



FARM PROGRAM DECISION TOOL

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DEVELOPMENT & OUTREACH COALITION

- University of Illinois
- Watts & Associates
- The Ohio State University
- Michigan State University
- Delaware State University
- University of Arkansas-Pine Bluff
- North Carolina A&T University
- Montana State University

DECISION ASSISTANCE

Farm Bill Toolbox on farmdoc:

<http://farmbilltoolbox.farmdoc.illinois.edu/>

Web-based decision tool,
Agriculture Policy Analysis System
(APAS):

<http://fsa.usapas.com/>

FARM BILL DECISIONS

One-time, irrevocable per FSA farm:

Deadline (February 27)

- 1) Update payment yields
- 2) Retain or reallocate base acres

Deadline (March 31)

3) Program Election decision:

- ✓ Agriculture Risk Coverage, County Option (ARC-CO)
 - ✓ Agriculture Risk Coverage, Individual Farm Coverage Option (ARC-IC)
 - ✓ Price Loss Coverage (PLC)
- (+ Supplemental Cover Option (SCO) in crop insurance)

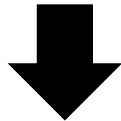
STEP FOUR:

COMPARE ARC-CO & PLC

- ✓ All producers on the farm;
crop-by-crop decision
- ✓ ARC-CO: county revenue
program
- ✓ PLC: deficiency payment
when MYA is below
reference price

OPERATIONAL COMPARISON

ARC-CO

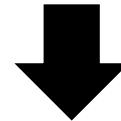


5-year Olympic moving average MYA price (reference price plug)

5-year Olympic moving average county yields (70% of T-yield plug)

Coverage is from 86% down to 76% of county revenue (a 10% max)

PLC



Reference price; does not change

Payment yield; does not change (after update) –
no yield coverage

Coverage is from reference price down to the loan rate

PRICE COMPARISON

Corn	
Year	MYA Price
2009	\$3.55 (\$3.70)
2010	\$5.18*
2011	\$6.22*
2012	\$6.89
2013	\$4.45*
5-year Olympic Moving Avg.	\$5.28

(Reference price replaces any MYA that is below it)

(*Used in the Olympic calculation, which drops highest and lowest)

Crop	Ref. Price
Corn	\$3.70/bu.



Note:

5-year Olympic average price used in ARC-CO benchmark;

PLC triggers payment if MYA is below the reference price



Input

State	Illinois
County	Logan
Crop	Corn
Type	All
PLC Payment Yield	134

ARC-CO AND PLC

What-If

Change the county yields and Market Year Average (MYA) prices for 2014 and 2018 to see payments under ARC-County and PLC. Payments are stated per base acre, as such they are multiplied by .85. If there are 100 base acres per farm, multiple the result below by 100.

Input	County Yield	MYA Price ¹	Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
			Benchmark		ARC	ARC	PLC
			Yield ²	Price ³	Guarantee ⁴	Payment ⁵	Payment ⁶
2009	188	3.55					
2010	155	5.18					
2011	173	6.22					
2012	125	6.89					
2013	198	4.45					
2014	215	3.40	172	5.28	781	43	34
2015	186	3.60	175	5.28	795	79	11
2016	188	4.00	186	4.79	766	12	0
2017	190	4.00	191	4.05	665	0	0
2018	192	4.00	192	3.90	644	0	0
Five-Year Average						27	9

Corn national loan rate equals: \$1.95

Corn reference price equals: \$3.70

¹ Market year average price which is a national price for a marketing year.

² Equals Olympic average of five-previous yields. Olympic averages eliminate high and low observations.

³ Equals Olympic average of five-previous prices, price can not be less than reference price.

⁴ Equals benchmark yield x benchmark price x .86.

⁵ Equals .85 x maximum of (ARC guarantee - county yield x MYA price) or (10% of benchmark yield x benchmark price).

⁶ Equals (reference price - higher of MYA price or national loan rate) x PLC payment yield x .85.

ARC-CO AND PLC

2014 Crop Year Price Comparison

Commodity	5-year Olympic moving avg. price (ARC-CO)	Reference price (PLC)
Peanuts (ton)	\$557	\$535
Rice (cwt)	\$14.10	\$14.00
Barley (bu)	\$5.45	\$4.95
Wheat (bu)	\$6.60	\$5.50
Grain Sorghum (bu)	\$5.09	\$3.95
Corn (bu)	\$5.28	\$3.70
Soybeans (bu)	\$12.27	\$8.40

Note:

ARC-CO calculations are also dependent upon average county yields (actual and 5-year Olympic moving average)

