



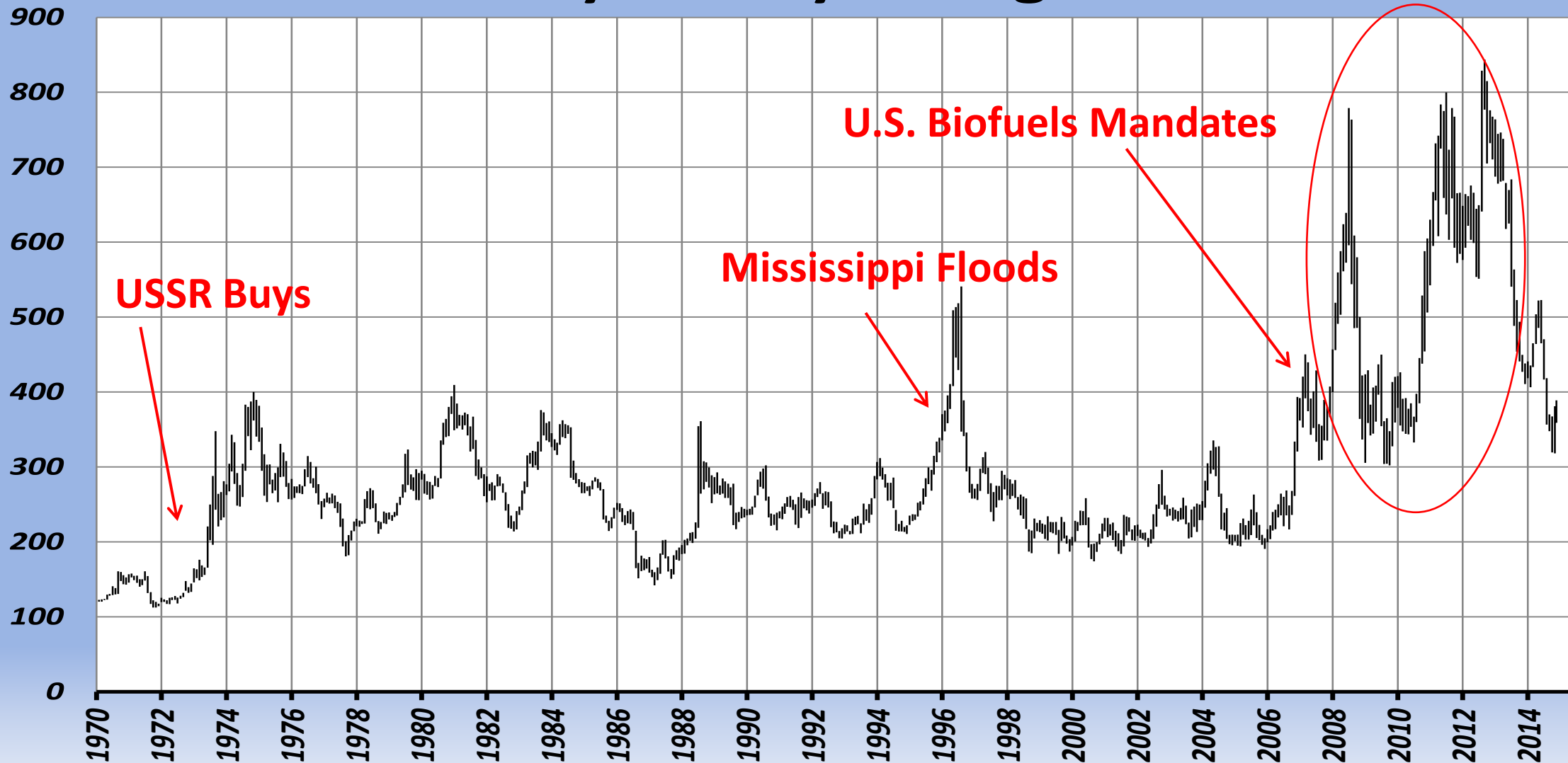
*with Mike  
Krueger*

[mike@themoneyfarm.com](mailto:mike@themoneyfarm.com)

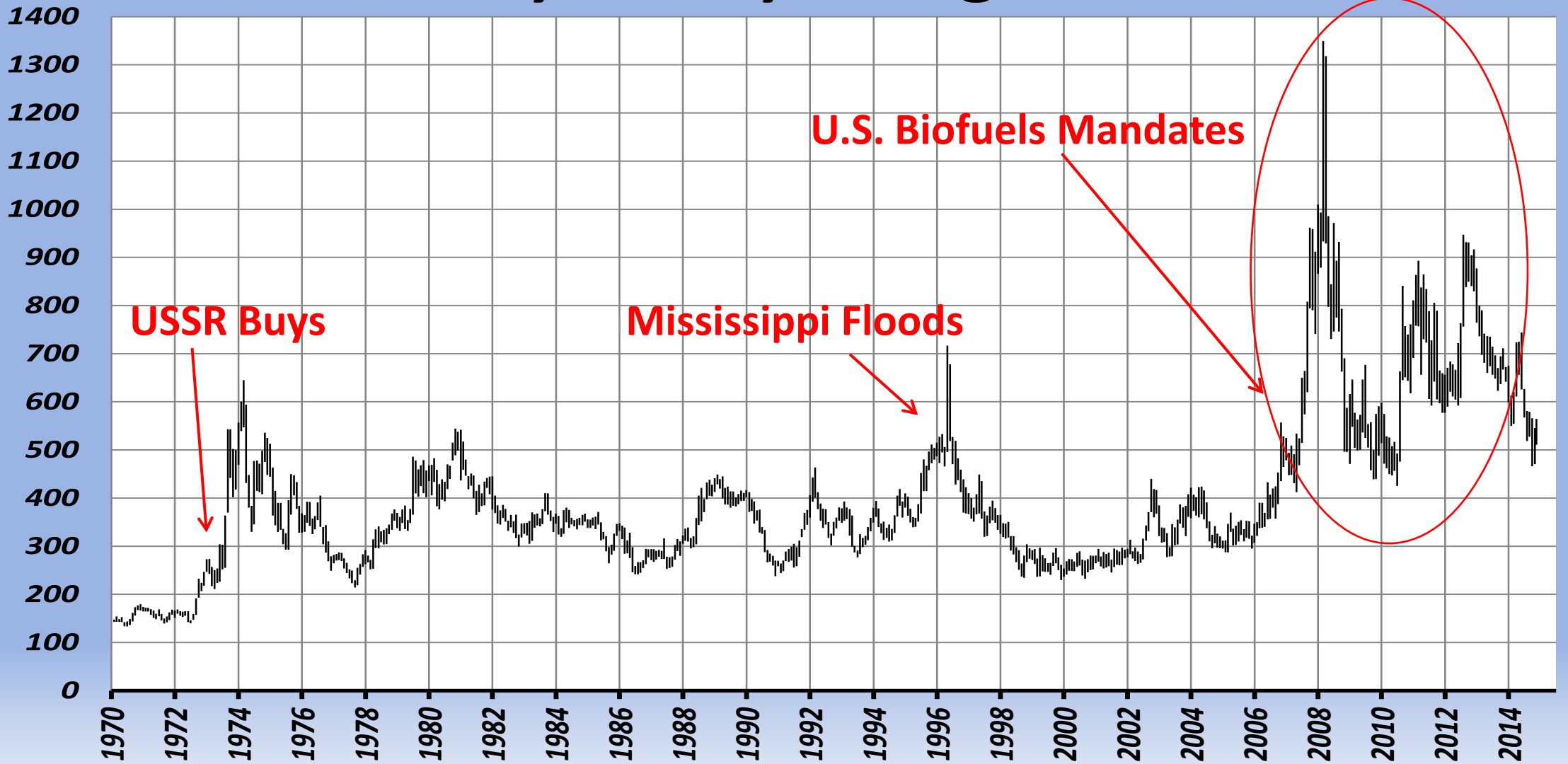
# Commodity Markets Is The Bull Really Dead?



# Monthly Nearby Chicago Corn



# Monthly Nearby Chicago Wheat



# Longest Bull Market in History

- **Why?**

- **Demand growth accelerates**
  - **Population growth**
  - **Middle class expands rapidly**
  - **Diets improve FOREVER**
- **Ethanol takes 40% of U.S. corn production**
- **Biofuels takes excess vegetable oil**
- **Crop production problems**

# Longest Bull Market in History

- **Why?**

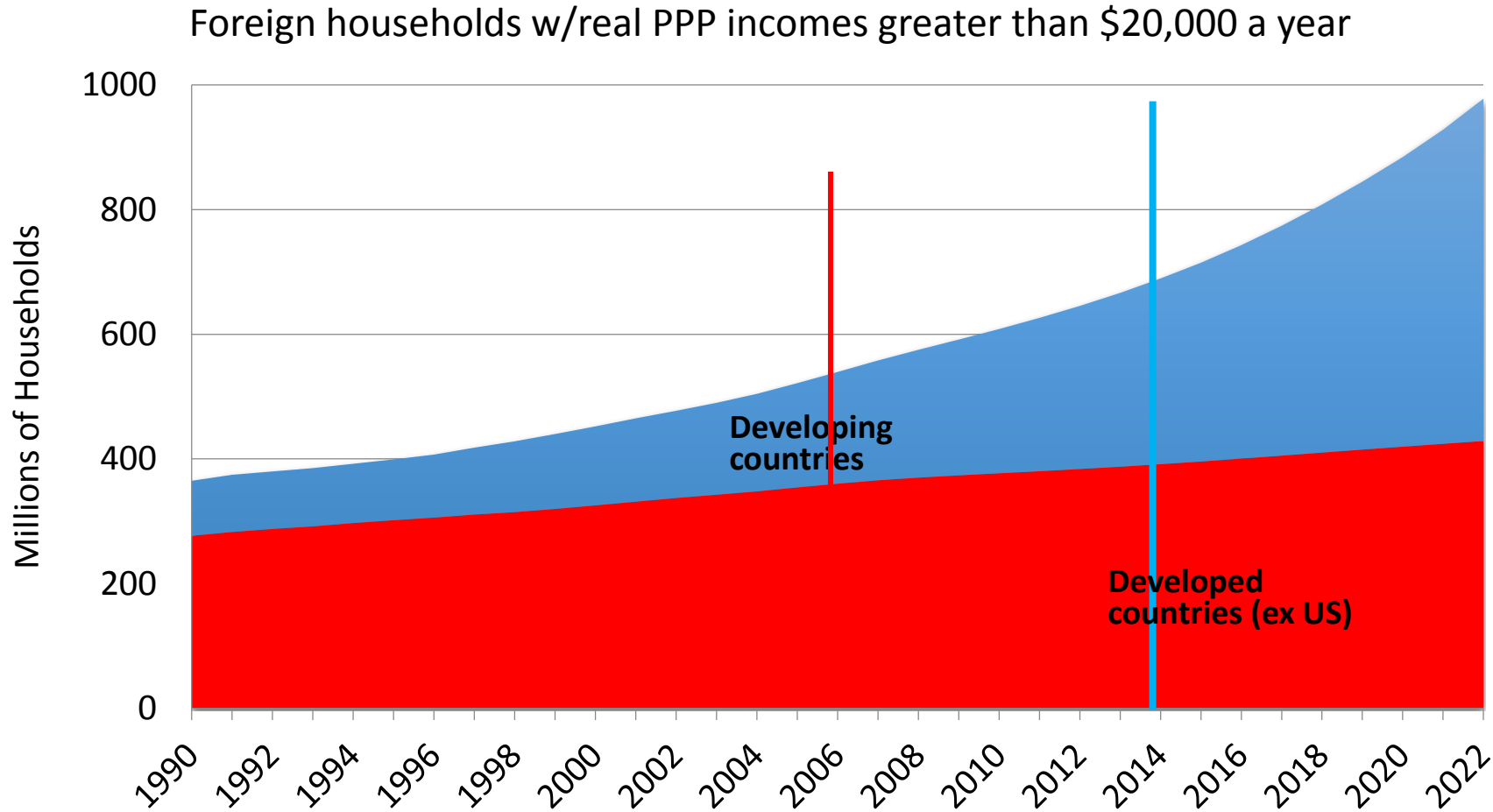
- **Commodities become an “investment” class, attracting huge amounts of cash**
- **Commodity funds become a new “demand” category**
- **Futures markets adapt to new demand**
  - **E trade replaces open outcry**
  - **Trading hours greatly expanded**
  - **Daily trading limits greatly expanded**
  - **We create extreme volatility**

