



Risk Management

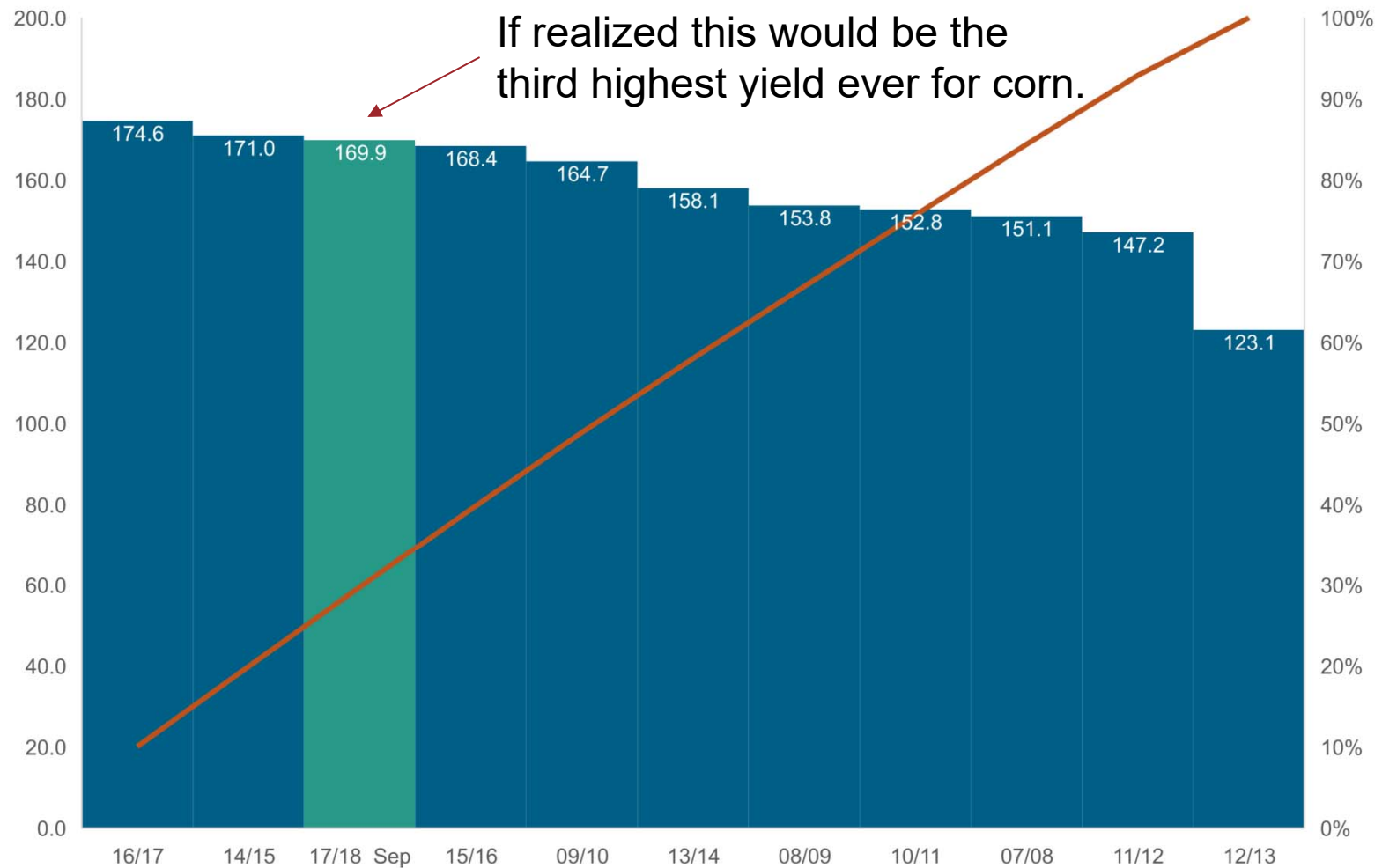
October 3, 2017

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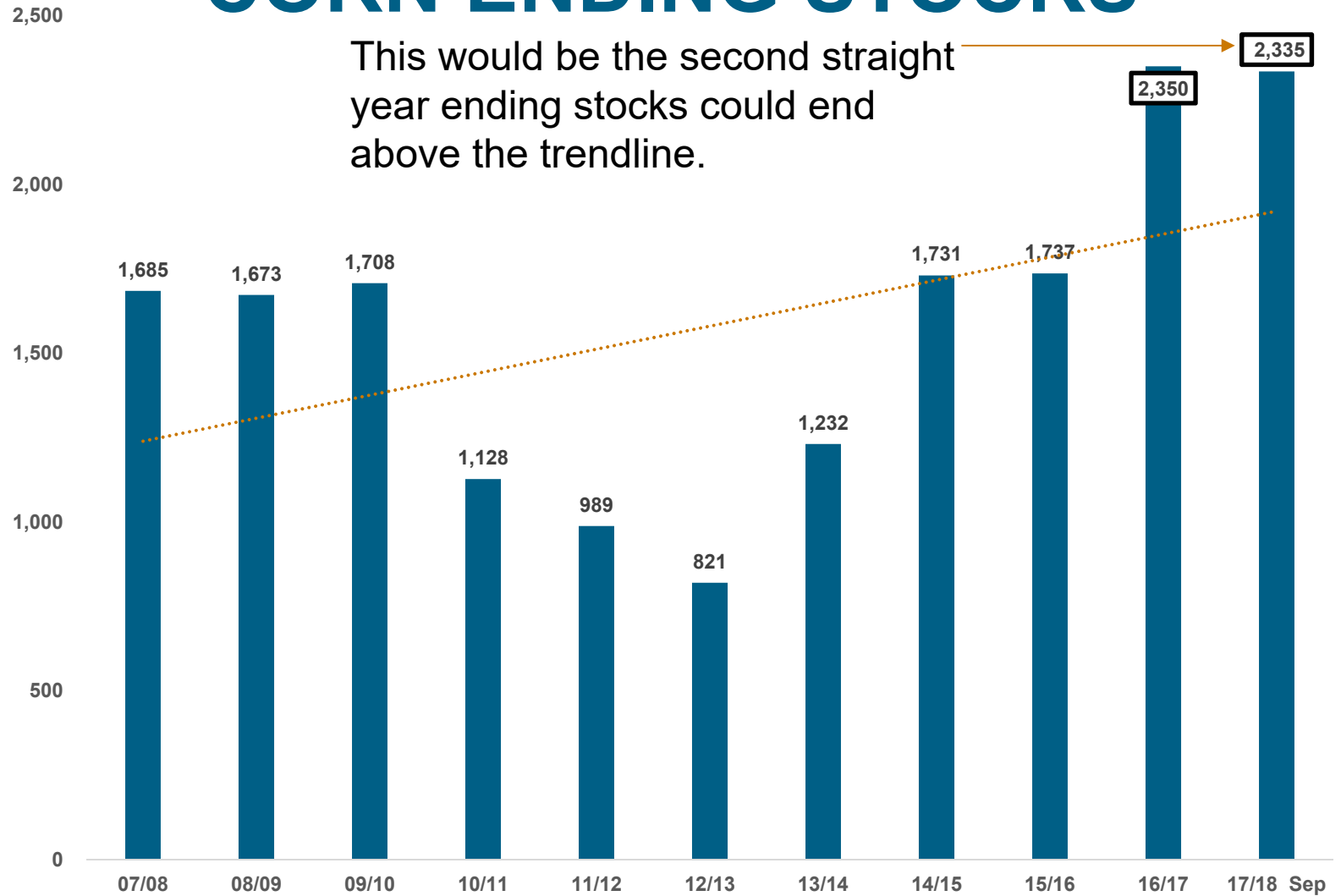
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Historical Corn Yield