McLEAN COUNTY, ILLINOIS

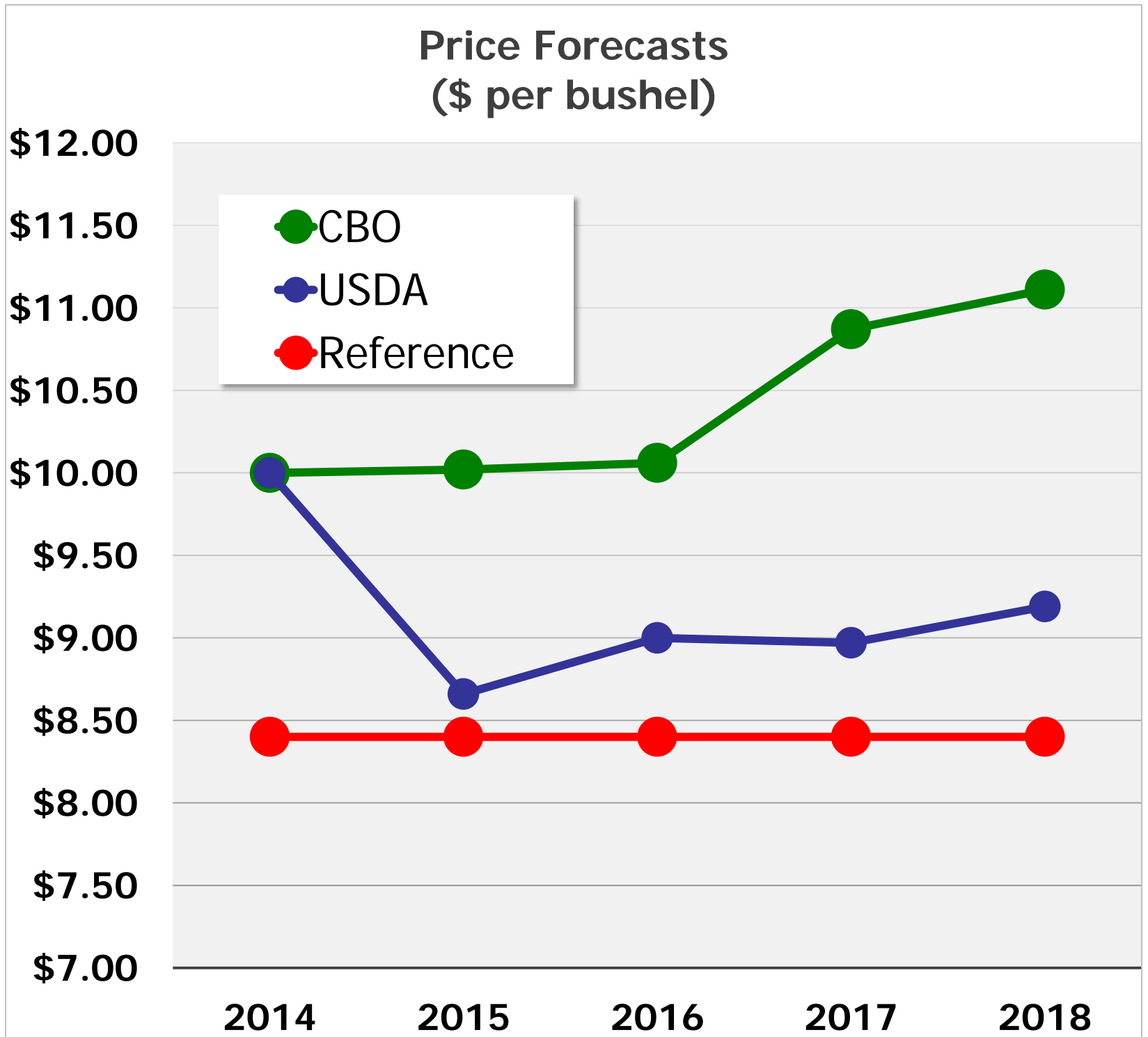
SOYBEANS

Input	County Yield	MYA Price ¹	Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
			Benchmark		ARC	ARC	PLC
			Yield ²	Price ³	Guarantee ⁴	Payment ⁵	Payment ⁶
2009	53	9.59					
2010	58	11.30					
2011	56	12.50					
2012	52	14.40					
2013	56	13.00					
2014	54	10.00	55	12.27	580	34	0
2015	54	8.66	55	12.27	580	57	0
2016	54	9.00	55	11.83	560	55	0
2017	54	8.97	54	10.67	496	9	0
2018	54	9.19	54	9.32	433	0	0
Five-Year Average						31	0
Soybeans national loan rate equals: 5.00				Soybeans reference price equals: 8.40			

Note:

USDA price forecasts do NOT fall below reference price (\$8.40) in any of crop years 2014 through 2018