# Summary of the Problem: *9 billion people*



- **Change in demand**
  - Accelerating population growth
  - Growing incomes
  - Urbanization
  - Dominance by China in many commodities
- **Growth in ag productivity is slowing...**
  - 1960's 3.5%/yr
  - 2010 1.5%
  - Fertilizer use increased from
    - 1961 2 t/sq km
    - 2010 11 t/sq km
- **Declining area planted in many countries/regions of the world**
- **Paradigm shift in commodity prices**
  - 1900-2000 declining prices
  - 2000 to current..rapid real appreciation in all commodity prices

# “Middle Class” Outside the U.S. Expected to Double by 2022 – To Nearly 1 Billion Households

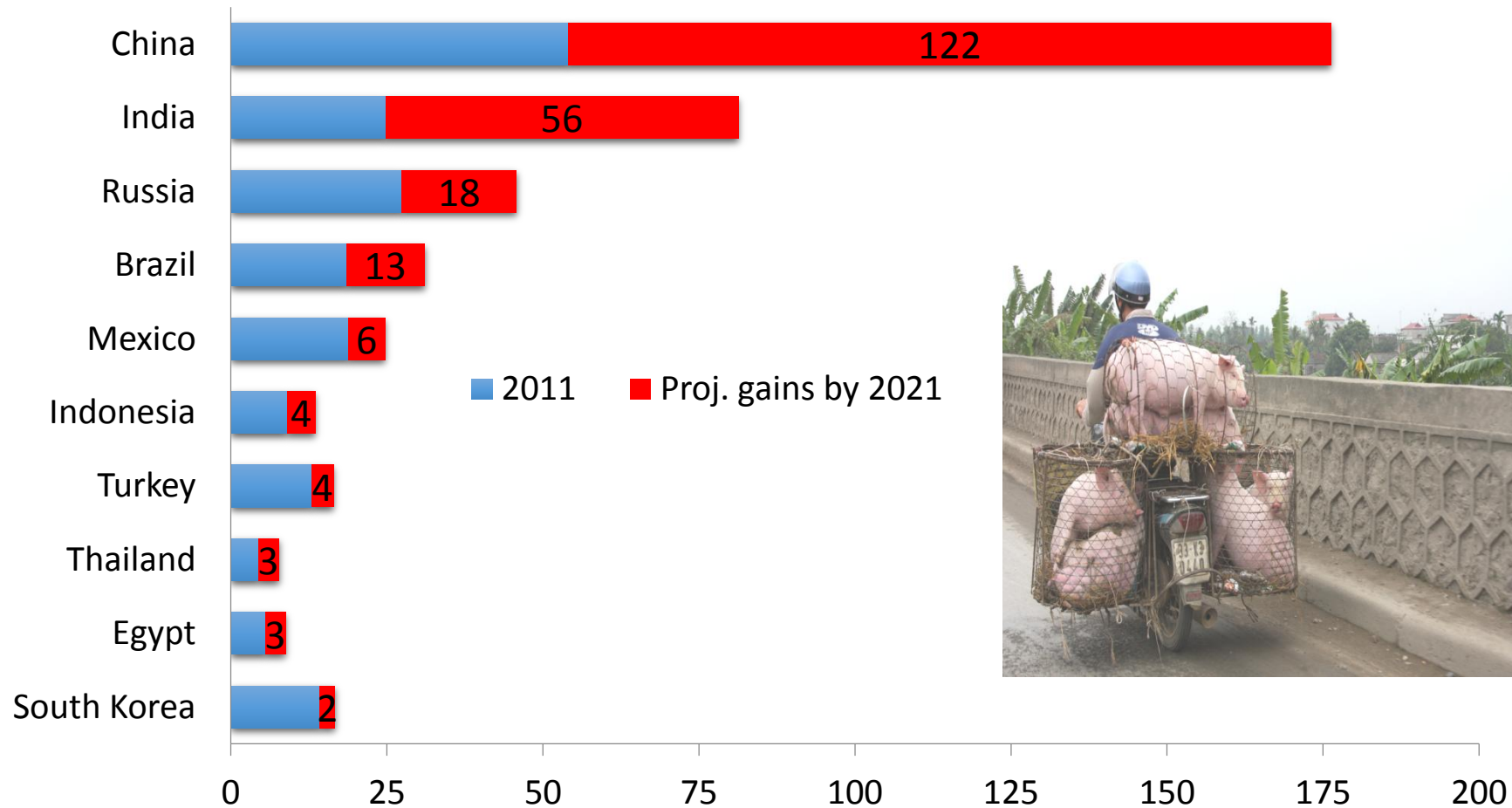




# Developing Countries With Fastest Growing Middle Class

24% of households in these countries are middle class. By 2022, this could increase to 51%

## Households with real PPP incomes greater than \$20,000 (millions)

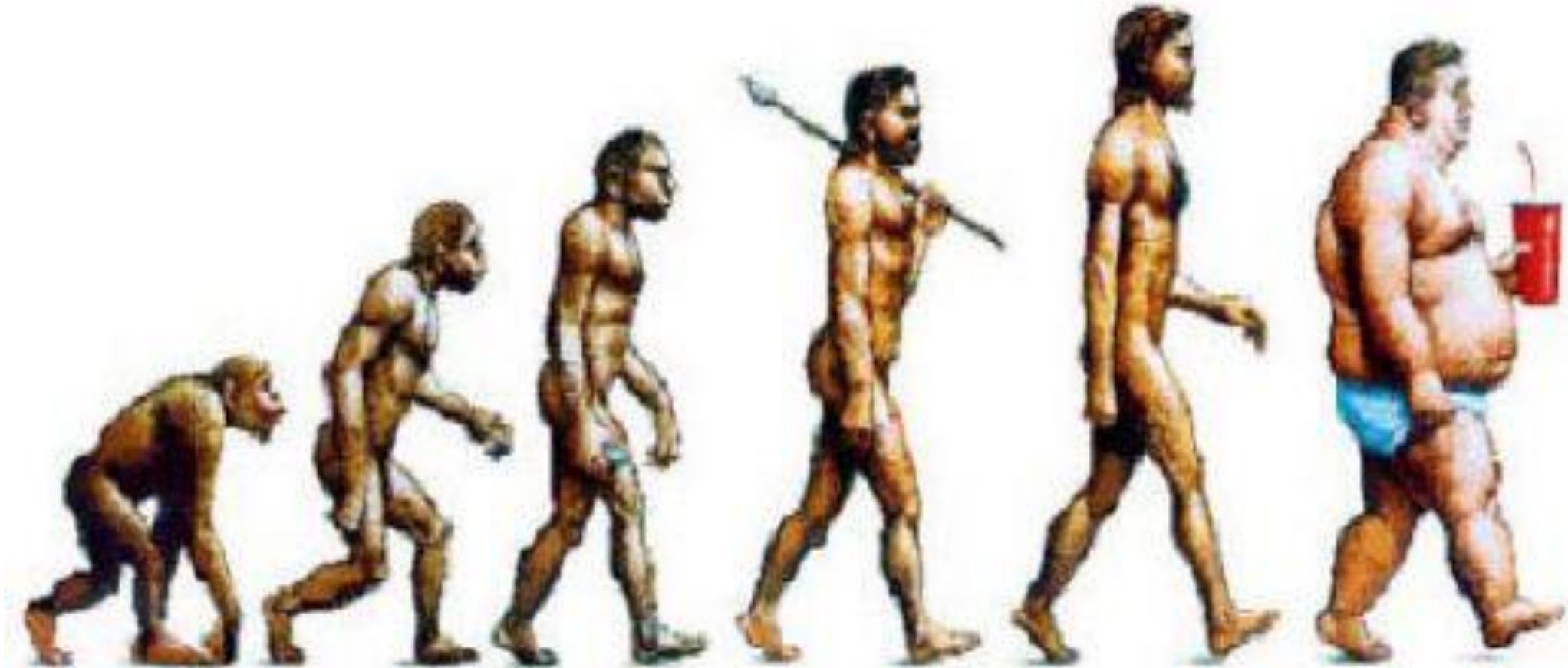


# Return to the Cave Man Diet?

## Demand for protein soars as diets improve



# Evolution of the Cave Man Diet

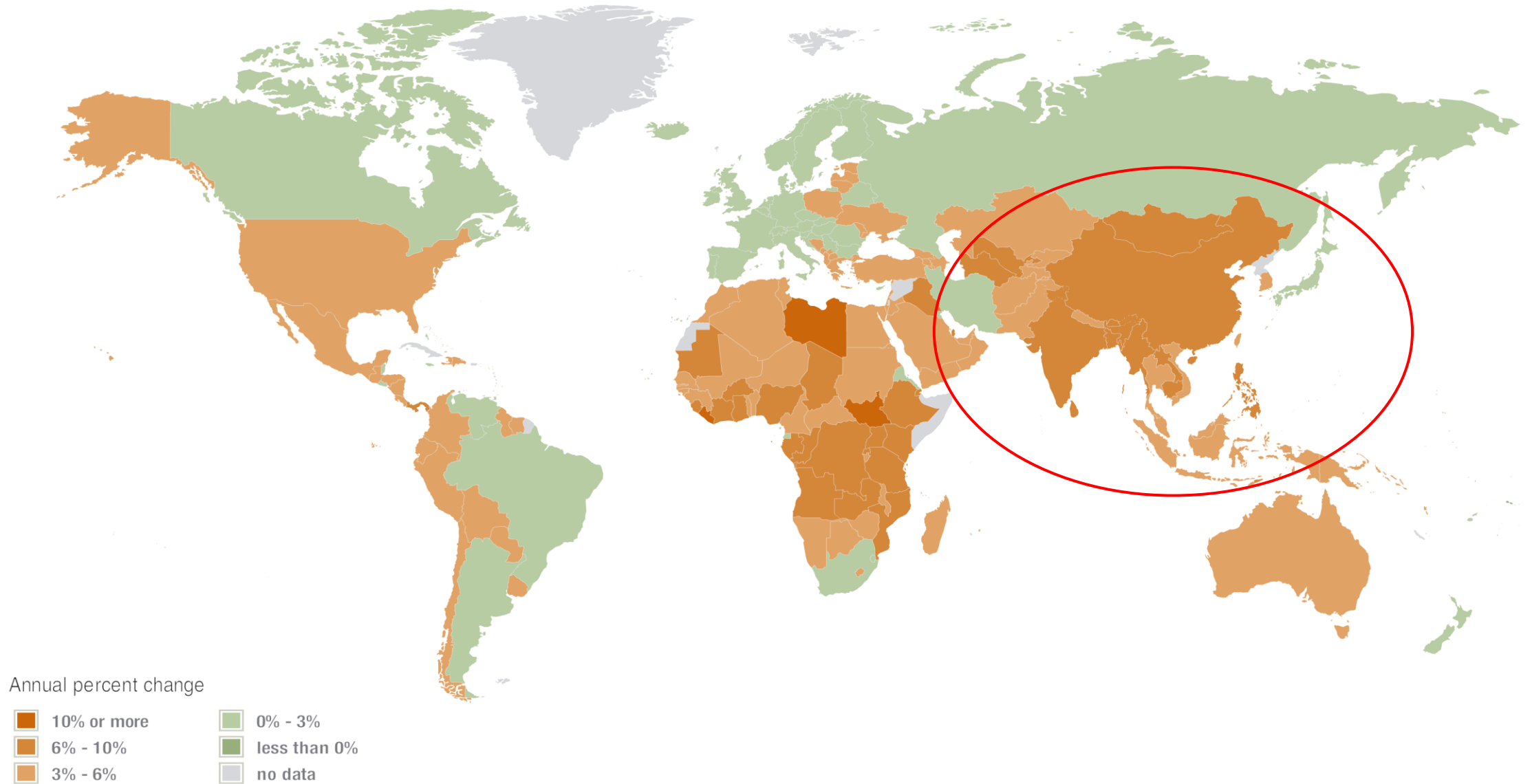


**U.S. Cave Man**

# IMF Data Mapper <sup>®</sup>

Real GDP growth (2016)