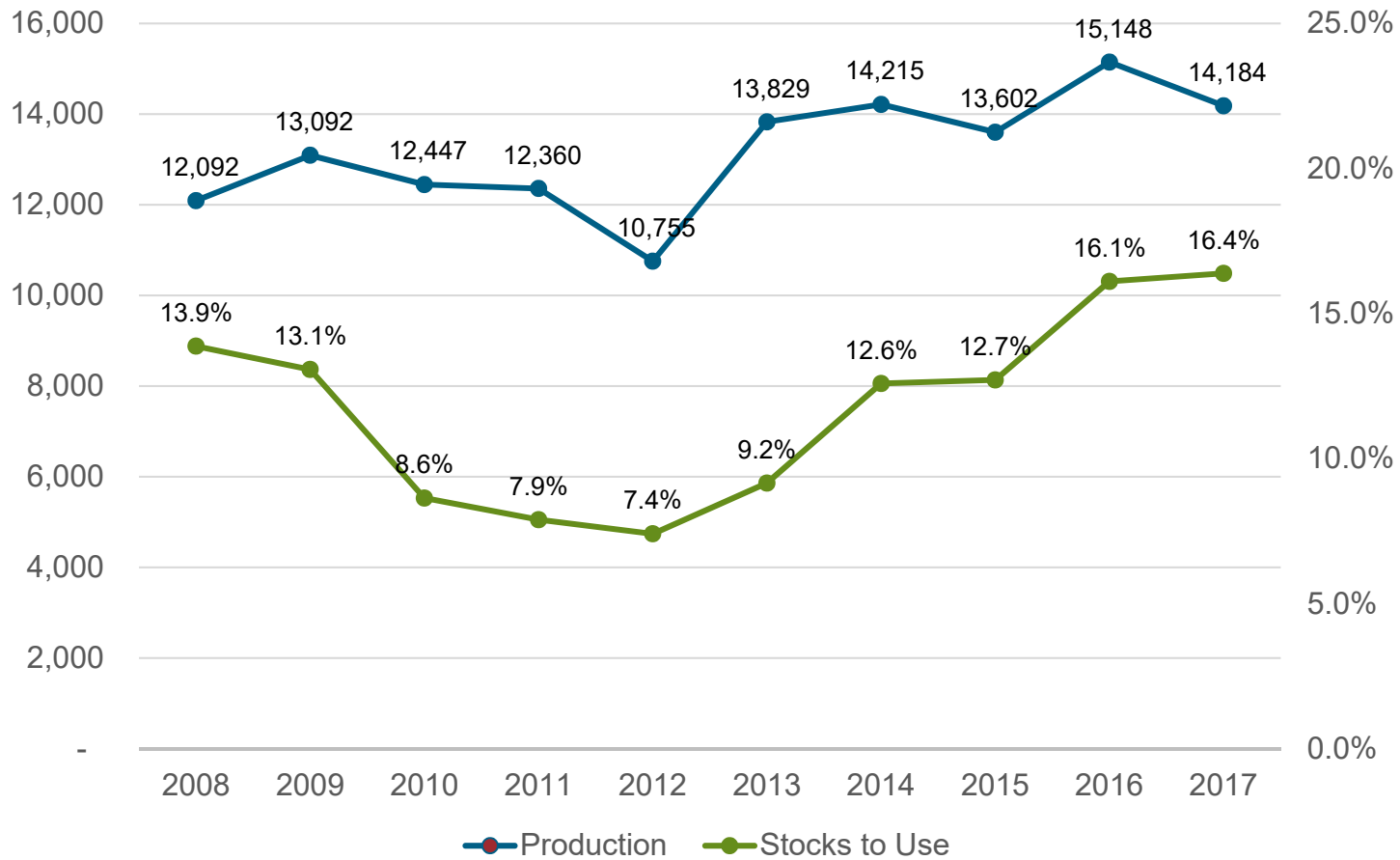
Source: USDA

CORN ENDING STOCKS



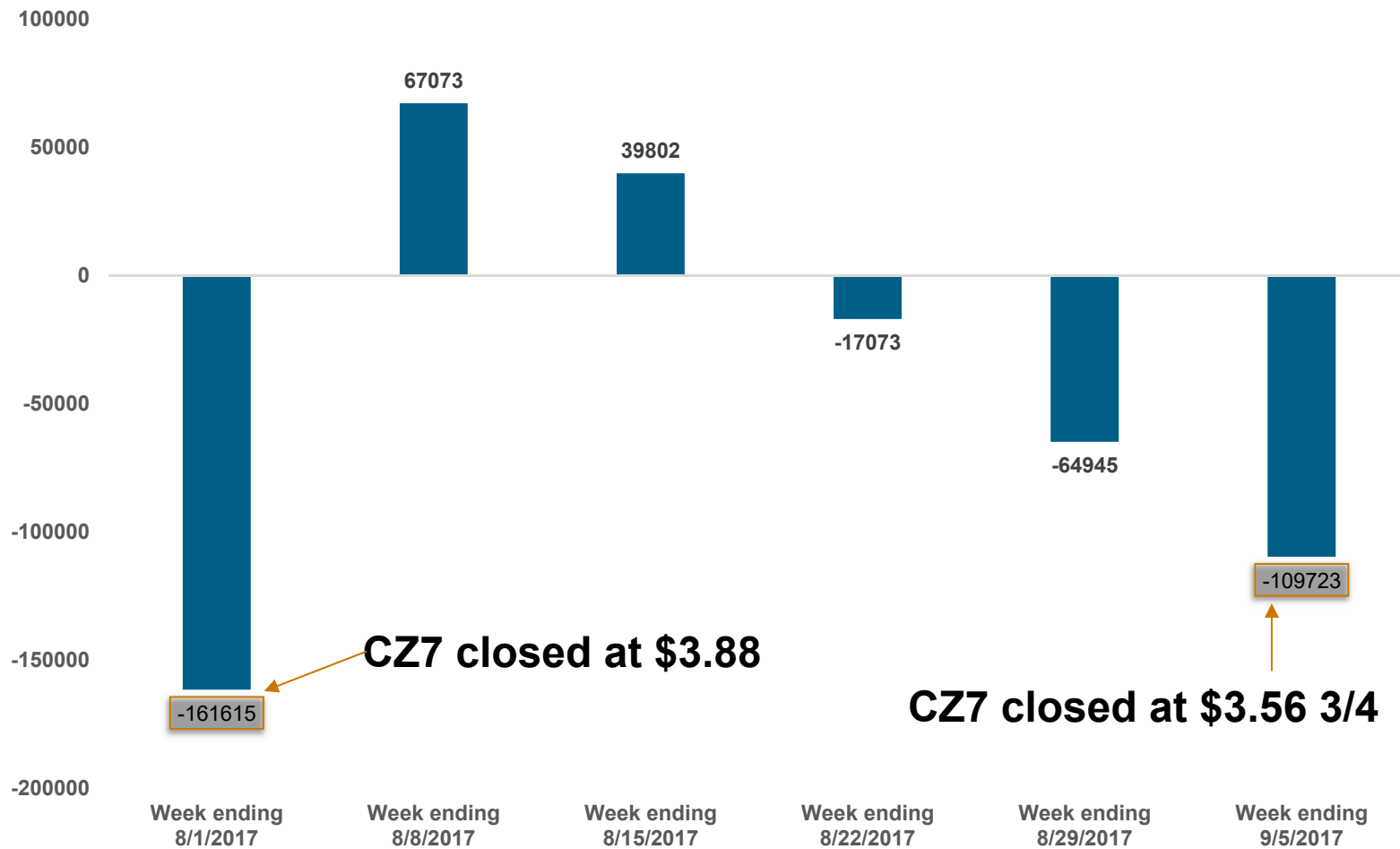
Source: USDA

US CORN PRODUCTION VS STOCKS TO USE



Source: USDA

Hedge Fund Corn Position



Source: CFTC

Corn – Short Term Market Factors

South American competition with the U.S. exports along with potential for increased Chinese imports

Year over year increase of U.S. ending stocks on the back of the third highest yield

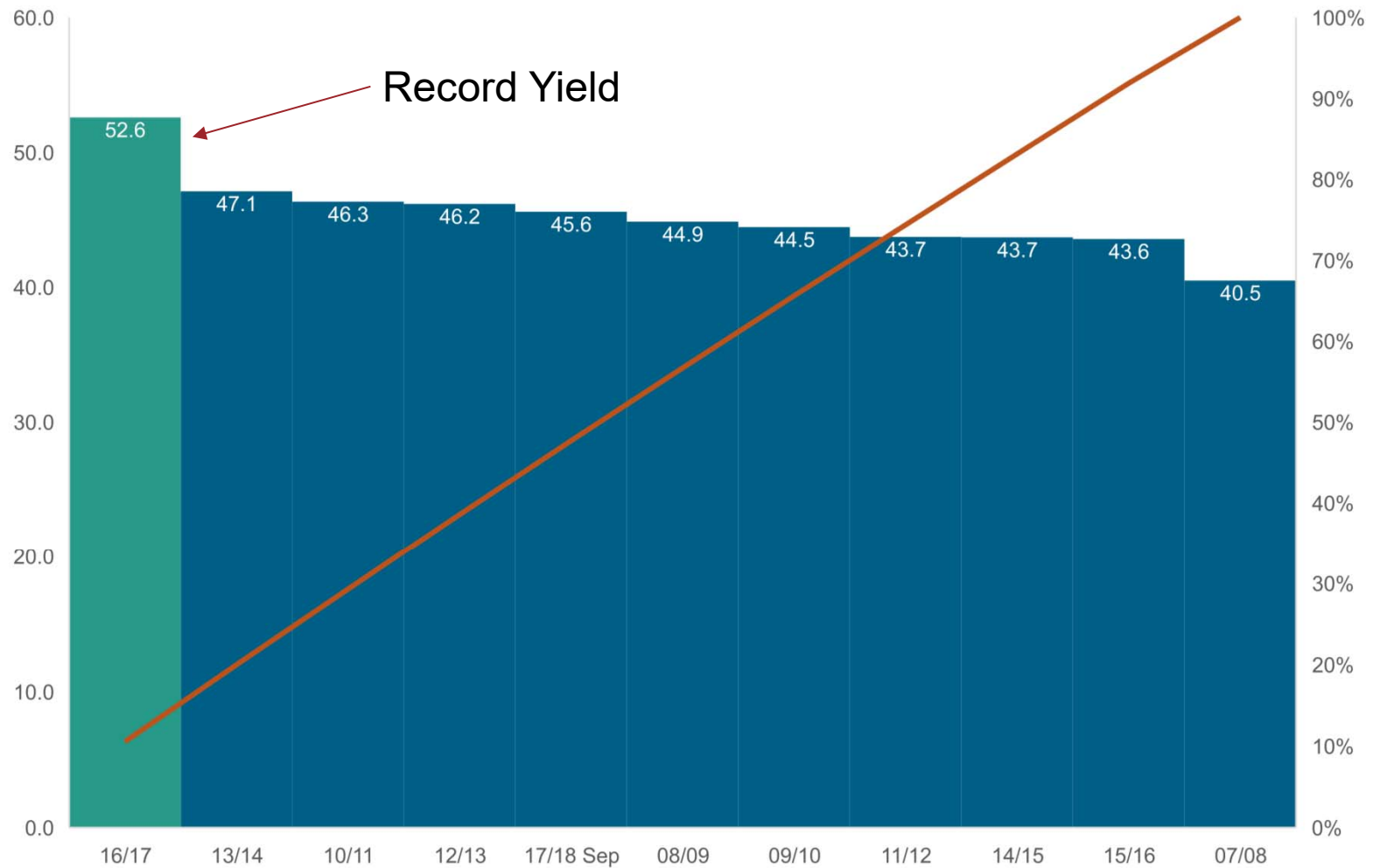
South American weather; early dryness & initial talk of La Nina