PRICE COMPARISON: SOYBEANS



KOSSUTH COUNTY, IOWA

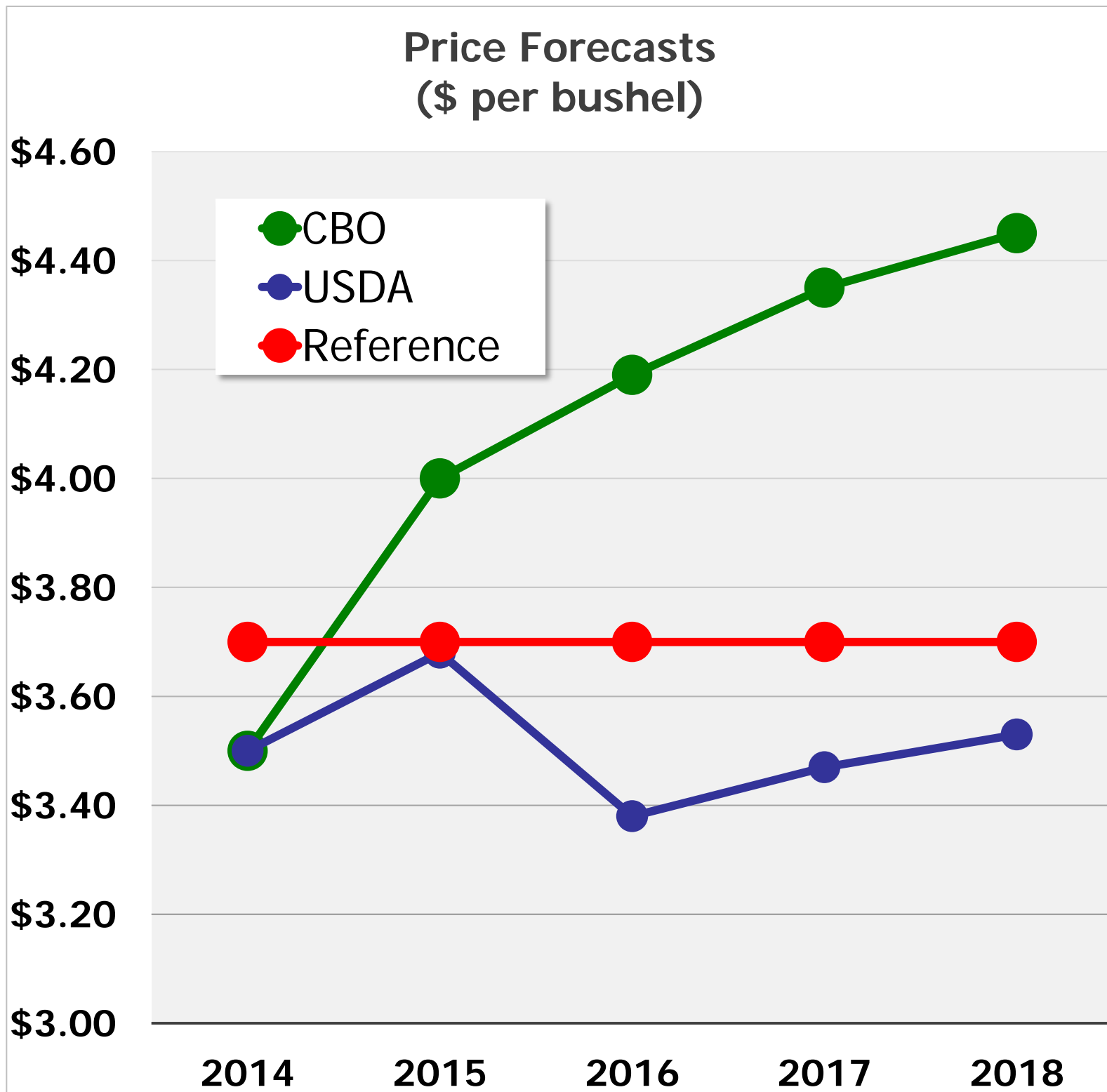
CORN

Input	County	MYA Price ¹	Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
			Benchmark		ARC	ARC	PLC
			Yield ²	Price ³	Guarantee ⁴	Payment ⁵	Payment ⁶
2009	193	3.55					
2010	184	5.18					
2011	180	6.22					
2012	164	6.89					
2013	167	4.45					
2014	190	3.50	177	5.28	804	79	32
2015	185	3.68	177	5.28	804	79	3
2016	187	3.38	177	4.79	729	72	51
2017	189	3.47	180	3.95	611	0	37
2018	191	3.53	187	3.70	595	0	27
			Five-Year Average		46		30
Corn national loan rate equals: 1.95					Corn reference price equals: 3.70		

Note:

USDA price forecasts are all below reference price (\$3.70); reference price replaces MYA for each of 2014 to 2018 crop years for ARC-CO