Source: World Economic Outlook (October 2014)



# Corn - COT - Futures and Options

Open Interest  
Number Of Contracts



The Hightower Report | Source: CFTC

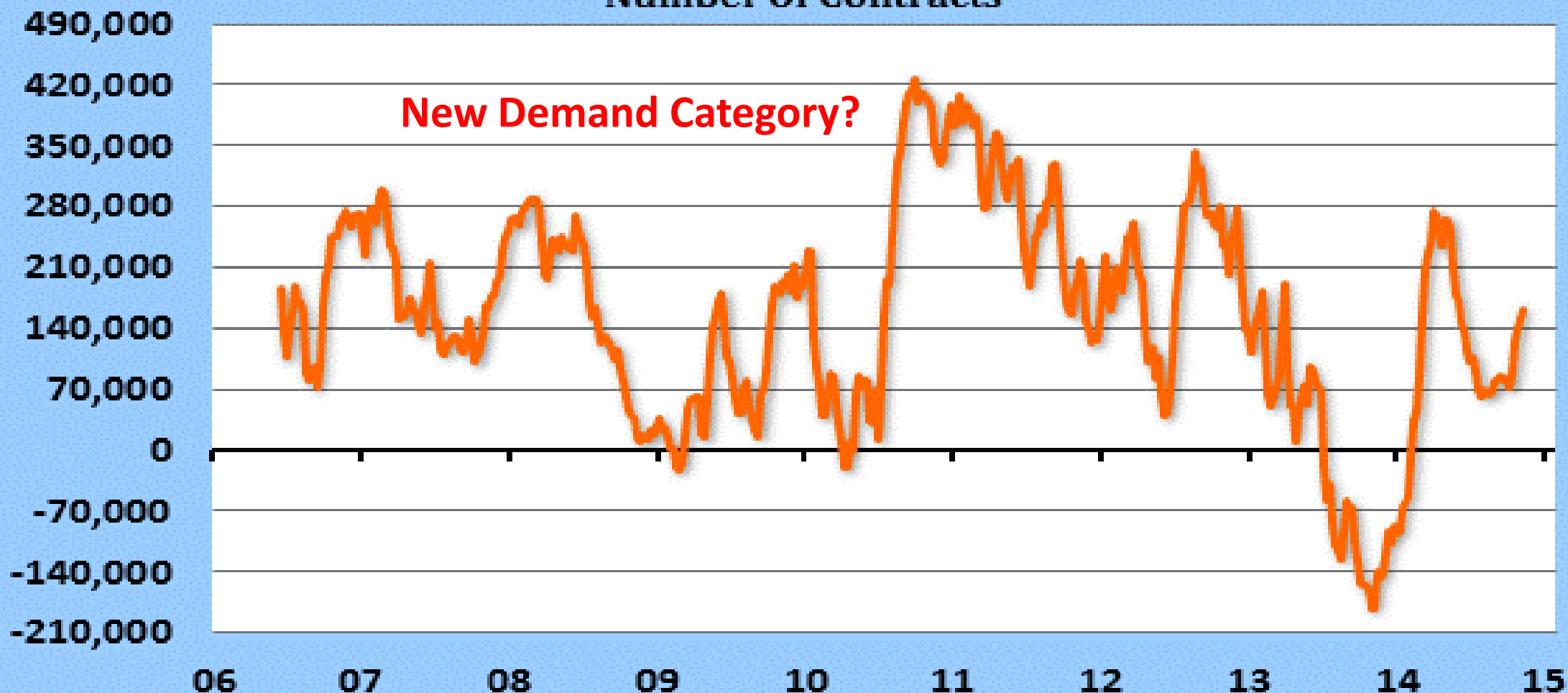
Max: 2,573,509 (2/15/2011) - Min: 351,111 (6/24/1997) - Most Recent: 1,895,470 (11/04/2014)



# Corn - COT - Disaggregated Futures and Options

Managed Money - Net Position

Number Of Contracts

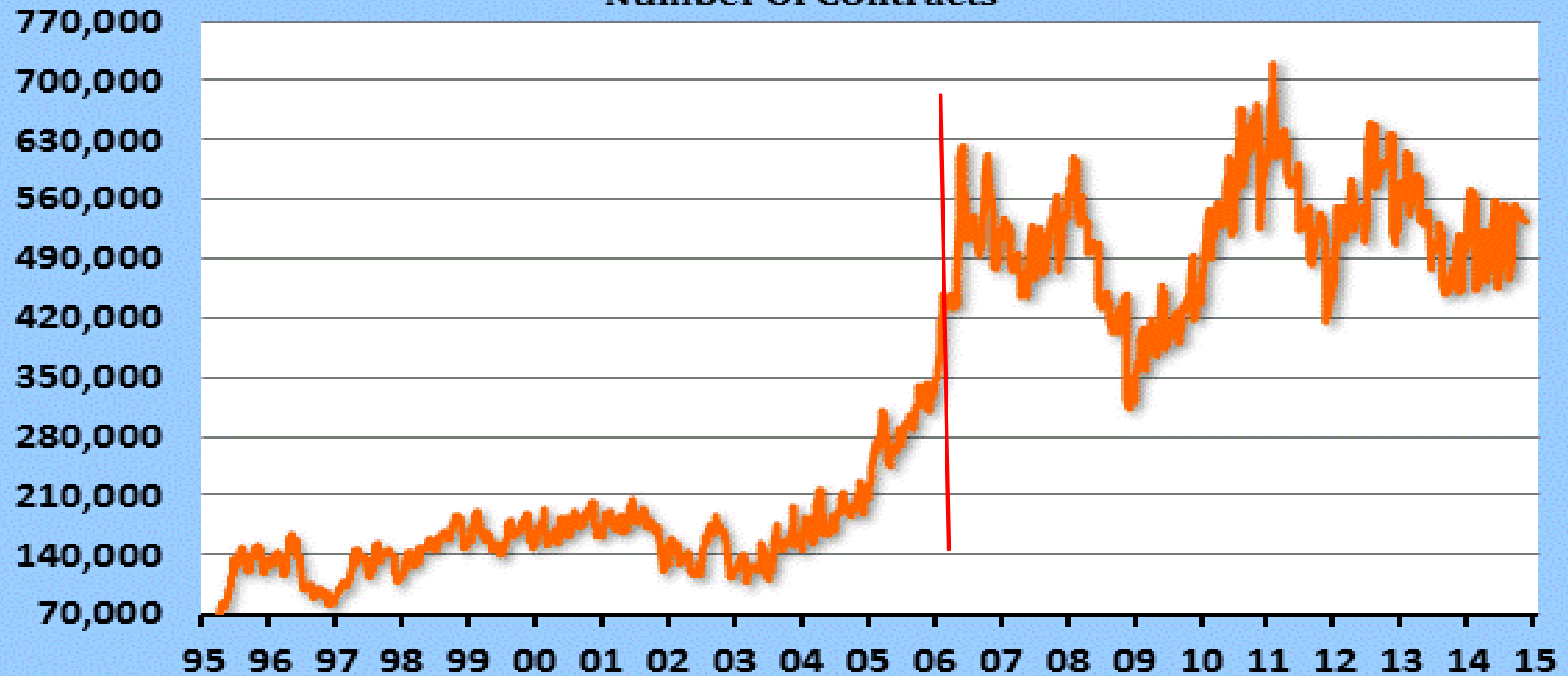


The Hightower Report | Source: CFTC

Max: 429,189 (9/28/2010) - Min: -180,627 (10/29/2013) - Most Recent: 163,673 (11/04/2014)

# Wheat - COT - Futures and Options

Open Interest  
Number Of Contracts



The Hightower Report | Source: CFTC

Max: 722,923 (2/8/2011) - Min: 72,083 (4/4/1995) - Most Recent: 536,005 (11/04/2014)

# Wheat - COT - Futures and Options CIT

## Commodity Index Trader Net Position

### Number Of Contracts



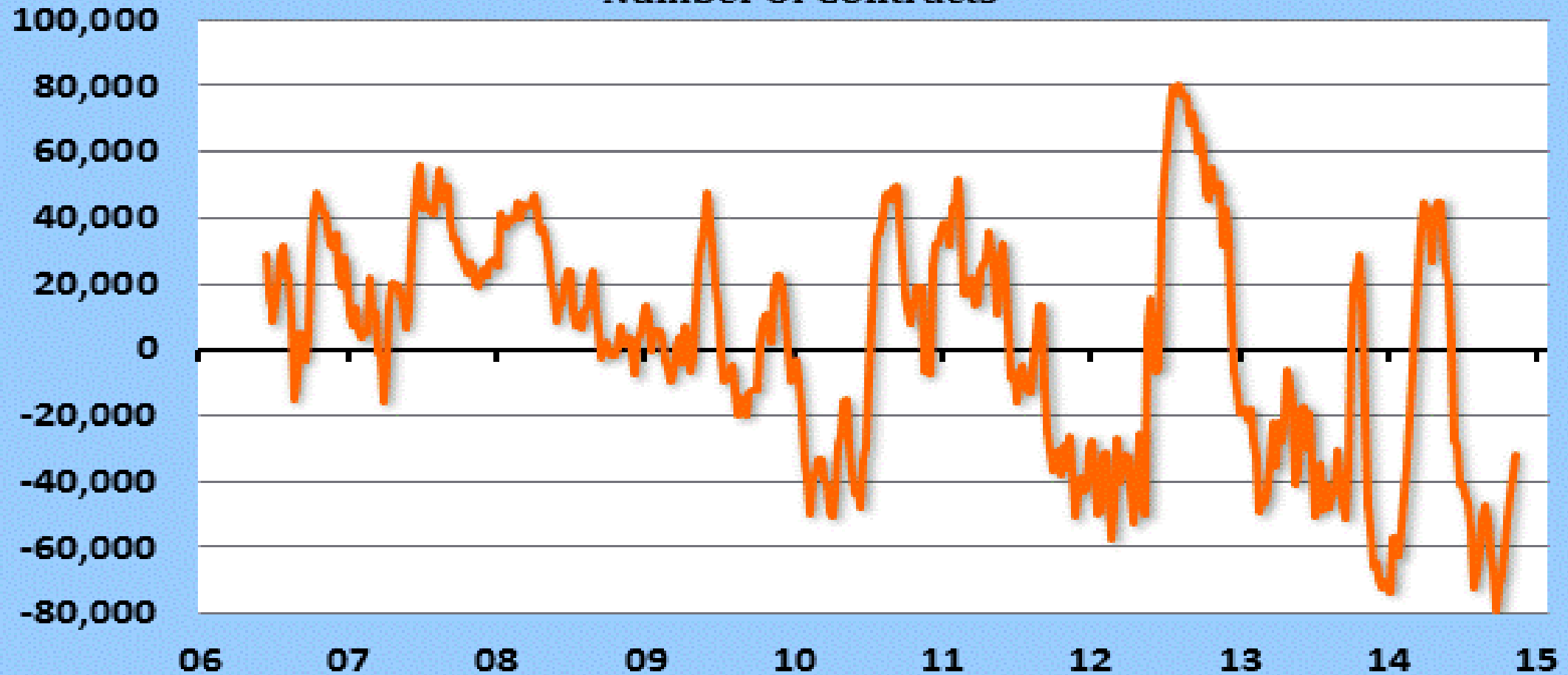
The Hightower Report | Source: CFTC

Max: 229,565 (5/11/2010) - Min: 120,099 (1/28/2014) - Most Recent: 136,626 (11/04/2014)