Commodity Funds potential to add to short position or reduce

Farmer profitability

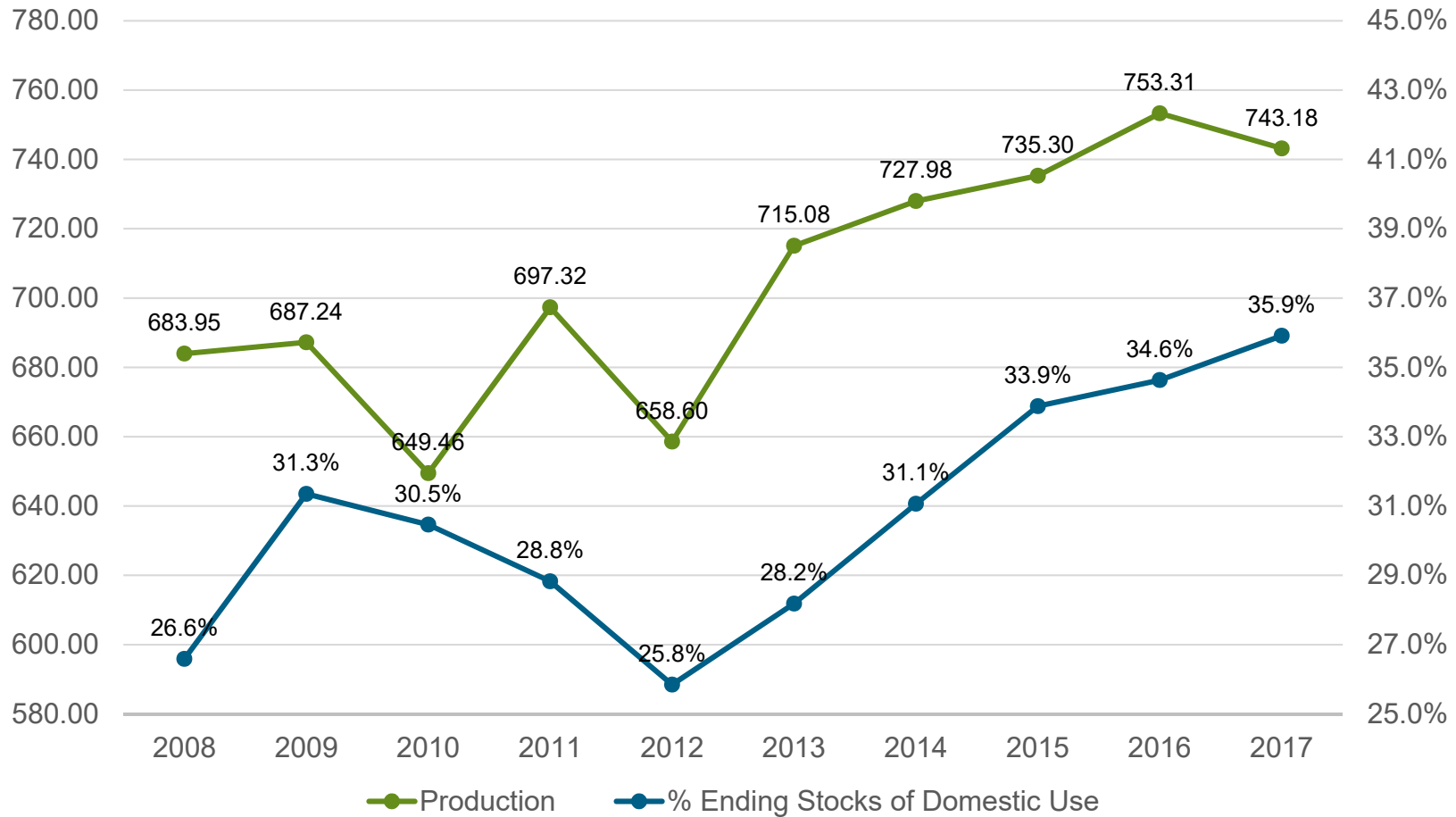
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U.S. Wheat Yield