PRICE COMPARISON: CORN



SUMNER COUNTY, KANSAS

WHEAT

What-If

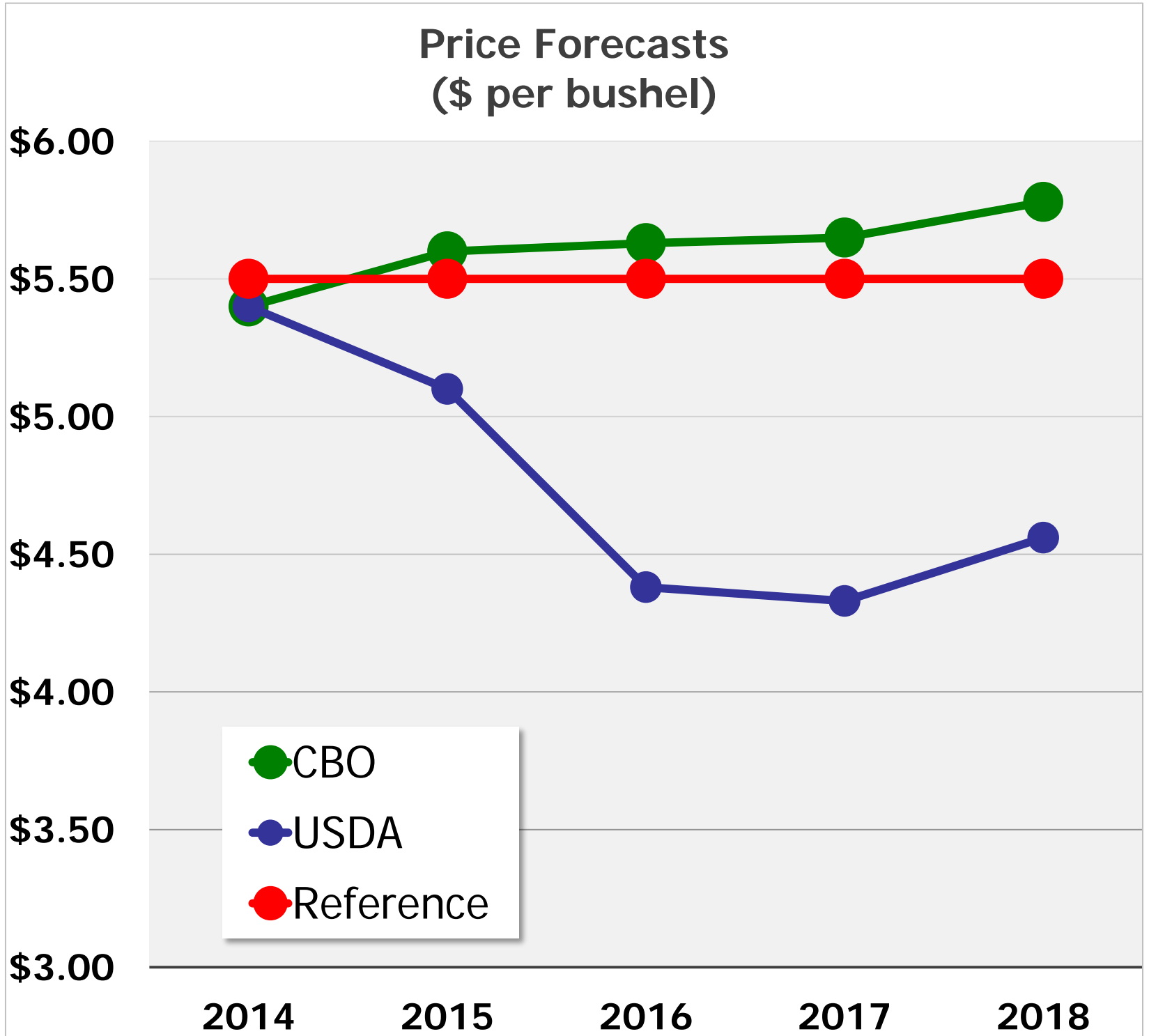
Change the county yields and Market Year Average (MYA) prices for 2014 and 2018 to see payments under ARC-County and PLC. Payments are stated per base acre, as such they are multiplied by .85. If there are 100 base acres per farm, multiple the result below by 100.

Input	County Yield	MYA Price ¹	Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
			Benchmark		ARC	ARC	PLC
			Yield ²	Price ³	Guarantee ⁴	Payment ⁵	Payment ⁶
2009	25	4.87					
2010	37	5.70					
2011	32	7.24					
2012	48	7.77					
2013	48	6.87					
2014	40	4.85	39	6.60	221	22	22
2015	40	4.02	42	6.60	238	24	50
2016	41	3.63	43	6.54	242	24	64
2017	41	3.71	43	5.96	220	22	61
2018	42	3.75	41	5.50	194	19	60
Five-Year Average						22	51
Wheat national loan rate equals: 2.94					Wheat reference price equals: 5.50		

Note:

USDA price forecasts are all below reference price (\$5.50); reference price replaces MYA for each of 2014 to 2018 crop years for ARC-CO

PRICE COMPARISON: WHEAT



BONNEVILLE CO., IDAHO

BARLEY

Input

State	Idaho
County	Bonneville
Crop	Barley
Type	All
PLC Payment Yield	108

What-If

Change the county yields and Market Year Average (MYA) prices for 2014 and 2018 to see payments under ARC-County and PLC. Payments are stated per base acre, as such they are multiplied by .85. If there are 100 base acres per farm, multiple the result below by 100.

