

Price outlook for the 21 covered commodities and risk considerations

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Food and Agricultural
Policy Research Institute



Agenda

- FAPRI-MU crop market outlook
 - Price projections
 - Farm commodity supply and use that generate those prices
 - Uncertainty around the projections
- Why prices matter in making program choices
- The AFPC-FAPRI tool to evaluate farm bill options



U.S. market price projections

FAPRI-MU, October 2014

U.S. crop farm prices

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Corn (\$/bu.)	3.55	5.18	6.22	6.89	4.46	3.40	3.74	3.98	4.19	4.20
Soybeans (\$/bu.)	9.59	11.30	12.50	14.40	13.00	9.95	8.93	9.55	10.26	10.50
Wheat (\$/bu.)	4.87	5.70	7.24	7.77	6.87	5.88	5.39	5.63	5.87	5.97
Durum	5.47	5.98	9.68	8.18	7.46	7.49	6.34	6.63	6.92	7.04
Other spring	5.23	6.49	8.24	8.24	6.73	5.97	5.67	5.92	6.17	6.28
Winter	4.71	5.37	6.81	7.55	6.89	5.80	5.28	5.51	5.73	5.84
Upland cotton (cents/lb.)	62.90	81.50	88.30	72.50	77.90	60.03	58.95	58.21	58.92	60.04
Sorghum (\$/bu.)	3.22	5.02	5.99	6.33	4.28	3.33	3.54	3.71	3.88	3.92
Rice (\$/cwt)	14.40	12.70	14.50	15.10	16.10	14.43	13.56	13.44	13.53	13.69
Long grain	12.90	11.00	13.40	14.50	15.40	12.82	12.48	12.35	12.43	12.56
Medium/short (exc. Japonica)	15.70	15.00	14.30	14.70	15.80	15.02	13.83	13.73	13.84	14.02
Japonica	19.50	20.80	18.40	18.40	18.50	19.97	17.29	17.16	17.30	17.52
Barley (\$/bu.)	4.66	3.86	5.35	6.43	6.06	5.17	4.55	4.69	4.90	4.93
Oats (\$/bu.)	2.02	2.52	3.49	3.89	3.75	3.20	3.03	3.20	3.34	3.34
Peanuts (cents/lb.)	21.70	22.50	31.80	30.10	24.90	20.12	22.87	21.87	22.37	22.42
Sunflower seed (\$/cwt)	15.10	23.30	29.10	25.40	21.60	19.55	18.56	19.01	20.09	20.39
Canola (\$/cwt)	16.20	19.30	24.00	26.50	20.60	17.06	17.11	17.67	19.09	19.27



U.S. market price projections

FAPRI-MU, October 2014

U.S. crop farm prices

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Flaxseed (\$/bu.)	8.15	12.20	13.90	13.80	13.80	12.17	11.46	11.88	12.35	12.52
Lentils (\$/cwt)	26.80	25.70	25.00	20.70	19.80	19.44	18.18	18.92	19.74	20.04
Safflower (\$/cwt)	17.10	17.20	24.40	27.50	23.70	21.67	20.25	21.08	22.00	22.33
Mustard seed (\$/cwt)	30.40	25.90	33.60	35.80	36.00	32.25	30.44	31.47	32.60	33.02
Dry peas (\$/cwt)	8.98	9.77	15.30	15.70	14.60	11.08	11.24	11.70	12.20	12.39
Rapeseed (\$/cwt)	26.30	23.40	27.00	26.10	25.60	22.82	21.09	22.05	23.21	23.63
Large chickpeas (\$/cwt)	29.10	30.50	42.10	37.90	31.20	29.35	27.35	28.45	29.63	30.09
Small chickpeas (\$/cwt)	20.30	20.80	21.50	27.40	22.90	19.44	17.94	18.77	19.65	19.99
Crambe (\$/cwt)	36.80	32.80	37.80	36.50	35.80	32.51	30.51	31.61	32.79	33.25
Sesame seed (\$/cwt)	28.00	30.60	35.00	32.00	44.00	44.74	41.90	43.48	45.18	45.83

Note: FAPRI-MU prepared these projections in mid-October 2014 based on information available at that time. Macroeconomic and policy assumptions are the same as those underlying the August 2014 baseline update, but the projections incorporate October 2014 USDA estimates of U.S. and global crop supply and use.



