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RESEARCH & EXTENSION

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Price Loss Coverage and Agricultural Risk Coverage

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I. 2014 Farm Bill

Quick Summary

- Contains <u>target</u> prices or <u>insured</u> revenues for covered commodities

    1) Price Loss Coverage: PLC, reference price (fixed)

    2) Agricultural Risk Coverage: ARC, revenue guarantee floats with national price & county yield

    Potential payments are based on 85% of base acres

- Retains marketing loan rates

- Increased availability of subsidized crop insurance (Supplemental Coverage Option – SCO)

- Cotton is not a covered commodity - has a separate area crop insurance program (STAX) available in 2015

- PLC and ARC selection are relevant to cotton base acreage

PLC and ARC Concepts

- PLC – Countercyclical Payments

- ARC – Revenue insurance (with no premiums to pay)

  1) ARC-County is similar to area revenue insurance on a crop by crop basis.

  2) ARC-Farm is similar to revenue insurance by FSA farm number. **All crop revenue on a farm is covered jointly, not crop by crop. Pays on 65% of base acres.**

  ↑↓Revenue Guarantee = (5-Year) ↑↓Price and ↑↓Yield

- Program selection covers 2014-2018 ….? Make a selection that fits your risk preferences and risk perceptions.

- With generic base, enroll all crops on the FSA list, even crops you have never planted. The default program is PLC.

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II. Programs

- Price Loss Coverage (PLC) - covers losses in actual revenue due to commodity price declines below established <u>reference prices.</u> (target price)

- Agricultural Risk Coverage (ARC-County) - covers losses in actual revenue for a covered commodity relative to a <u>revenue guarantee</u>. (insured revenue)

  FSA will calculate the revenue guarantee each year, and it will be identical for every farm in the county.

Price Loss Coverage (PLC)

- PLC payments are made for any crop year if the **effective price** is less than the **reference price**.

- Effective Price is the higher of:

  ➢ The national average market price received during the 12 month marketing year.

  ➢ The national average loan rate for the crop.

- Reference Price is established in the Farm Bill for each covered commodity.

PLC Reference Prices

Corn	$3.70 /bu.
Rice (Delta)	$6.30/bu.
Soybeans	$8.40/bu.
Wheat	$5.50/bu.
Sorghum	$3.95/bu.
Peanuts	$535/ton

PLC Example for Rice

- The national average market price at the end of the 2014 production year is $6.14/bu. This becomes the effective price.

- The **payment rate** is calculated as $6.30 - $6.14 = $0.16/bu.

- The **payment yield** on record with USDA is 139.6 bu./acre.

- Base rice acres on record with USDA are 100 acres.

- The payment amount is
  $0.16 x 139.6 x (100 x 0.85) = $1,868.36

Agricultural Risk Coverage (ARC)

- ARC (County) is based on revenue (yield X price).

- County yields and national prices are applied to determine the **benchmark revenue** and the **actual crop revenue**.

- Applied price is the higher of:

➢ The national average market price received during the 12 month marketing year.

➢ The national average loan rate for the crop.

❖ ARC (County) allows separate irrigated and non-irrigated ARC benchmark revenues.

ARC (County) Soybean Example

- Olympic average county yield for 2009-2013 is 46.33 bu./acre
- Olympic average national price for 2009-2013 is $11.77
- ✓ **Benchmark revenue** is 46.33 x $11.77 = $545.19/acre

- **Revenue guarantee** is $468.86/acre ($545.19 x 0.86)

- As an example situation, **actual crop revenue** for 2014 is $450.00/acre (45 bu./acre county yield, $10.00/bu. national price). A farm has 100 base acres.

- ➢ Actual crop revenue is less than the revenue guarantee.

- **Payment rate** is $468.86 - $450.00 = $18.86.

- **Payment amount** is $18.86 x 100 x 0.85 = $1,603.10

PLC and ARC Summary

- **PLC**
  - Fixed reference prices are compared to current national prices for each crop
  - Payments are determined by payment yields established with USDA
  - Payments are on 85% of base acres for a crop

- **ARC (County)**
  - Benchmark revenue is a moving measure for the 5 most recent years
  - Actual revenue is determined by current county yields and national prices for each crop
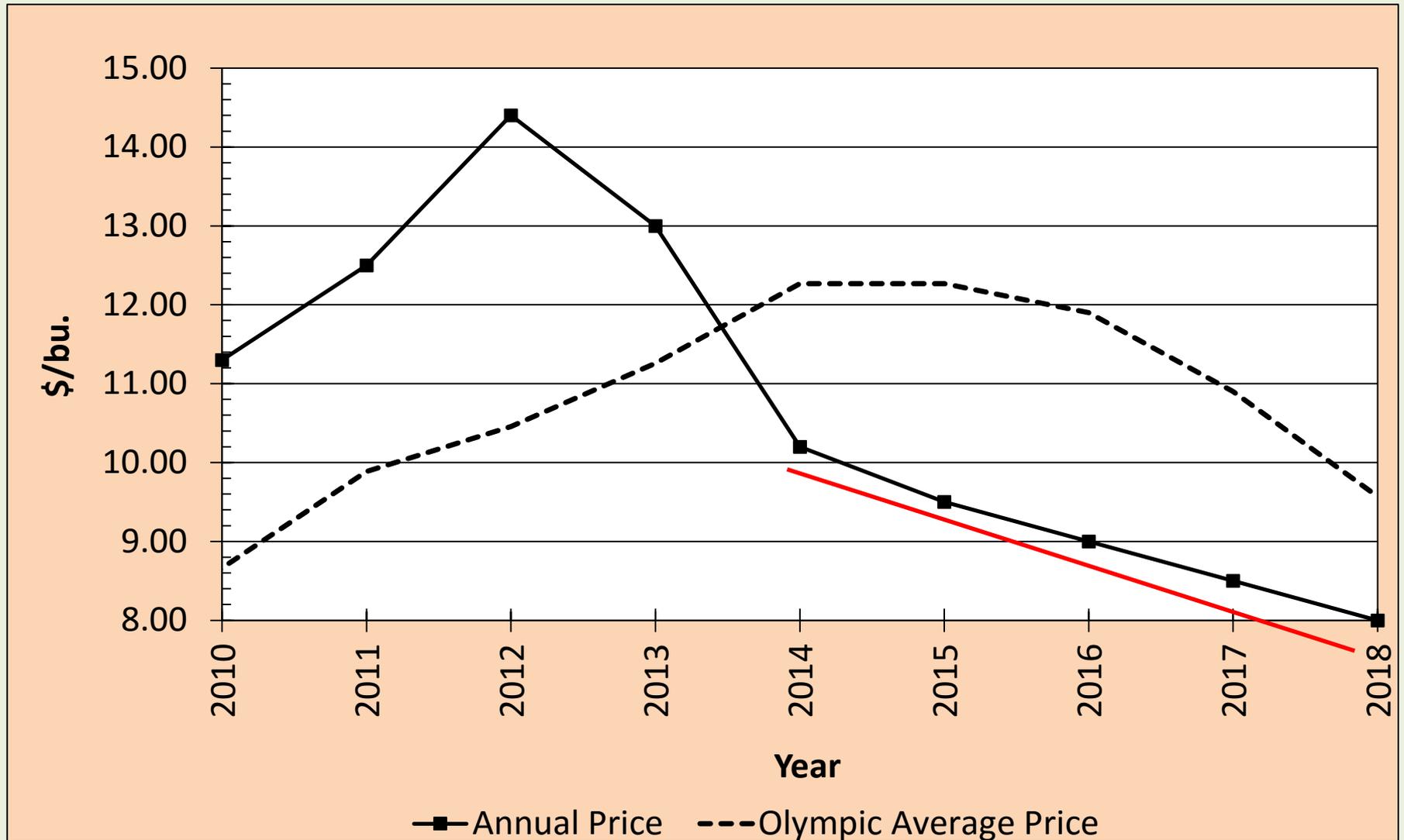 - Payments are on 85% of base acres for a crop

PLC and ARC in Risk Management

- **PLC**
➤ How likely is the national price to be less than the reference price?