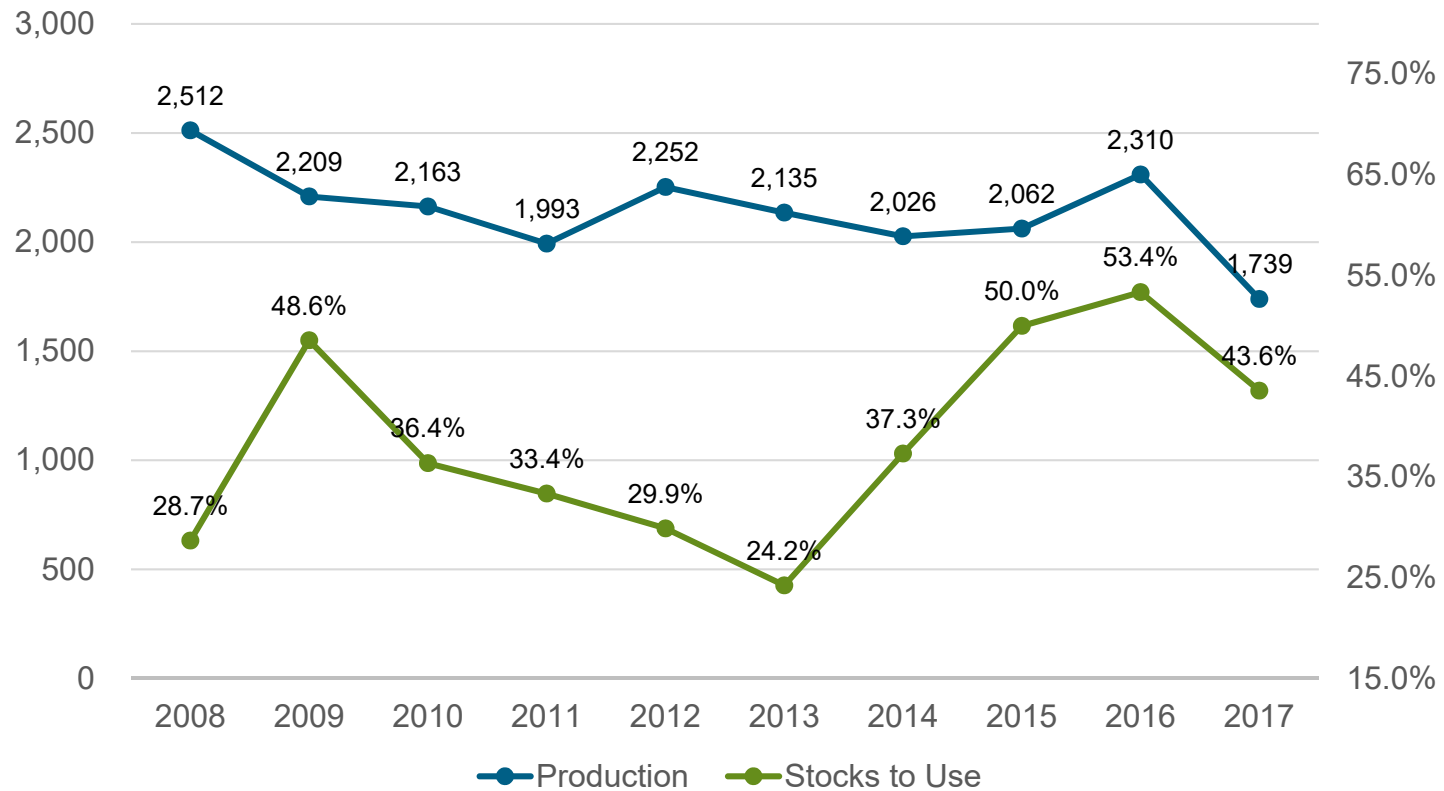
Source: USDA

GLOBAL WHEAT PRODUCTION VS STOCKS TO USE



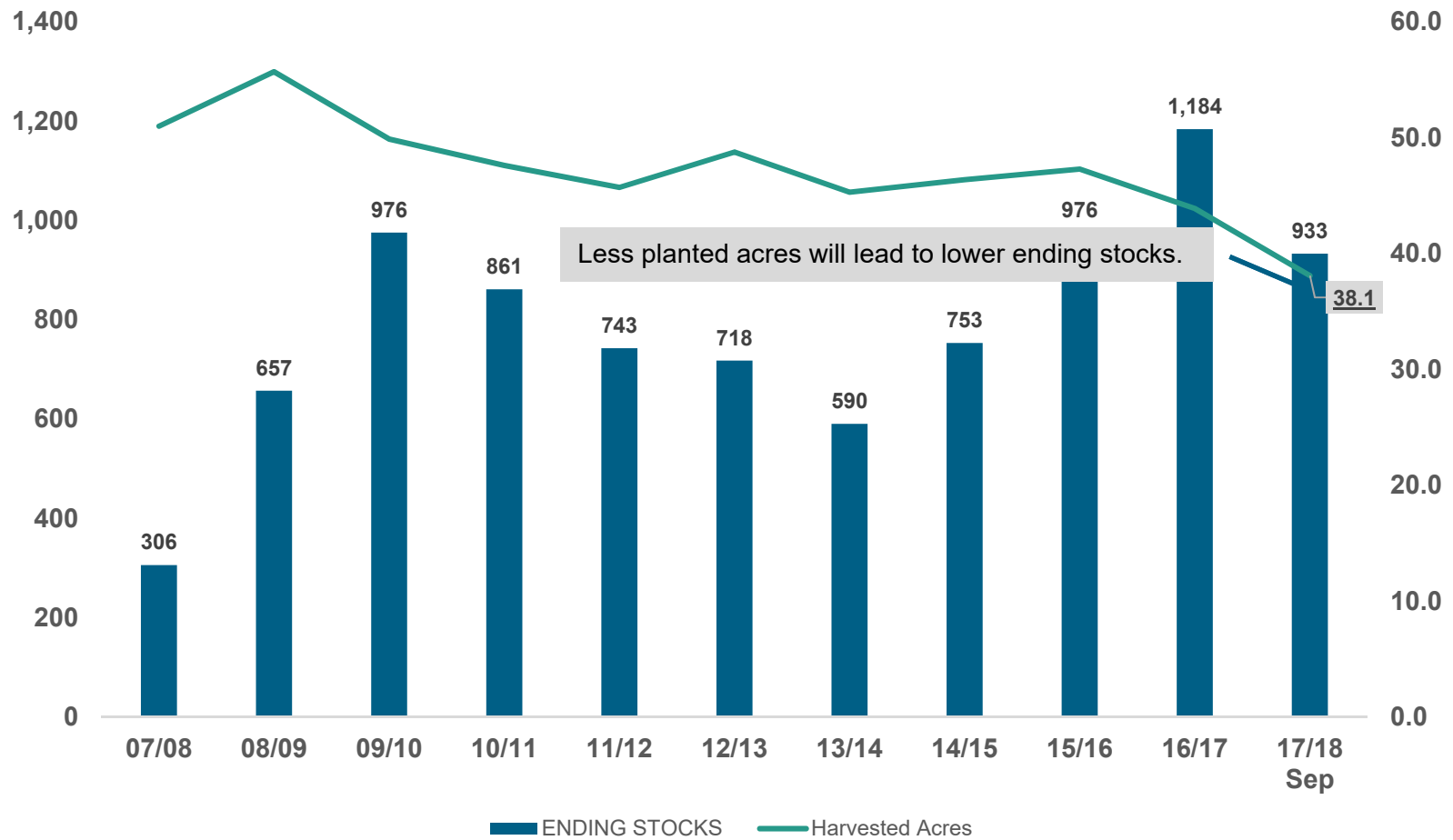
Source: USDA

US ALL WHEAT PRODUCTION VS STOCKS TO USE



Source: USDA

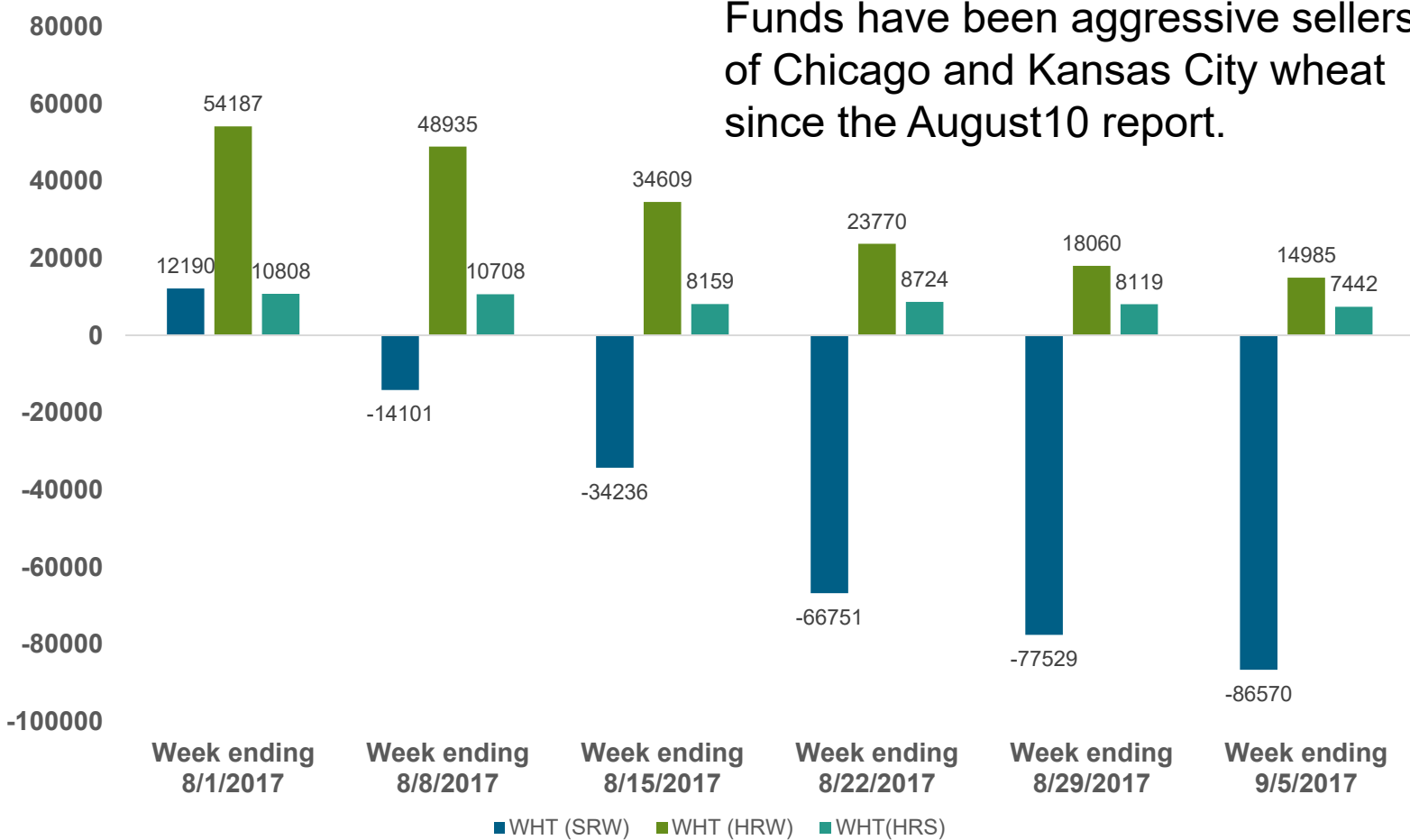
U.S. Wheat Ending Stocks



Source: USDA

Hedge Fund Wheat Position

Funds have been aggressive sellers of Chicago and Kansas City wheat since the August 10 report.



Source: CFTC

Wheat – Short Term Market Factors

Reductions in U.S., Australian, & German crops offset by record Russian Production

Russian export flows limited by capacity constraints & competition for corn and barley exports