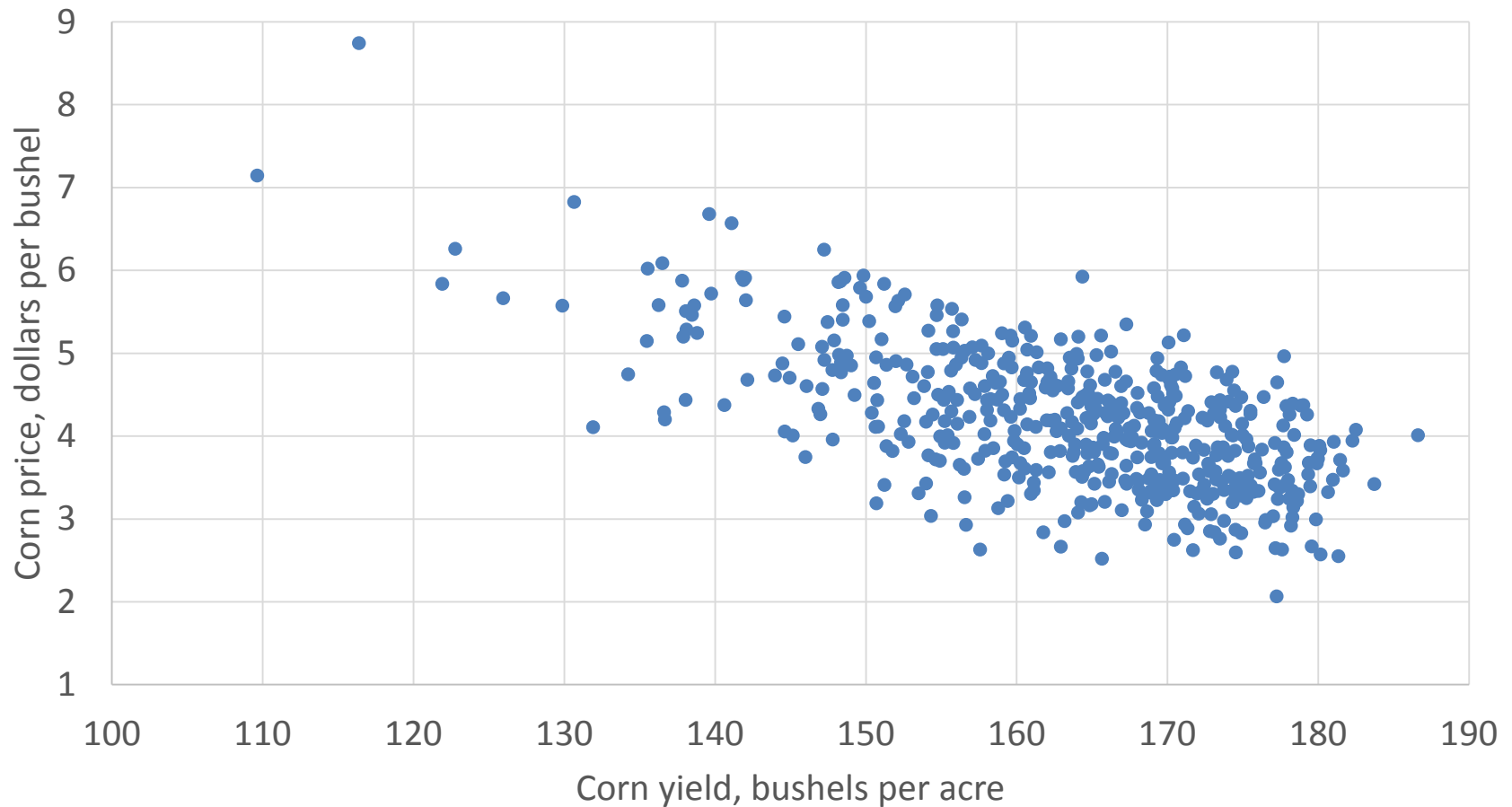
So where did those come from?

