



# Soybean, Corn, & Wheat Outlook Middle Tennessee Grain Conference

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<https://ag.tennessee.edu/arec/Pages/cropeconomics.aspx>

# Overview

- Corn, Soybeans, and Wheat
  - Supply
  - Demand
  - Stocks
  - 2018 Price Outlook



Supply, Demand, Stocks, and Price Outlook

# WHEAT

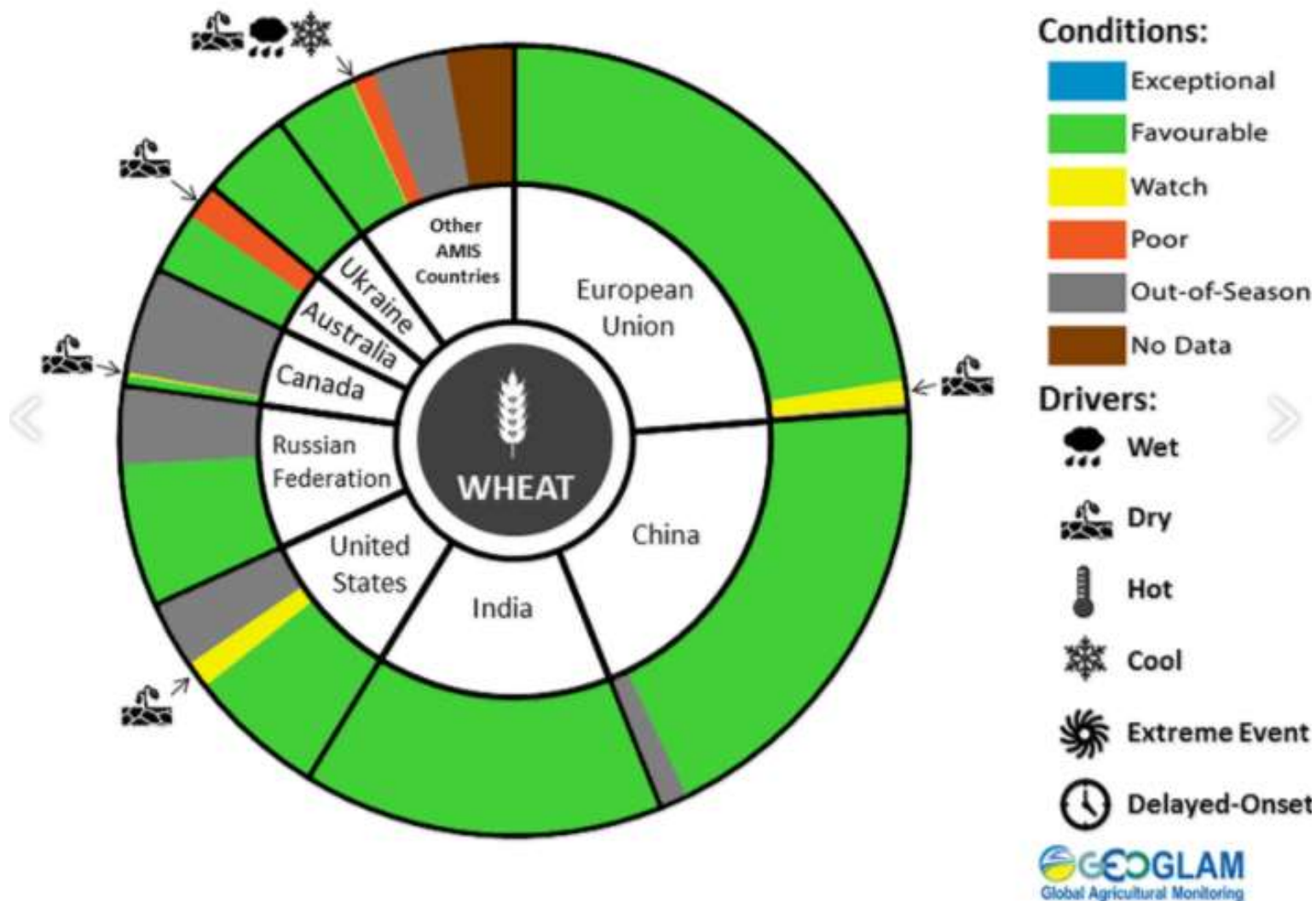
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# Wheat

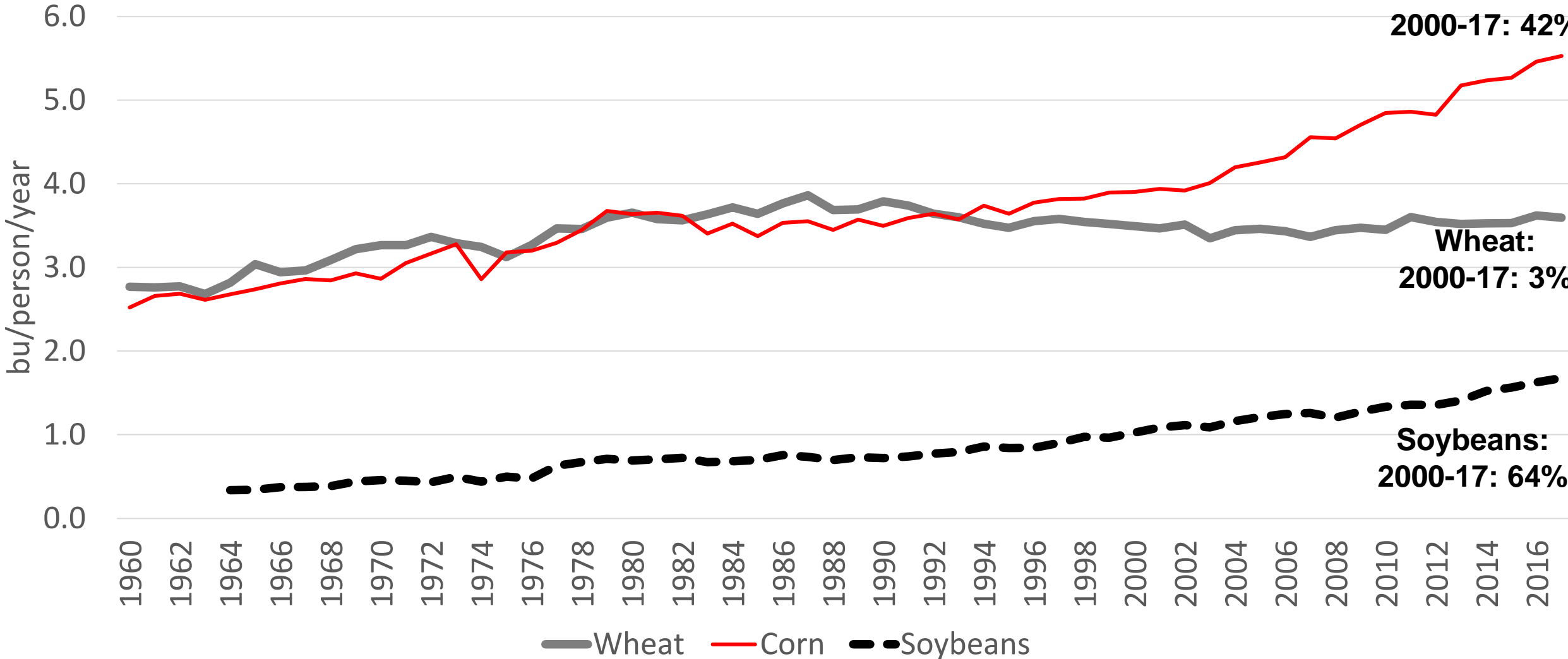
- Production continues to exceed production
  - Total Global Production 27.815 Billion Bushels
  - Total Consumption 27.253 Billion Bushels
- Demand is Flat
- Stocks are record large
  - Projected Ending Stocks 9.891 Billion Bushels
- Prices will continue to struggle to get above \$5.00.

# Share of total AMIS Production



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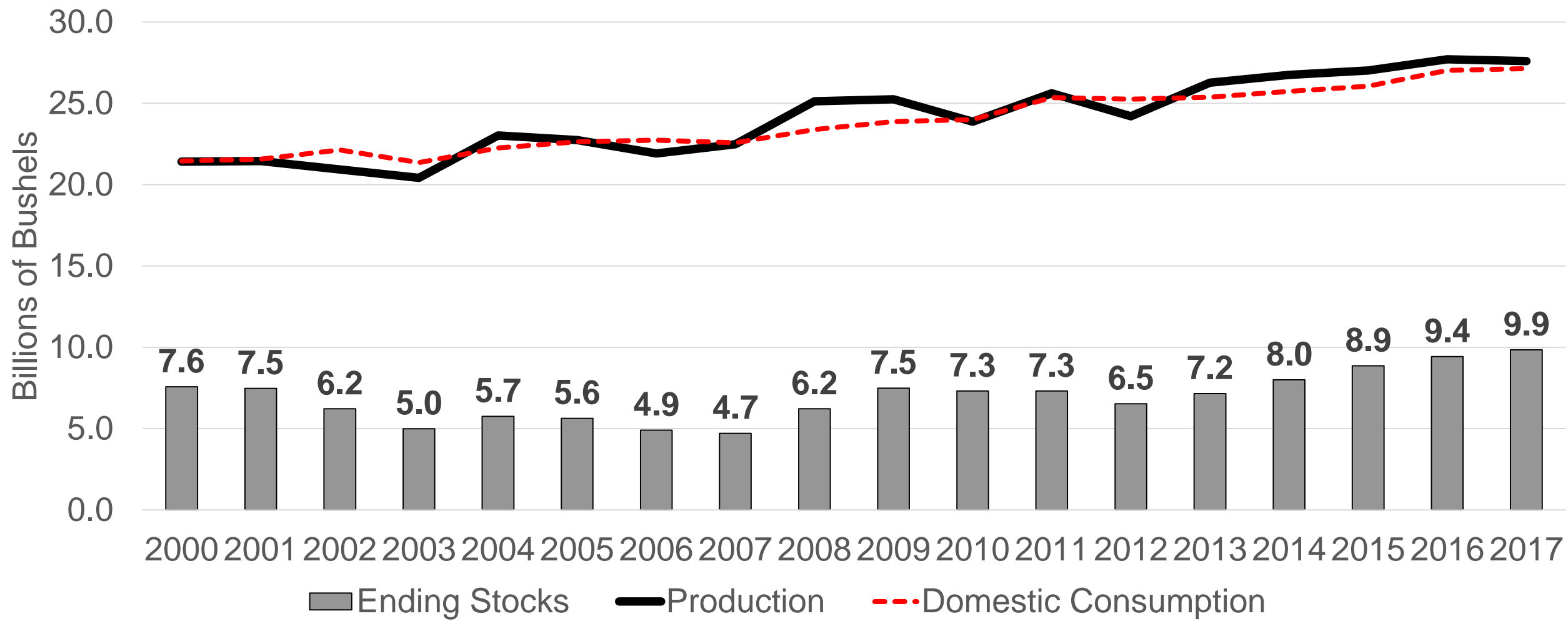
# Global Soybean, Corn, and Wheat Consumption per Capita, 1960-2017



