

UofA

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The Farm Bill Decision Making Process

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I. 2014 Farm Bill

Quick Summary

- Retains marketing loan rates
- Retains target prices for covered commodities by another name
 - 1) Price Loss Coverage: PLC, reference price (fixed)
 - 2) Agricultural Risk Coverage: ARC, revenue guarantee (floats with national price & yield, county or farm yield)
- Increased availability of subsidized crop insurance replaces direct payments (Supplemental Coverage Option – SCO)
- Cotton is not a covered commodity - has a separate area crop insurance program (STAX) available in 2015

Decision Summary

- Decision to reallocate base acres
 - 1) one-time reallocation based on 2009-2012 planting mix, cannot add base acres to a farm or
 - 2) retain existing base acres
- Evaluate updated yields for potential PLC – want to have the highest possible payment yield for a potential payment – 90% of 2008-2012 simple average
- Reallocating base acreage and updating payment yield are two separate decisions.
- Choice between PLC and ARC – to be determined by evaluating the programs in relation to your expectations of future trends in commodity prices

II. Program Selection

Producers make a one time program choice between:

PLC and ARC (County) on a crop by crop basis.

1. Price Loss Coverage (PLC) - covers losses in actual revenue due to commodity price declines below established reference prices.
2. Agricultural Risk Coverage (ARC) - covers losses in actual revenue for a covered commodity relative to a revenue guarantee.
 - If ARC (Farm) is selected instead of the ARC (County) , ARC (Farm) applies to all crops on the farm. A farm is not allowed to combine PLC and ARC (Farm).

Enrollment selection made for the 2014 crop year is irrevocable for the duration of the farm bill.

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

Key Terms for PLC

- **Payment rate** is the difference between the reference price and effective price.
- **Payment yield** is the USDA record for the farm and is either the updated payment yield or the 2008 counter-cyclical-payment yield.
- **Payment acres** are 85% of the sum of base acres for the crop and generic base acres attributable to the crop for the current year.
- **Payment amount** is the product of
payment rate x payment yield x payment acres

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 $\$6.30 - \$6.14 = \$0.16/\text{bu}$.
- 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
 $\$0.16 \times 139.6 \times (100 \times 0.85) = \$1,868.36$

Agricultural Risk Coverage (ARC)

- ARC is based on revenue, rather than only commodity prices. Thus, ARC involves yields and prices.
- Two options are available with ARC:
1) county and 2) farm, alternatively referred to as individual.
- Selection of an option determines the yields (either county or farm) that are applied to determine the **benchmark revenue** and the **actual crop revenue**.
 - Applies the higher of the national average 12-month marketing year price or the national average marketing loan rate.
- Selection of ARC (Farm) puts the entire farm in ARC (Farm), and no crop on the farm can be enrolled in PLC.
- ❖ ARC (County) allows separate irrigated and non-irrigated ARC benchmark revenues.

Key Terms for ARC

- **Benchmark revenue** is the product of historical yields and historical national prices. Historical measures are the **Olympic averages** for the most recent 5 production years - are moving averages.
- **ARC guarantee** is 86% of the **benchmark revenue**.
- ARC payments occur when **actual crop revenue** is less than the **ARC guarantee**.
- **Payment rate** is determined after calculating the difference between the **ARC guarantee** and **actual crop revenue**. It may not exceed 10% of the benchmark revenue.
- **Payment amounts** are paid on **payment acres** (a percentage of base acres).

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 $46.33 \times \$11.77 = \$545.19/\text{acre}$

- **Revenue guarantee** is $\$468.86/\text{acre}$ ($\$545.19 \times 0.86$)

- As an example situation, **actual crop revenue** for 2014 is $\$450.00/\text{acre}$ (45 bu./acre county yield, \$10.00/bu. national price)

- Actual crop revenue is less than the revenue guarantee.

- **Payment rate** is $\$468.86 - \$450.00 = \$18.86$. (May not exceed $\$545.19 \times 0.10 = \54.52)

- **Payment amount** per base acre is $\$16.03 = 85\%$ of the payment rate

ARC (County) Notes

- In calculating Olympic average county yields, substitute 70% of the transitional yield (as determined by the Secretary) for any year in which county yield is below this level.
- In calculating Olympic average national price, substitute the PLC reference price for any year in which the national average market price is below the reference price.
- ❖ Benchmark revenue is a moving calculation for the most recent 5 years. Example: 2016 will be Olympic averages for 2011-2015.