- **ARC (County)**
➤ How likely is the national price to be less than 86% of the moving Olympic average national price?
➤ How likely is the county yield to be less than 86% of the moving Olympic average county yield?

- Are you mostly concerned with price protection, yield protection, or a combination of both?
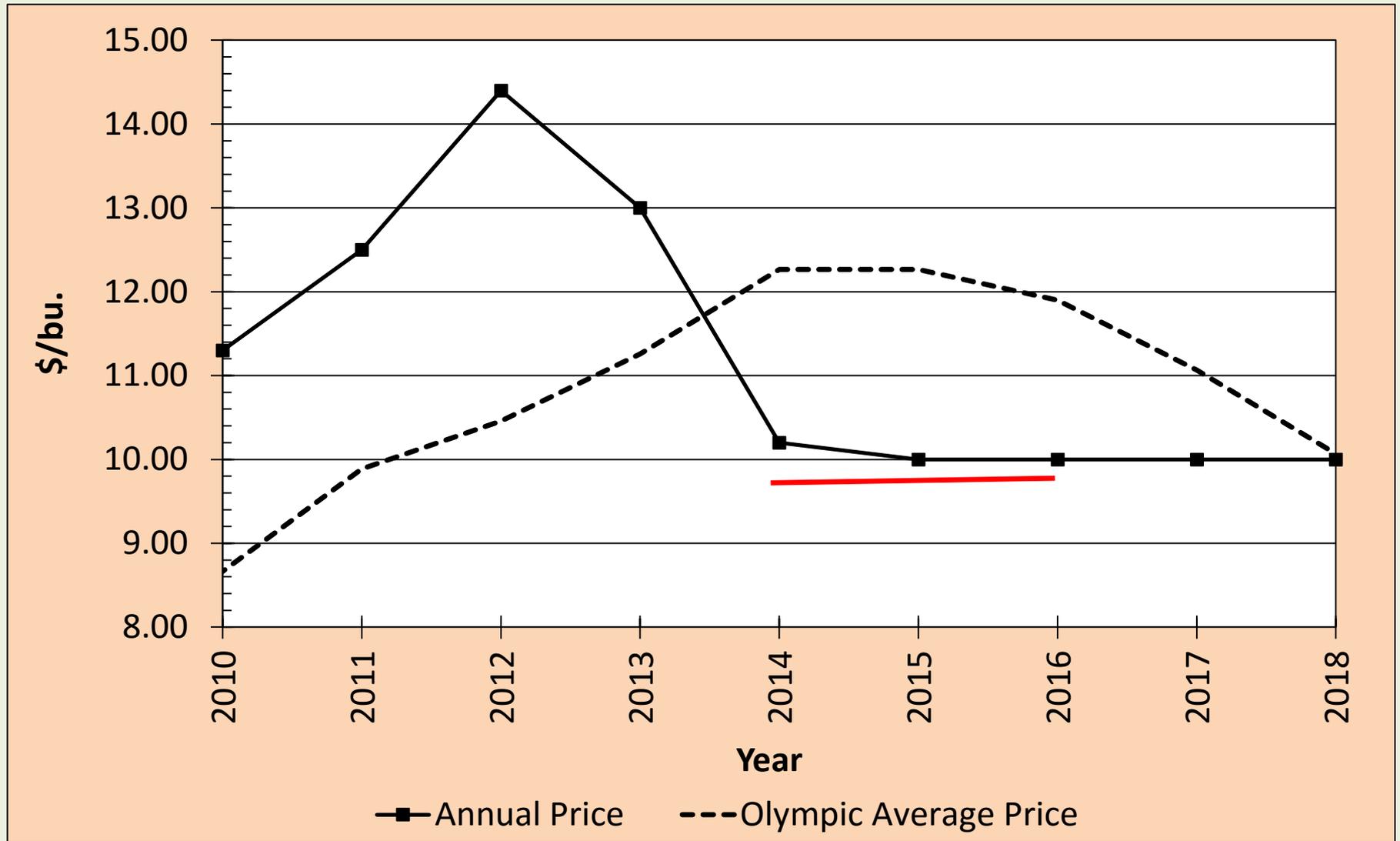
ARC Price Characteristics, Soybeans
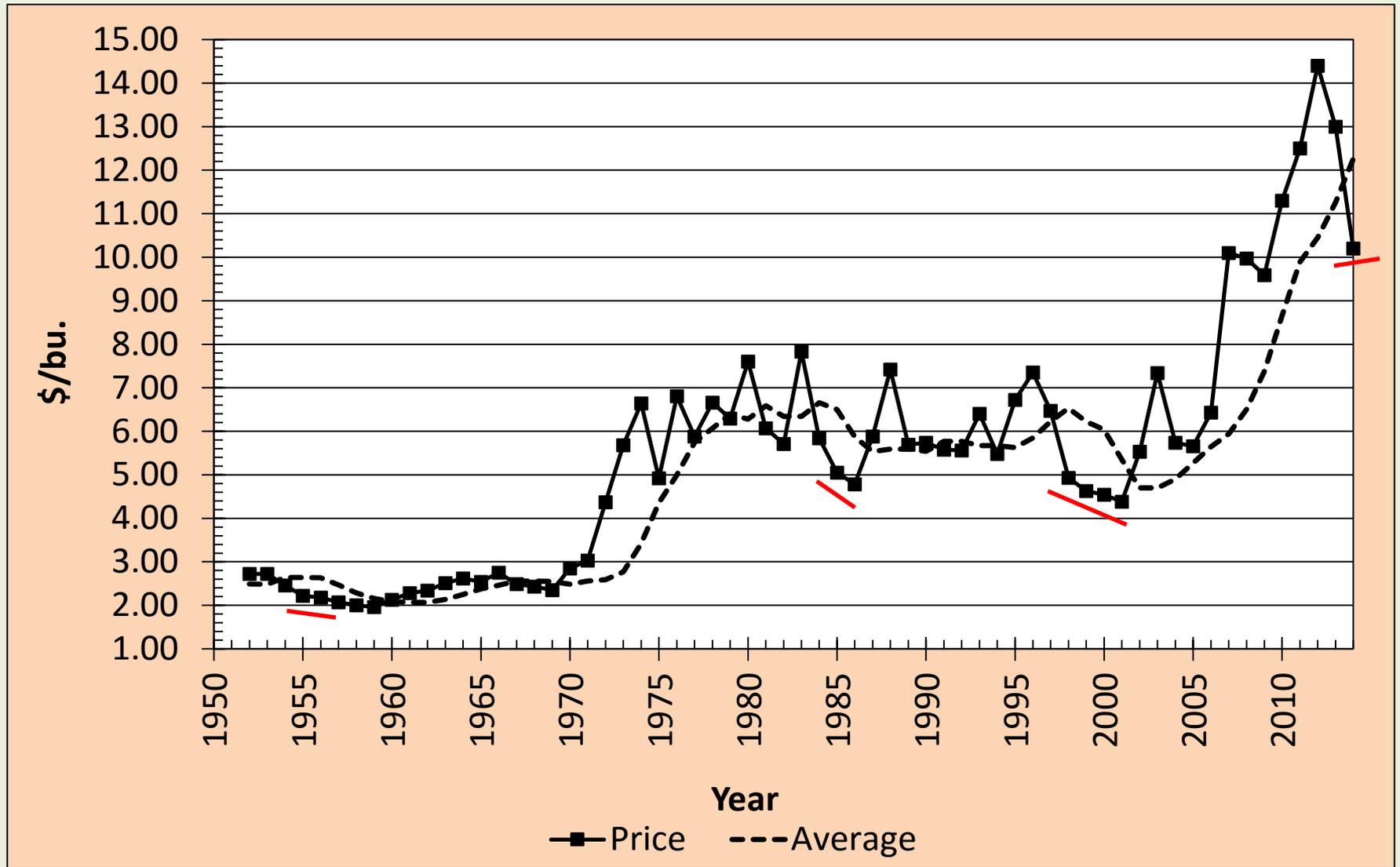
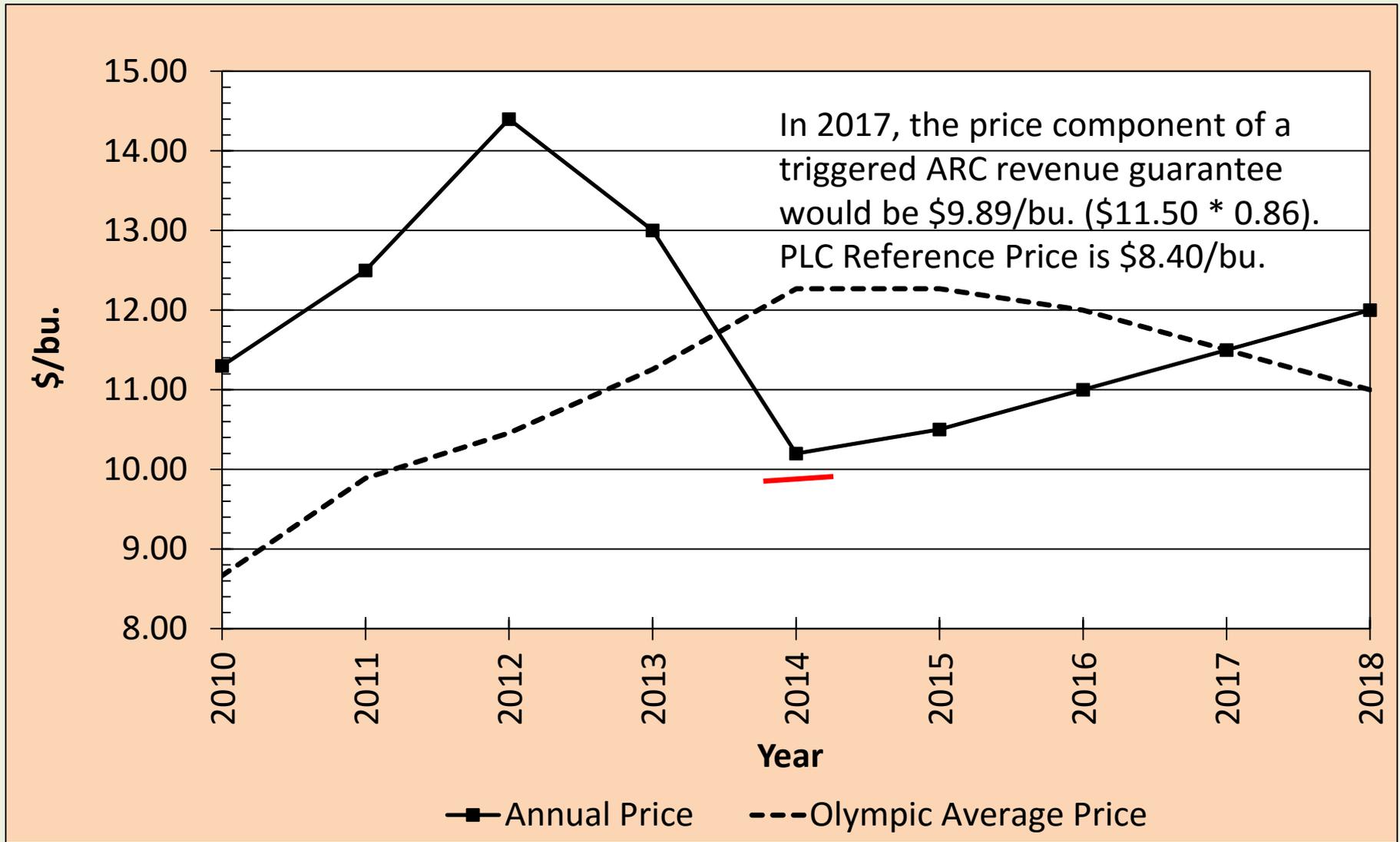| Crop	Probability of Price < 86% of Olympic Average	Average % of Olympic Average, if Triggered	Triggered in 2014?, % of Olympic Average
Soybean	10/63=16%	80%	Yes, 83%
Corn	12/63=19%	77%	Yes, 69%
Sorghum	11/63=17%	76%	Yes, 75%
Wheat	11/63=17%	76%	No, 92%
LG Rice	7/31=23%	61%	No, 90%
MG Rice	6/31=19%	68%	No, 102%