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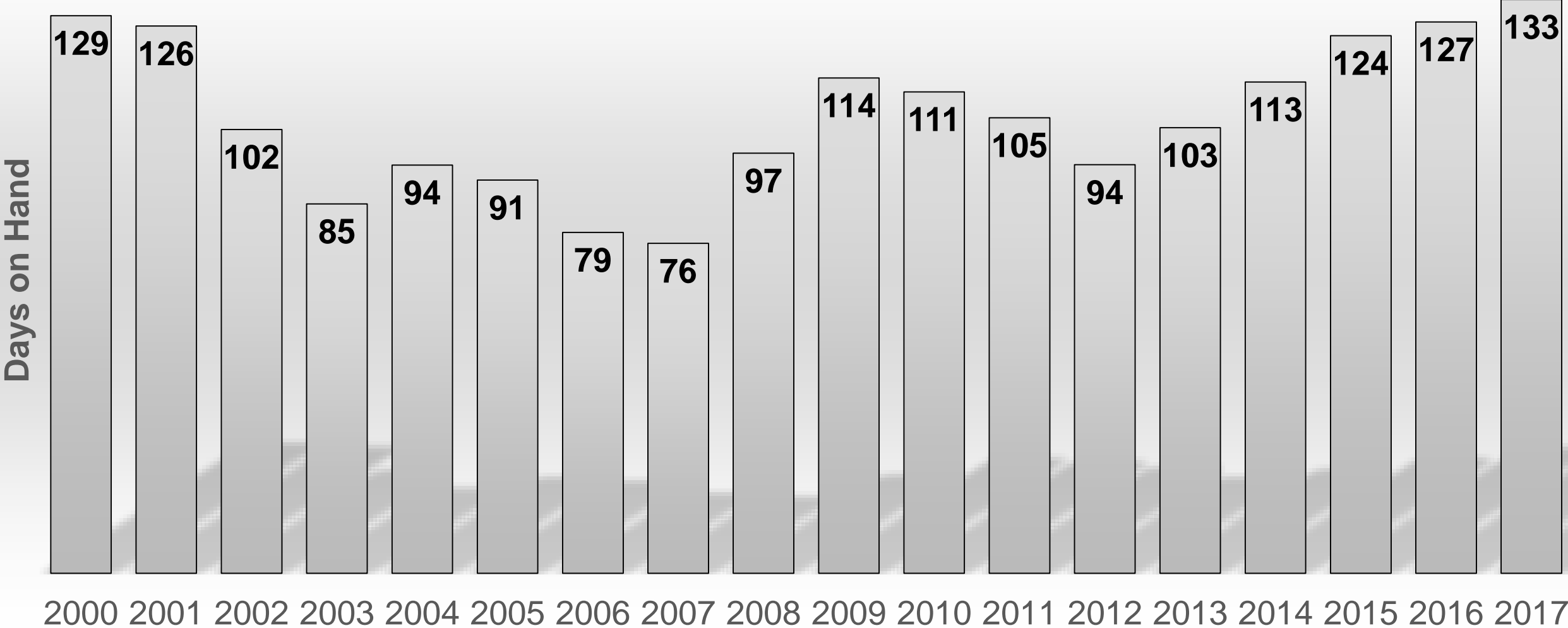


# Global Wheat Production, Consumption, and Ending Stocks, 2000-2017



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# Global Days on Hand [ $\text{Ending Stocks}/(\text{Consumption}/365)$ ], 2000-2017



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Supply, Demand, Stocks, and Price Outlook

# CORN

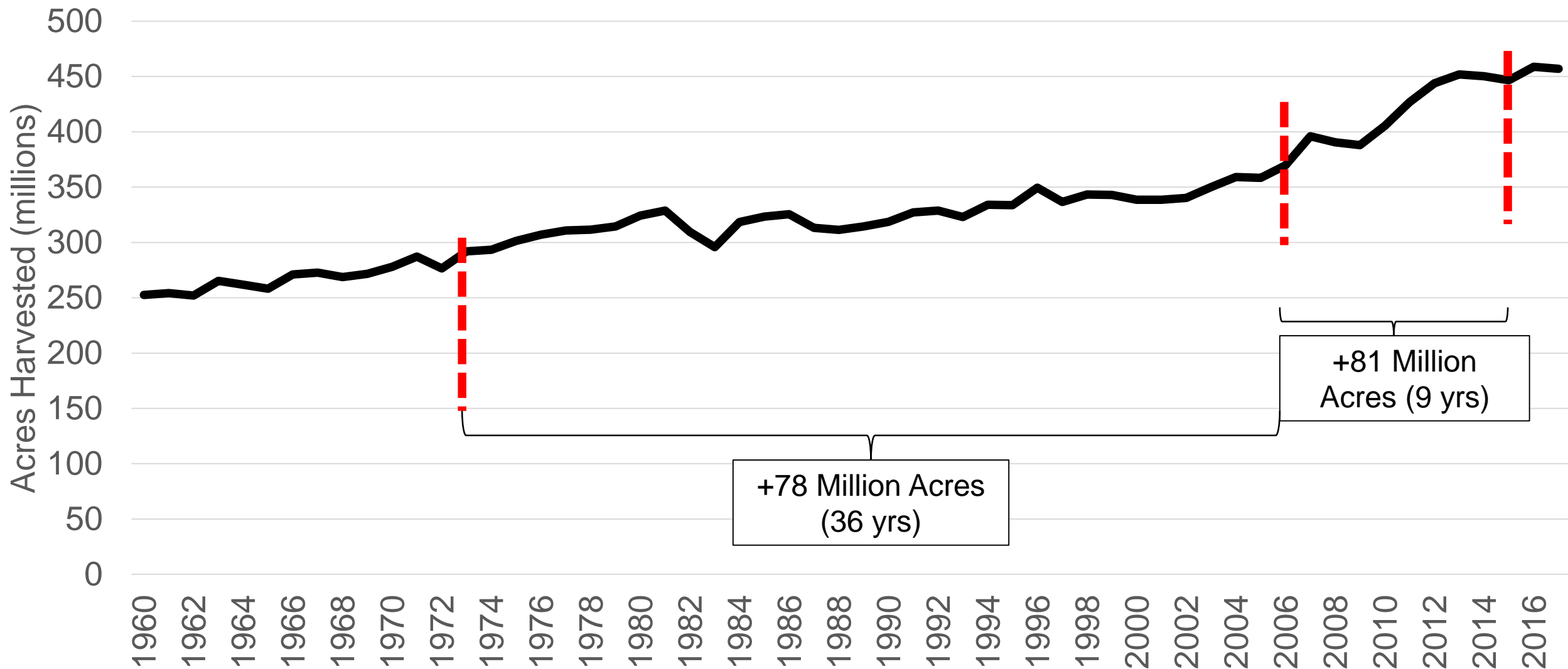


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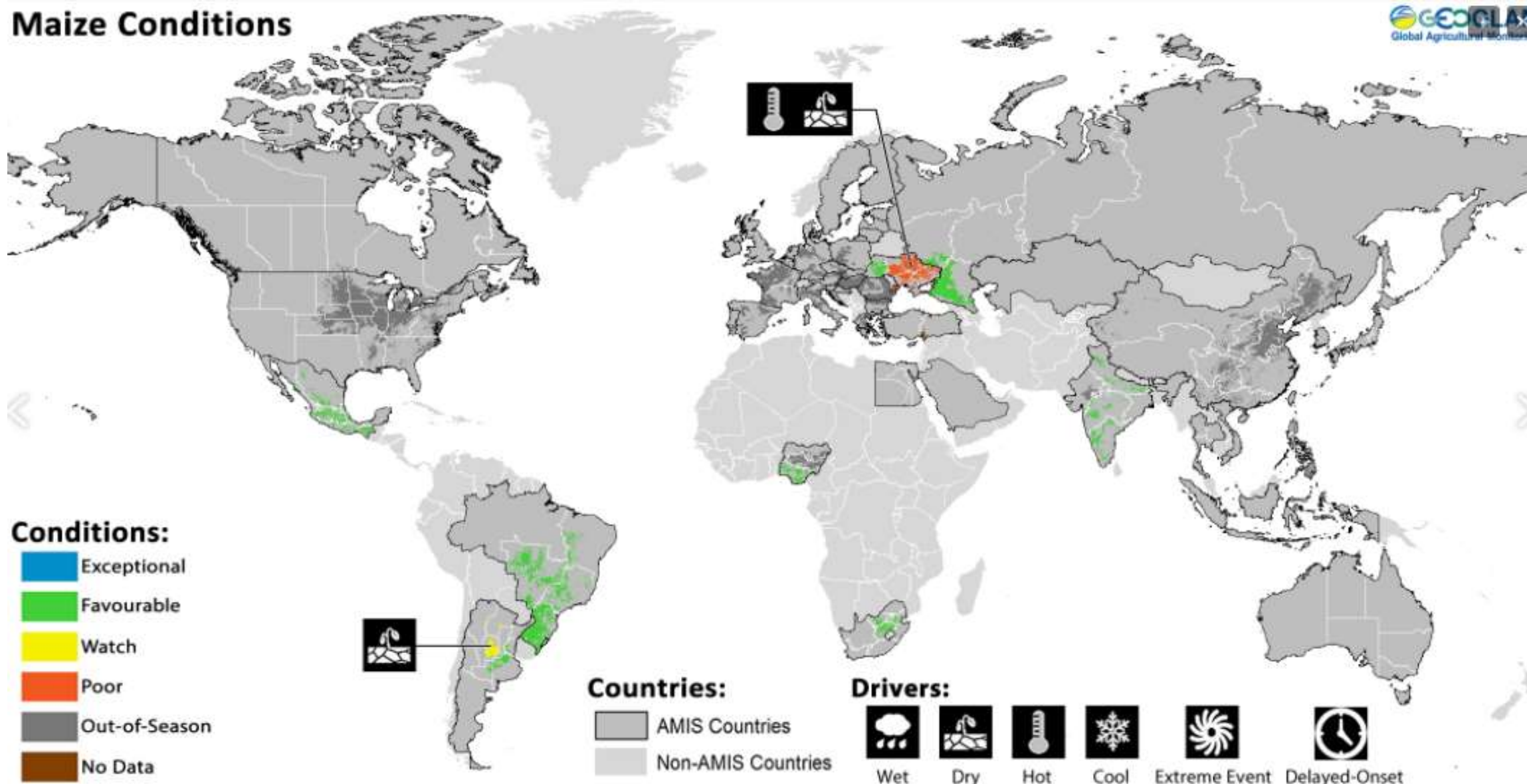
# Corn Supply

- Global
  - Increased acres
  - Multiple production regions
- United States
  - 2017 acreage down; record yield
  - 2018 acreage flat?