- FAPRI-MU has been making market projections for 30 years
 - Complex models of U.S. and world markets + analyst expertise
 - DC review of models and projections each December
 - Annual baseline released in early March
- Updates
 - August update each year
 - For this project, monthly updates—September was first official
 - Reflect new information on crop production, demand, etc.
- We know actual prices will differ
 - We solve for 500 different futures given different assumptions



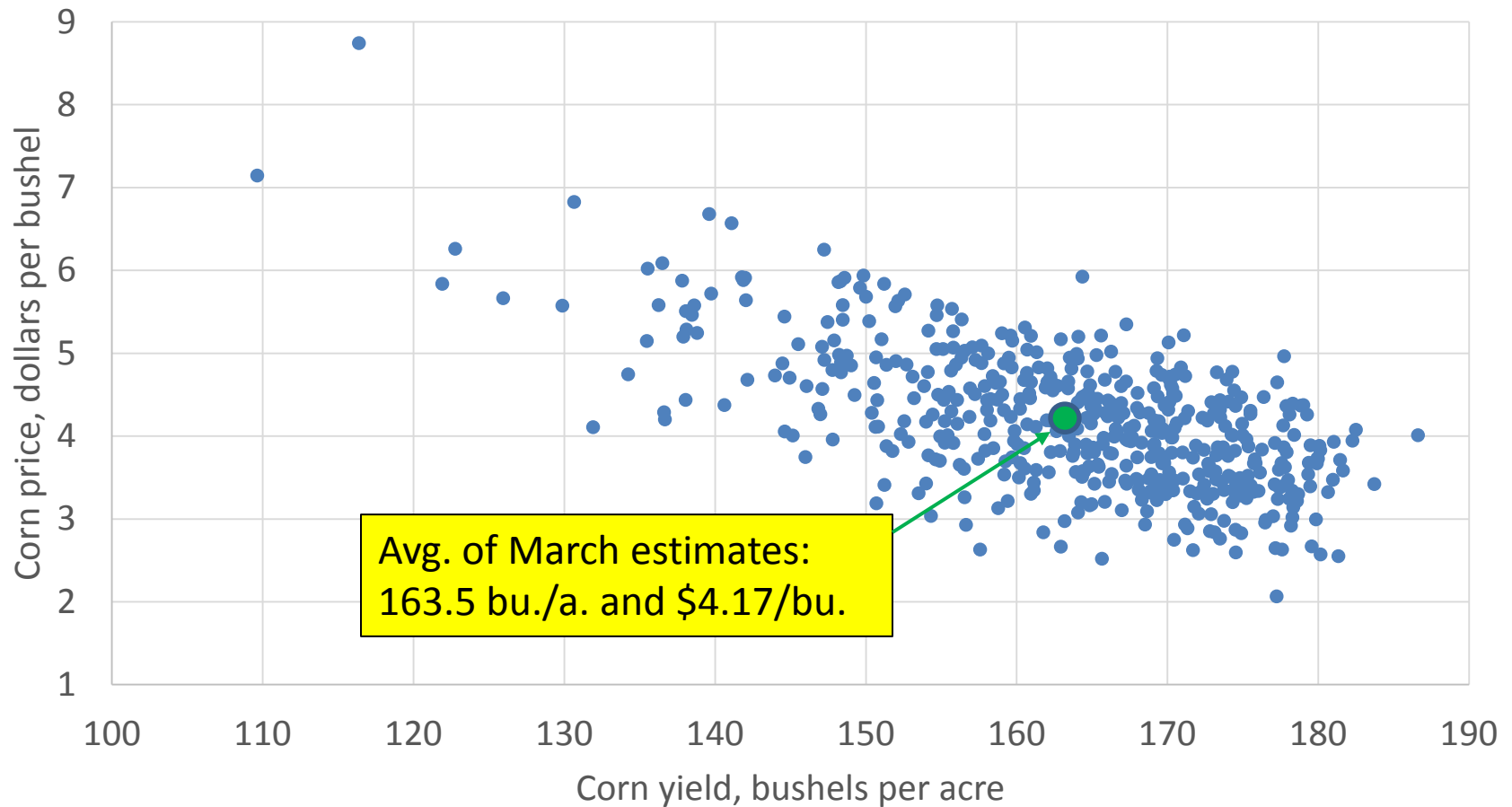
2014/15 corn yields and prices

FAPRI-MU stochastic baseline, March 2014



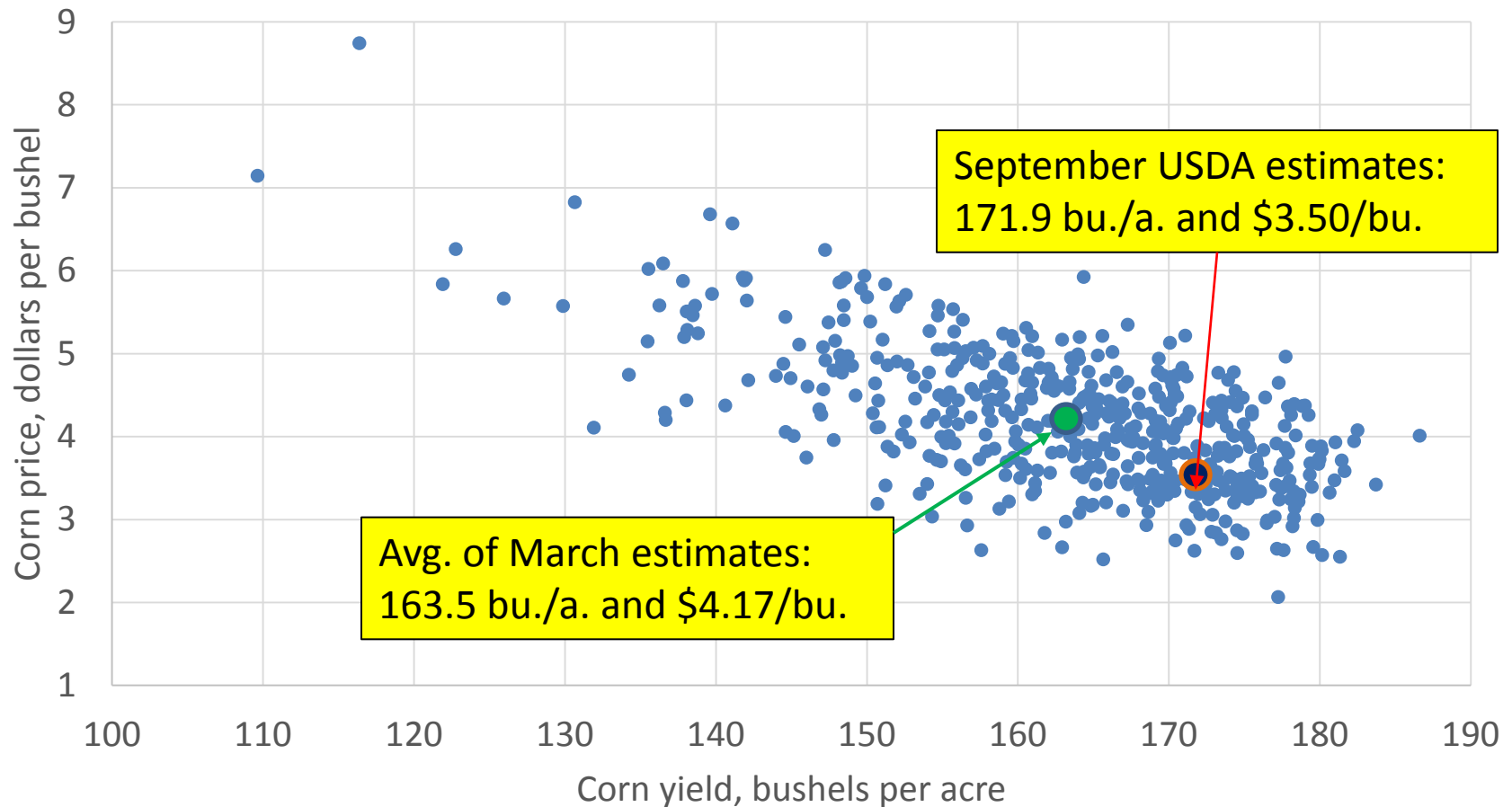
2014/15 corn yields and prices