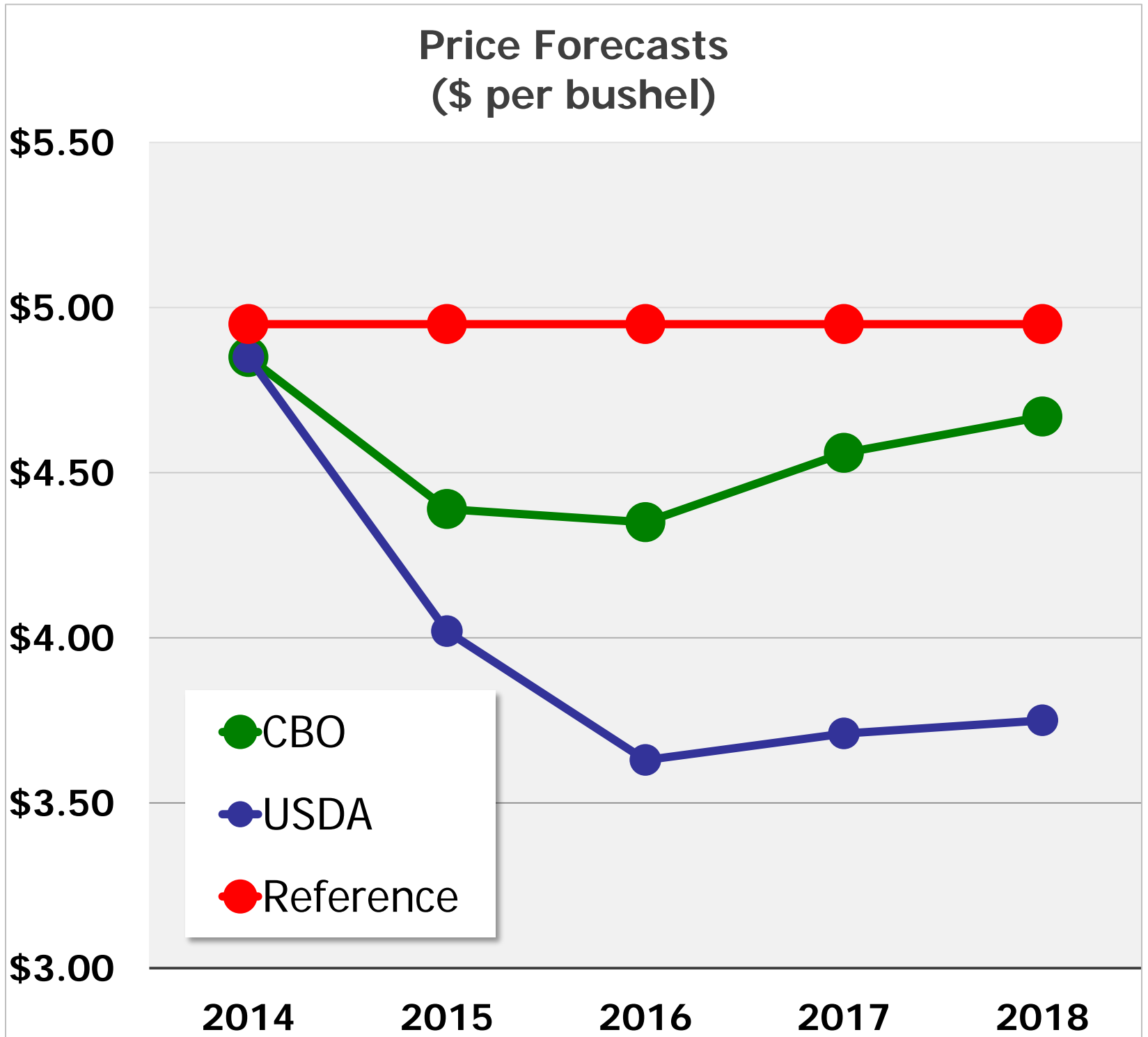
Input	County Yield	MYA Price ¹	Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
			Benchmark Yield ²	ARC Price ³	ARC Guarantee ⁴	ARC Payment ⁵	PLC Payment ⁶
2009	103	4.66					
2010	99	3.86					
2011	104	5.35					
2012	103	6.43					
2013	105	6.06					
2014	104	4.85	103	5.45	483	0	9
2015	105	4.02	104	5.45	487	48	85
2016	105	3.63	104	5.45	487	48	121
2017	106	3.71	105	5.32	480	47	114
2018	106	3.75	105	4.95	447	41	110
Five-Year Average						37	88

Barley national loan rate equals: 1.95 Barley reference price equals: 4.95

Note:

USDA price forecasts are all below reference price (\$4.95), so reference price replaces MYA for each of 2014 to 2018 crop years for ARC-CO