# World Corn Harvested Acres, 1960-2017



# Maize Conditions



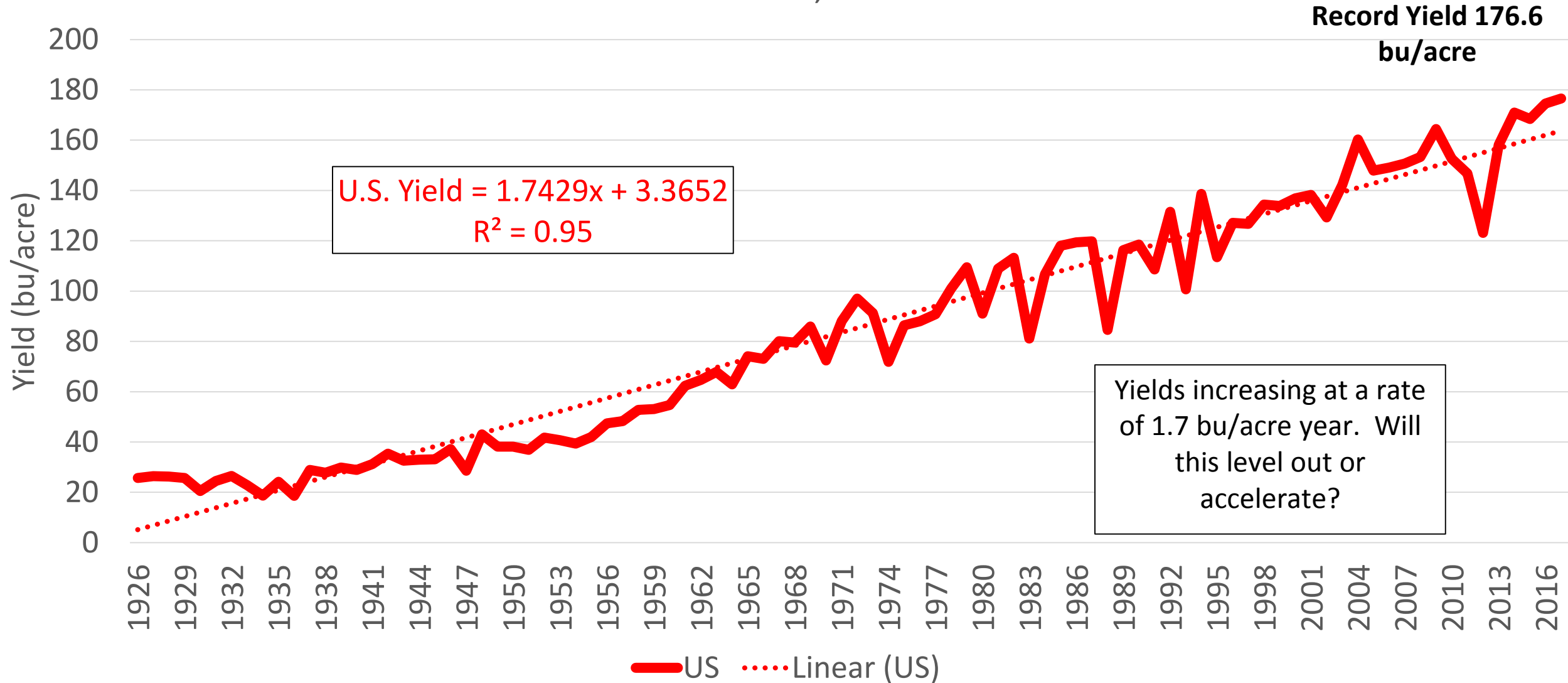
Source: <https://cropmonitor.org/>  
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# World Corn Yields by Country (bu/acre)

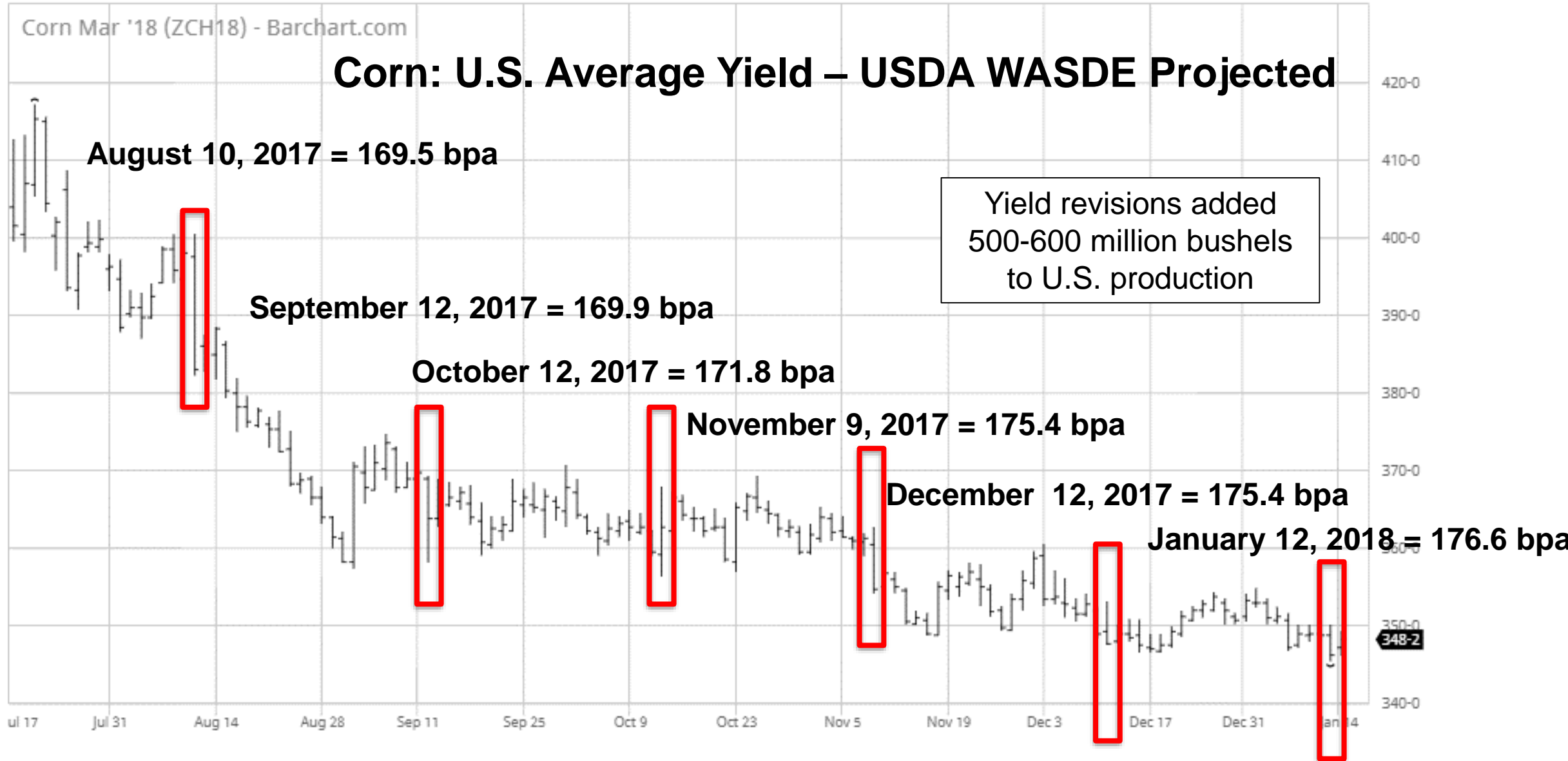
| Country              | 1999 Yield | 10 Year Average Yield | 2017/18 Yield | Difference from 10 Year Average |
|----------------------|------------|-----------------------|---------------|---------------------------------|
| Argentina            | 88         | 116                   | 129           | 13                              |
| Brazil               | 40         | 74                    | 86            | 12                              |
| China                | 79         | 90                    | 97            | 7                               |
| European Union       | 102        | 108                   | 113           | 5                               |
| Ukraine              | 40         | 86                    | 89            | 2                               |
| <b>United States</b> | <b>134</b> | <b>156</b>            | <b>177</b>    | <b>20</b>                       |
| World                | 70         | 84                    | 90            | 6                               |

- U.S. has a major yield advantage over other corn producers.
- Will US yields plateau?
- Will/when world yields catch up?