# Wheat - COT - Disaggregated Futures and Options

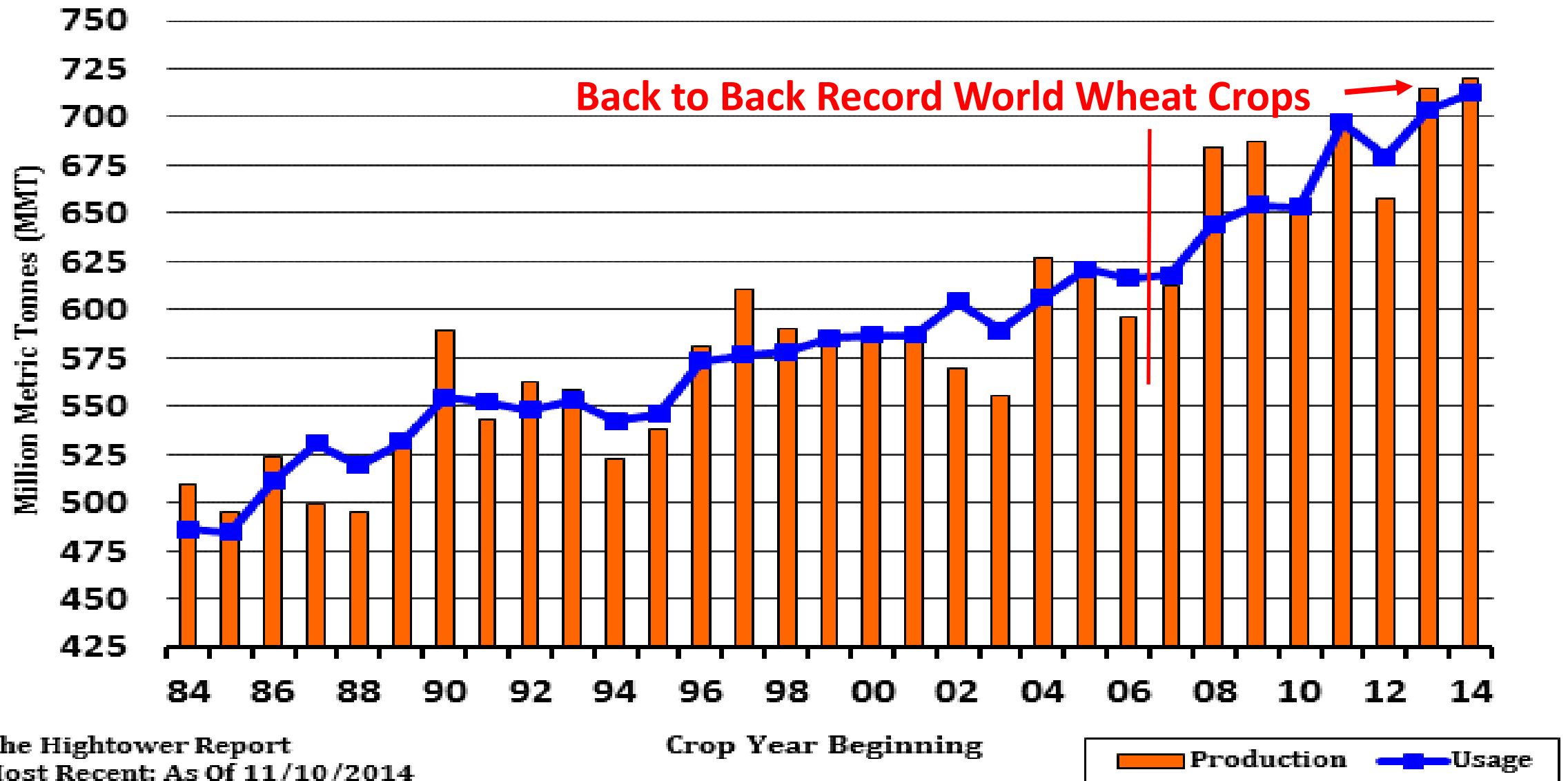
Managed Money - Net Position  
Number Of Contracts



The Hightower Report | Source: CFTC

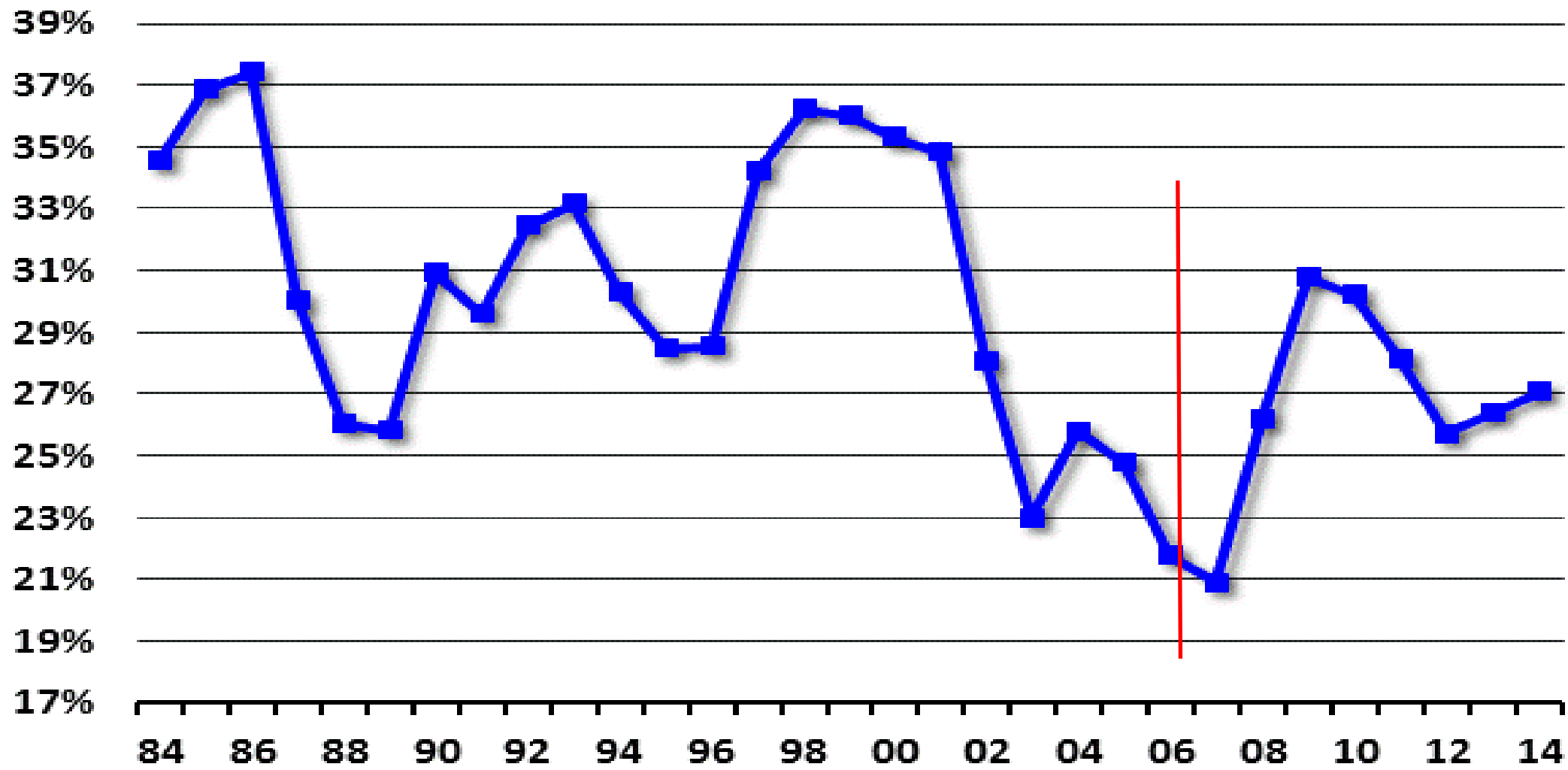
Max: 80,827 (8/7/2012) - Min: -78,928 (9/23/2014) - Most Recent: -31,517 (11/04/2014)