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 determined by historical county yields and national prices for each crop and 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

- **ARC (Farm)**

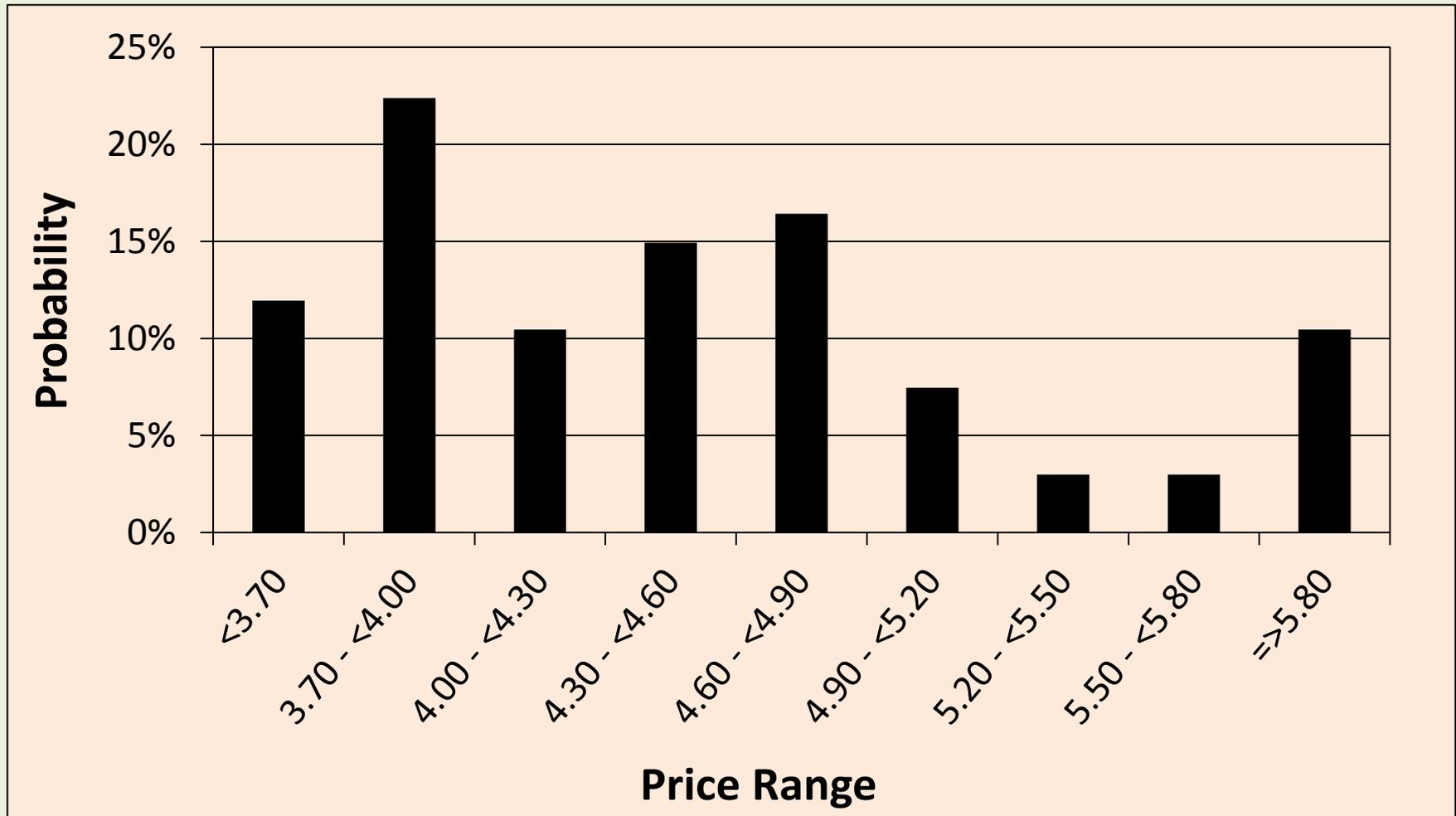
- Benchmark revenue is farm revenue determined by historical farm yields and national prices and is a moving measure for the 5 most recent years
- Is a whole farm revenue program for all crops enrolled
- Payments are on 65% of total base acres for a farm

III. Commodity Price Expectations

Potential program selection will be influenced by producer expectations of future commodity prices. To evaluate enrollment options, producers should determine:

- Do you expect the current era of relatively high commodity prices to continue?
- Do you expect moderate declines in commodity prices that stabilize below current levels?
- Do you expect a collapse in commodity prices and a return to relative prices similar to levels before 2006?