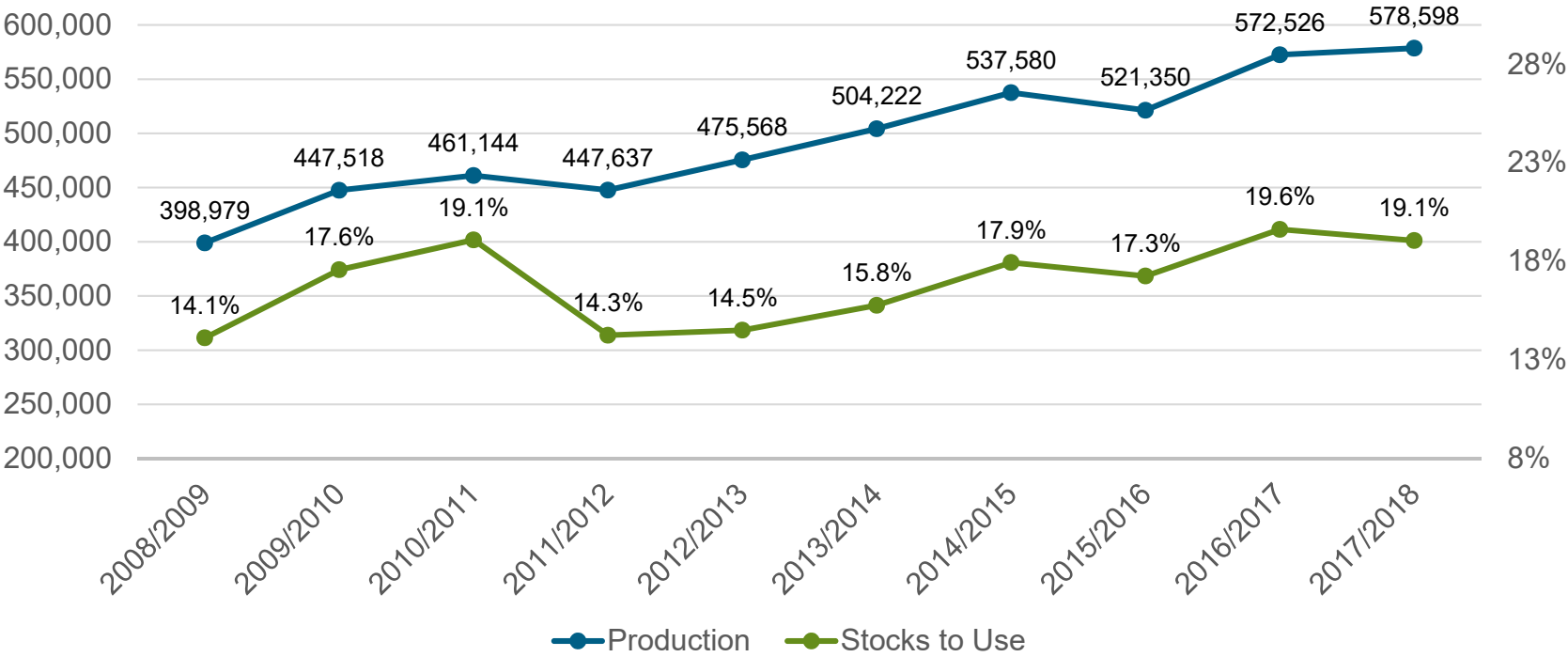
US stocks reducing off of last year's highs due to the lowest planted acres in over 100 years, Spring Wheat high protein crop a supply concern

Commodity Funds increased short position in Chicago and maintain long position in Kansas City and Minneapolis

Growing season weather in Southern Hemisphere and winter conditions in North

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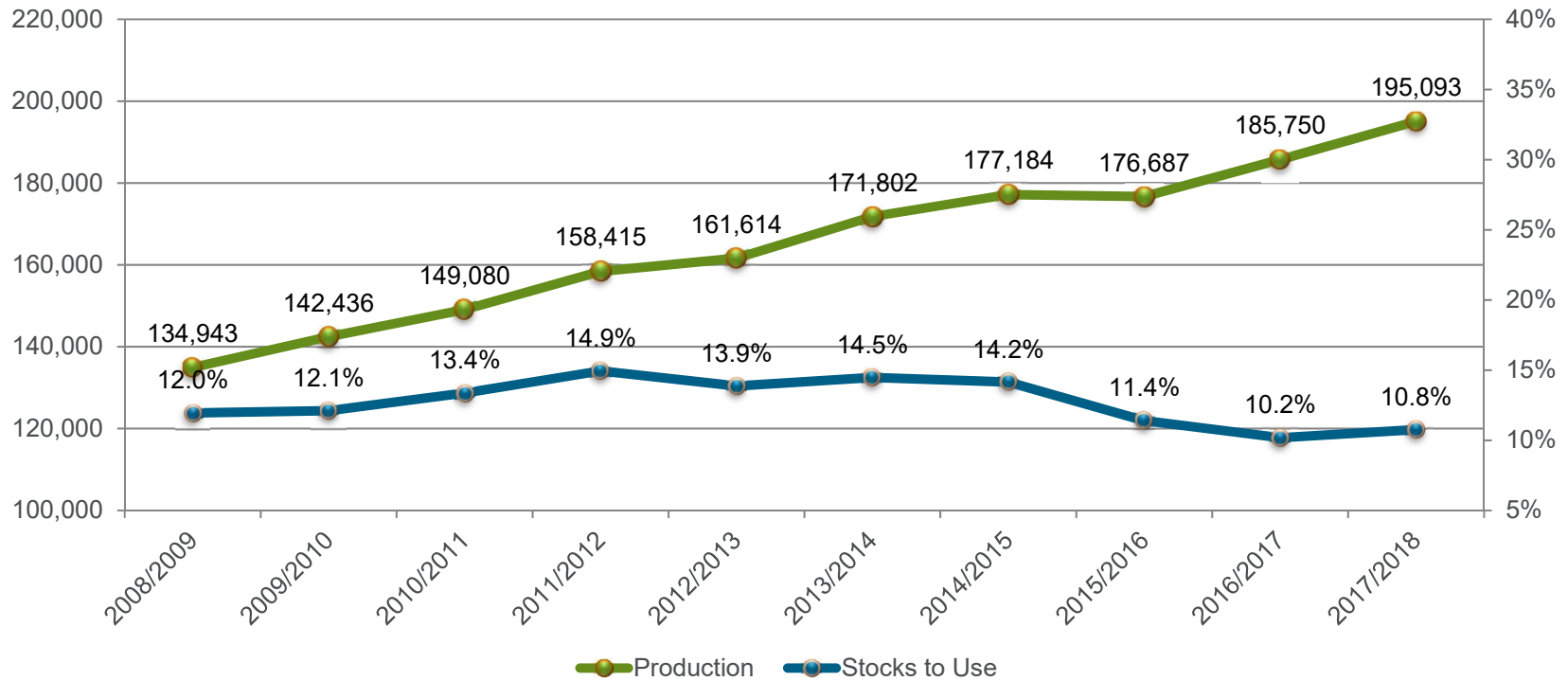
WORLD OILSEED PRODUCTION VS STOCKS TO USE (COPRA, COTTONSEED, PALM KERNAL, PEANUT, SOY, SUNFLOWER)



Source: USDA

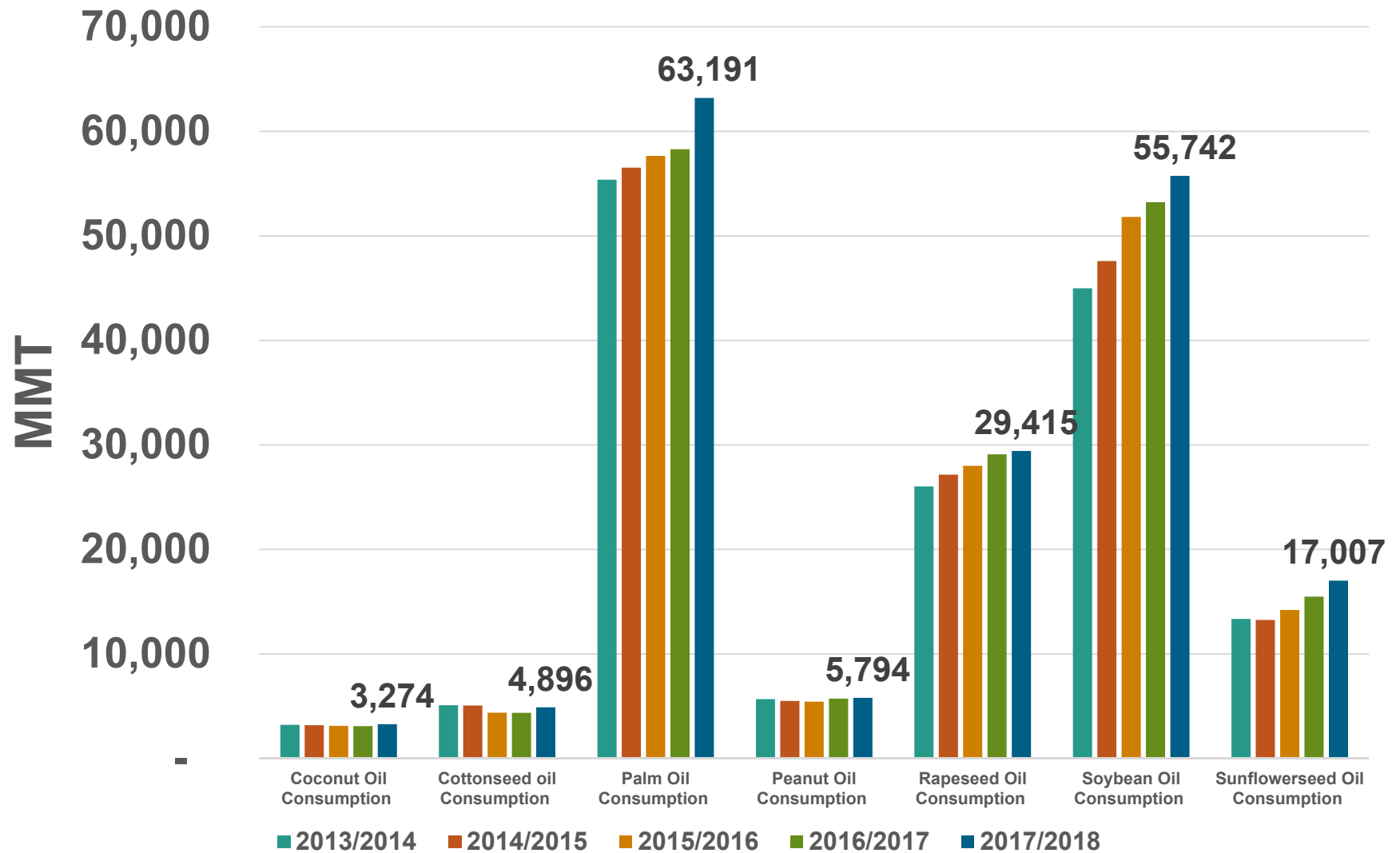
World Vegetable Oil Production vs Stocks to Use