Soybean: ARC with Declining Prices

Soybean: ARC with Steady Prices

Soybean: ARC with Increasing Prices

In 2017, the price component of a triggered ARC revenue guarantee would be $9.89/bu. ($11.50 * 0.86). PLC Reference Price is $8.40/bu.

PLC: Characteristics of National Prices for Covered Commodities

- Historical price deviations and trends support comparing PLC reference prices to annual prices for 2007 – 2014.

- Historical durations of periodic price deviations and trends imply similar relationships for the duration of the 2014 Farm Bill.

- The methodology is applicable for evaluating price risk reduction.

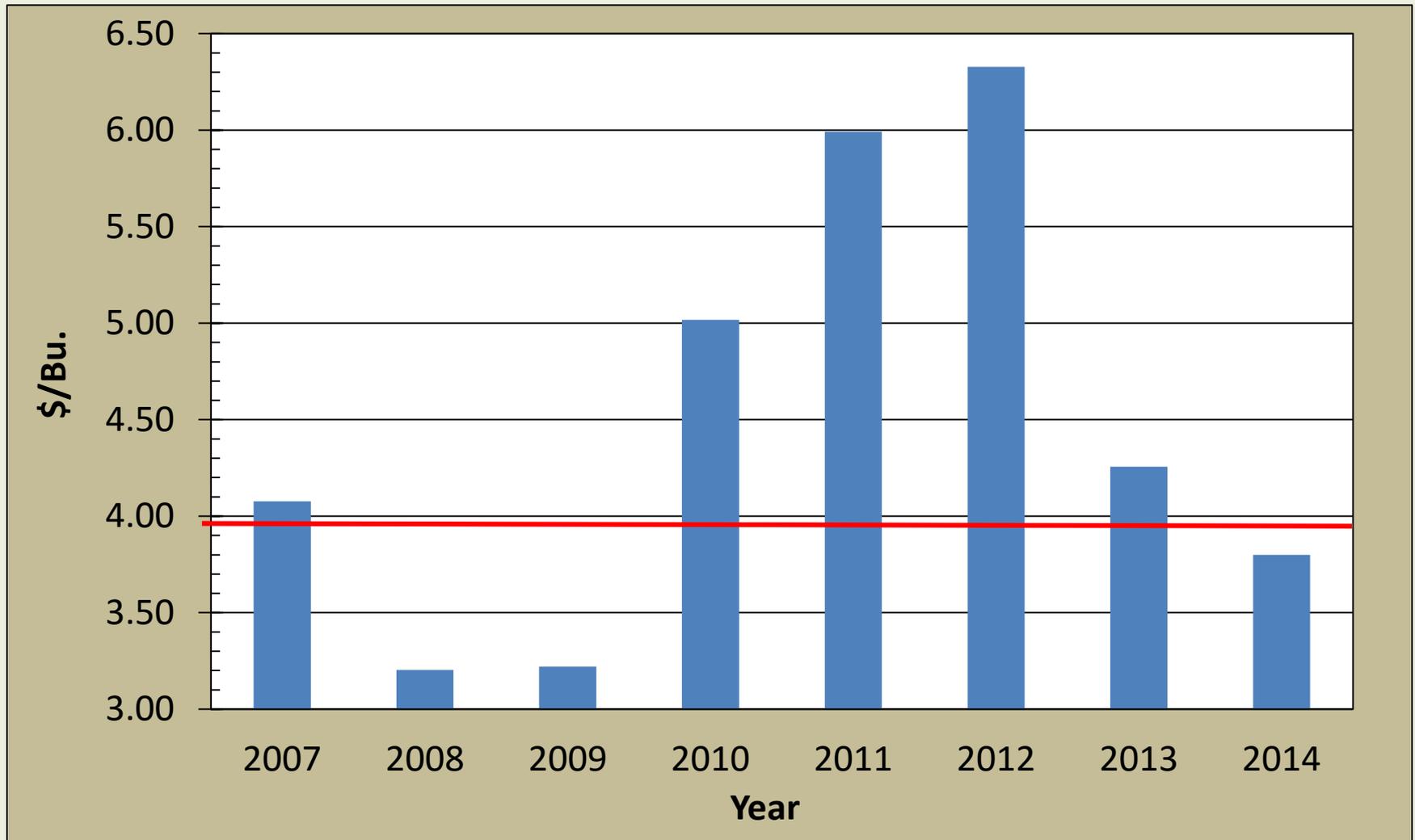- The methodology is not applicable for predicting prices.