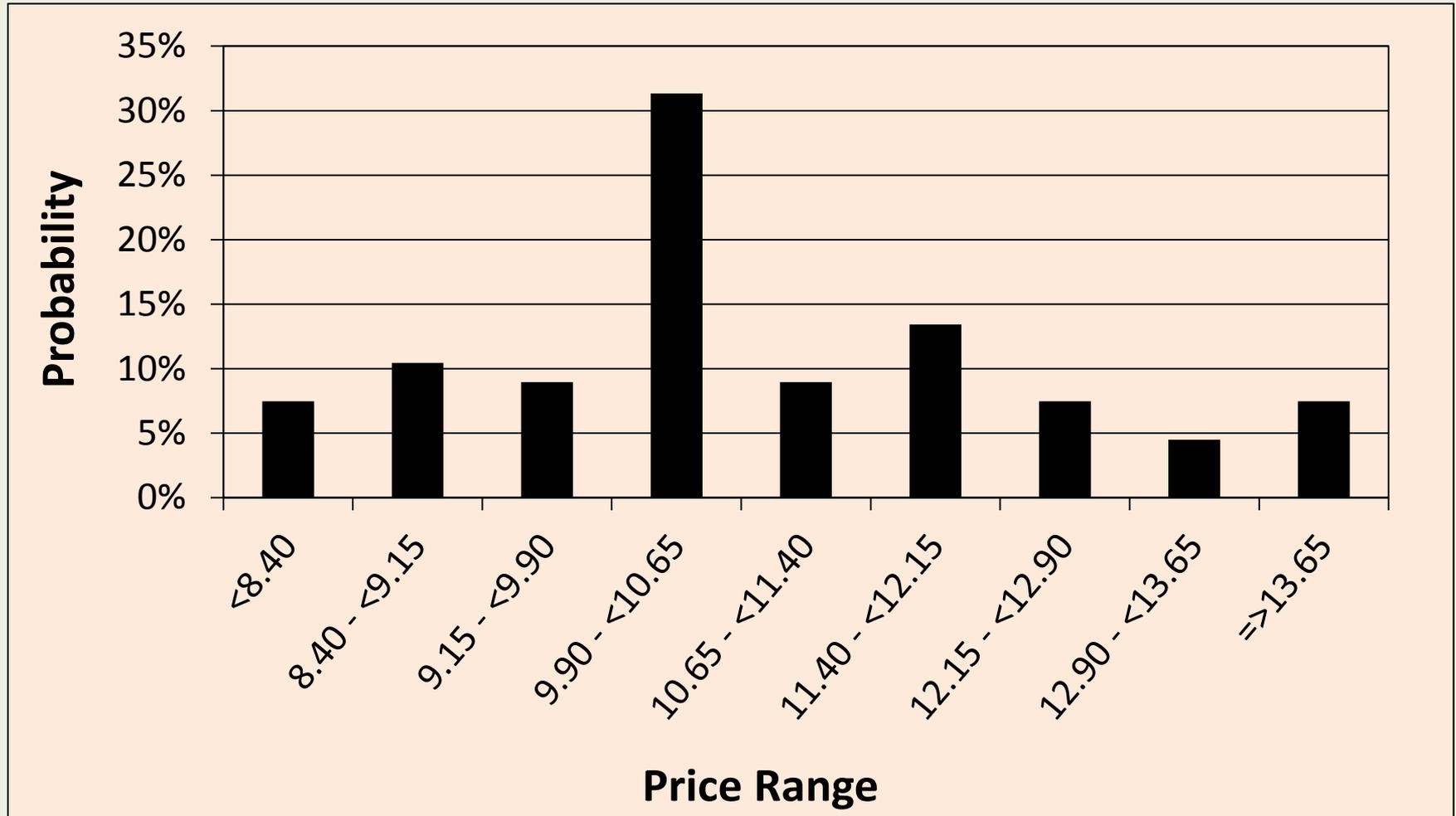
Corn, Histogram of Predicted MYA Prices, 2014-2018



Corn, U.S. MYA Price, 2014-2018, \$/bu., Cumulative Probability

	3.70 -	4.00 -	4.30 -	4.60 -	4.90 -	5.20 -	5.50 -	
<3.70	<4.00	<4.30	<4.60	<4.90	<5.20	<5.50	<5.80	=>5.80
12%	34%	45%	60%	76%	84%	87%	90%	100%