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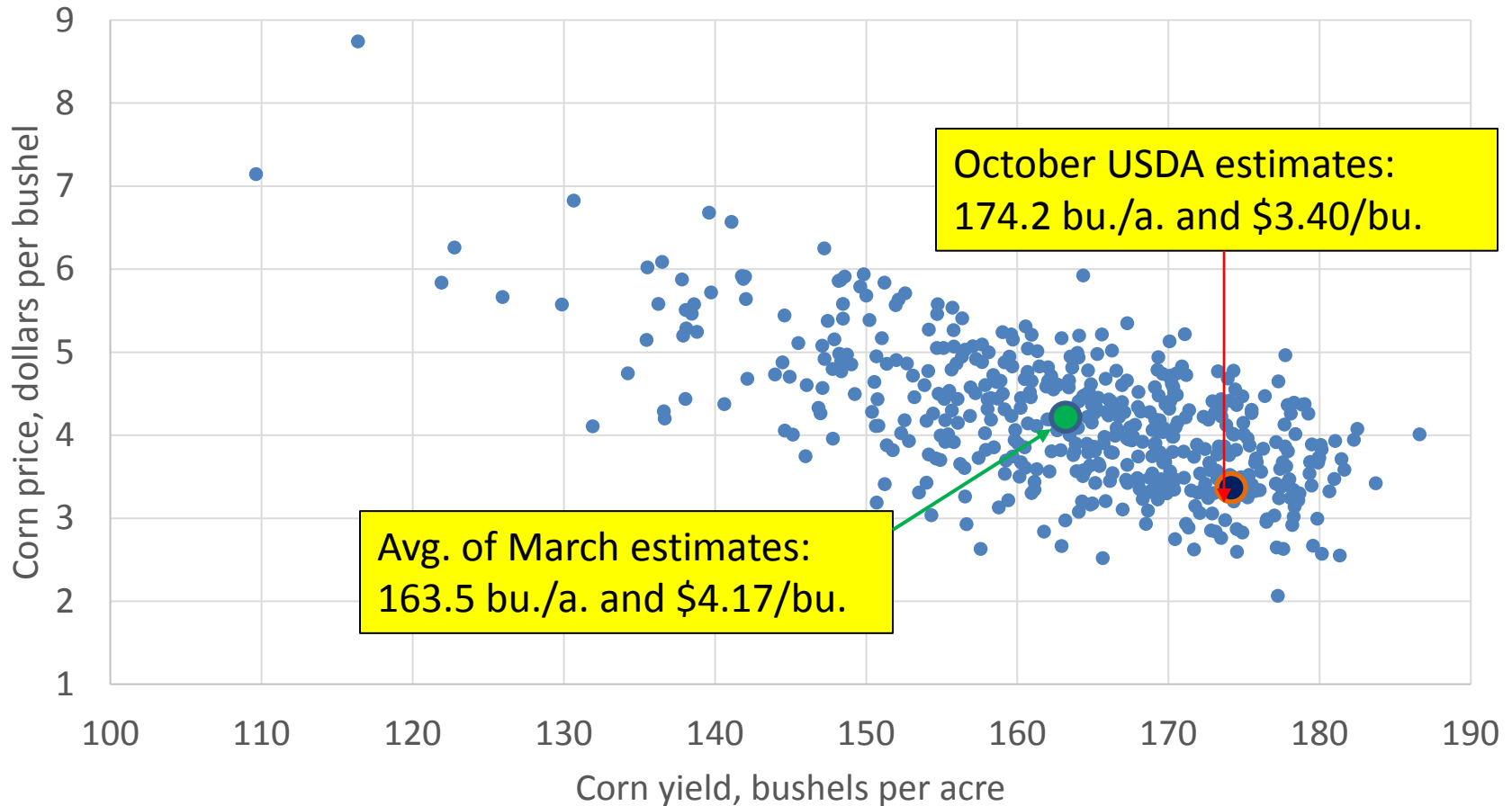
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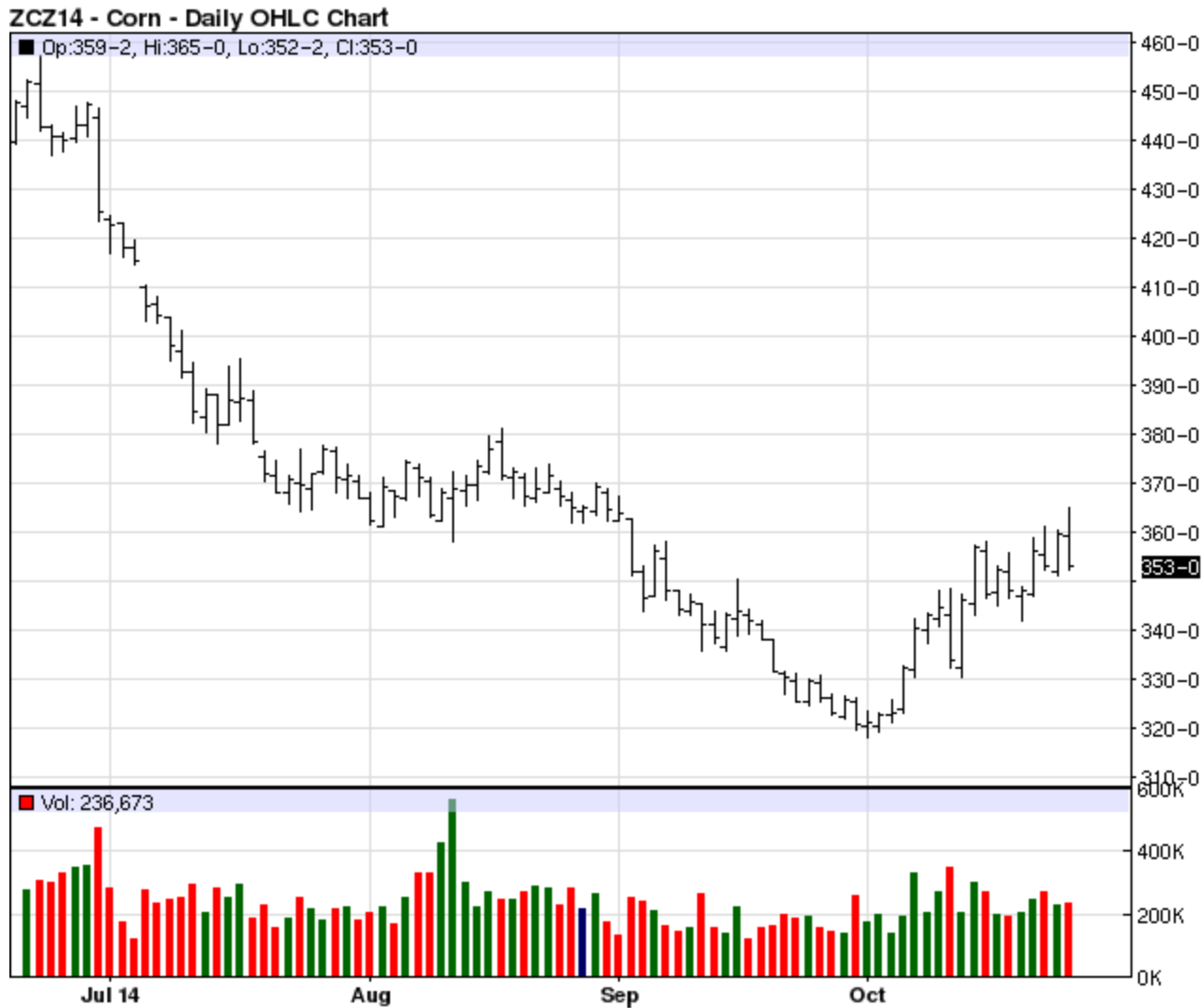
2014/15 corn yields and prices