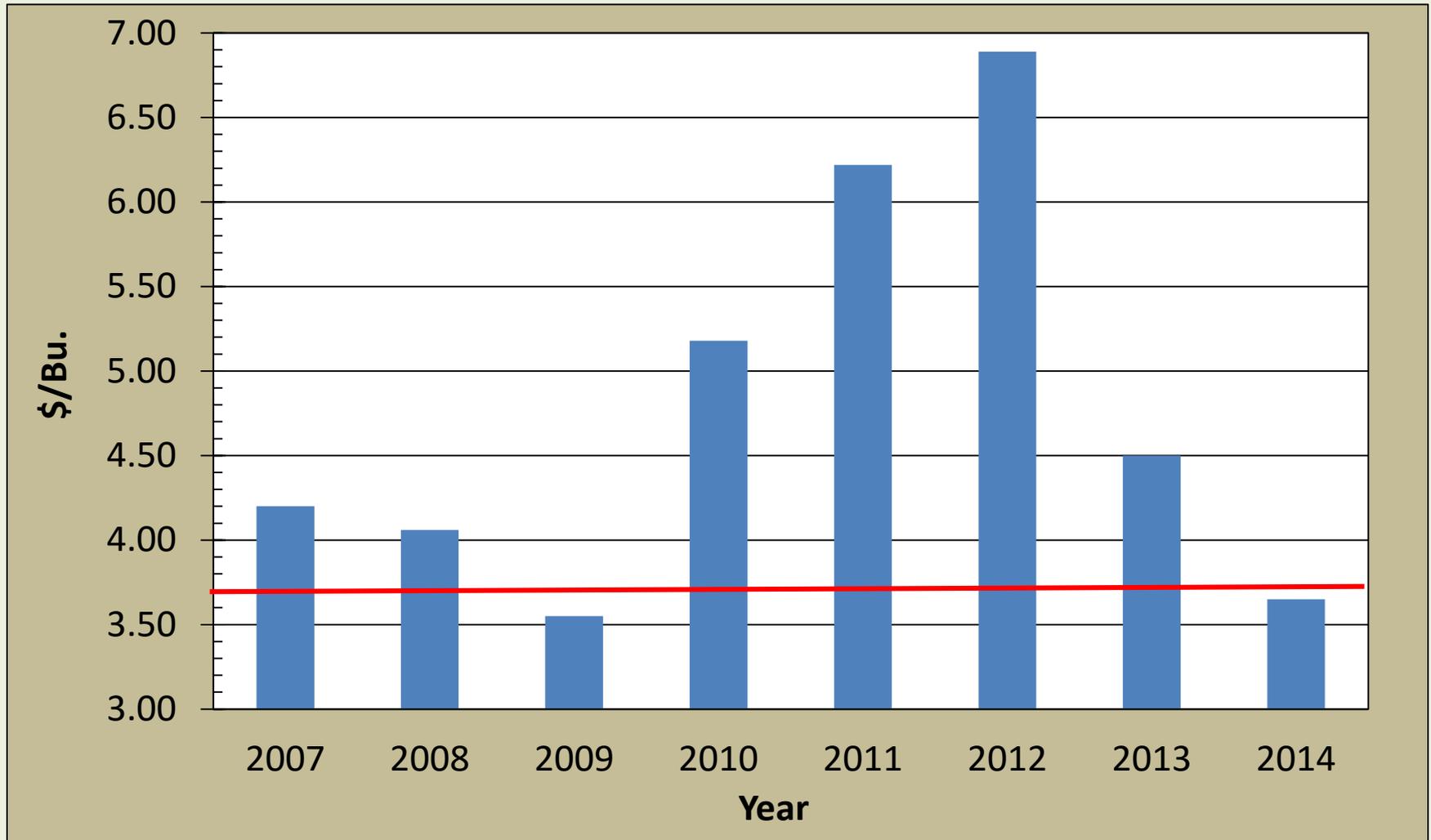
Peanut, < $535 Reference Price, 6 Years (75%)
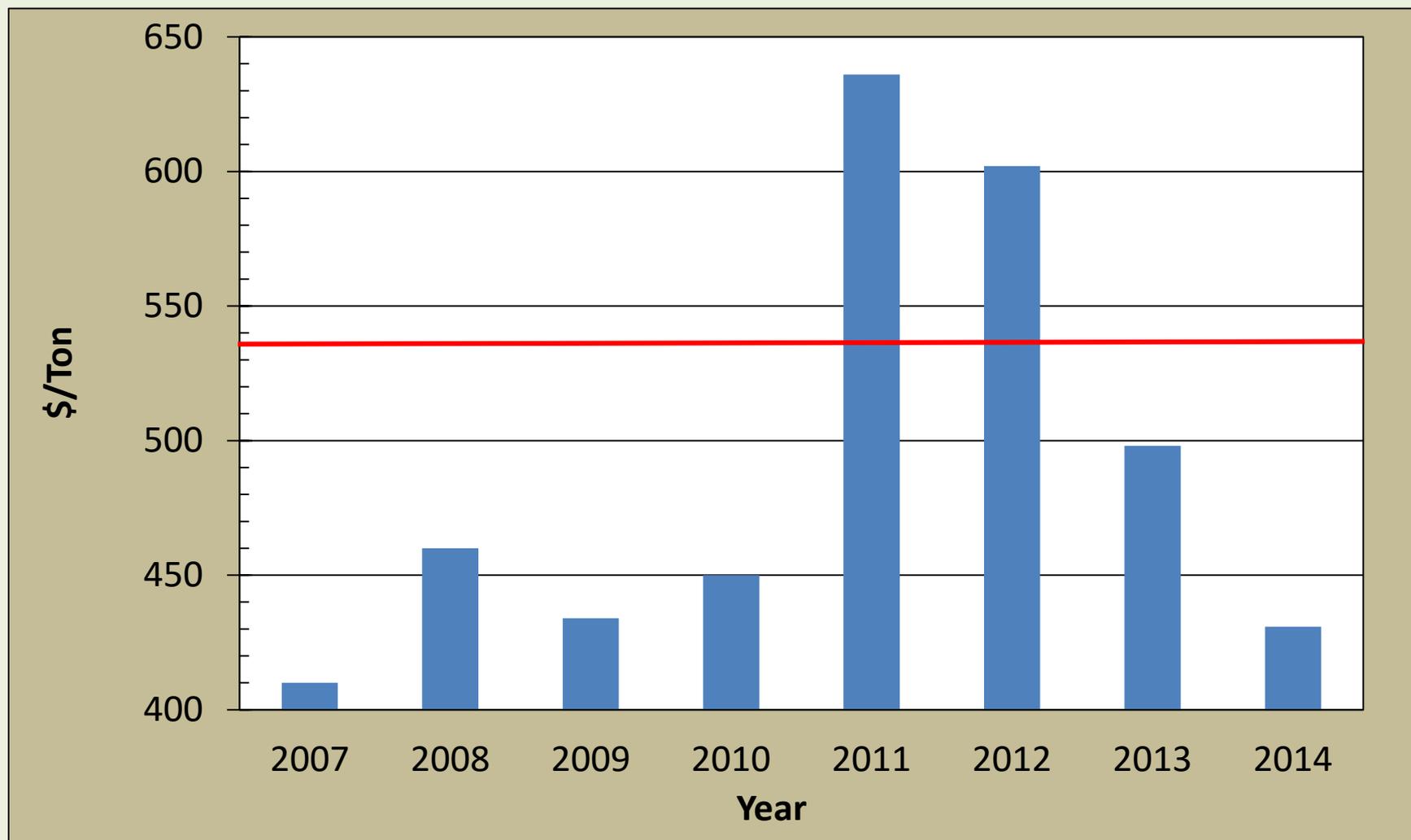
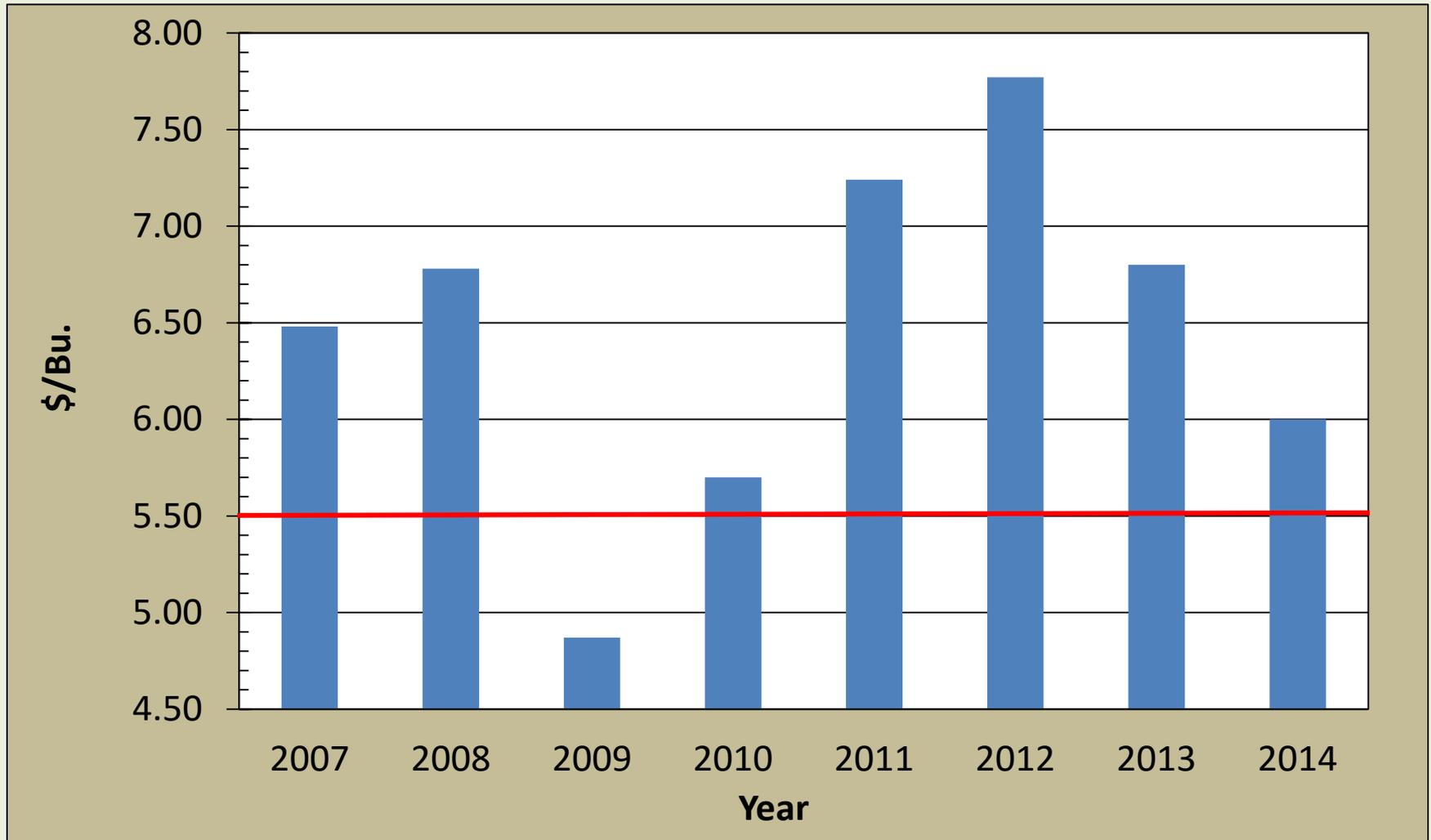# LG Rice, < $6.30 Reference Price, 5 Years (63%)
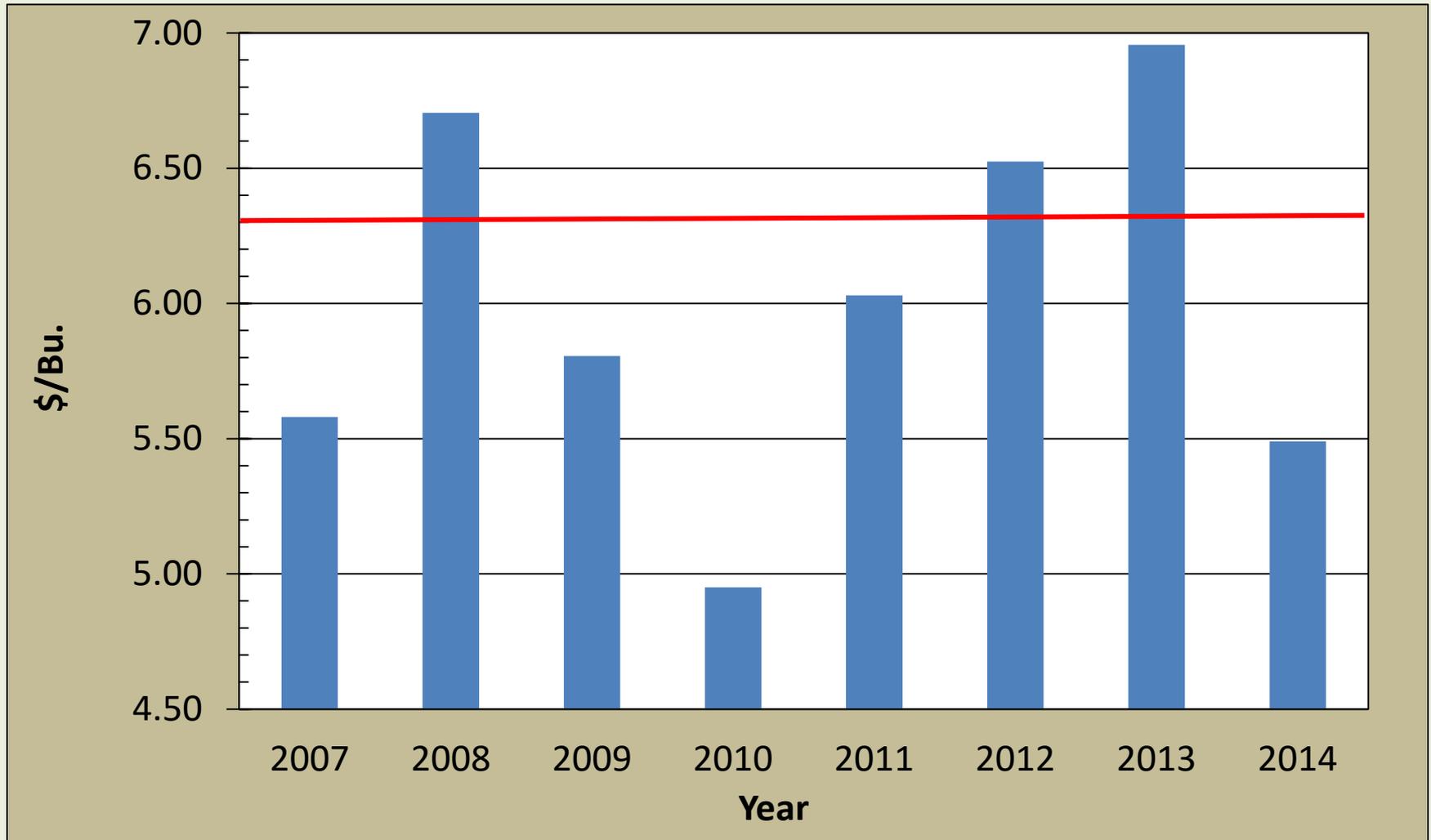
Sorghum, < $3.95 Reference Price, 3 Years (38%)