# U.S. Corn Yields, 1926-2017



# Corn: U.S. Average Yield – USDA WASDE Projected

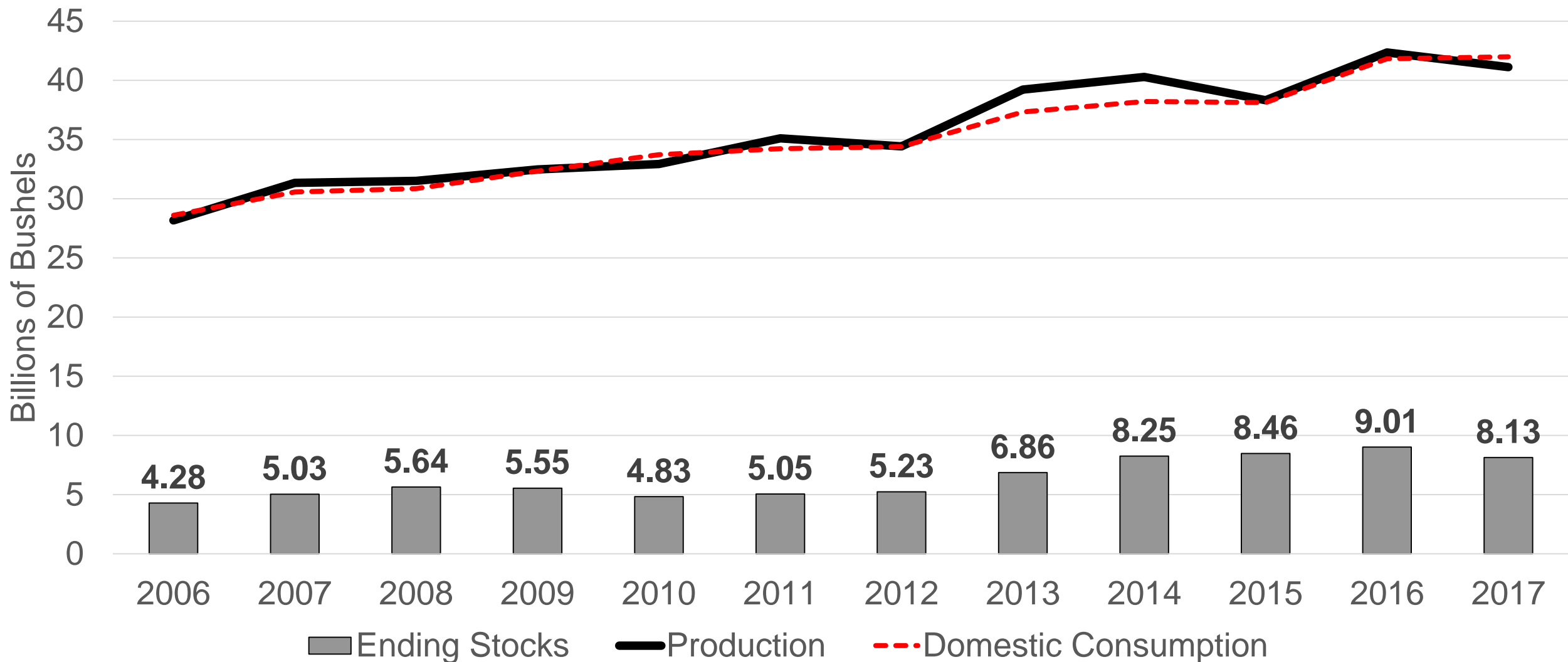


# Corn Demand and Stocks

- Global
  - Global corn stocks estimated to shrink but still near record large (build up of stocks in the U.S.).
  - Demand increasing - Continued economic growth is important.
- United States
  - Domestic carryover continues to be problematic.
  - 13% of production goes to exports.
  - Trade / exports are crucial to reducing domestics stocks.
    - NAFTA and Bi-lateral trade agreements are imperative.
    - Competition for exports from South America and other exporting countries.



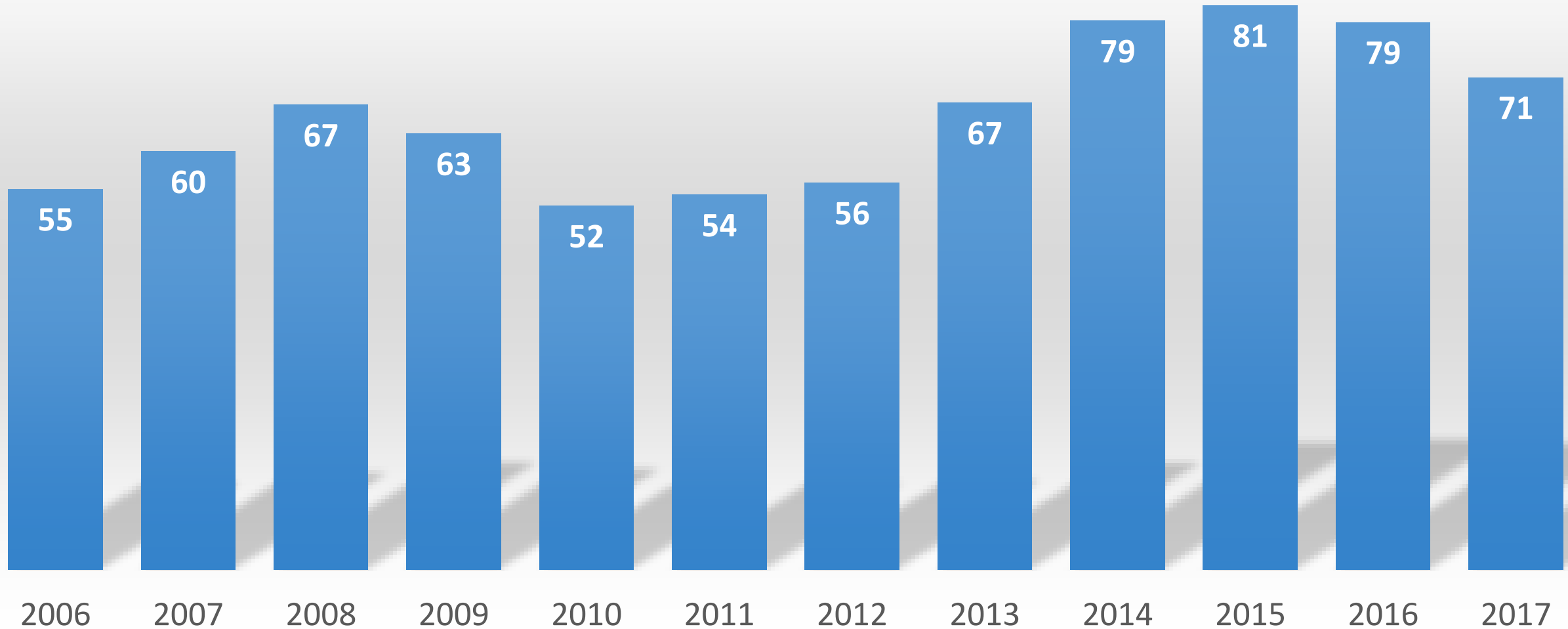
# Global Corn Production, Consumption, and Ending Stocks, 2006-2017



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# Global Days on Hand [ $\text{Ending Stocks}/(\text{Consumption}/365)$ ], 2006-2017

Days on Hand

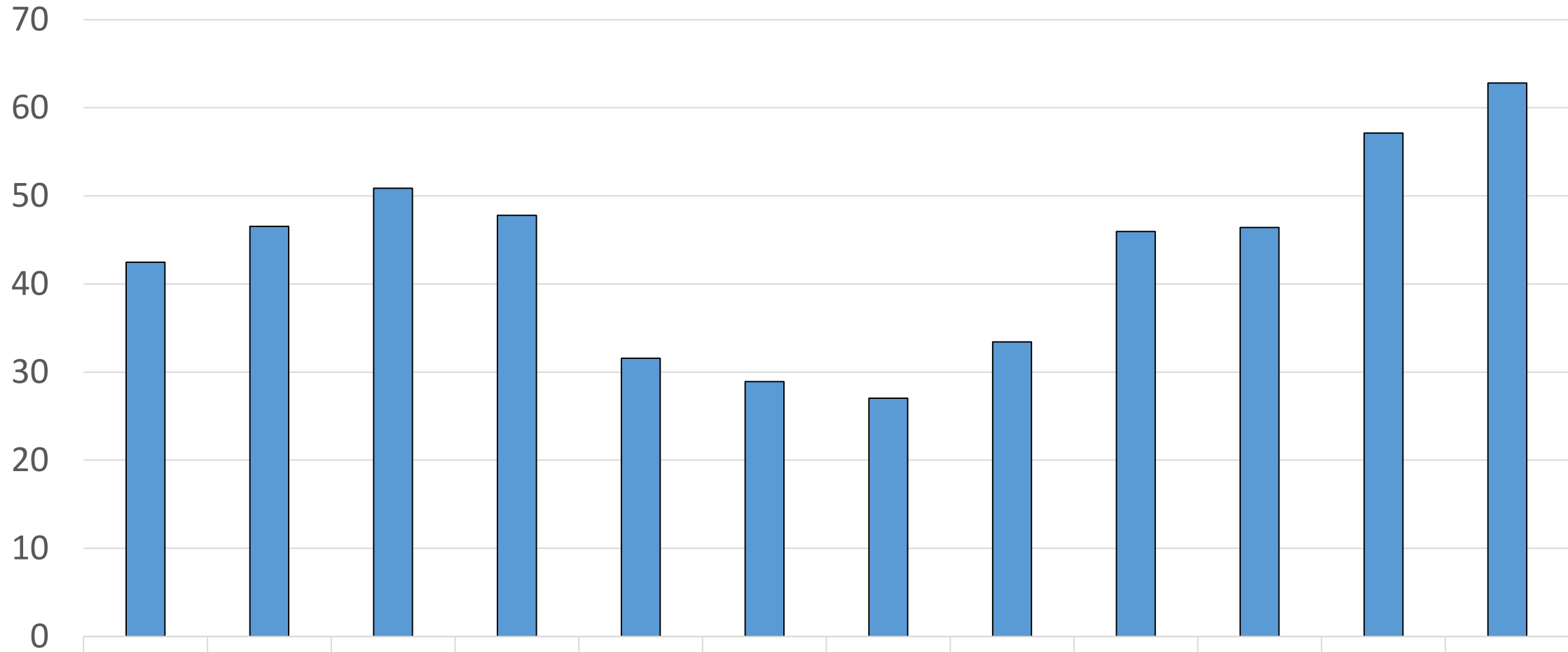


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# Corn Supply and Demand

|  | 2016          | 2017 January  | Change 16 to 17 |
|--|---------------|---------------|-----------------|
| <b>Planted and Harvested Acres (million) &amp; Yield</b> |               |               |                 |
| Acres Planted  | 94            | 90.2          | -3.8            |
| <b>Acres Harvested</b>                                   | <b>86.7</b>   | <b>82.7</b>   | <b>-4.0</b>     |
| <b>U.S. Yield (bpa)</b>                                  | <b>174.6</b>  | <b>176.6</b>  | <b>2.0</b>      |
| <b>Supply (Million Bushels)</b>                          |               |               |                 |
| Production   | 15,148        | 14,604        | -544            |
| Total Supply   | 16,942        | 16,947        | 5               |
| <b>Use &amp; Ending Stocks (Million Bushels)</b>         |               |               |                 |
| Feed and Residual  | 5,467         | 5,550         | 83              |
| Ethanol  | 5,439         | 5,525         | 86              |
| Food, Seed & Industrial                                  | 1,450         | 1,470         | 20              |
| <b>Exports</b>   | <b>2,293</b>  | <b>1,925</b>  | <b>-368</b>     |
| <b>Total Use</b>   | <b>14,649</b> | <b>14,470</b> | <b>-179</b>     |
| <b>U.S. Ending Stocks</b>                                | <b>2,293</b>  | <b>2,477</b>  | <b>184</b>      |
| <b>Foreign Stocks</b>                                    | <b>6,712</b>  | <b>5,655</b>  | <b>-1,057</b>   |
| <b>Price and Stocks to Use Ratio</b>                     |               |               |                 |
| U.S. Avg. Price (\$/bu)                                  | \$3.36        | \$2.95-\$3.55 | -\$0.10         |
| <b>U.S. Stocks/Use</b>                                   | <b>15.65%</b> | <b>17.12%</b> | <b>1.47%</b>    |