PRICE COMPARISON: BARLEY



HIDALGO COUNTY, TEXAS

GRAIN SORGHUM

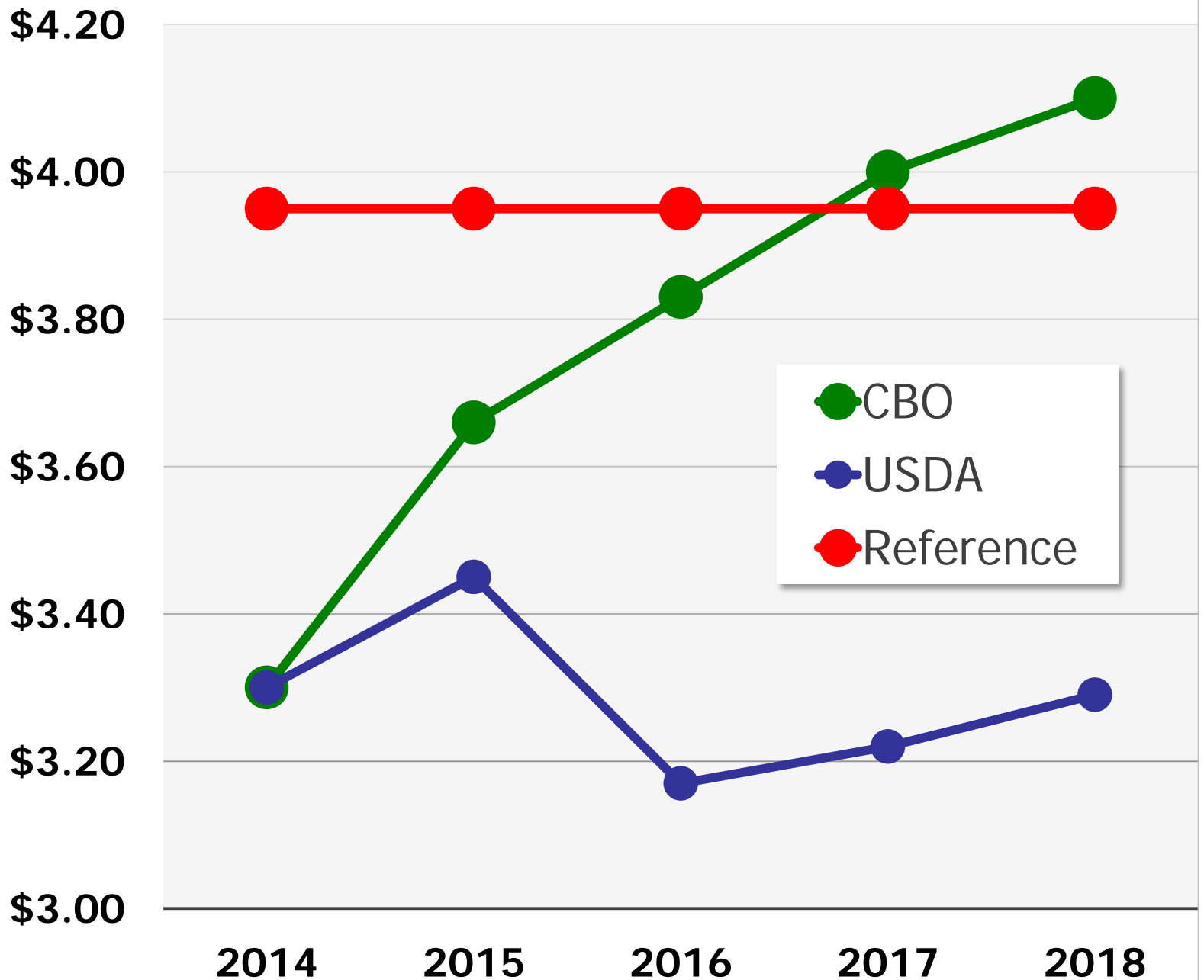
Input	County	MYA Price ¹	Agricultural Risk Coverage (ARC) - County				Price Loss
			Benchmark		ARC	ARC	Coverage (PLC)
			Yield ²	Price ³	Guarantee ⁴	Payment ⁵	PLC Payment ⁶
2009	25	3.22					
2010	45	5.02					
2011	24	5.99					
2012	46	6.33					
2013	24	4.25					
2014	32	3.30	31	5.09	136	13	\$/acre 25
2015	32	3.45	34	5.09	149	15	20
2016	33	3.17	29	4.73	118	11	30
2017	34	3.22	32	4.05	111	2	29
2018	34	3.29	32	3.95	109	0	26
Five-Year Average						8	26
Grain Sorghum national loan rate equals: 1.95				Grain Sorghum reference price equals: 3.95			

Note:

USDA price forecasts are all below reference price (\$3.95); reference price replaces MYA for each of 2014 to 2018 crop years for ARC-CO

PRICE COMPARISON: GRAIN SORGHUM

Price Forecasts
(\$ per bushel)