Corn, < $3.70 Reference Price, 2 Years (25%)

Wheat, < $5.50 Reference Price, 1 Year (13%)

Soybean, < $8.40 Reference Price, 0 Years (0%)

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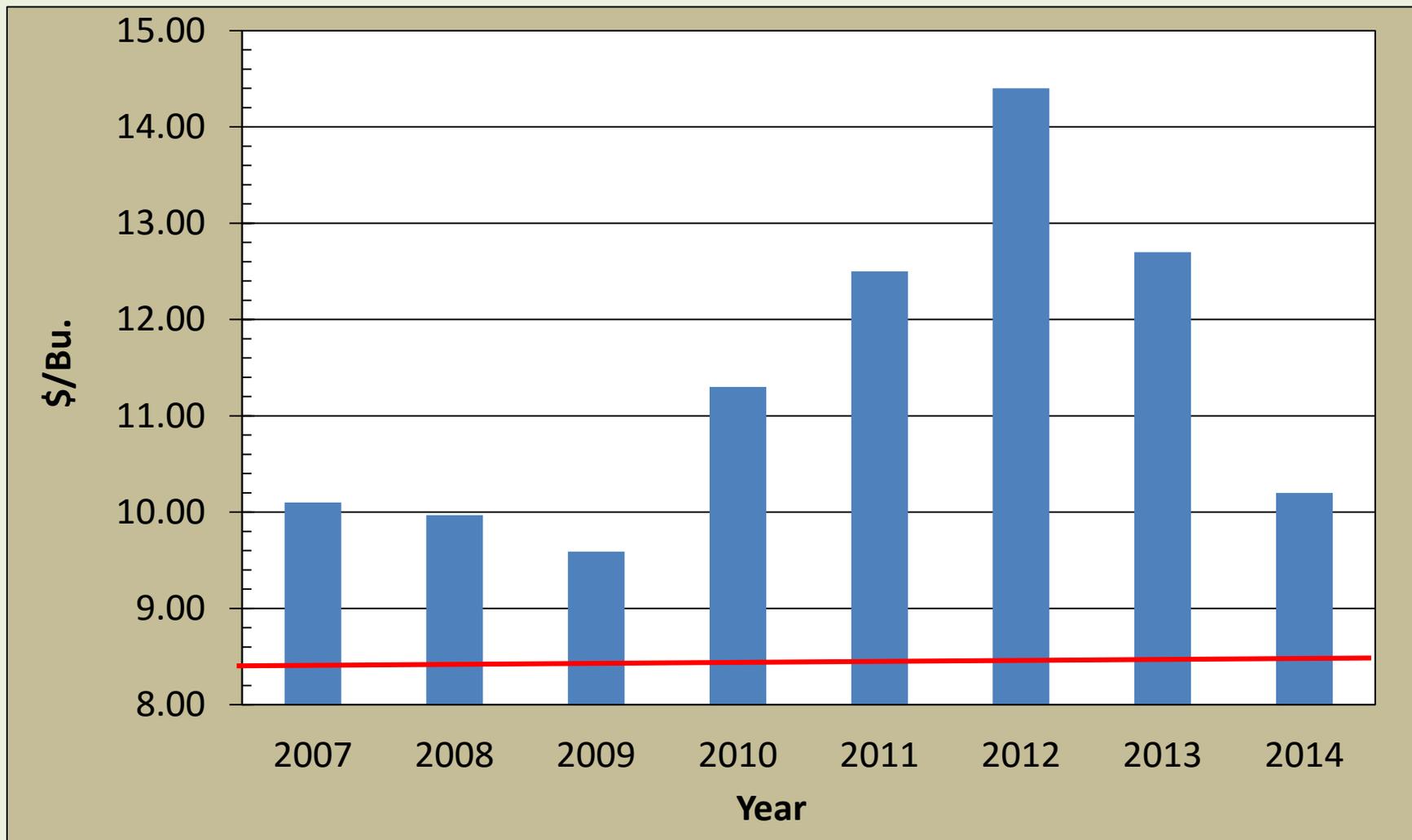
# Delta MG Rice, < $6.30 Reference Price, 0 Years
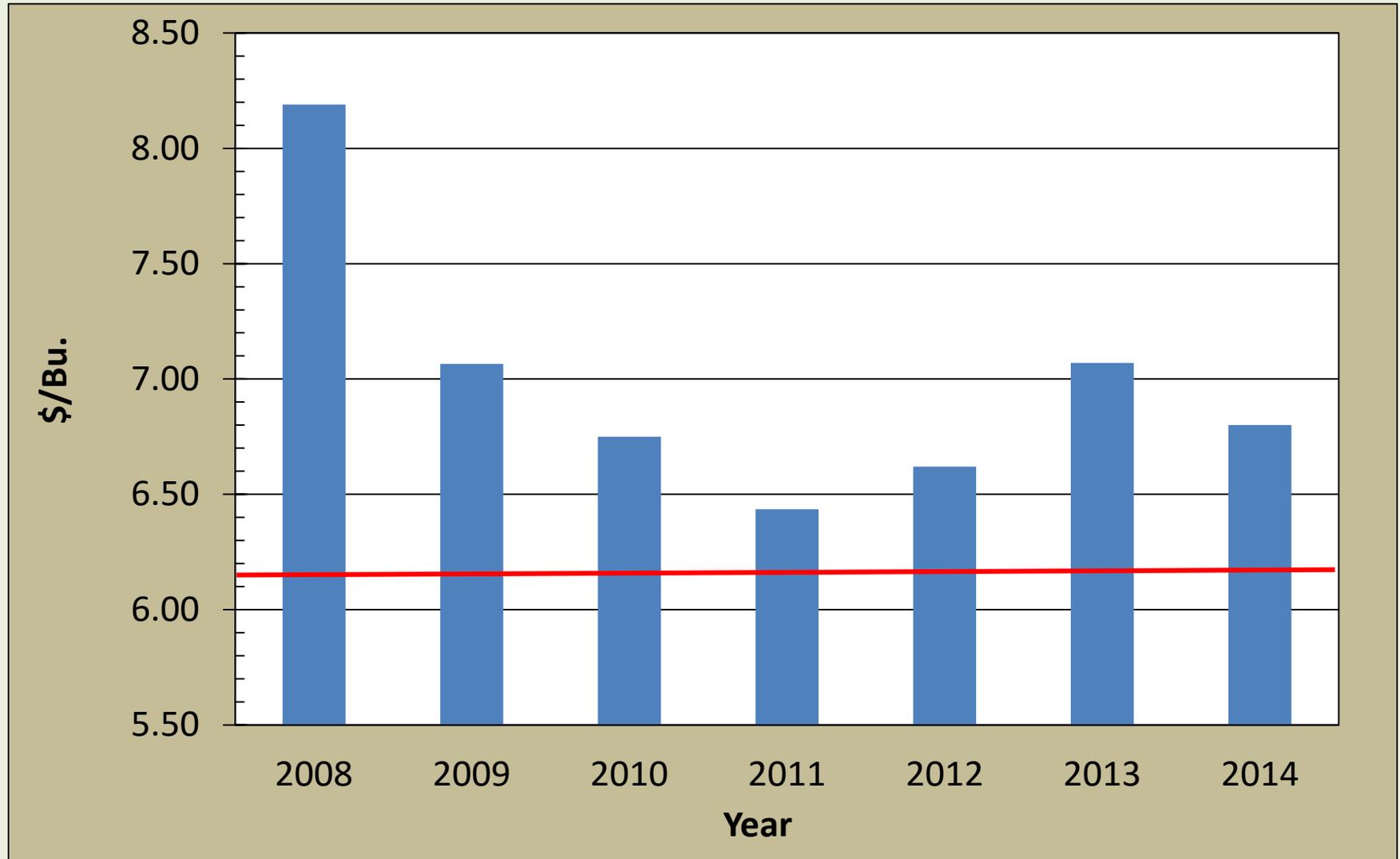
Price Expectations