# U.S. Corn Days on Hand [Ending Stocks/(Use/365)], 2006-2017



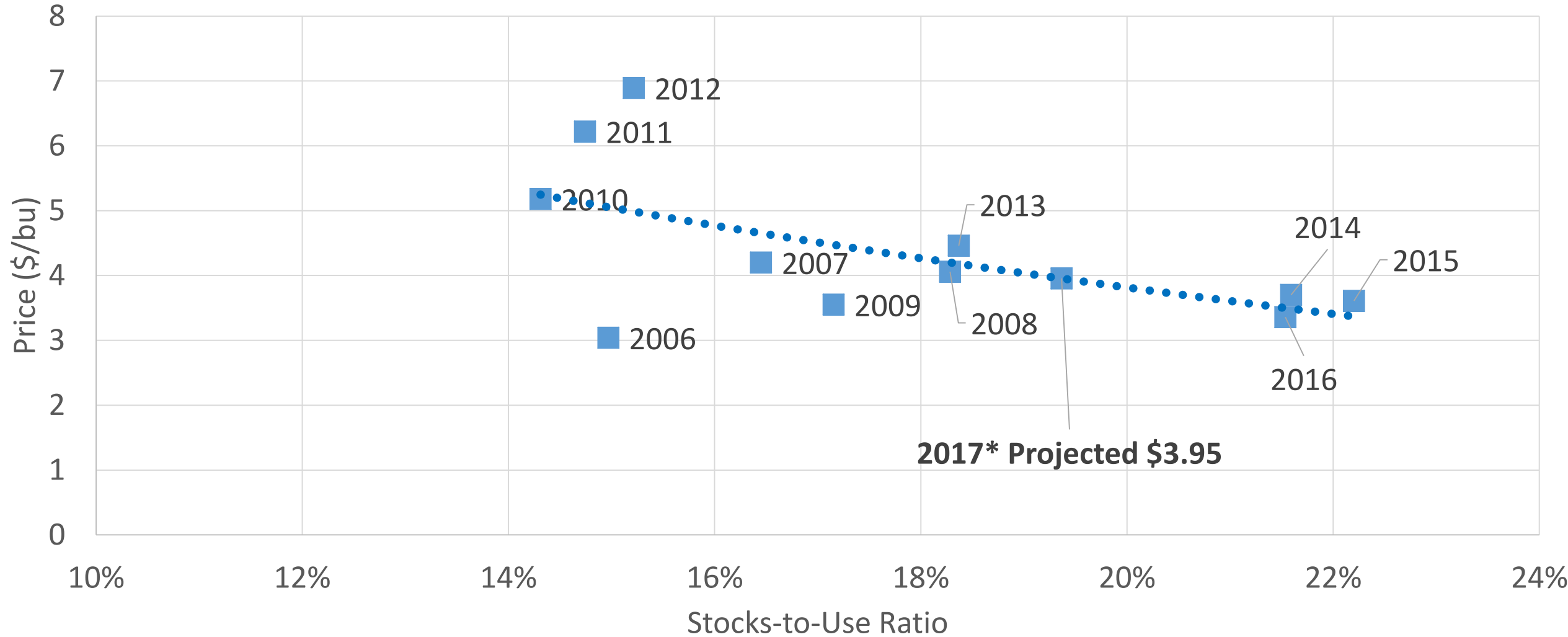
|                | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| ■ Days on Hand | 42   | 47   | 51   | 48   | 32   | 29   | 27   | 33   | 46   | 46   | 57   | 63   |

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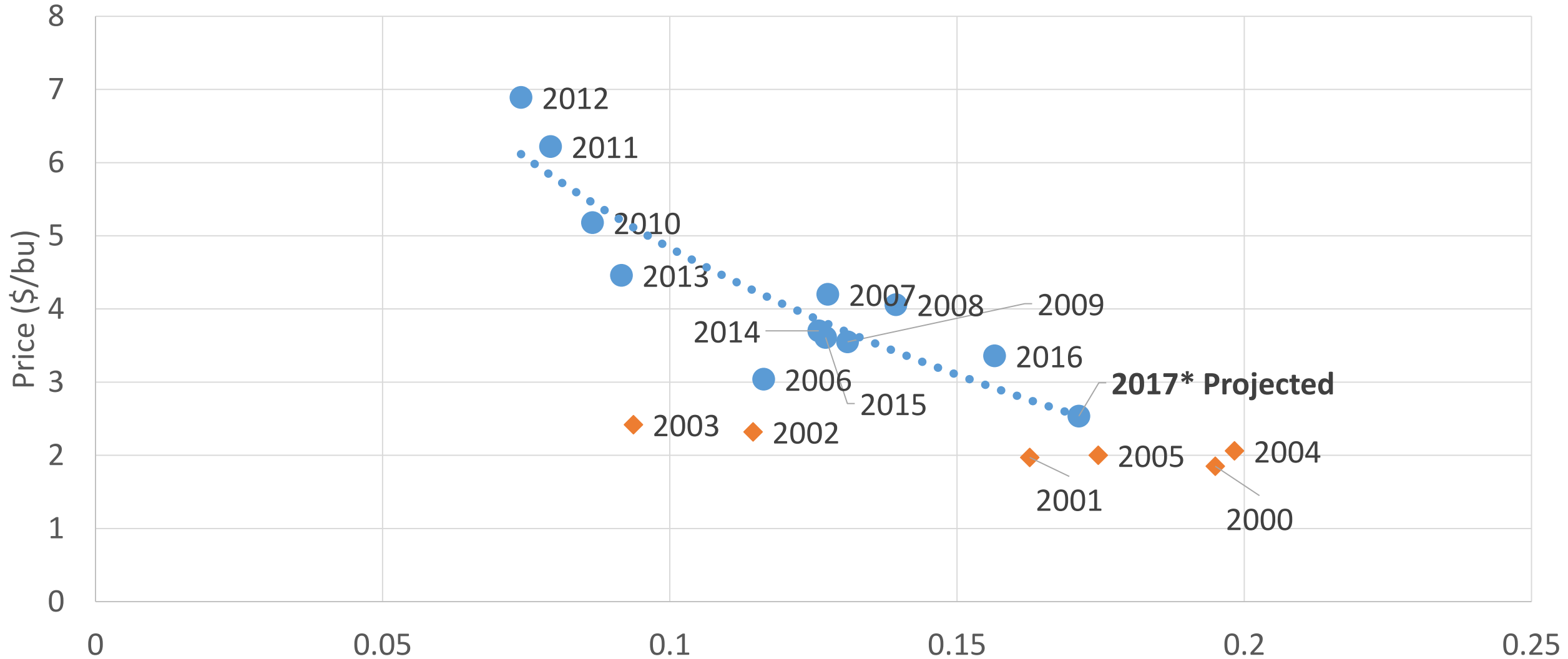
# Corn Prices

- Range bound prices
- Old Crop
  - Look for deferred futures contract opportunities to secure price on stored corn.
  - Look for basis improvements.
- New Crop
  - Start sales with December 2018 corn futures above \$3.90.
  - Fix additional production in 5-10 cent increments.
  - For example, \$3.90 = 10% of production; \$4.00 = 20%.
  - Look for basis opportunities.

# Global Corn Stocks-to-Use to Price Relationship, 2006-2017



# U.S. Stocks-to-Use to Price Relationship, 2000-2016



# Corn Markets: What I'm Watching in Early 2018

- Old Crop and New Crop
  - NAFTA
  - Exports sales pace (55% compared to 5-yr Avg of 59% of MY total)
  - Planting Intentions (crop insurance price determination period)
  - South American second crop corn plantings
  - Global Economic Growth (Positive, but is it Stable?)
  - U.S. Dollar