(Coconut, Cottonseed, Olive, Palm, Palm Kernal, Peanut, Rapeseed, Soy, Sunflower)

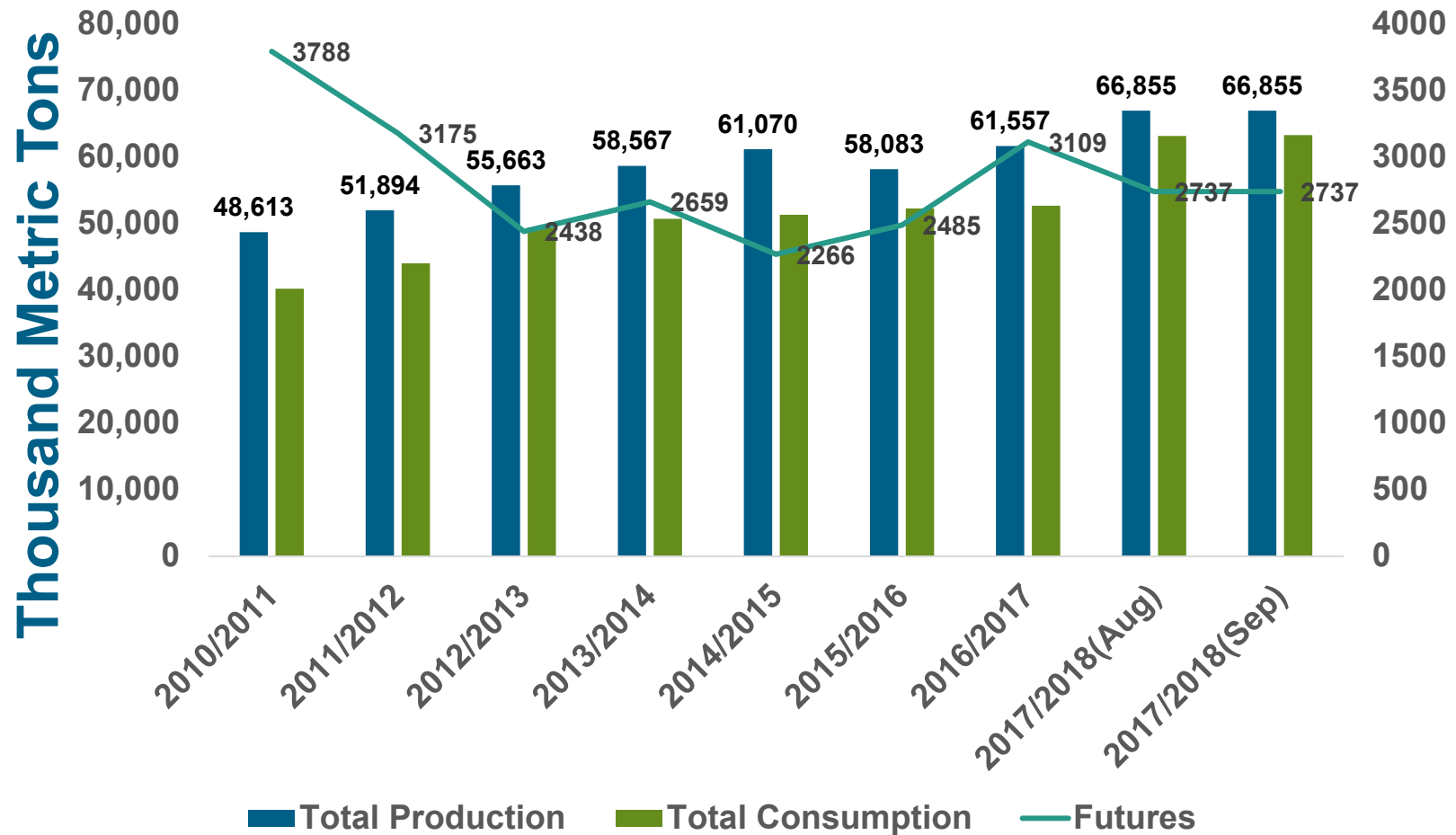


Source: USDA

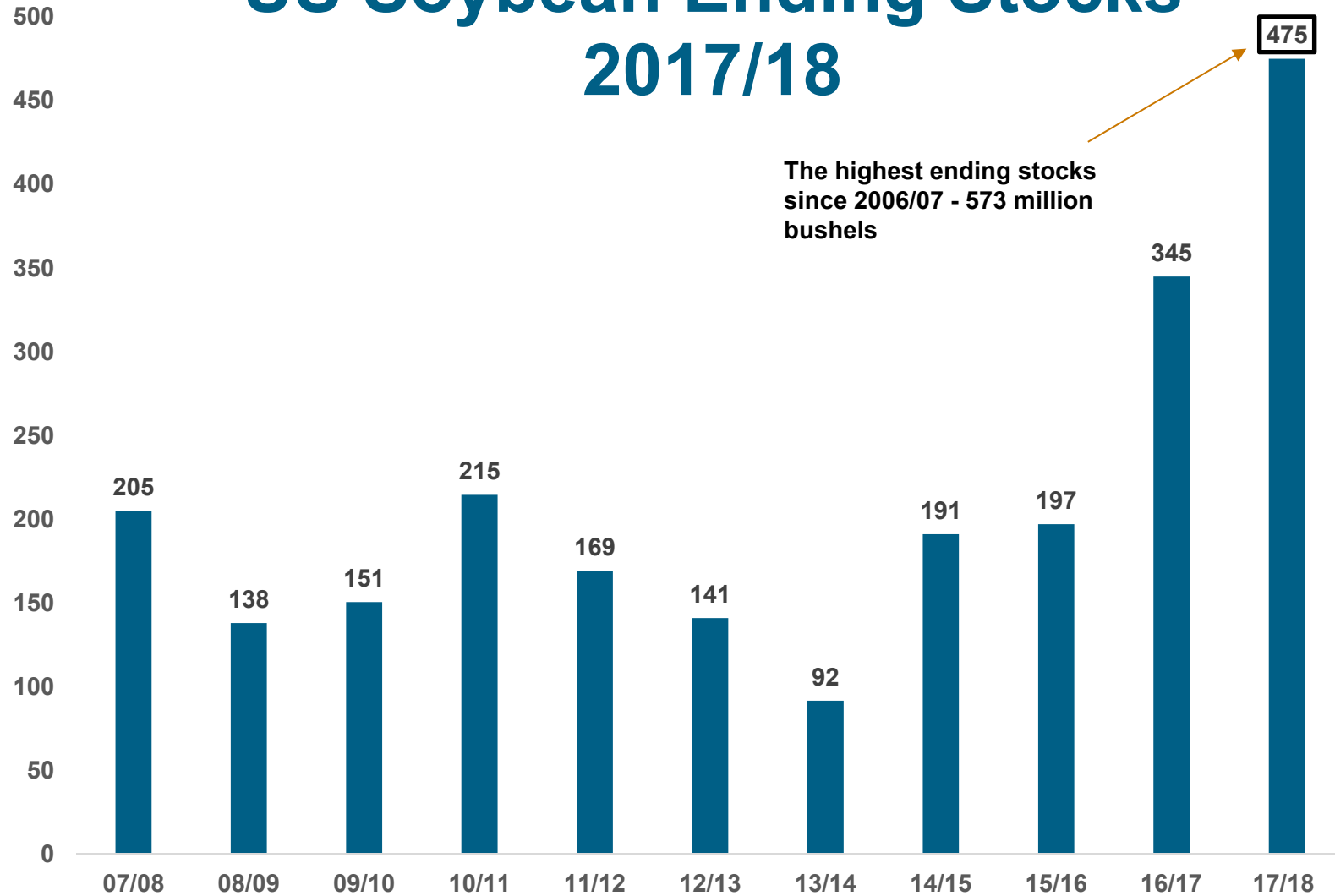
Global Consumption



Palm Oil Global Production/Consumption

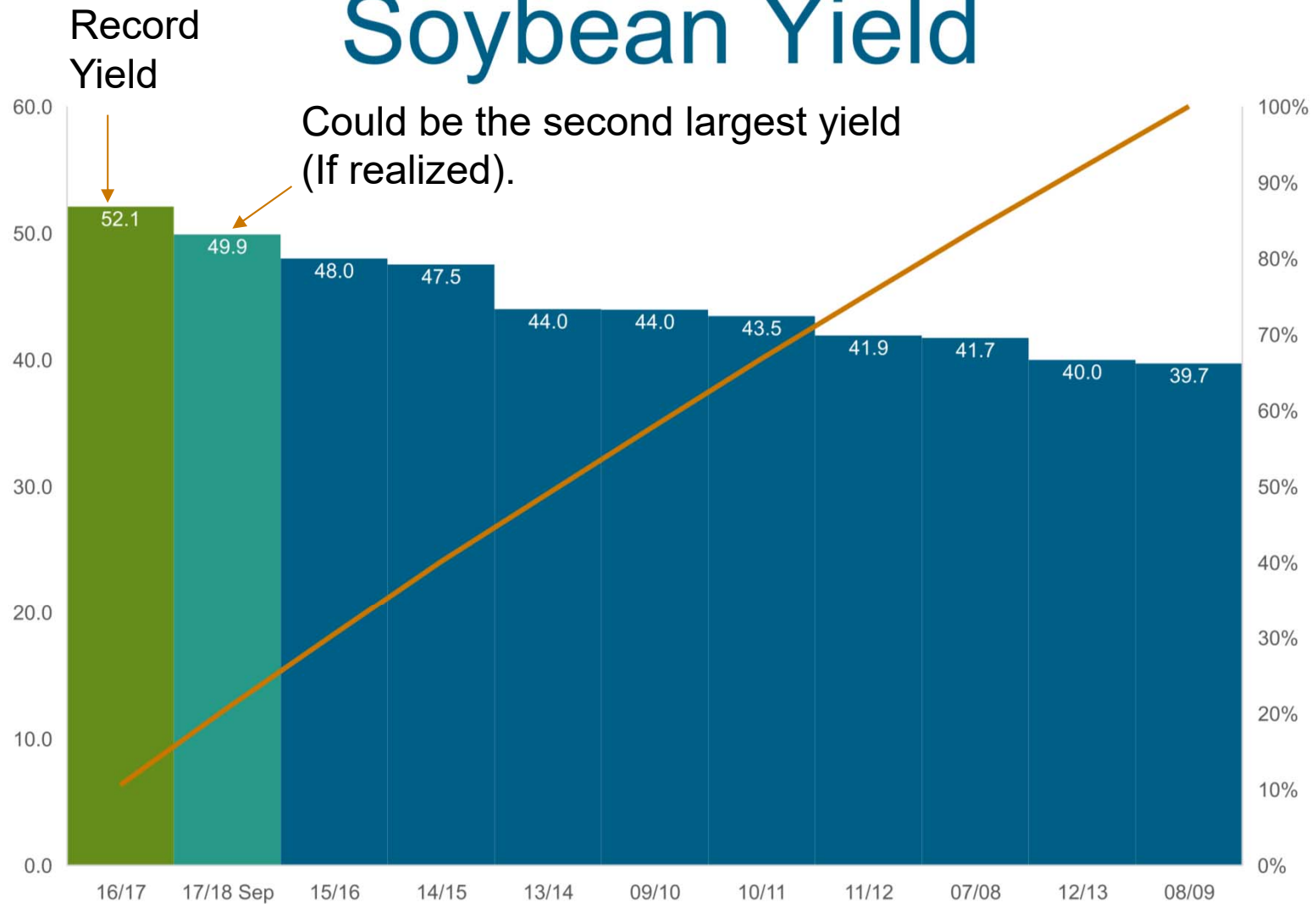


US Soybean Ending Stocks 2017/18



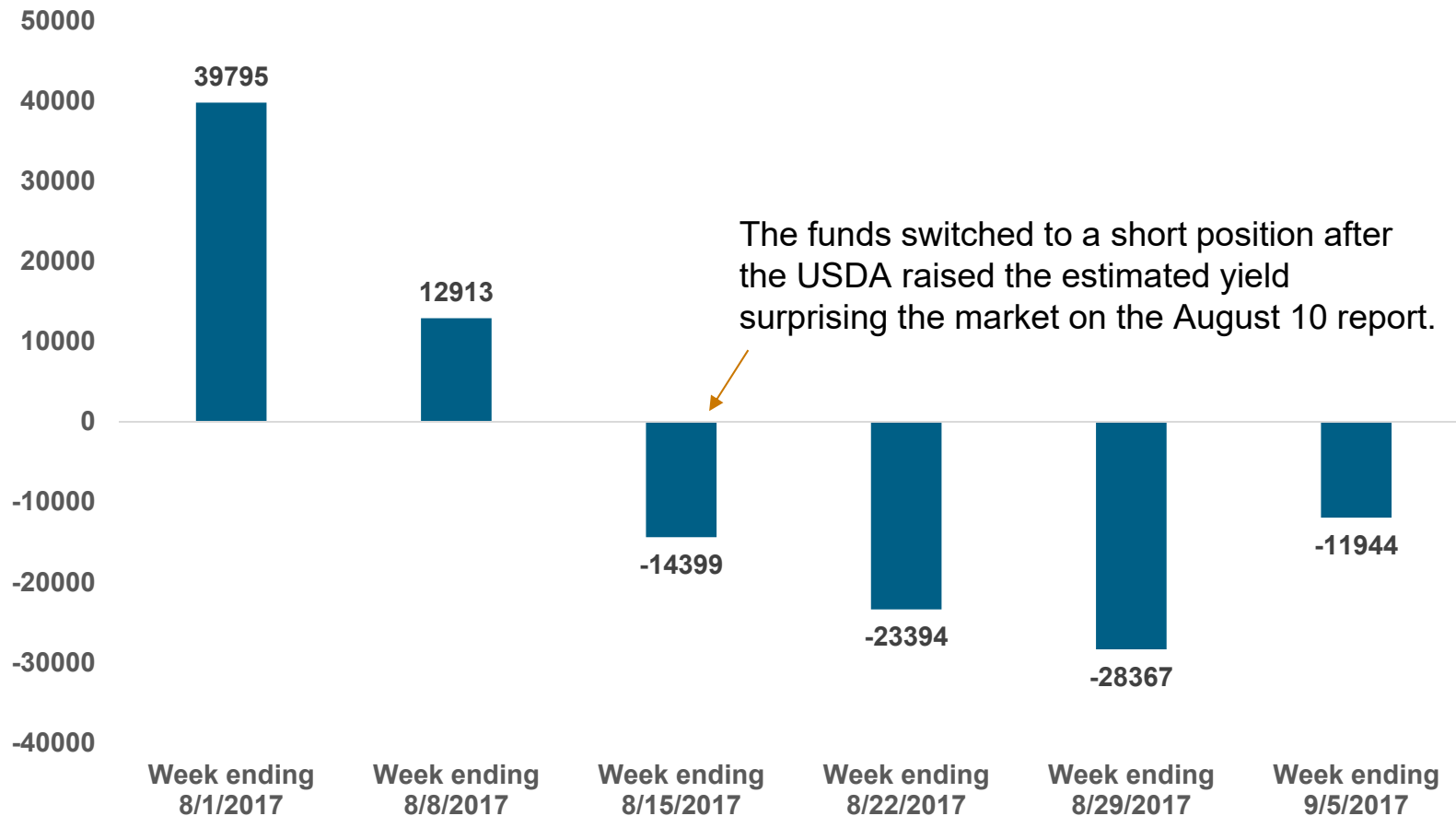
Source: USDA

Soybean Yield



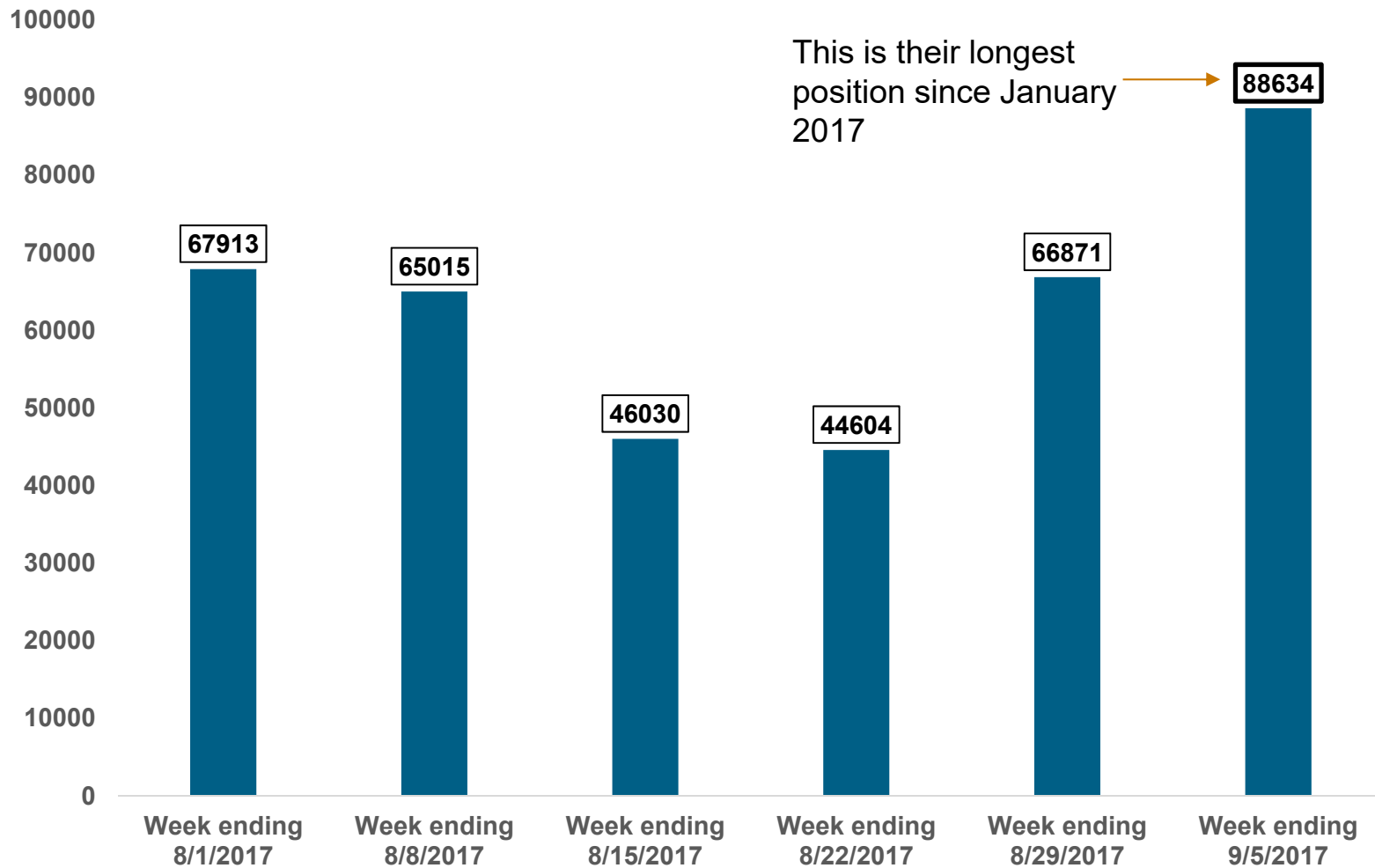
Source: USDA

Hedge Fund Soybean Position



Source: CFTC

Hedge Fund Soybean Oil Position



Source: CFTC

Vegetable Oils – Short Term Market Factors

10 year production high for 6 major oilseed crops

Palm oil production led by Indonesia and Malaysia at multi year highs

Strong South American crop last year followed by a strong US crop

South American weather and early prognosis for La Nina a swing factor

Biodiesel policies in US, South America and Europe a demand swing factor

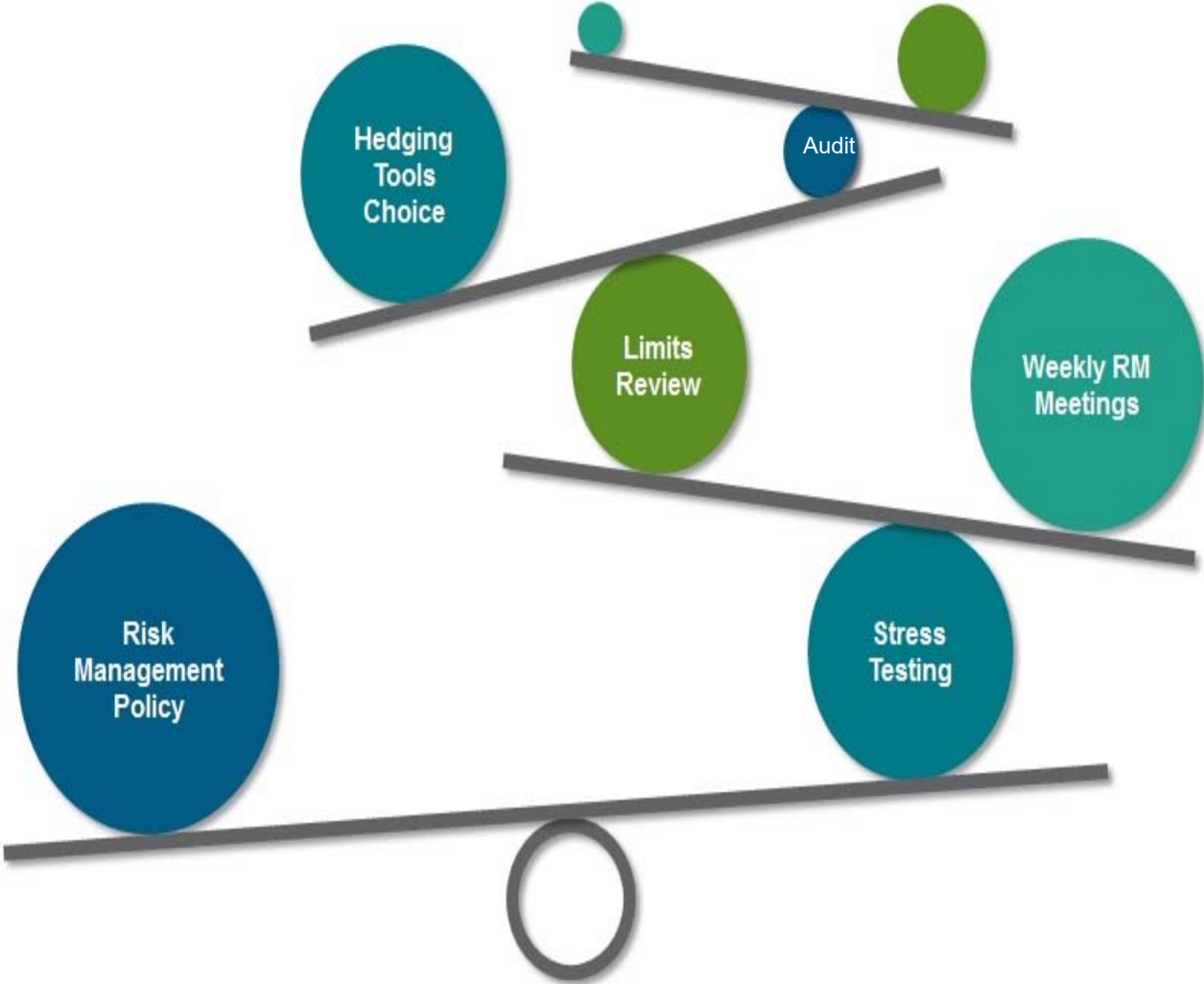


- **Align** to business objectives
- **Manage** exposure based on robust risk measures
- **View** this as a competitive advantage

Where others see risk we see opportunity

- **Defend market share** (prevent lost ground to competition)
- **Protect margins** (maintain profit margins in the face of pricing pressure)
- **Secure budgets** (achieve a more predictable and profitable future)
- **Stabilize pricing** (mitigate swings in commodity prices)
- **Eliminate surprises** (avoid being caught off guard by the unknown)
- **New avenues of business** (engage in new opportunities)