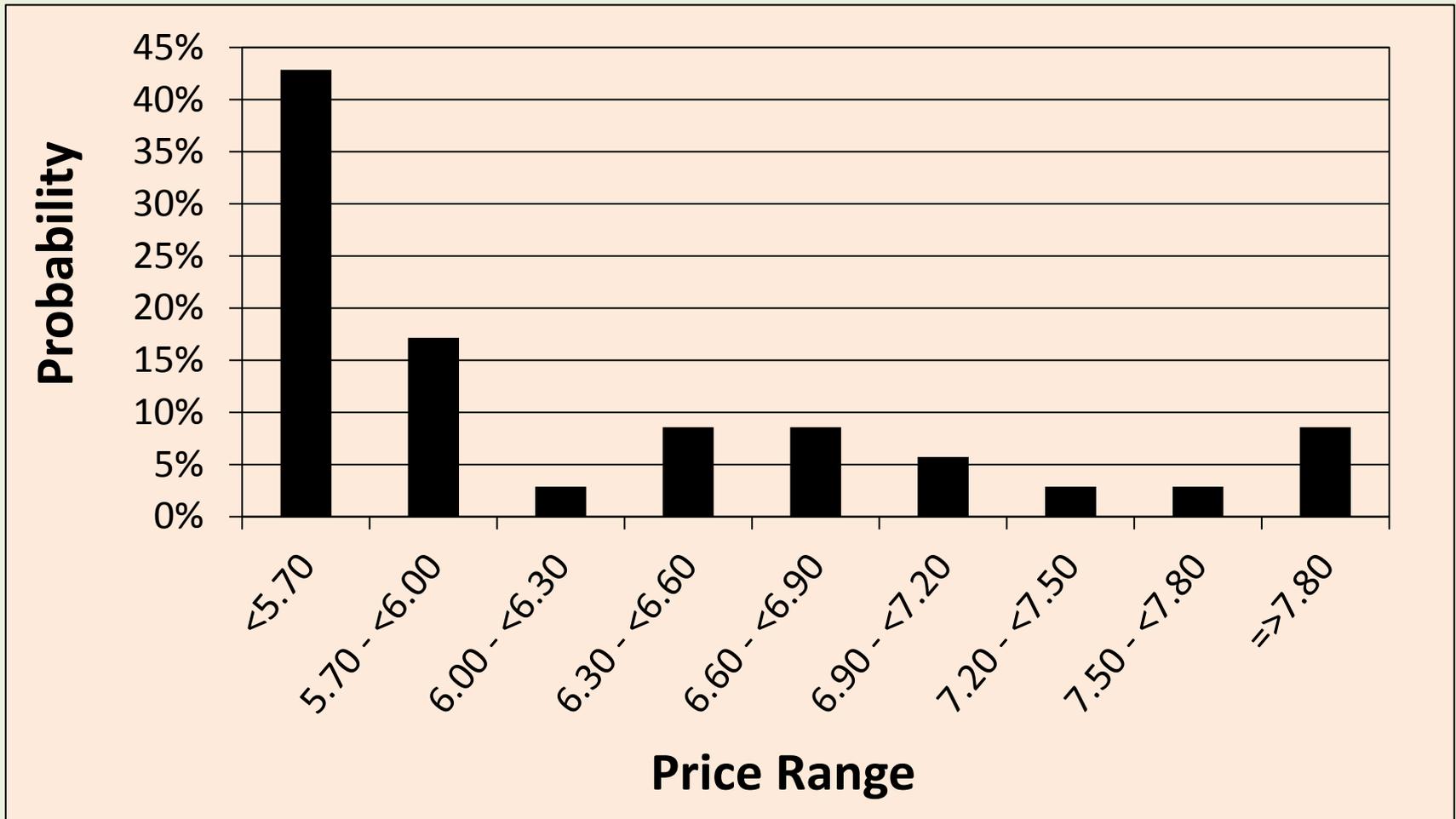
Soybeans, Histogram of Predicted MYA Prices, 2014-2018



Soybeans, U.S. MYA Price, 2014-2018, \$/bu., Cumulative Probability

	8.40 -	9.15 -	9.90 -	10.65 -	11.40 -	12.15 -	12.90 -	
<8.40	<9.15	<9.90	<10.65	<11.40	<12.15	<12.90	<13.65	=>13.65
7%	18%	27%	58%	67%	81%	88%	93%	100%

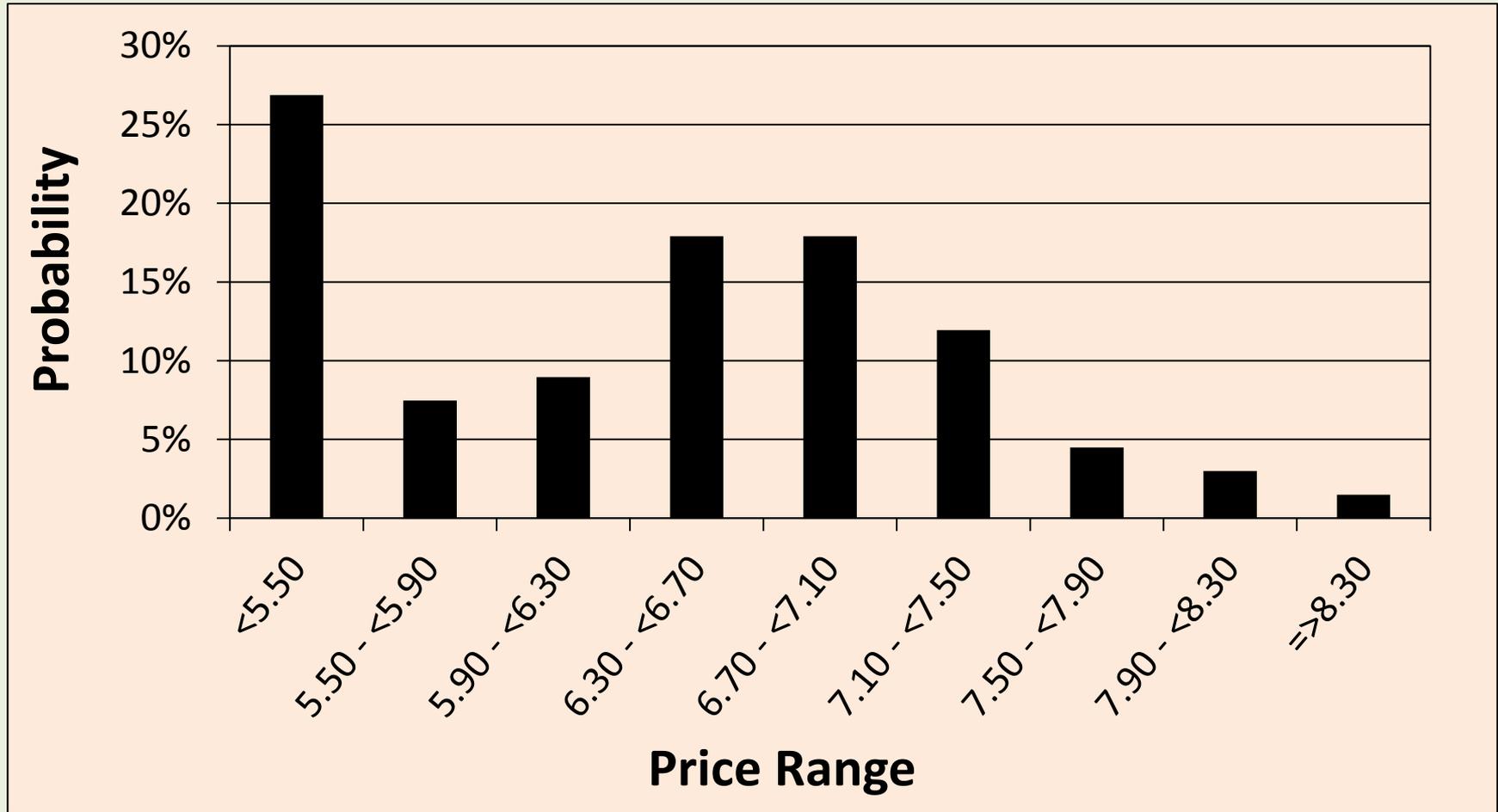
Long-Grain Rice, Histogram of Predicted MYA Prices, 2014-2018