Supply, Demand, Stocks, and Price Outlook

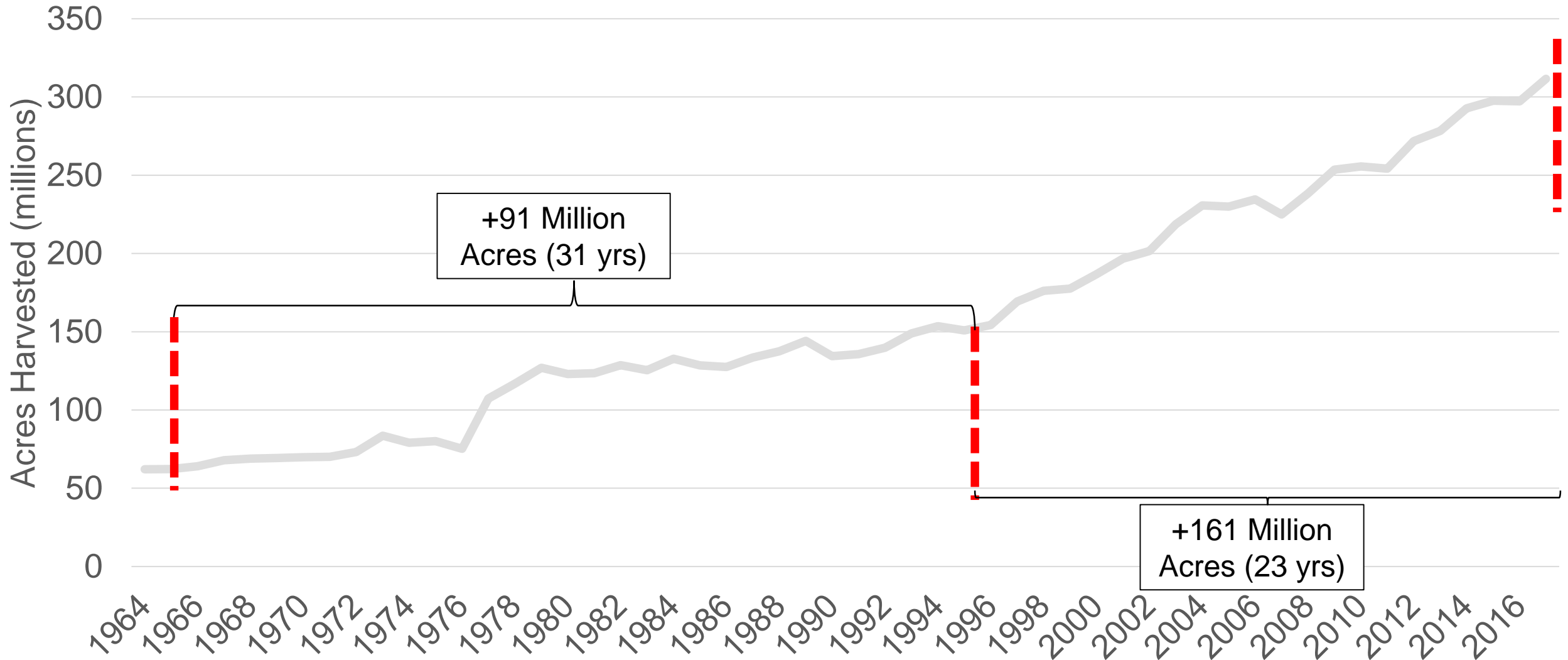
# SOYBEANS



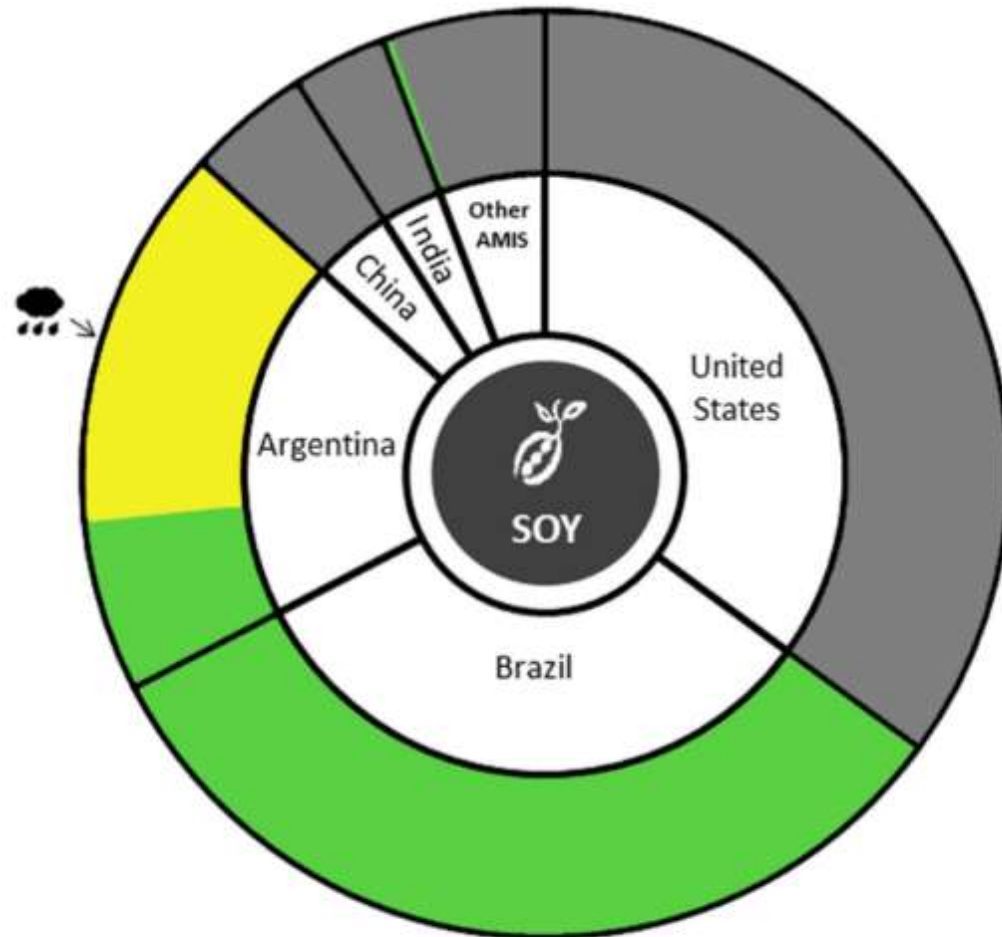
# Soybean Supply

- Global
  - South American Growth
  - Long Term Growth Prospects in China and India
- United States
  - 2017 acreage up; 2<sup>nd</sup> highest yield
  - 2018 acreage flat?

# World Soybean Harvested Acres, 1960-2017



# Share of total AMIS Production



## Conditions:

- Exceptional
- Favourable
- Watch
- Poor
- Out-of-Season
- No Data

## Drivers:

- Wet
- Dry
- Hot
- Cool
- Extreme Event
- Delayed-Onset



Source: <https://cropmonitor.org/>

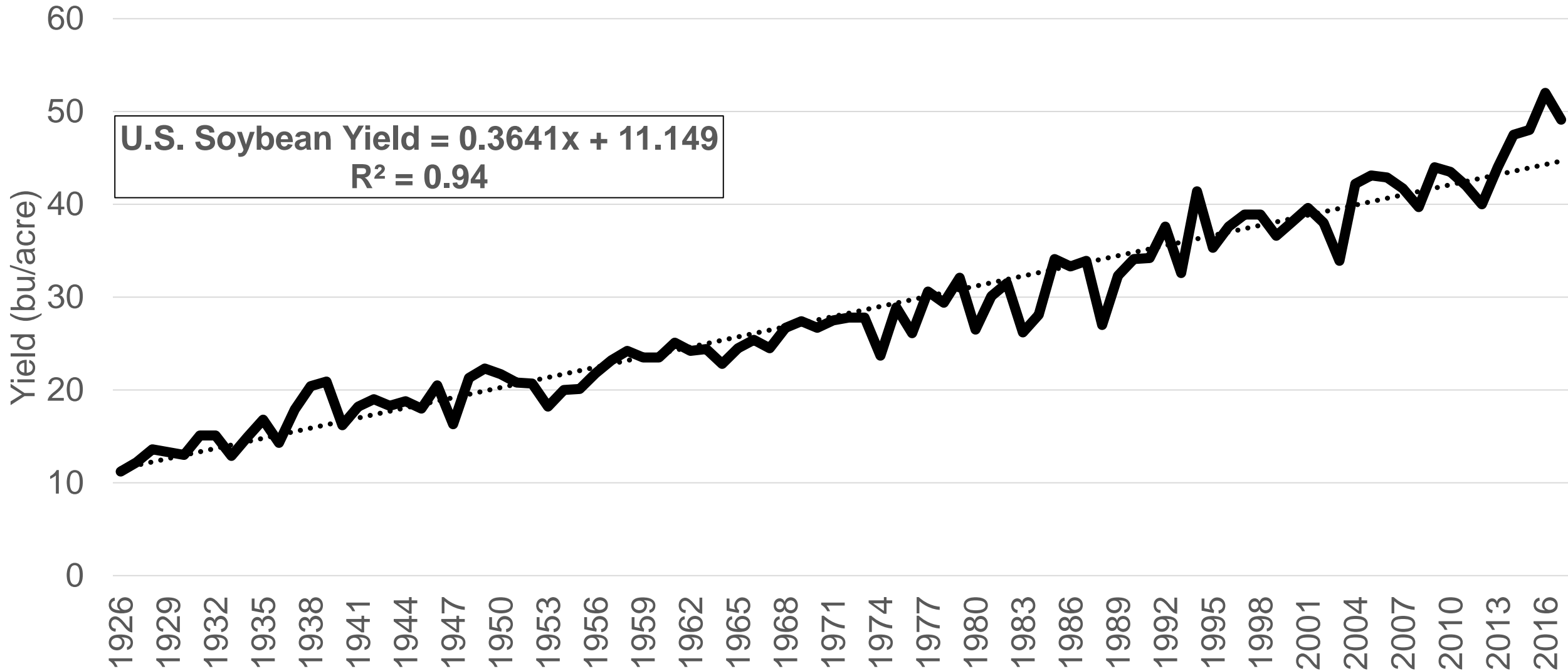
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# World Soybean Yields by Country (bu/acre)

| Country       | 1999 Yield | 10 Year Average Yield | 2017/18 Yield | Difference from 10 Year Average |
|---------------|------------|-----------------------|---------------|---------------------------------|
| Argentina     | 37         | 40                    | 45            | 4                               |
| Brazil        | 38         | 44                    | 47            | 3                               |
| China         | 27         | 26                    | 27            | 1                               |
| United States | 37         | 44                    | 49            | 5                               |
| World         | 33         | 38                    | 41            | 4                               |

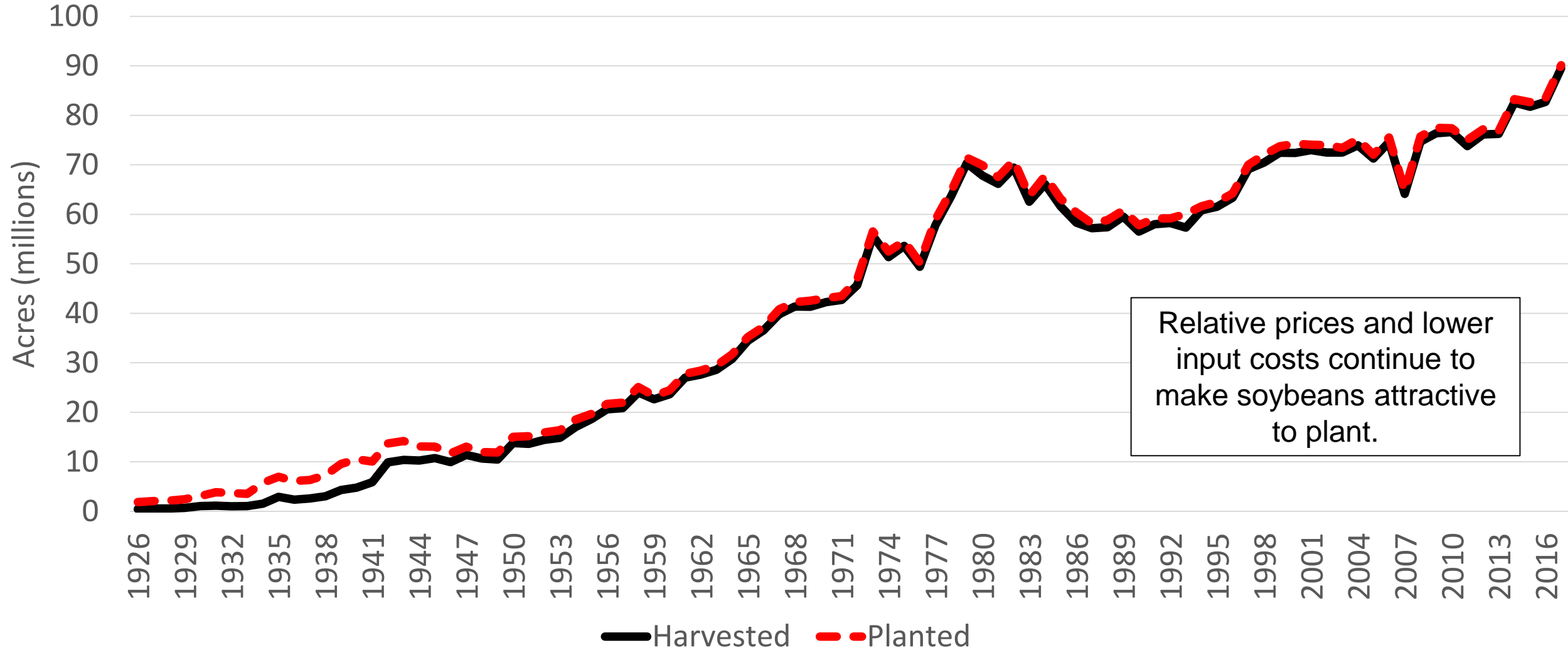
- U.S. and South American yields are very similar, unlike corn.
- China has the potential to increase soybean yield and acres (over the long term)

