldon**, Chair, Andersons Chair of Agricultural Marketing, Trade and Policy - “Trade and Policy”

**Carl Zulauf**, Professor Emeritus - “Ag Policy”

**Ben Brown**, Program Manager, Farm Management Program - “Ohio Commodity Outlook”