# World Wheat - Production vs Usage



The Hightower Report  
Most Recent: As Of 11/10/2014

# World Wheat - Ending Stocks / Usage Ratio

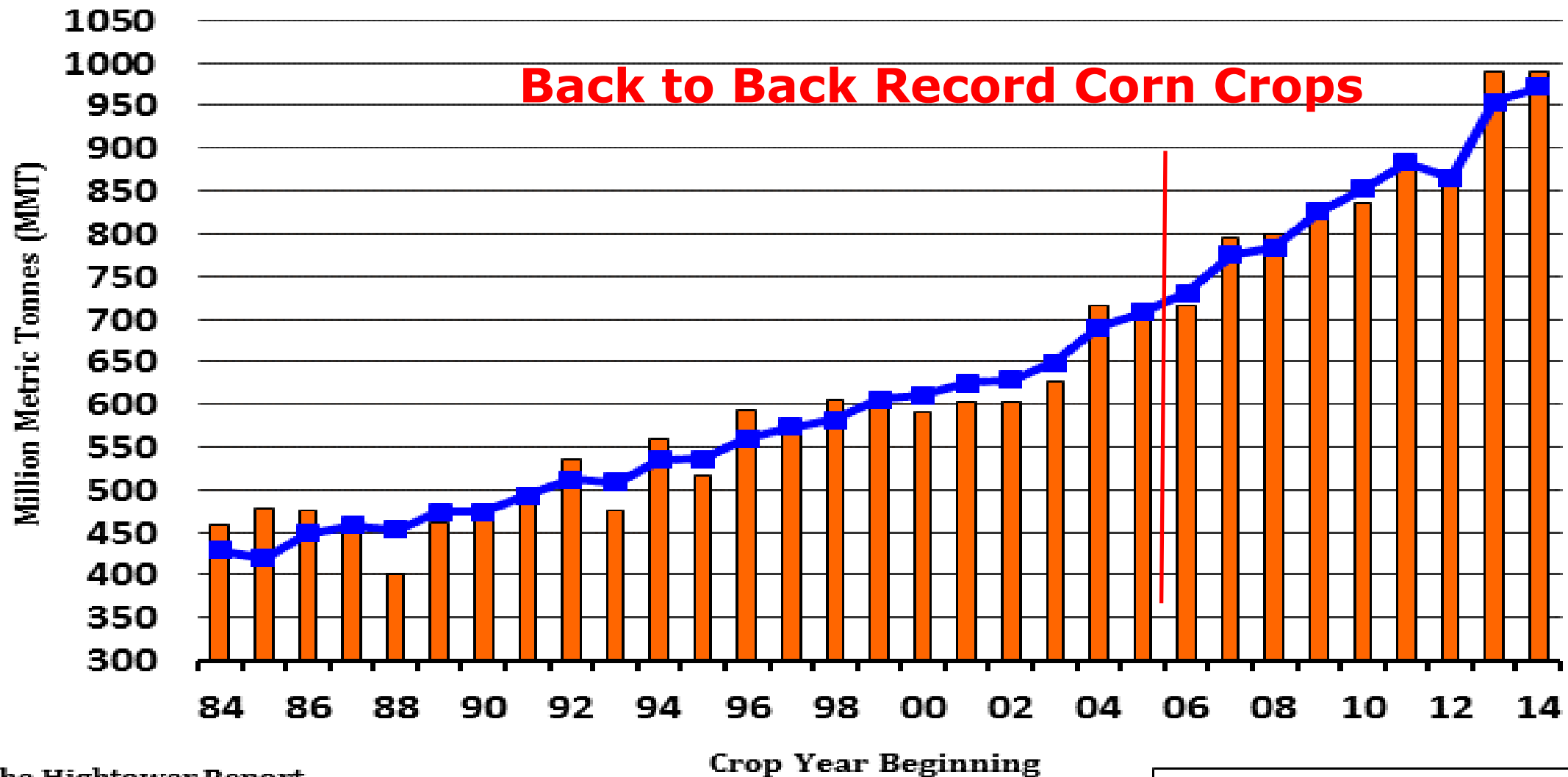


Most Recent: 27.066% As Of 11/10/2014

Crop Year Beginning

The Hightower Report

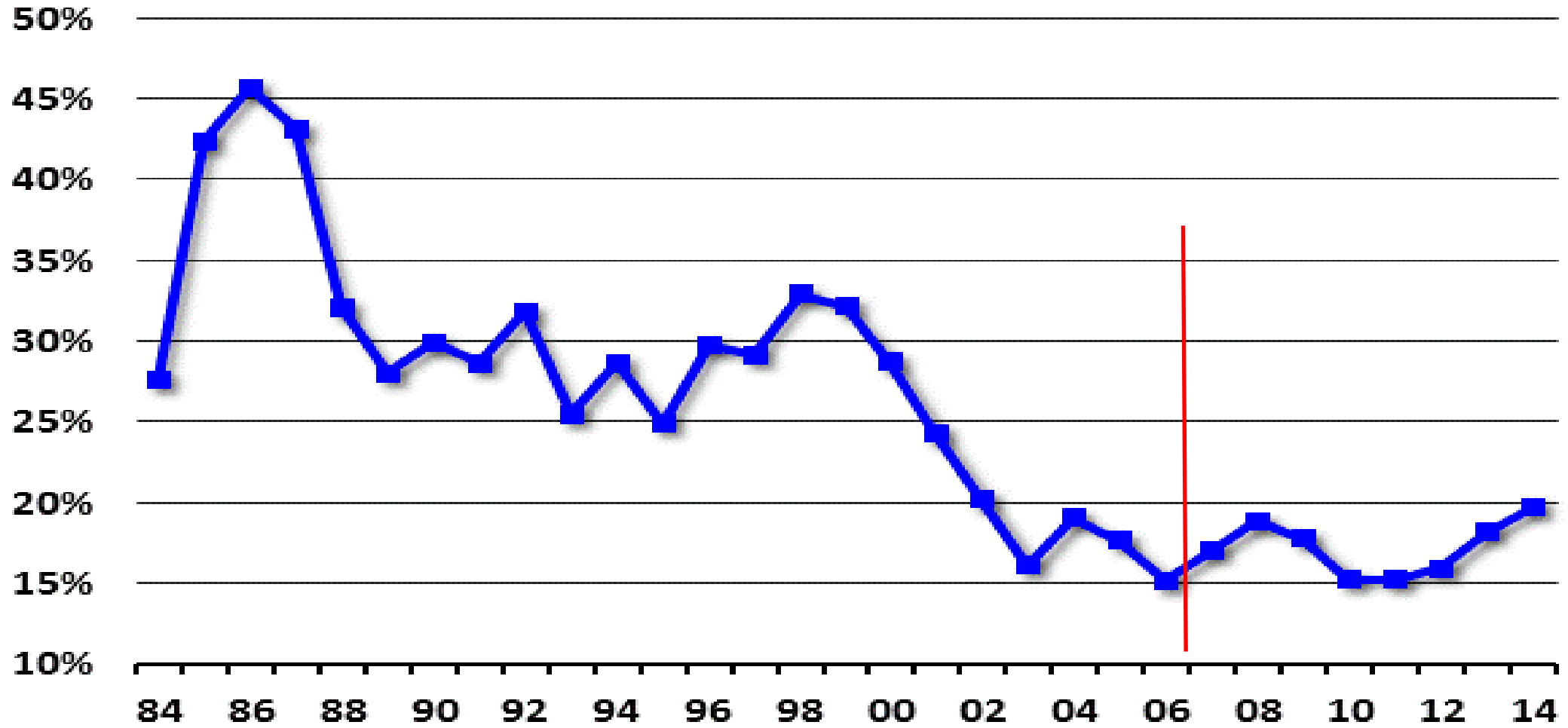
# World Corn - Production vs Usage



The Hightower Report  
Most Recent: As Of 11/10/2014

Production Usage

# World Corn - Ending Stocks / Usage Ratio

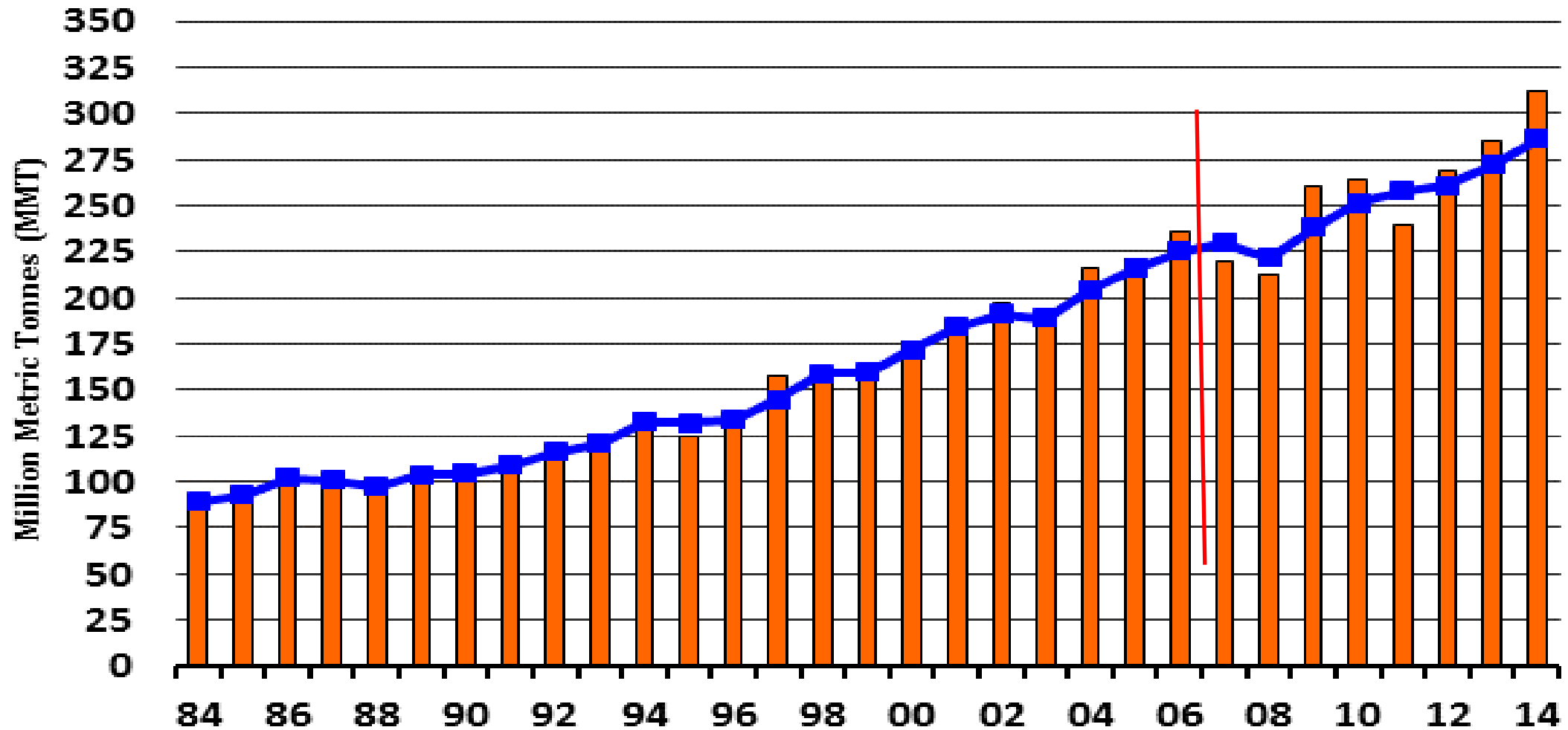


Most Recent: 19.706% As Of 11/10/2014

Crop Year Beginning

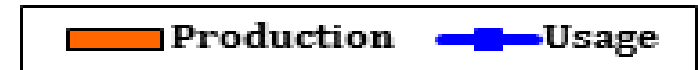
The Hightower Report

# World Soybean - Production vs Usage



The Hightower Report  
Most Recent: As Of 11/10/2014

Crop Year Beginning



# World Soybean - Ending Stocks / Usage Ratio



Most Recent: 31.586% As Of 11/10/2014

Crop Year Beginning

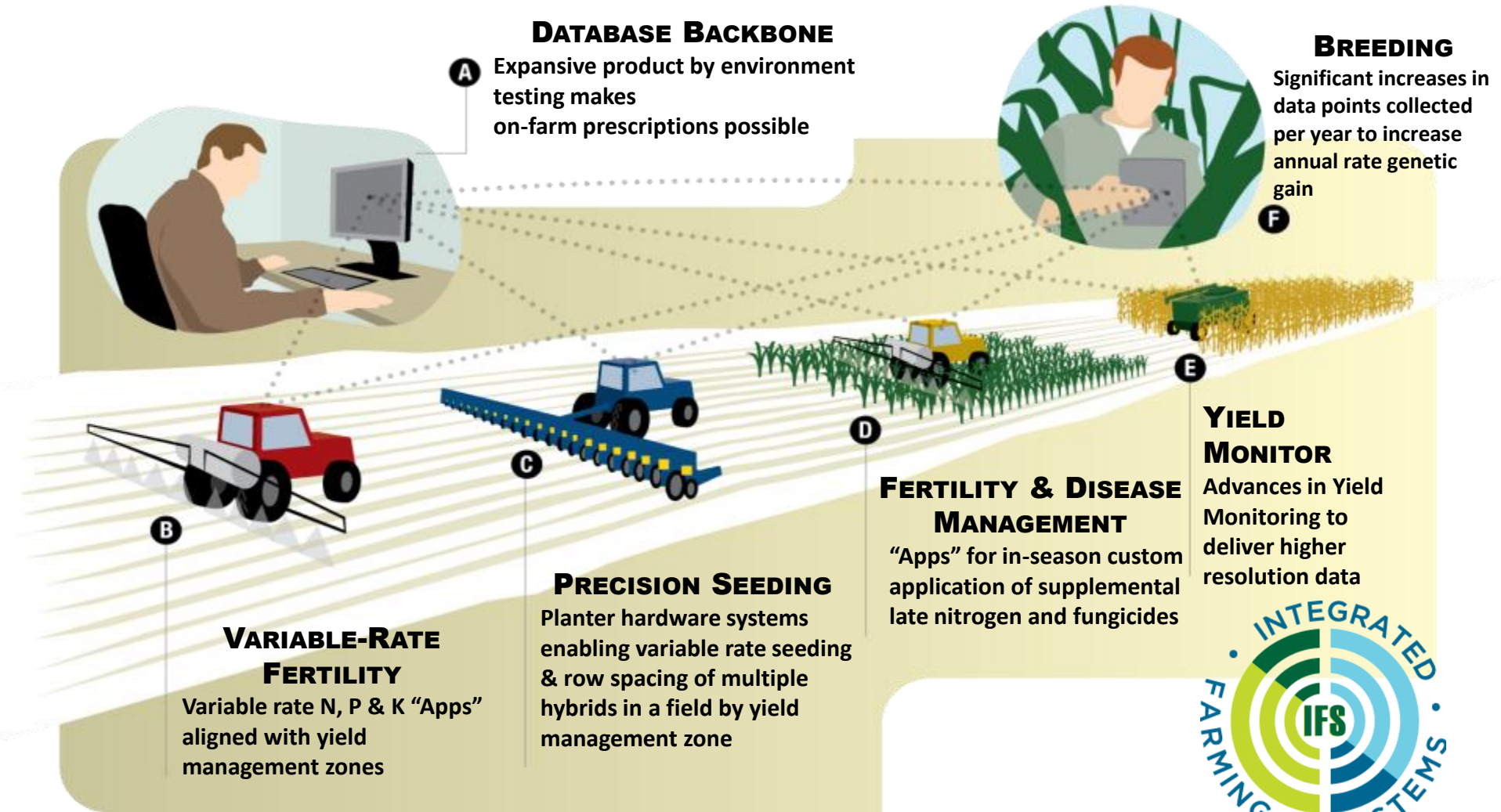
The Hightower Report

# High Prices Have Brought Huge Investment to Agriculture

- **Introduction of “high tech” ag**
- **Ongoing research in biotech seed/crops**
- **Big increases in crop inputs to enhance yields**
  - **Expensive biotech seed**
  - **More intensive use of fertilizers and fungicides**
- **Soaring land values**
- **More land in production**