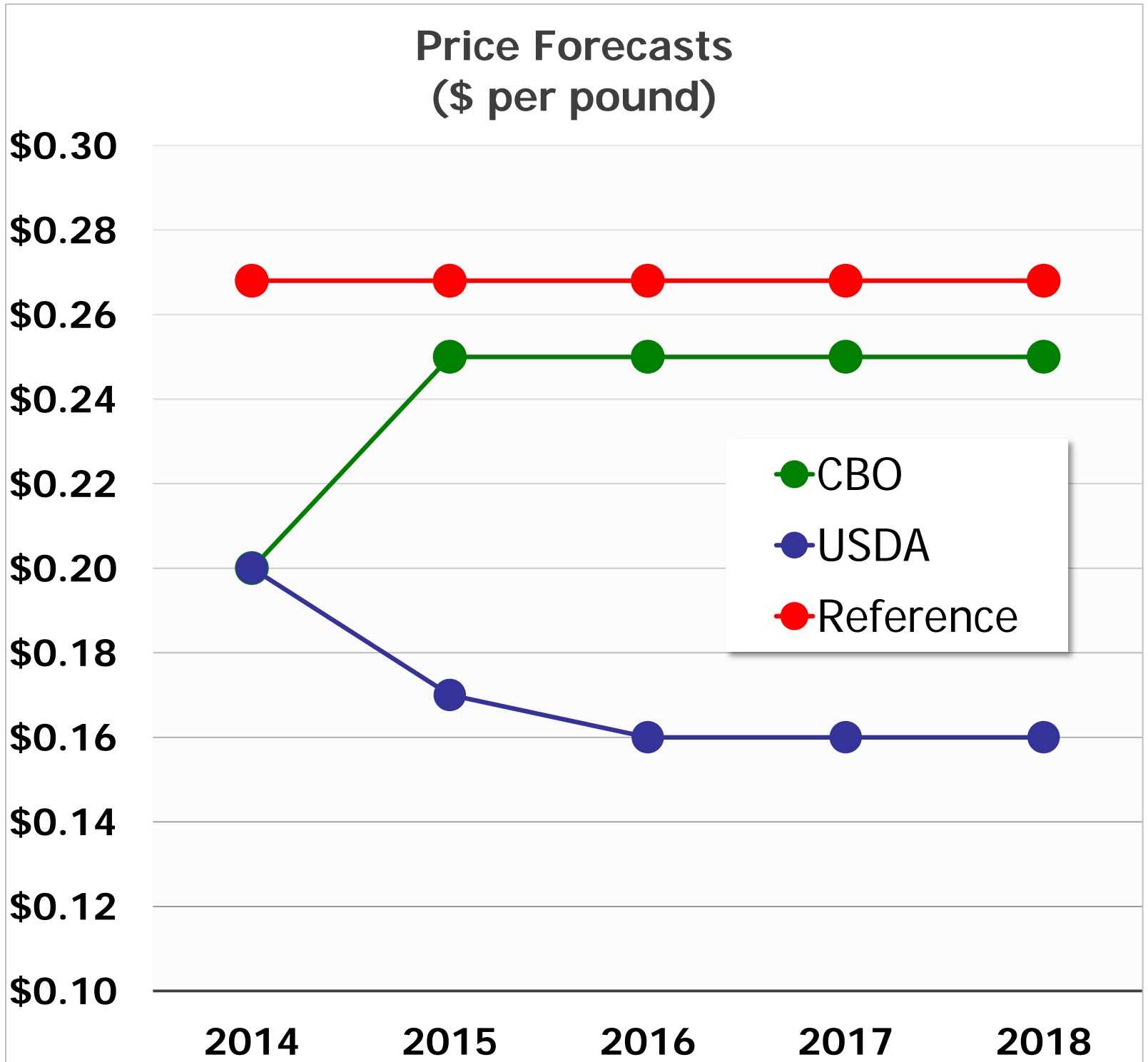
PEANUTS, WORTH COUNTY, GEORGIA

Input	County Yield	MYA Price ¹	Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
			Benchmark		ARC	ARC	PLC
			Yield ²	Price ³	Guarantee ⁴	Payment ⁵	Payment ⁶
2009	4105	0.22					
2010	4651	0.23					
2011	4794	0.32					
2012	5130	0.30					
2013	4947	0.25					
2014	4800	0.20	4797	0.28	1155	114	189
2015	4810	0.17	4847	0.28	1167	115	252
2016	4820	0.16	4852	0.28	1168	115	252
2017	4830	0.16	4859	0.27	1128	112	252
2018	4840	0.16	4820	0.27	1119	111	252
Five-Year Average						113	240
Peanuts national loan rate equals: 0.1775				Peanuts reference price equals: 0.2675			

Note:

USDA price forecasts are all below reference price (\$0.2675/lb), so reference price replaces MYA for each of 2014 to 2018 crop years for ARC-CO