FAPRI-MU stochastic baseline, March 2014



December 2014 corn futures

(June-Oct. 24, 2014, Great Pacific Trading Co.)



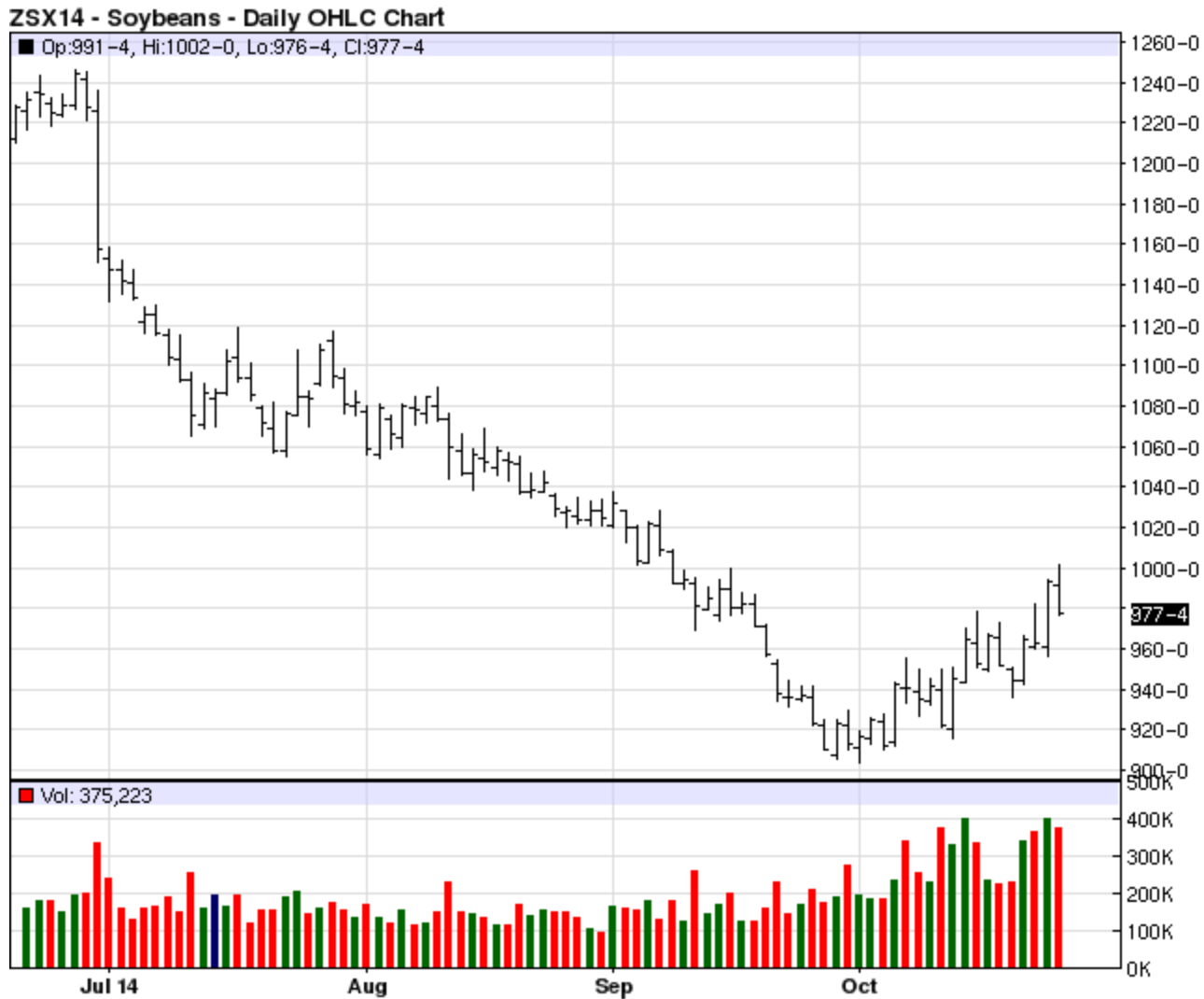
U.S. corn supply and use

FAPRI-MU, October 2014

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
			million acres			
Area harvested	87.7	83.1	81.3	83.7	83.7	83.9
			bushels per acre			
Yield	158.8	174.2	162.7	164.6	166.5	168.1
			million bushels			
Production	13,925	14,475	13,235	13,786	13,934	14,106
Imports	36	25	25	25	25	25
Beginning stocks	821	1,236	2,030	1,586	1,509	1,475
Total supply	14,782	15,736	15,290	15,397	15,469	15,606
Feed use	5,125	5,319	5,172	5,283	5,293	5,291
Other domestic use	6,504	6,563	6,615	6,620	6,611	6,617
Exports	1,917	1,823	1,917	1,984	2,089	2,234
Total use	13,546	13,705	13,704	13,887	13,993	14,142
Ending stocks	1,236	2,030	1,586	1,509	1,475	1,464
			dollars per bushel			
Price, U.S. farm	4.46	3.40	3.74	3.98	4.19	4.20



November 2014 soybean futures (June-Oct. 24, 2014, Great Pacific Trading Co.)