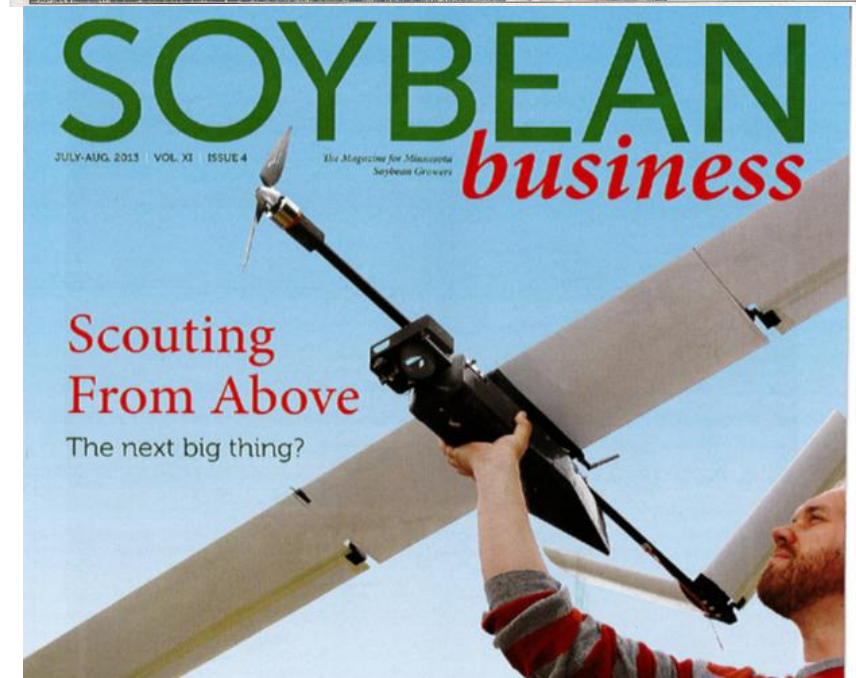


# Ag-Informatics! Integrated Farming Systems<sup>SM</sup> Would Combine Advanced Seed Genetics, On-farm Agronomic Practices, Software and Hardware Innovations to Drive Yield (Monsanto: Yield increase=10b/a)



## Precision Agriculture, DRONES and Future Technology

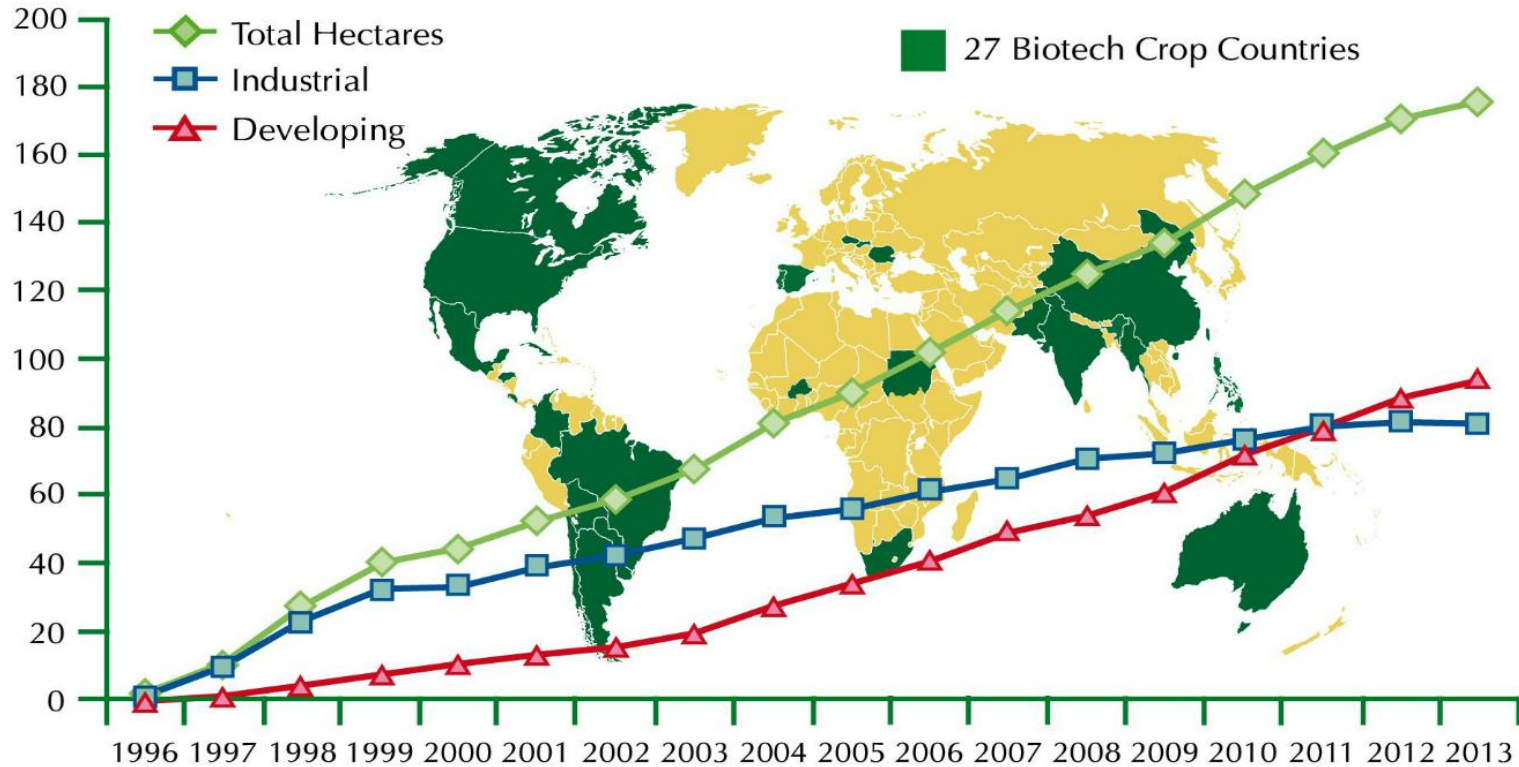
- Immense investment in R&D in precision agriculture
- Numerous forms and technologies:
  - Intra and interpersonal
  - Sensors
  - Drones
  - Other
- Concept: Seeking to identify yield risk and cost efficient ways to mitigate these risks





# Biotech Crop Adoption – Global 2013

GLOBAL AREA OF BIOTECH CROPS  
Million Hectares (1996-2013)



*A record 18 million farmers, in 27 countries, planted 175.2 million hectares (433 million acres) in 2013, a sustained increase of 3% or 5 million hectares (12 million acres) over 2012.*

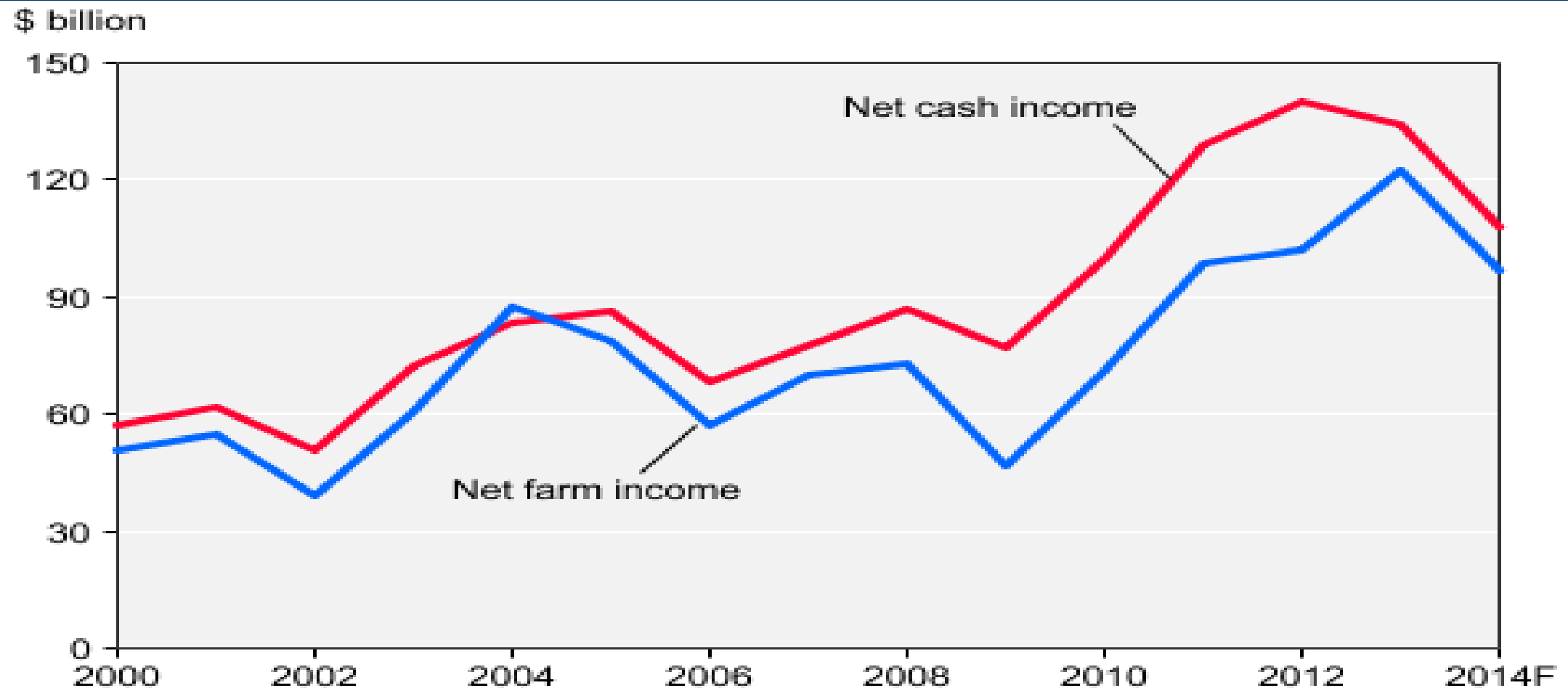
Source: Clive James, 2013.