# U.S. Average Soybean Yield, 1926-2017



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# U.S. Planted and Harvested Soybean Acres, 1926-2017

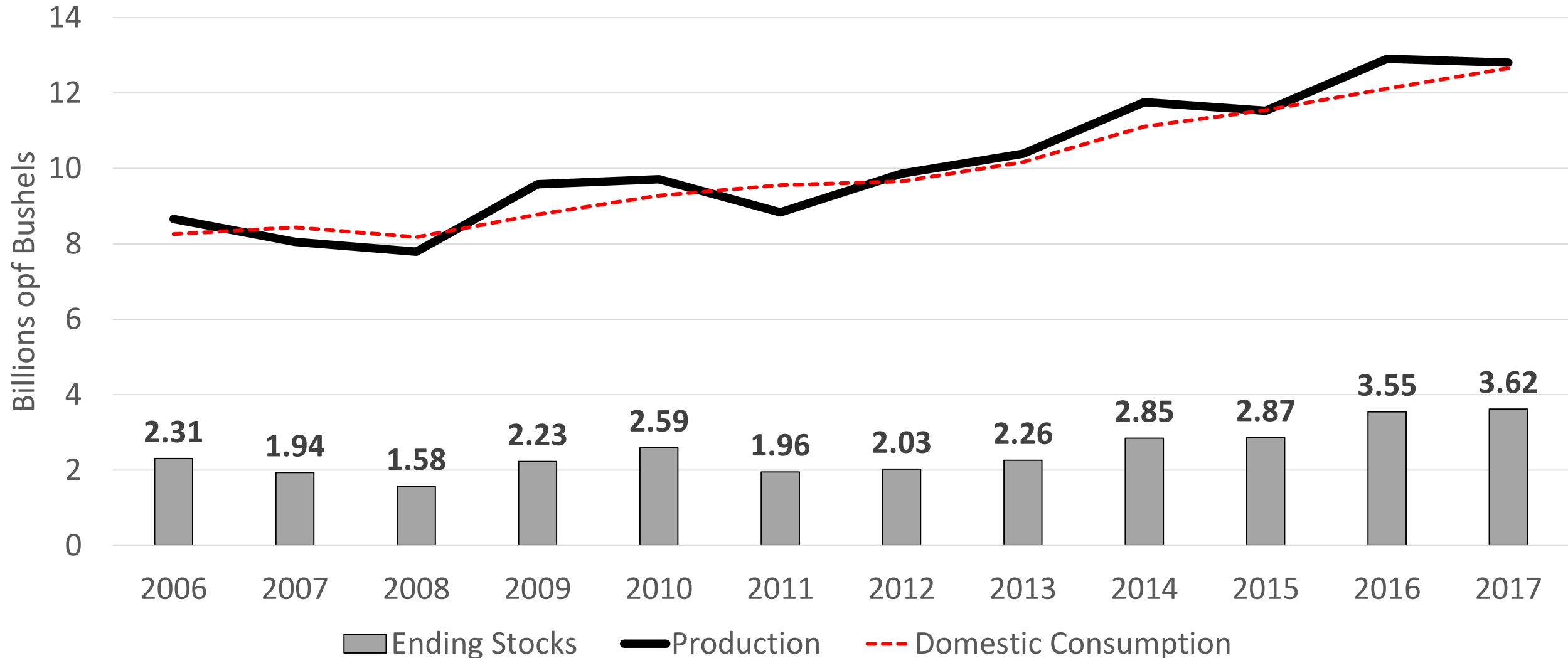


# Soybean Demand and Stocks

- Global
  - Global soybean stocks are growing (build up of stocks in the U.S.).
  - Demand increasing - continued economic growth is important.
- United States
  - Strong domestic crush – increases year-over-year.
  - Almost 50/50 domestic use and exports.
  - Trade / exports are crucial to reducing domestic stocks.
    - Bi-lateral trade agreements are imperative.
    - Competition for exports from South America and other exporting countries.

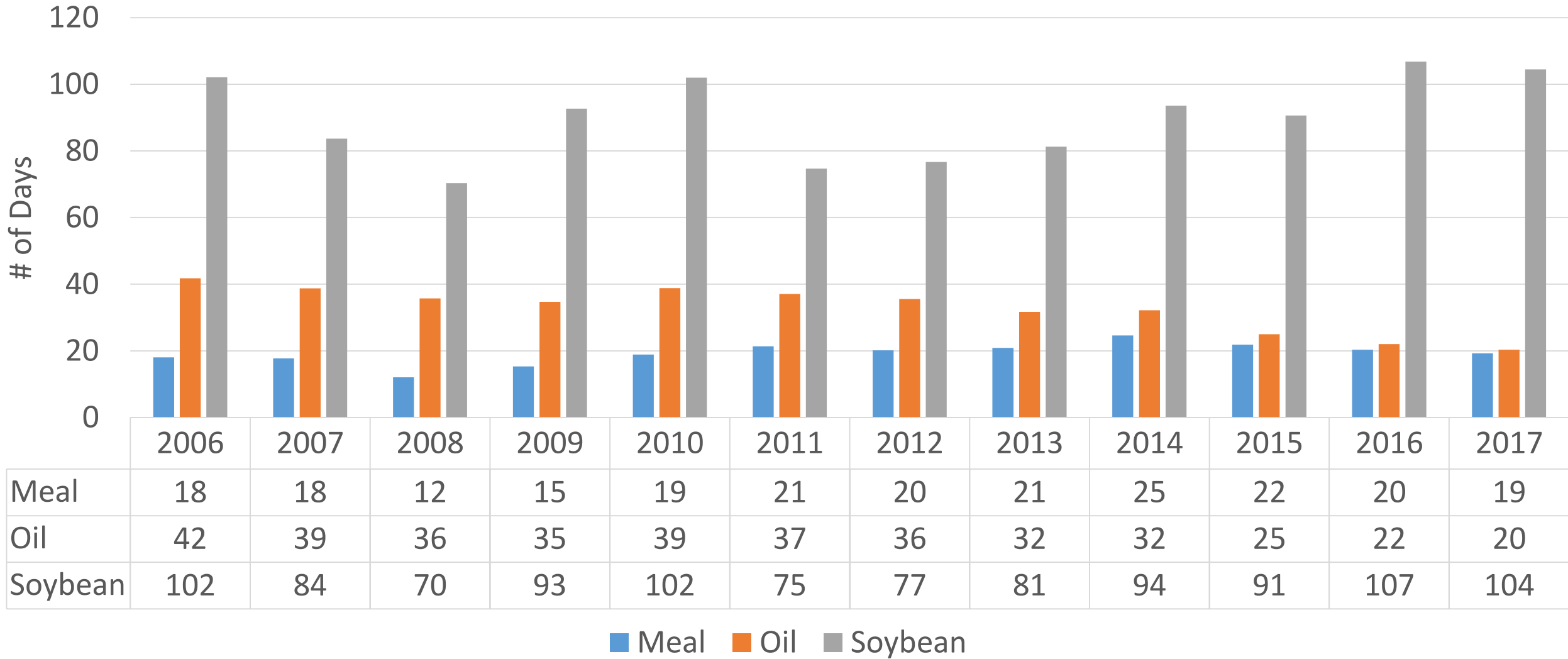


# Global Soybean Production, Consumption, and Ending Stocks, 2006-2017



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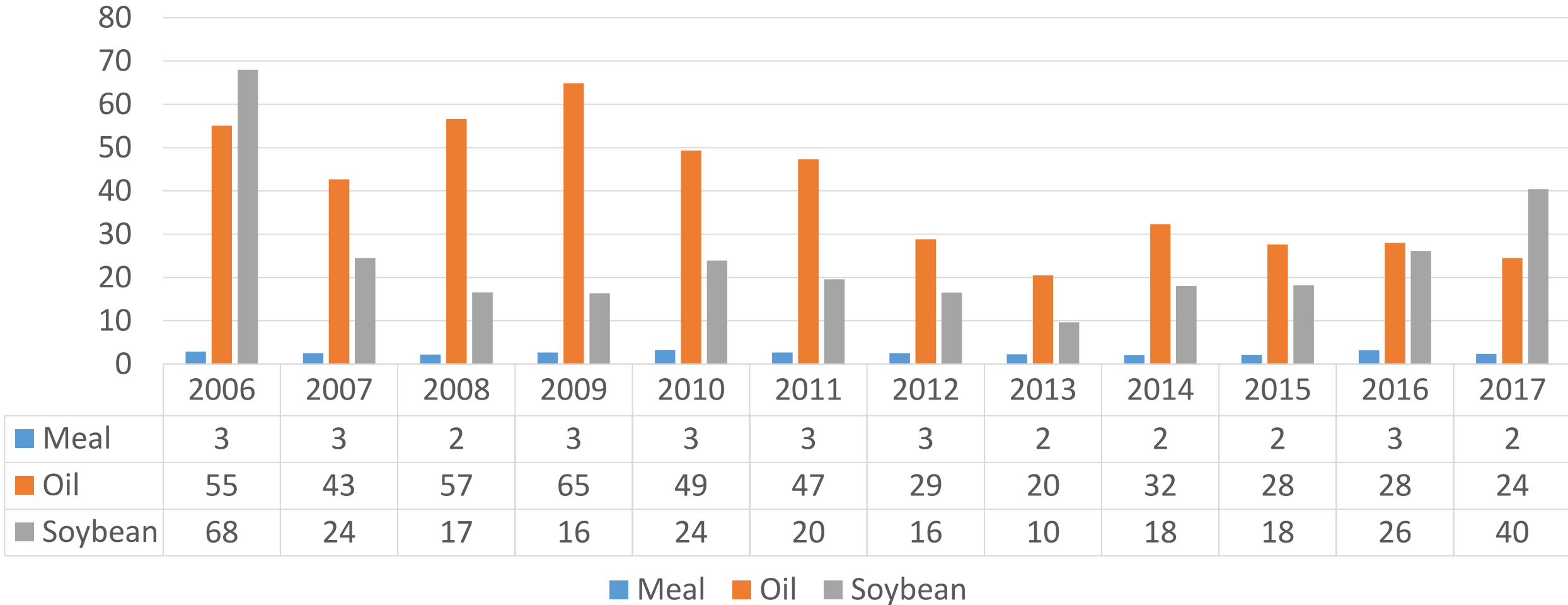
# Global Soybean Days on Hand [ $\text{Ending Stocks}/(\text{Consumption}/365)$ ], 2006-2017