Long-Grain Rice, U.S. MYA Price, 2014-2018, \$/bu., Cumulative Probability

	5.70 -	6.00 -	6.30 -	6.60 -	6.90 -	7.20 -	7.50 -	
<5.70	<6.00	<6.30	<6.60	<6.90	<7.20	<7.50	<7.80	=>7.80
43%	60%	63%	71%	80%	86%	89%	91%	100%

Wheat, Histogram of Predicted MYA Prices, 2014-2018



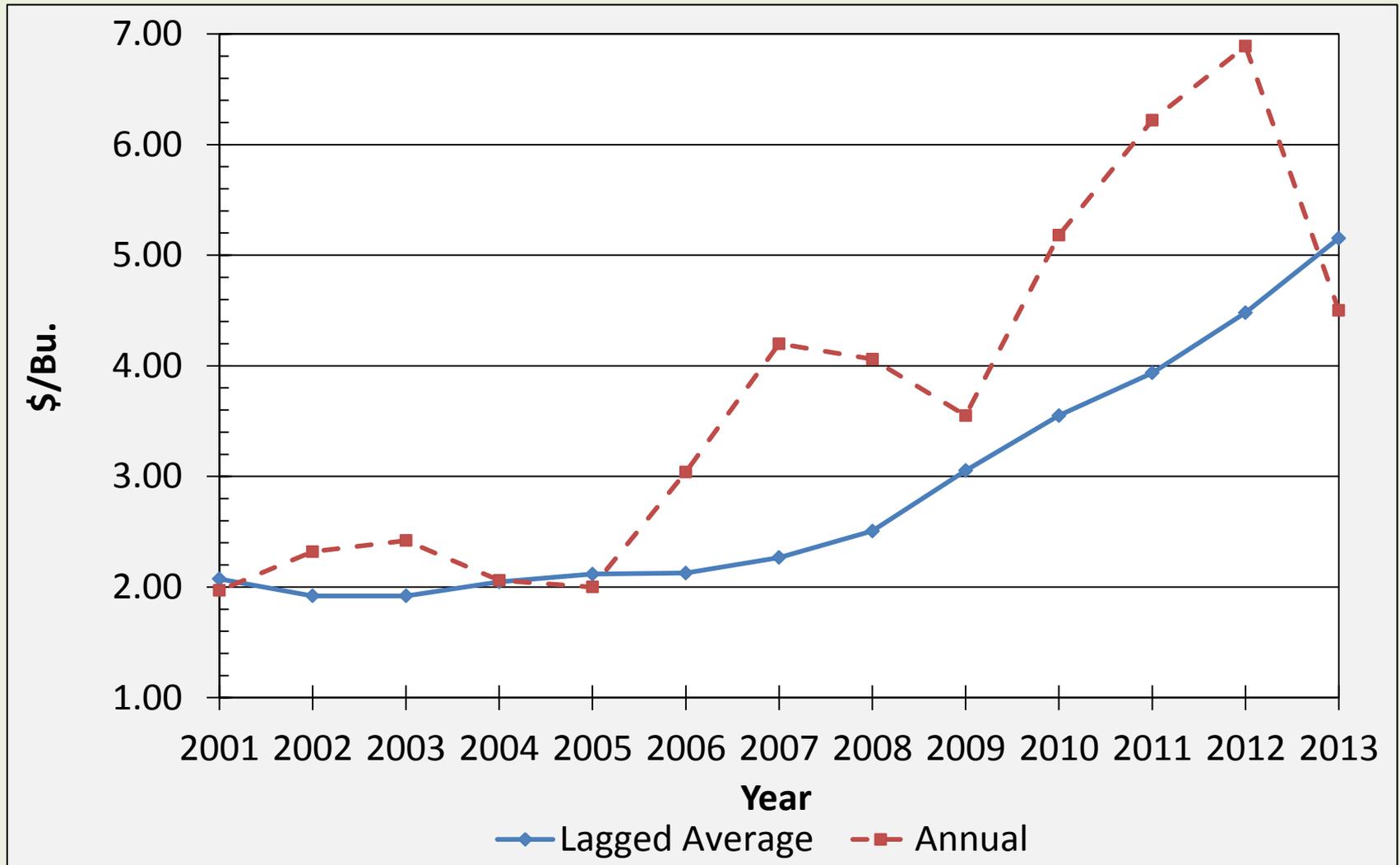
Wheat, U.S. MYA Price, 2014-2018, \$/bu., Cumulative Probability