PRICE COMPARISON: PEANUTS



RICE, ARKANSAS COUNTY, ARKANSAS

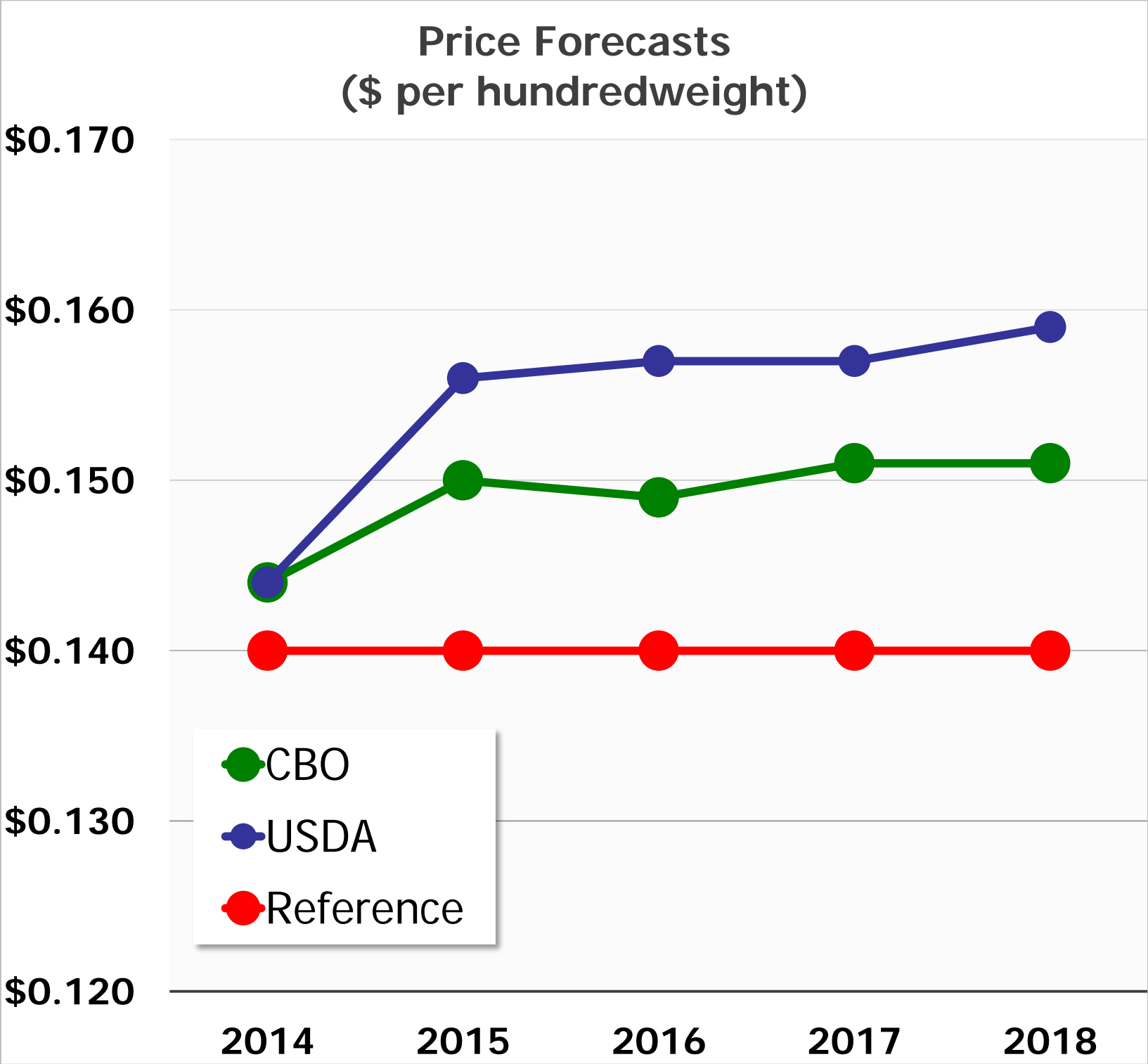
Change the county yields and Market Year Average (MYA) prices for 2014 and 2018 to see payments under ARC-County and PLC. Payments are stated per base acre, as such they are multiplied by .85. If there are 100 base acres per farm, multiple the result below by 100.

Input			Agricultural Risk Coverage (ARC) - County				Price Loss Coverage (PLC)
Year	County	MYA	Benchmark		ARC	ARC	Payment ⁶
	Yield	Price ¹	Yield ²	Price ³	Guarantee ⁴	Payment ⁵	
2009	7390	0.1290					
2010	7340	0.1100					
2011	7604	0.1340					
2012	8272	0.1450					
2013	8595	0.1540				\$/acre	\$/acre
2014	7900	0.1344	7755	0.1400	934	0	30
2015	7920	0.1344	7925	0.1400	954	0	30
2016	7940	0.1344	8031	0.1400	967	0	30
2017	7960	0.1344	8044	0.1400	968	0	30
2018	7980	0.1344	7940	0.1400	956	0	30
Five-Year Average						0	30
National loan rate equals: 0.0650					Reference price equals: 0.1400		

Note:

USDA price forecasts are all below reference price (\$0.2675/lb), so reference price replaces MYA for each of 2014 to 2018 crop years for ARC-CO

PRICE COMPARISON: RICE



MAKING THE CHOICE

ARC-CO & PLC

1. Expected payments (much depends on price expectations)
2. What type of risk to cover
 - Moderately low prices and yields (ARC-CO)
 - Lower prices (PLC)
3. Availability of SCO (with PLC)

COMPARE ARC-CO & PLC: PRICES

- Soybean price forecasts (high and low scenarios) do not fall below the reference price in any of the 2014-2018 crop years
- Under these scenarios, PLC would not be expected to be effective for soybeans

COMPARE ARC-CO & PLC: PRICES

- Significant differences in forecasted corn prices; recent high prices compared to reference price; long-term price collapse expected to be necessary for PLC
- 10% maximum and county average yields are also relevant to the ARC-CO payment

COMPARE ARC-CO & PLC: PRICES

- Wheat reference price is much closer to the forecasted price levels
- Wheat program decision more sensitive to smaller price declines but also expected to be more sensitive to yield variations