## 11 Crops

- Corn
- **Soybeans**
- Cotton
- **Canola**
- Squash
- **Papaya**
- Alfalfa
- **Sugar beet**
- Sweet Pepper
- **Tomato**
- Poplar

**Will Low Prices Allow the  
Investment in Ag to  
Continue?**

## Net farm income and net cash income, 2000-2014F

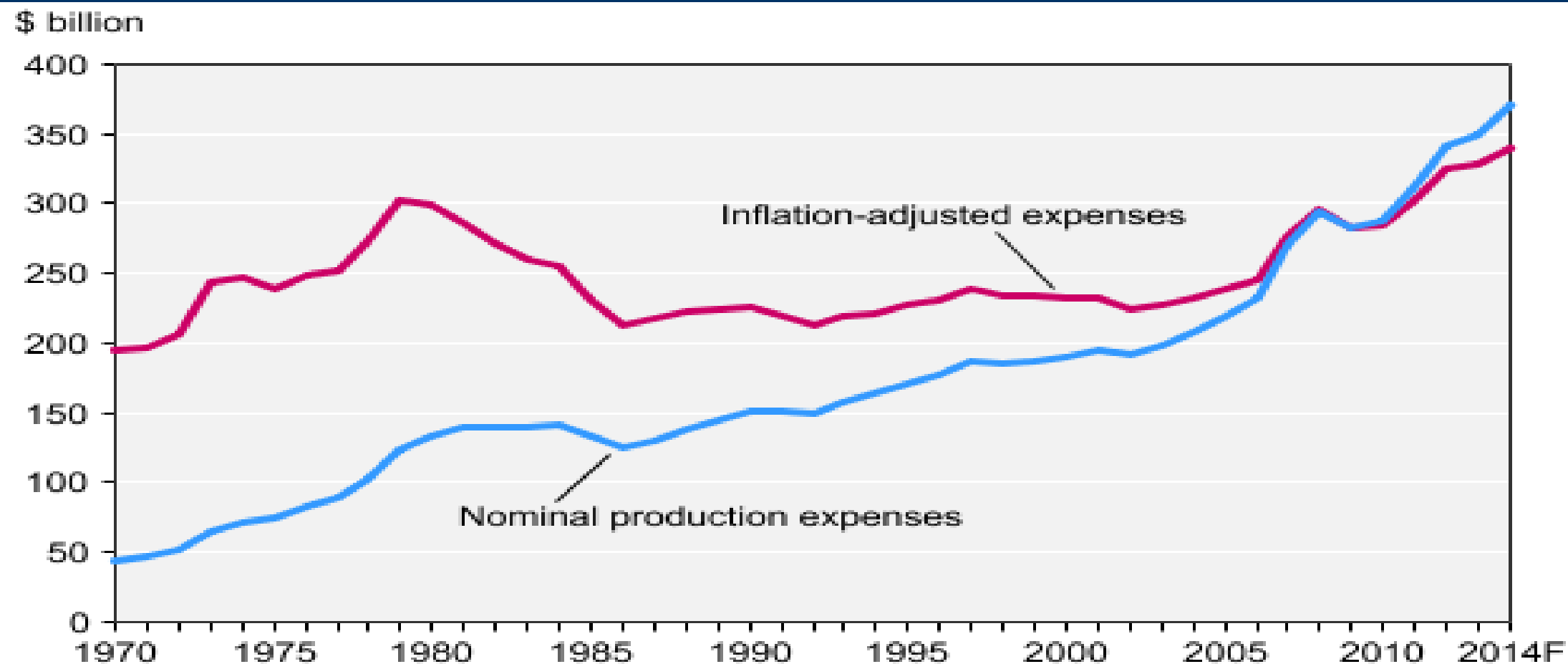


Note: F = forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of November 25, 2014.

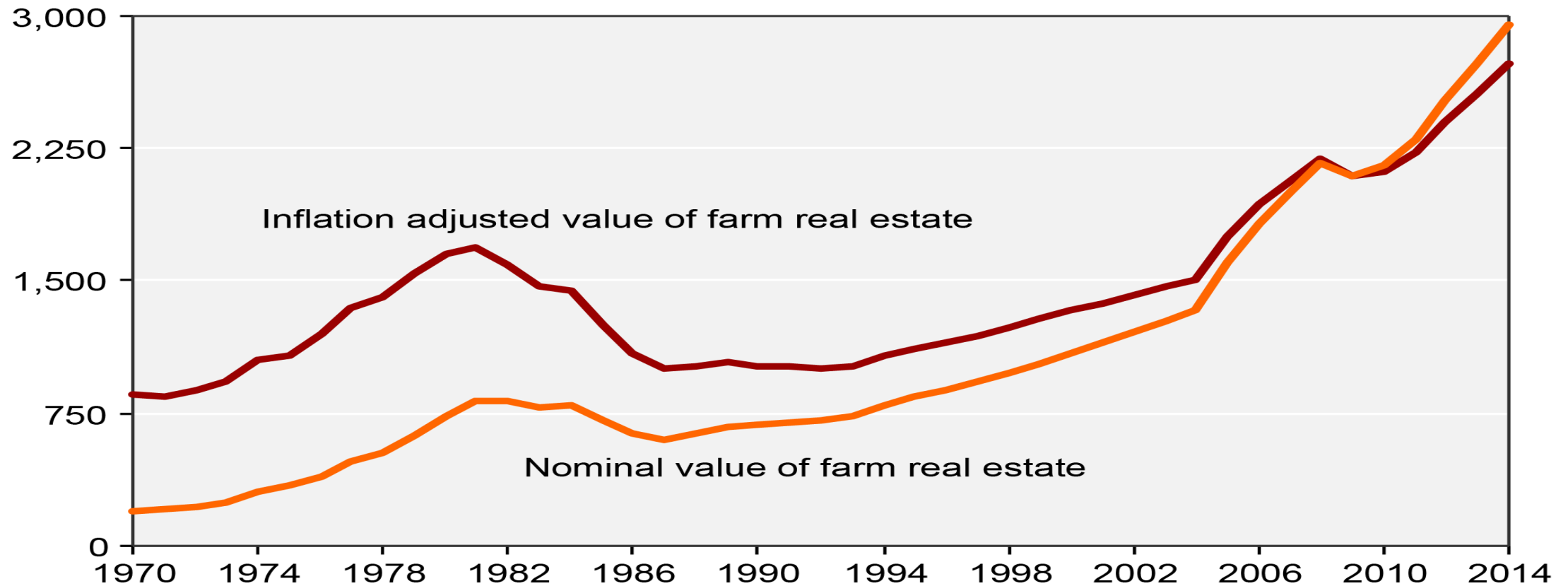
## Nominal and inflation-adjusted farm production expenses, 1970-2014F



Note: F = forecast. Values are adjusted using the chain-type GDP deflator, 2009=100.  
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.  
Data as of November 25, 2014.

## Average U.S. farm real estate value, nominal and real (inflation adjusted), 1970-2014

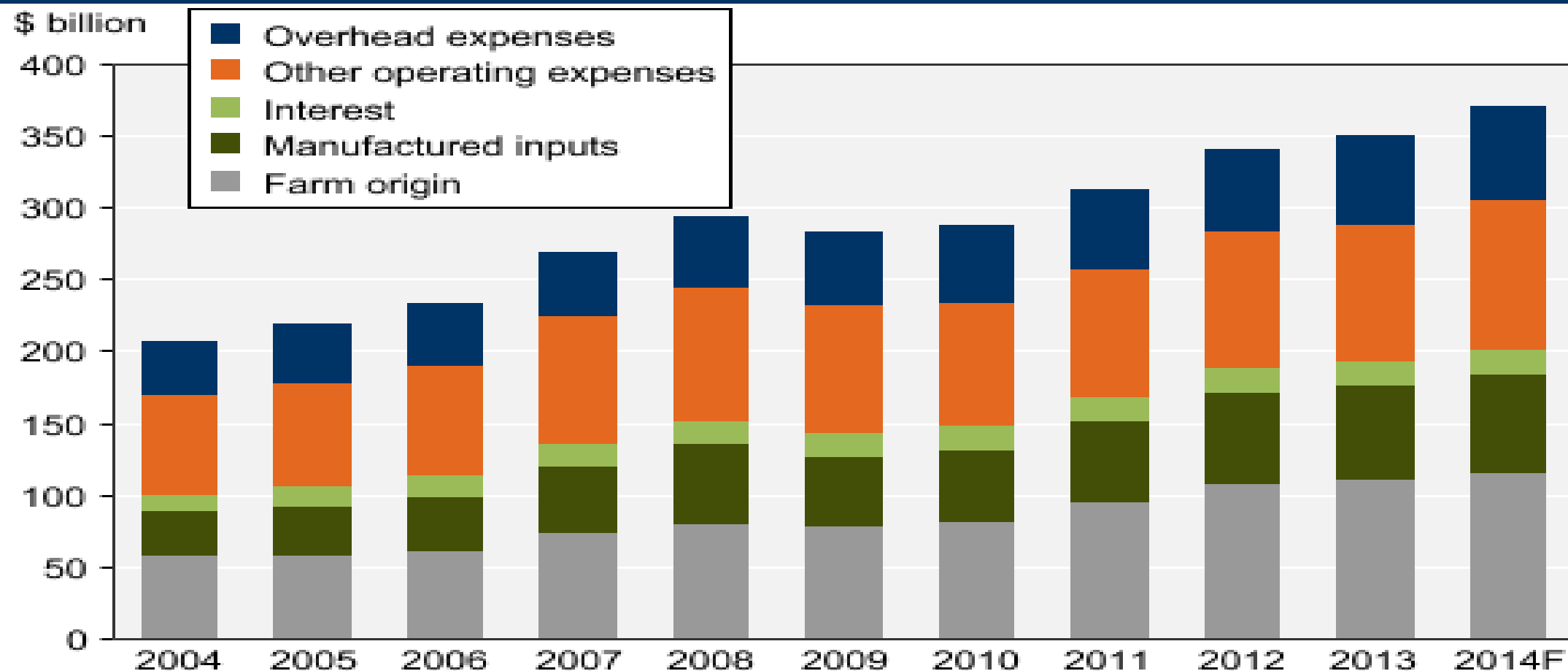
Dollars per acre



Note: The GDP chain-type price index is used to convert NASS current-dollar statistics to 2009=100 equivalents (Bureau of Economic Analysis, Dept. of Commerce). Farm real estate includes land and buildings.

Source: USDA, Economic Research Service and National Agricultural Statistic Service.

## Farm production expenses by component, 2004-2014F



Note: Data for 2014 are forecasts.