	5.50 -	5.90 -	6.30 -	6.70 -	7.10 -	7.50 -	7.90 -	
<5.50	<5.90	<6.30	<6.70	<7.10	<7.50	<7.90	<8.30	=>8.30
27%	34%	43%	61%	79%	91%	96%	99%	100%

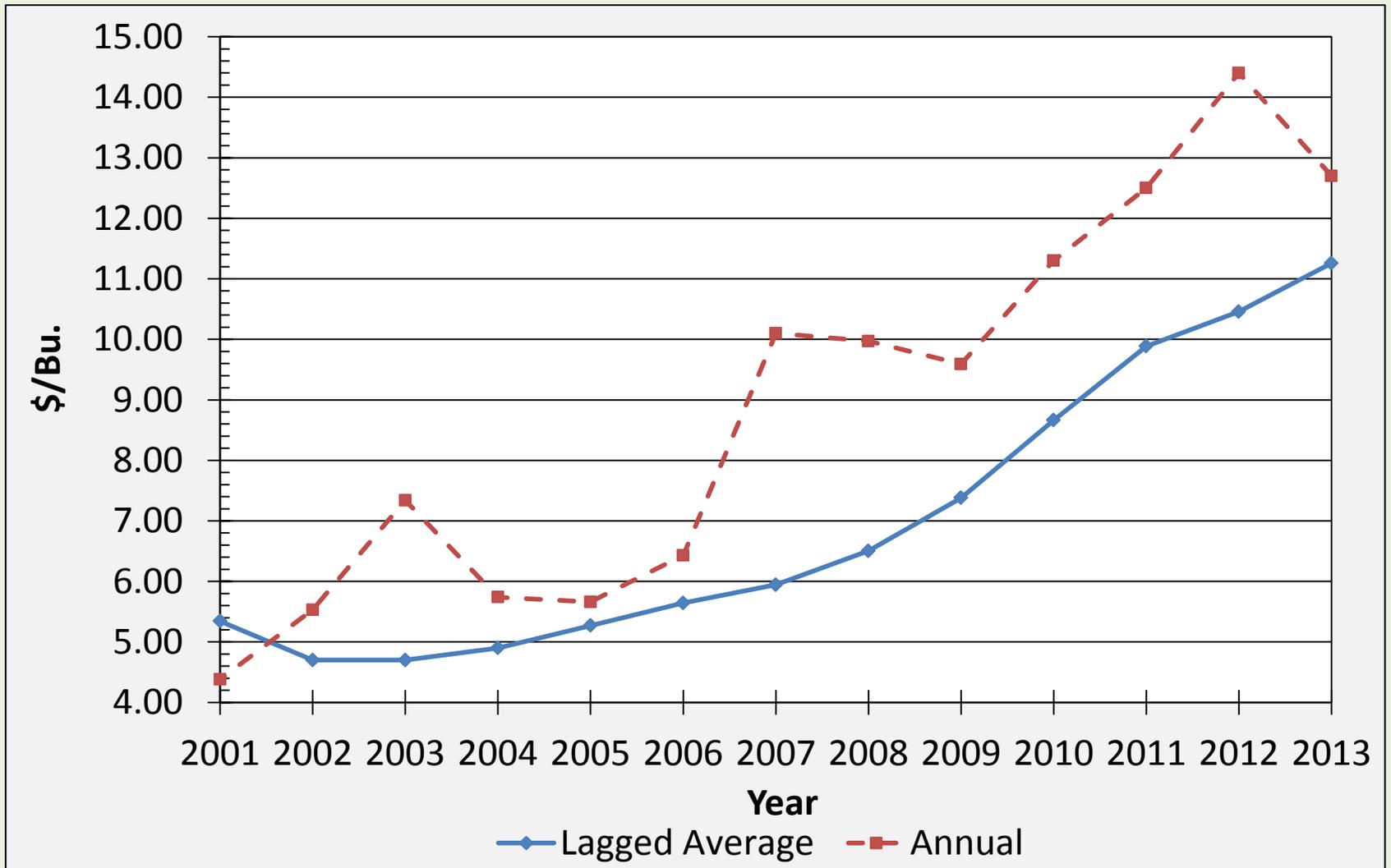
Crop Prices in Evaluating ARC (County)

- County revenue in ARC (County) is composed of Olympic average national prices and Olympic average county yields.
- As price trends increase, the price component of Benchmark Revenue increases. This provides revenue protection in the event of a single year price decrease when calculating Actual Crop Revenue.
- In contrast to the fixed PLC Reference Price, Benchmark Revenue is a moving measure.
- Based on historical data, what is the likelihood that a single year crop price is less than the moving Olympic average?