Risk Management: It's a balancing act



Portfolio Diversification

Hedging strategies should involve a diverse set of components and scaling into positions.

Cargill
Risk
Management
Tailored
Solutions
%

Cargill
Risk
Management
Vanilla
Options
%

Other
Pricing
Mechanisms
%

EFFECTIVE HEDGING STRATEGY

Why this combination of tools?

1. The non-correlated behavior of different tools.
2. Reduces cost and volatility.
3. Outcome of each tool is different, complements each other's weaknesses.

	Out of Pocket Cost	Price Protection	Participation in Up/Down beneficial market moves	Expensive	Working Capital Use on Initial or Variation Margining
No Hedge	No	No	Yes (full)	No	No
Futures / Forwards	No	Yes	No	No	Yes
Options	Yes	Yes	Yes (full)	Yes	Yes
Tailored Solutions	No	Yes	Yes (limited)	No	Yes

Risk management collaboration



The 8-Step Checklist

- 1. Design a hedging policy.** Establish boundaries, rules and limits to guide work objectives.
- 2. Establish a Risk Committee.** Representatives from commercial, trading, credit, control and treasury should meet regularly and deliberate about positions, results, stress testing, portfolio concentration, sudden changes in market conditions and limits.
- 3. Identify and hire the right talent.** A combination of experienced talent from within the organization and individuals from outside the confines of the company can create a complementary and fresh approach.
- 4. Set up a recurring review schedule.** Establish weekly meetings to review exposures, trends, market data, policy, proposals and exceptions.



The 8-Step Checklist

- 5. Define the max concentration of each tool within your hedging portfolio.** Every tool within your portfolio needs to have a defined goal of why is it used and how it helps achieve specific objectives--as well as its downsides. Define a max concentration limit for each tool to avoid excesses.
- 6. Practice recurring stress testing.** Put the team and company through the paces of different financial scenarios (i.e., “stress testing”) and share the results at the weekly committee meetings.
- 7. Set up schedules for annual external reviews and benchmarks.** Bring in an independent financial consultant/firm to review results from the prior year, assess risks, and help create benchmarks to measure against in the year ahead.
- 8. Set strict limits for exception approvals.** Create a short list of executives within the organization who can approve exceptions.





Commodity Price Risk

by Cargill Risk Management

www.commoditypricerisk.com



How to build a diversified hedging portfolio using a Delta 1 or < 1 approach

By Federico Stiegwardt

When I talk about building a diversified hedging portfolio as a business, I often use the analogy of building an investment portfolio as an individual.

With an individual investment portfolio, a mix of different, non-correlated asset classes (i.e., stocks, bonds, etc.) is used by wealth management advisers to minimize risk and maximize long-term results—no matter if it's a bull or bear market.

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