# Soybean Supply and Demand

|   | 2013         | 2014         | 2015         | 2016         | 2017 January  | Change 16 to 17 |
|---|--------------|--------------|--------------|--------------|---------------|-----------------|
| <b>Planted and Harvested Acres (millions) &amp; Yield</b> |              |              |              |              |               |                 |
| Acres Planted   | 76.8         | 83.3         | 82.7         | 83.4         | 90.1          | 6.7             |
| <b>Acres Harvested</b>                                    | <b>76.3</b>  | <b>82.6</b>  | <b>81.7</b>  | <b>82.7</b>  | <b>89.5</b>   | <b>6.8</b>      |
| <b>U.S. Yield (bpa)</b>                                   | <b>44.0</b>  | <b>47.5</b>  | <b>48</b>    | <b>52</b>    | <b>49.1</b>   | <b>-2.9</b>     |
| <b>Supply (Million Bushels)</b>                           |              |              |              |              |               |                 |
| <b>Production</b>   | <b>3,358</b> | <b>3,927</b> | <b>3,926</b> | <b>4,296</b> | <b>4,392</b>  | <b>96</b>       |
| Total Supply  | 3,570        | 4,052        | 4,140        | 4,515        | 4,718         | 203             |
| <b>Use &amp; Ending Stocks (Million Bushels)</b>          |              |              |              |              |               |                 |
| Crushing  | 1,734        | 1,873        | 1,886        | 1,899        | 1,950         | 51              |
| <b>Exports</b>  | <b>1,638</b> | <b>1,842</b> | <b>1,942</b> | <b>2,174</b> | <b>2,160</b>  | <b>-14</b>      |
| <b>Total Use</b>  | <b>3,478</b> | <b>3,862</b> | <b>3,944</b> | <b>4,213</b> | <b>4,248</b>  | <b>35</b>       |
| <b>U.S. Ending Stocks</b>                                 | <b>92</b>    | <b>191</b>   | <b>197</b>   | <b>302</b>   | <b>470</b>    | <b>168</b>      |
| Foreign Stocks  | 2,211        | 2,658        | 2,670        | 3,244        | 3,152         | -92             |
| <b>Price and Stocks to Use Ratio</b>                      |              |              |              |              |               |                 |
| U.S. Price (\$/bu)  | \$13.00      | \$10.10      | \$8.95       | \$9.47       | \$8.80-\$9.80 | -\$0.17         |
| <b>U.S. Stocks/Use</b>                                    | <b>2.65%</b> | <b>4.95%</b> | <b>4.99%</b> | <b>7.17%</b> | <b>11.06%</b> | <b>3.90%</b>    |

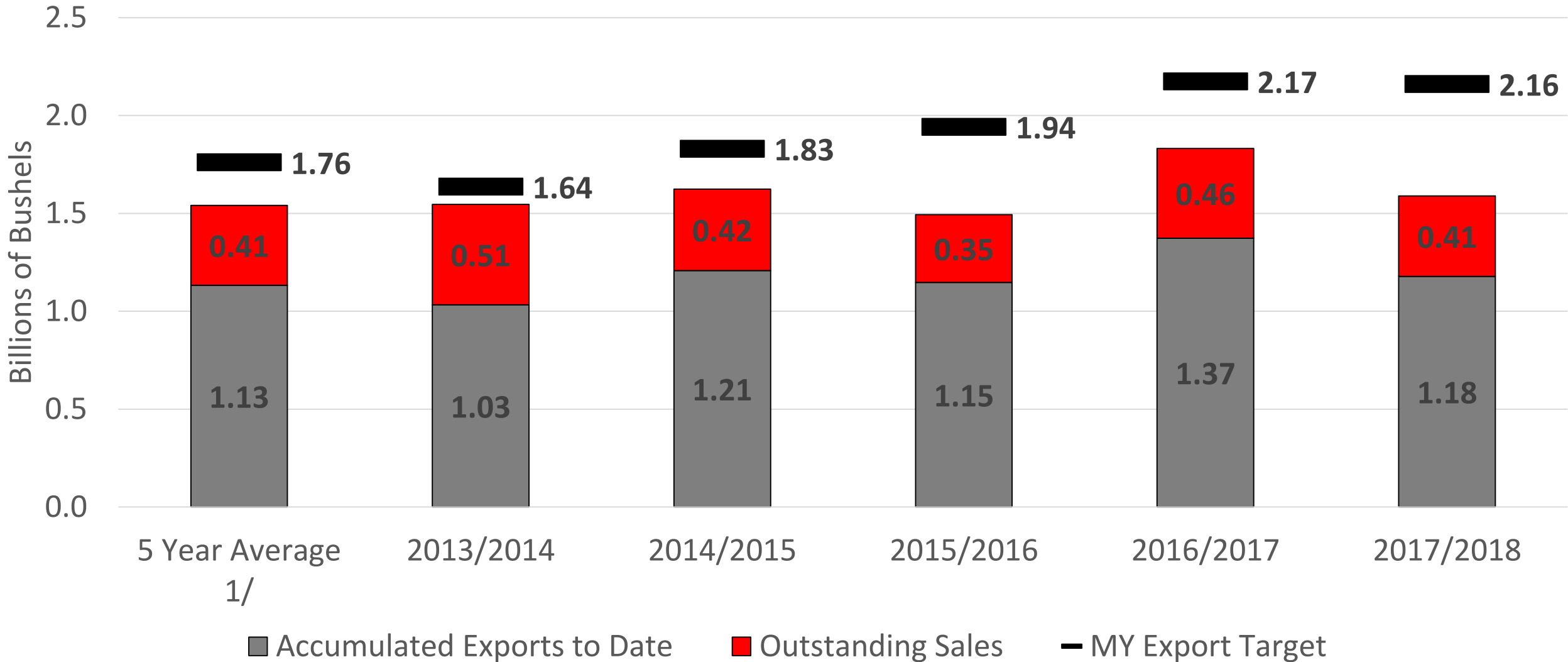
# U.S. Soybean, Soybean Oil, and Soybean Meal Days on Hand [(Ending Stocks/(Use/365)], 2006-2017



## Past Revisions to USDA Ending Stocks (Will they continue....)

|               | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
|---------------|---------|---------|---------|---------|---------|
| August        | 220     | 430     | 470     | 330     | 460     |
| December      | 150     | 410     | 465     | 480     | 445     |
| July          | 140     | 255     | 350     | 410     | -       |
| Final/Current | 92      | 191     | 197     | 302     | 470     |

# Soybean Exports as of Week Ending 01/18/2018 (20 Weeks)



# Soybean Pricing

- Old Crop
  - Hopefully not much left to price.
  - Basis opportunities are likely muted compared to previous years.
- New Crop
  - \$10.00 on the November start selling production in increments
  - Secure a basis / cash price when favorable basis is presented.

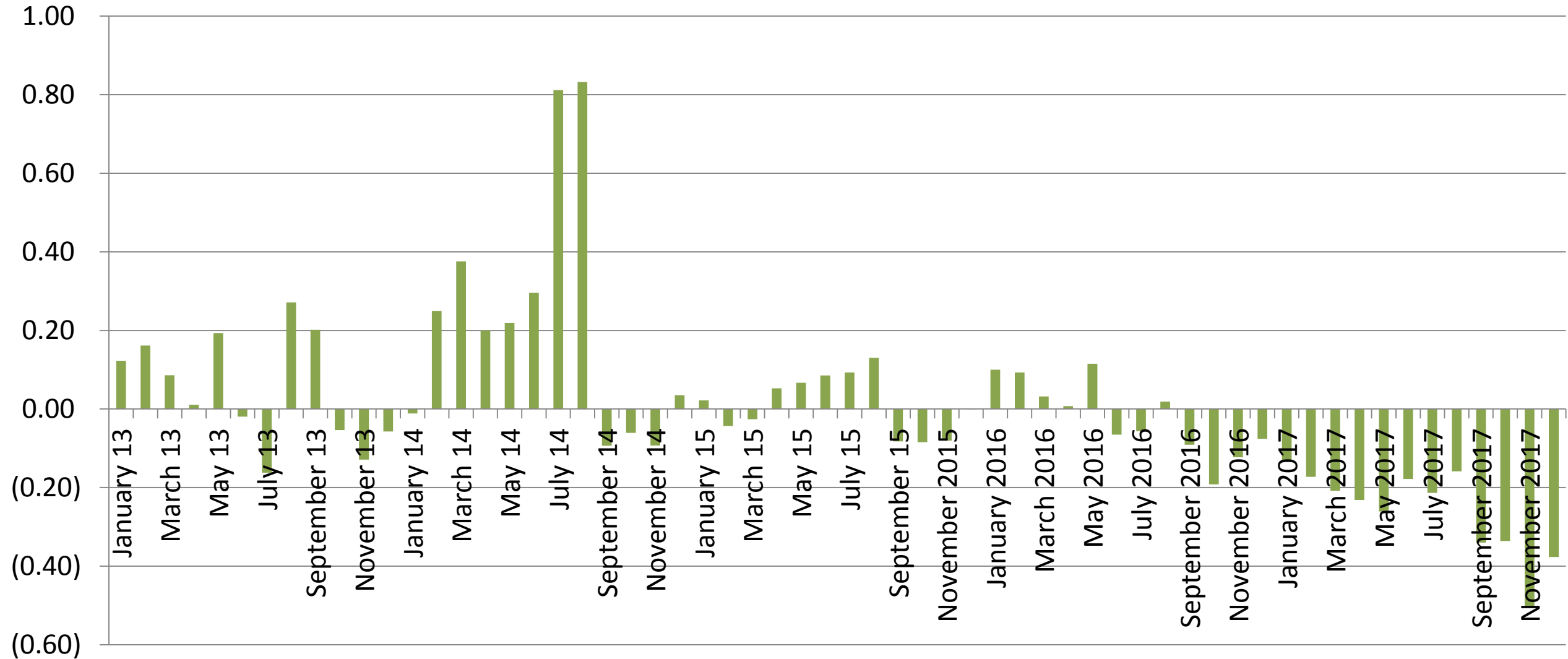
# Nearby Close



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# Lower-Middle Tennessee Soybeans Basis, 2013-2017



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Soybeans Nov '18 (ZSX18) - Barchart.com



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# Soybean Markets: What I'm Watching in Early 2018

- Old Crop and New Crop
  - Trade with China
  - Exports (Sales Pace and Shipments vs. Sales)
  - South American Production (Brazil Up? Argentina Down?)
  - Global Economic Growth (Positive, but is it Stable?)
  - USD/Brazilian Real/Argentinian Peso/Chinese Yuan (Weaker USD = More U.S. Exports)

Questions?

**THANK YOU!**

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