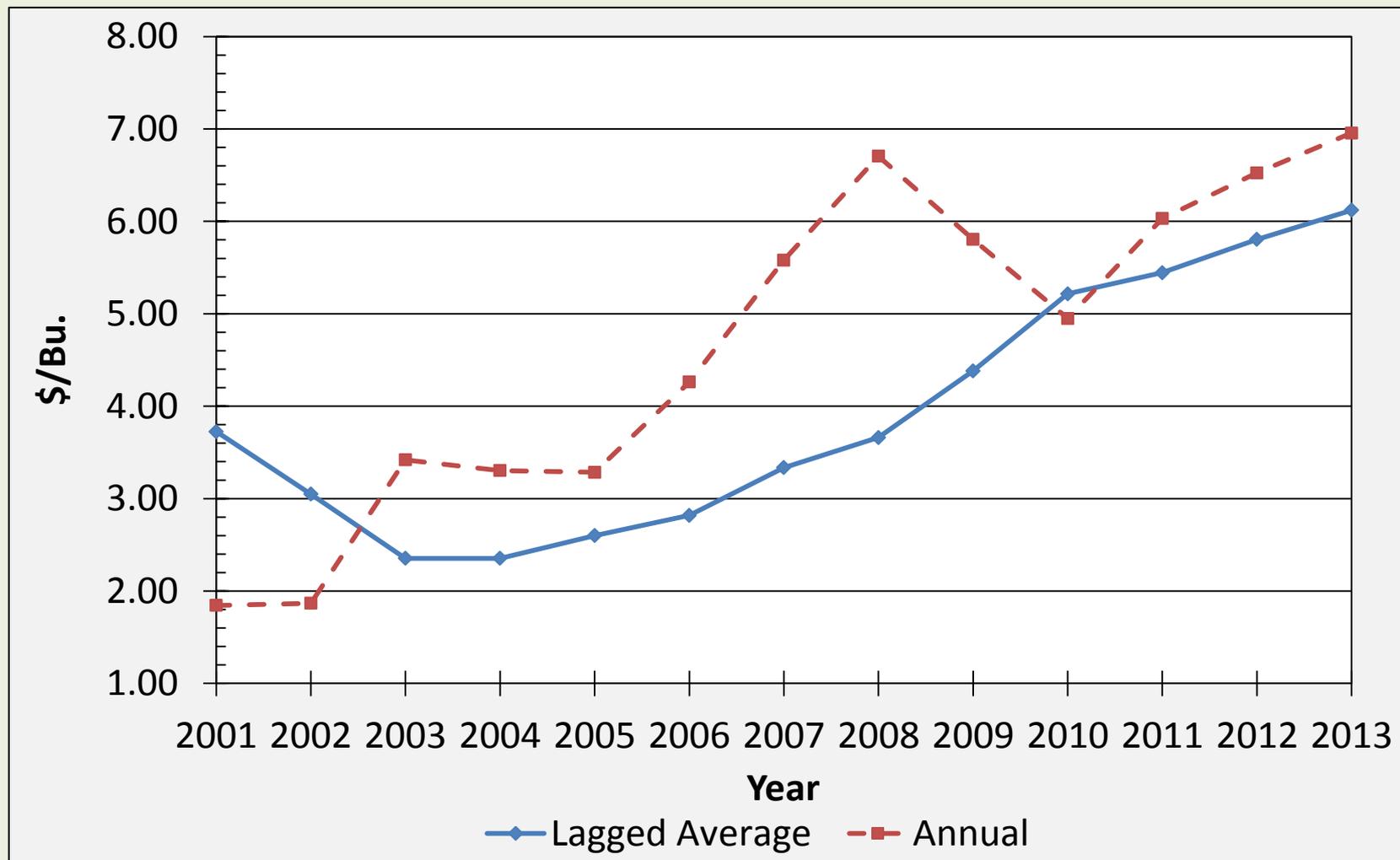
Corn Prices, Annual & Lagged Olympic Average