Crop	Equilibrium Outlook	Reference Price	Reference/ Equilibrium
Peanut	**475**	**535**	**113%**
LG Rice	**5.80**	**6.30**	**109%**
Sorghum	4.30	3.95	92%
Corn	4.60	3.70	80%
Wheat	6.20	5.50	89%
Soybean	**10.80**	**8.40**	**78%**
MG Rice	**7.00**	**6.30**	**90%**

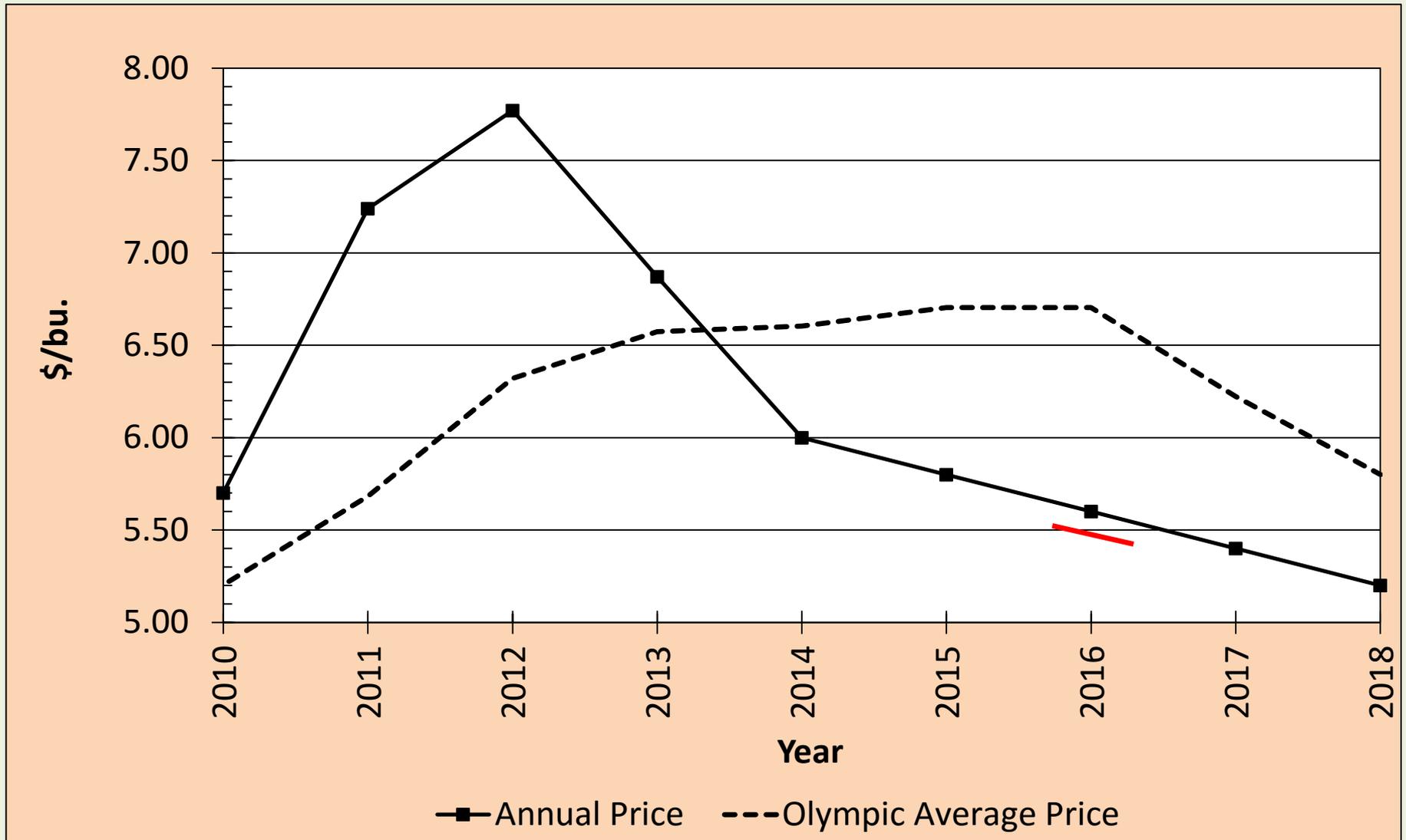| Crop	Reference Price	2014 Price Forecast	ARC Triggered in 2014?, % of Olympic Average
Soybean	8.40	10.20	Yes, 83%
Corn	3.70	3.65	Yes, 69%
Sorghum	3.95	3.80	Yes, 75%
Wheat	5.50	6.00	No, 91%
LG Rice	6.30	5.49	No, 90%
MG Rice	6.30	6.80	No, 102%