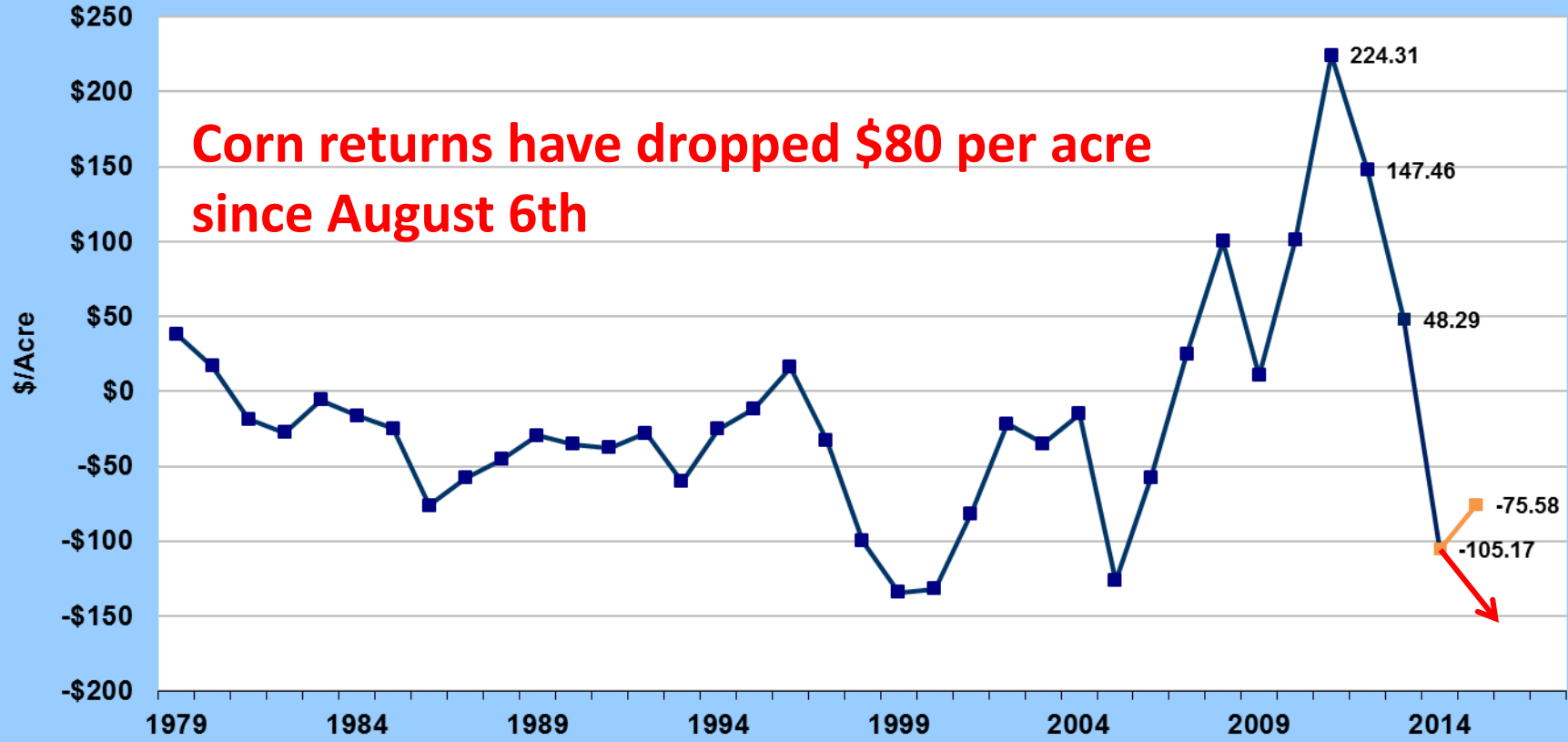
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of November 25, 2014.



# US Corn Returns per Acre

Value of Production Less Total Costs  
(Operating Cost + Allocated Overhead)  
a/o August 6, 2014

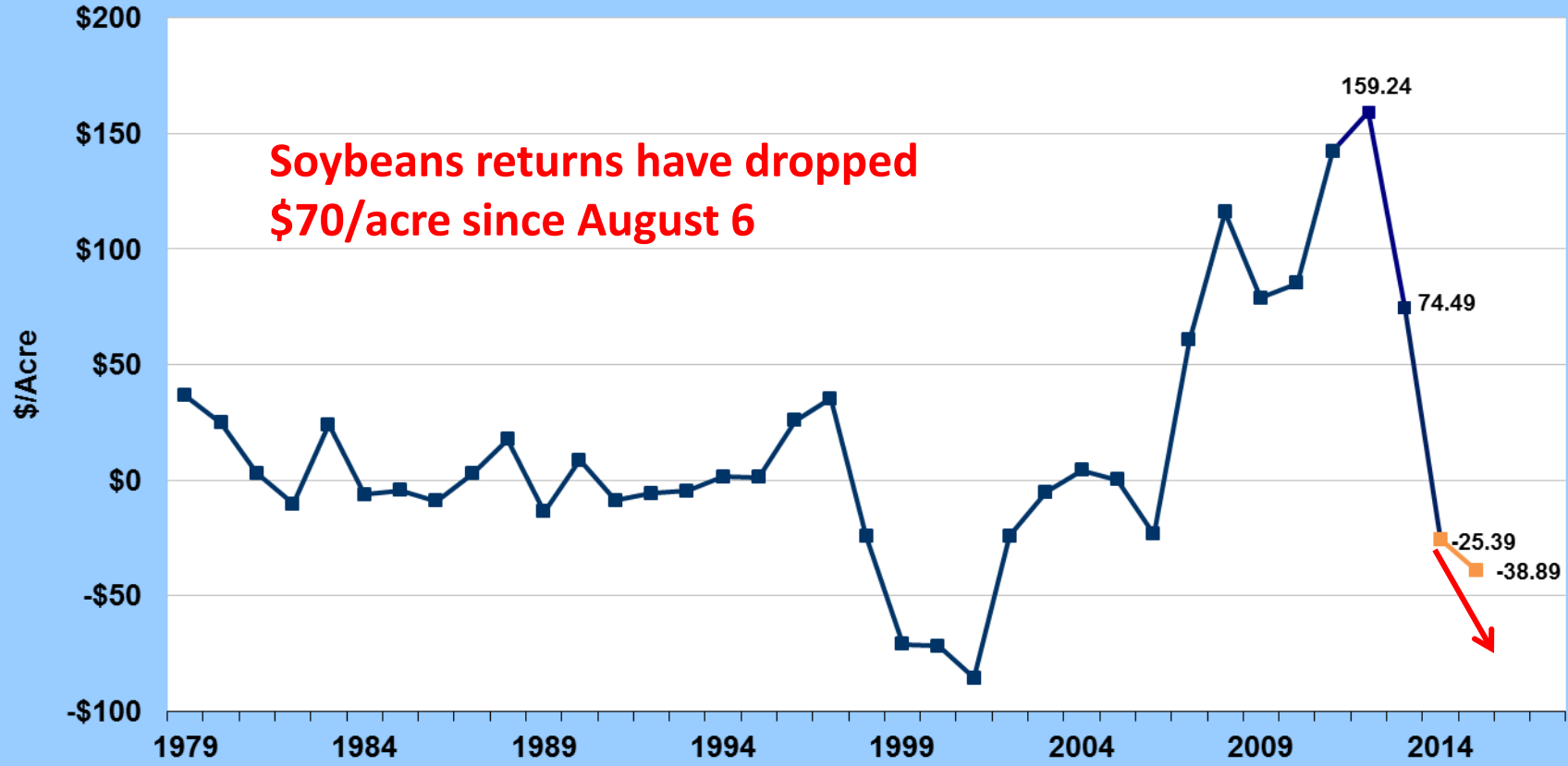


Source = USDA, CRB

2014 & 2015 = Hightower Forecast

# US Soybean Returns per Acre

Value of Production Less Total Costs  
(Operating Cost + Allocated Overhead)  
a/o August 6, 2014



Soybeans returns have dropped  
\$70/acre since August 6

Sources: USDA, CRB

2014 & 2015 = Hightower Forecasts

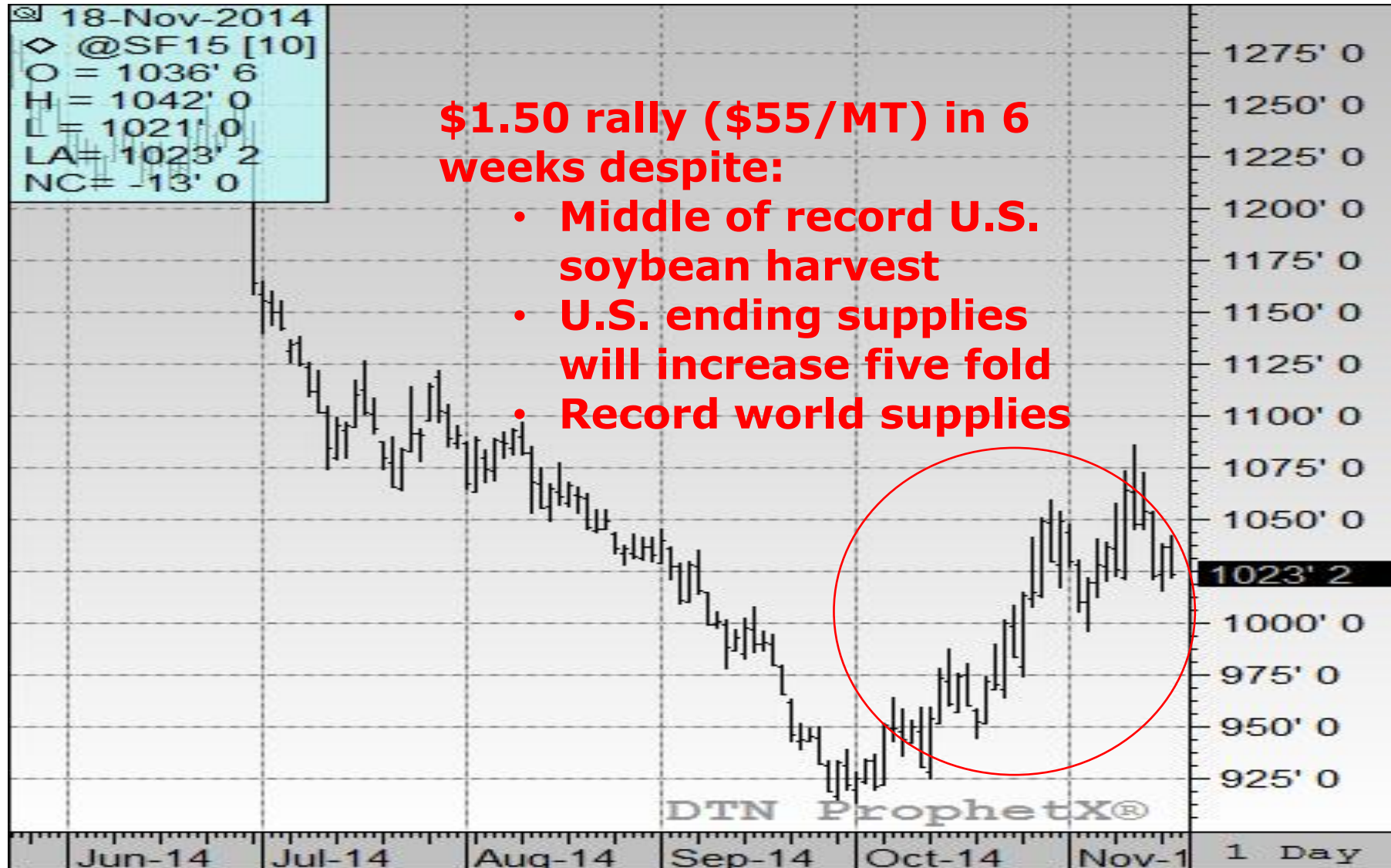
# The Next Trend Change?

- **Net farm returns now negative around the world**
- **Corn shows greatest losses**
- **Corn most expensive crop to produce**
- **Shift from corn to other crops?**
- **Marginal acres go out of production**
- **Double cropped acres decline**
- **World balance sheets tighten**
- **Weather?**

# Conclusions

- **STRONG DEMAND** **Undeterred** by record high prices
- **INTENSE COMPETITION:** Interregional, international
- **TECHNOLOGY IS CRITICAL**
  - Numerous forms: GM, plants/germplasm, machinery, GIS, precision ag, sensors, drones. **We need them all!**
  - Future battle: Bundling of technologies
  - Big data: analytics for making better decisions
- **Prices**
  - Must be sufficient to provide incentives for more efficient producing regions and technology adoption
  - Volatile: inter-seasonal and intra-seasonal

# How Quickly Things Can Change!



# **Fear of a global drought? Get used to it.**

## **CNBC 09/05/14**





# Is The Bull Really Dead?



**ONLY IF WORLD WEATHER IS  
PERFECT AND CROP PRODUCTION  
AT RECORD LEVELS**

**LOW PRICES WON'T LET THAT  
HAPPEN**





*with Mike  
Krueger*

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