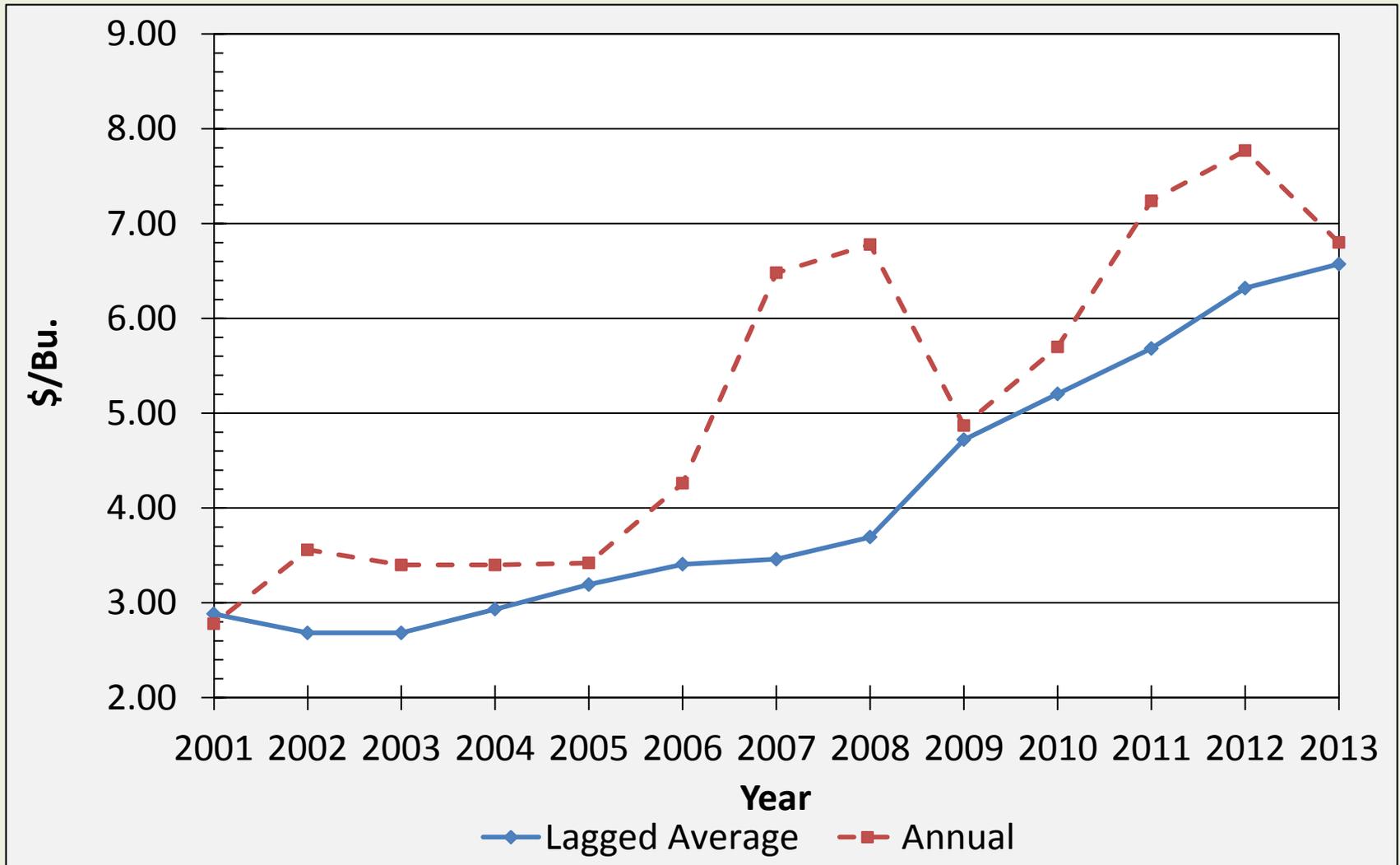
Soybean Prices, Annual & Lagged Olympic Average



LG Rice Prices, Annual & Lagged Olympic Average



Wheat Prices, Annual & Lagged Olympic Average



Crop Prices and ARC (County) Benchmark Revenue

- The ARC (County) Guarantee is 86% of the Benchmark Revenue.
- Actual Crop Revenue for the county must be less than the ARC (County) Guarantee to trigger a payment.
- ARC (County) Guarantee and Actual Crop Revenue are composed of county yield and national price.
- Annual national prices for all crops have historical trends significantly above the Olympic averages that correspond to calculating the Benchmark Revenue.
- Significant shortfalls in county yields when calculating Actual Crop Revenue would be required to trigger an ARC (County) payment.

Supplemental Coverage Option

- Beginning in 2015, the Supplemental Coverage Option (SCO) will be available for producers who have selected PLC.
- SCO will be a buy-up to cover a portion of the deductible for underlying crop insurance.
- SCO is available for cotton production, but not in combination with STAX.
- Producers must have underlying crop insurance to purchase SCO as an option. SCO has a 65% premium subsidy and guarantees up to 86% of revenue.
- Farms enrolling in ARC for 2014 are not eligible for SCO in 2015.

Crop Insurance in the PLC and ARC Decision

- Participation in the Supplemental Coverage Option (SCO) requires enrollment in PLC.
- Producers should evaluate crop insurance alternatives when making enrollment decisions for PLC and ARC.

Conclusion

- Questions?

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- Comments?

- This Information is based on our reading of the 2014 Farm Bill and discussions with other professional economists.
- There will likely be differences in our interpretation and the final regulations to be developed by USDA, FSA.