Corn: ARC with Declining Prices
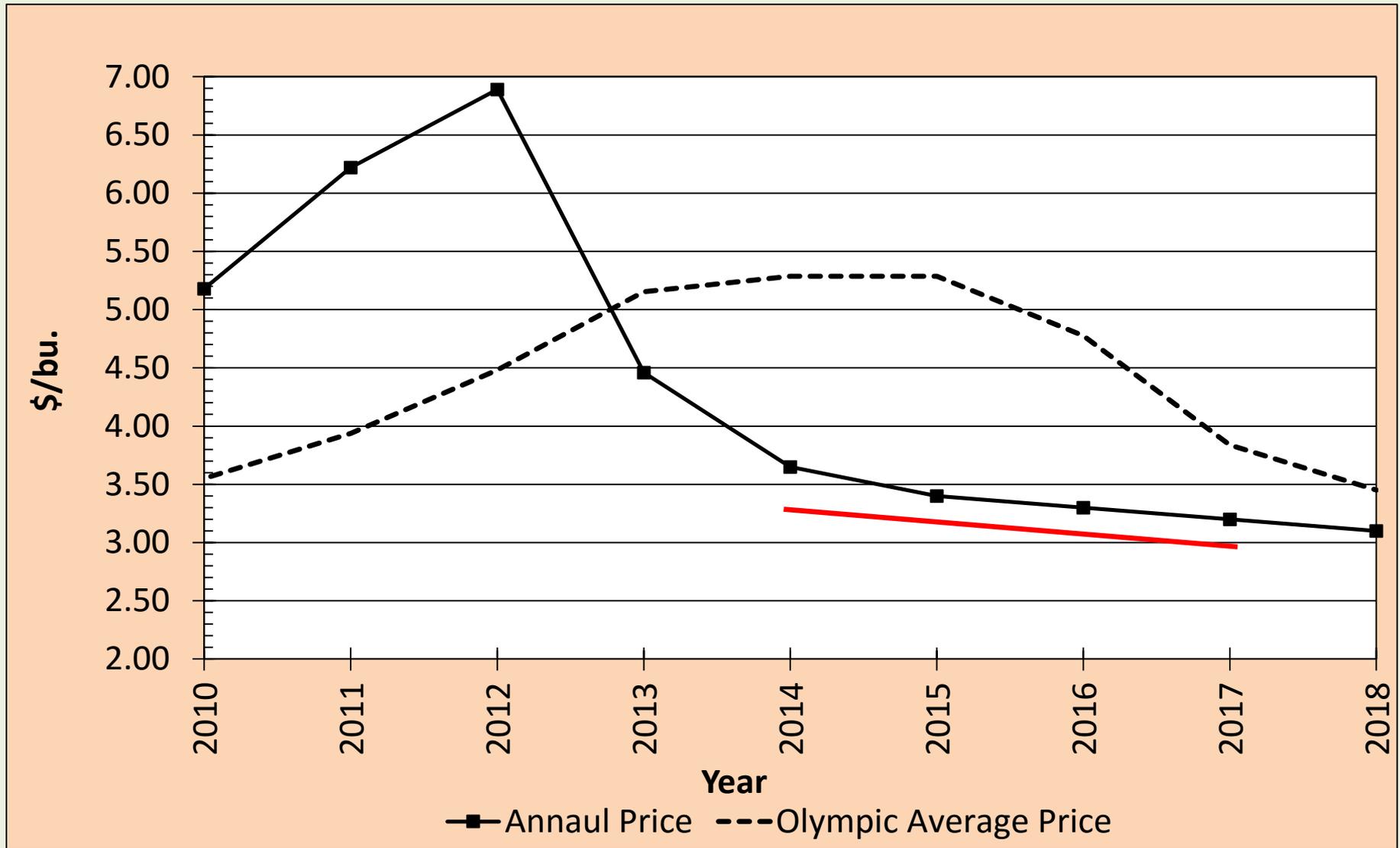
Sorghum: ARC with Declining Prices
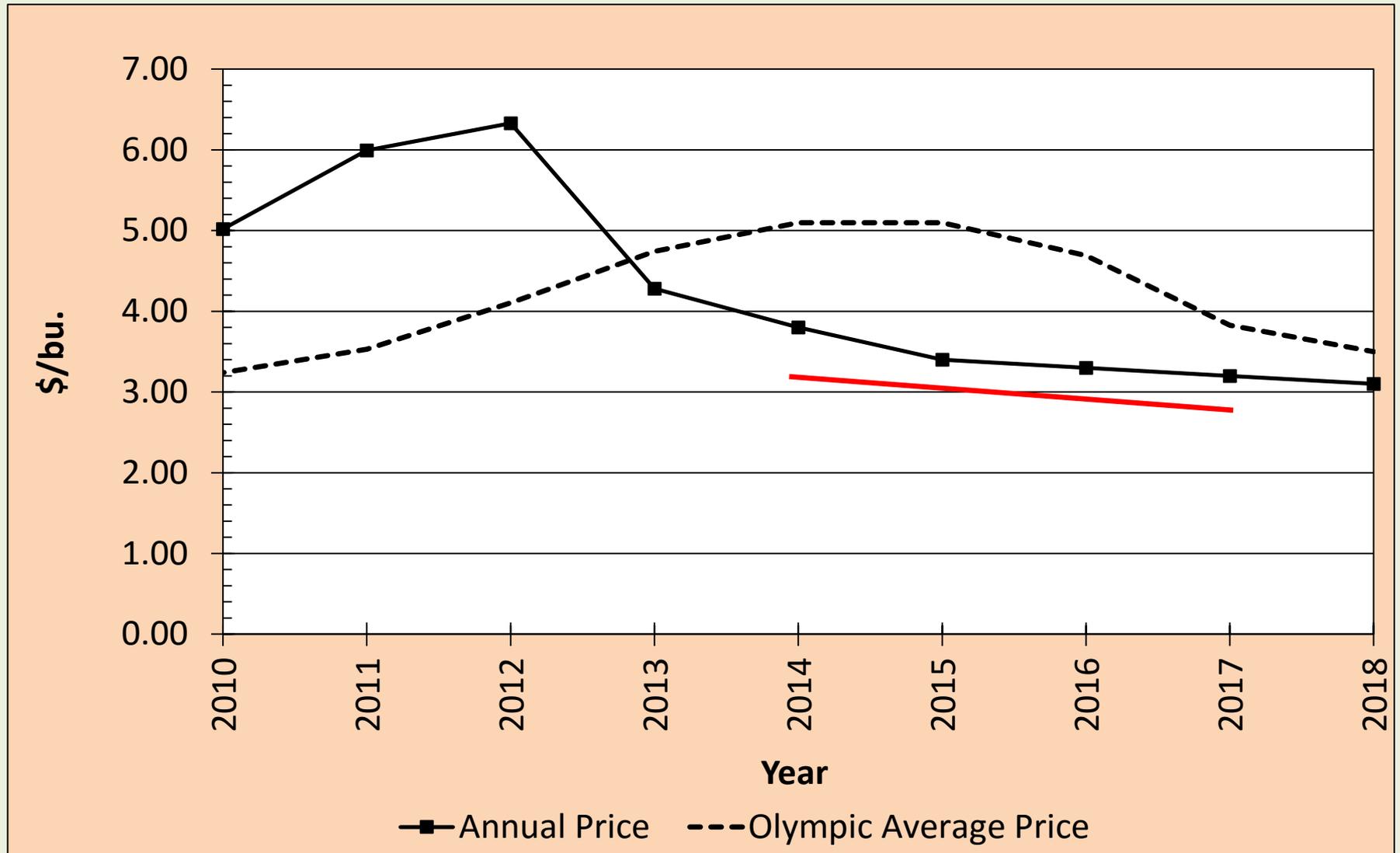
Wheat: ARC with Declining Prices

How do I evaluate risk reduction?

- In general, ARC is a good risk management program for a range of annual price levels.

- PLC will likely give greater payments than ARC

    1) for specific crops (LG Rice and Peanuts)
    and

    2) under specific price conditions (**persistently** low prices at levels below reference prices).

Conclusion

- Questions?

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- Comments?