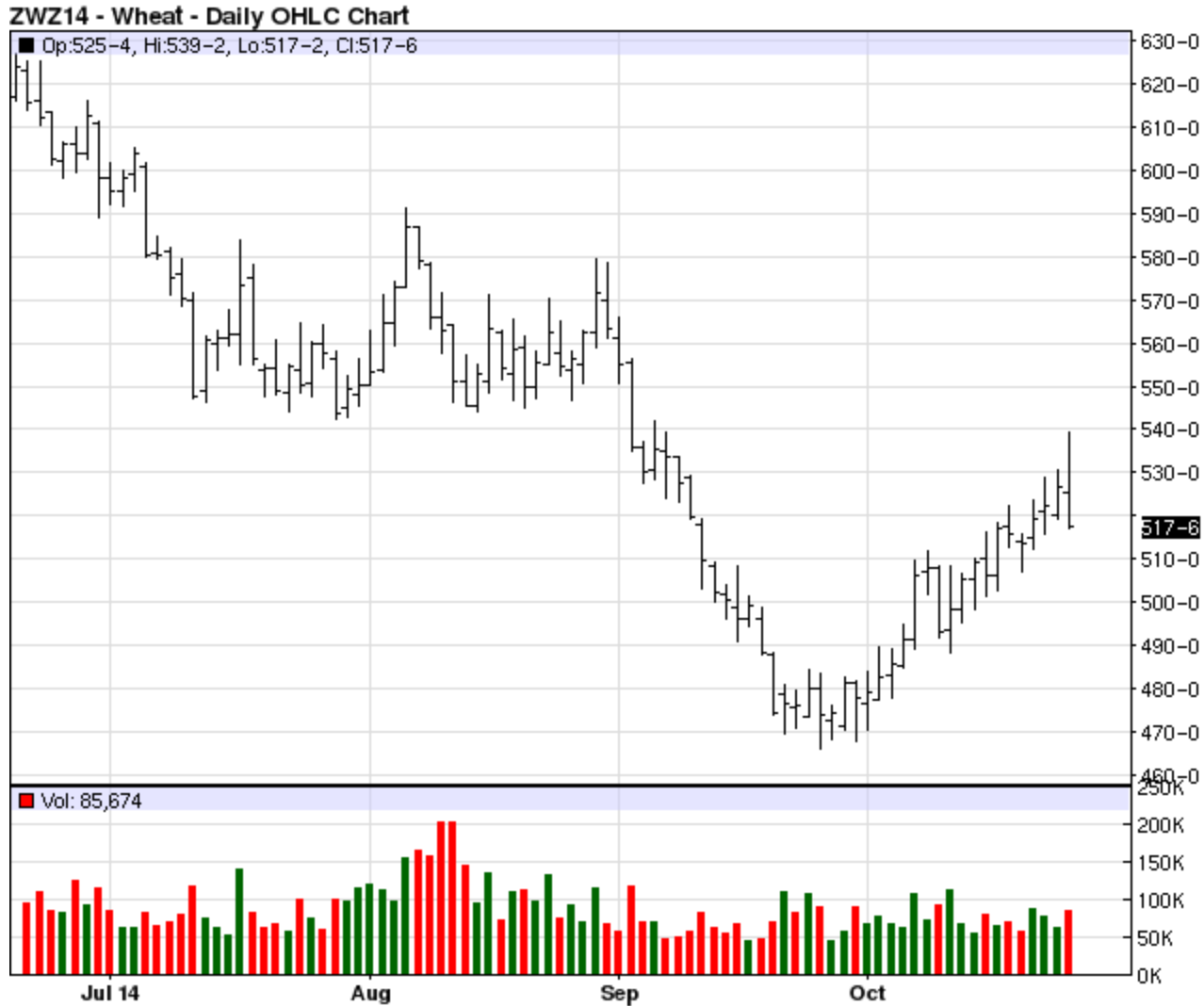
U.S. soybean supply and use

FAPRI-MU, October 2014

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
			million acres			
Area harvested	76.3	83.4	83.0	80.0	80.9	81.2
			bushels per acre			
Yield	44.0	47.1	44.0	44.6	45.0	45.3
			million bushels			
Production	3,358	3,927	3,655	3,568	3,639	3,680
Imports	72	15	15	15	15	15
Beginning stocks	141	92	422	435	382	374
Total supply	3,570	4,034	4,092	4,017	4,036	4,070
Crush	1,734	1,803	1,833	1,821	1,829	1,841
Other domestic use	98	104	102	103	103	103
Exports	1,647	1,704	1,722	1,712	1,730	1,757
Total use	3,478	3,612	3,657	3,635	3,662	3,701
Ending stocks	92	422	435	382	374	369
			dollars per bushel			
Price, U.S. farm	13.00	9.95	8.93	9.55	10.26	10.50
			ratio			
Soybean/corn price ratio	2.91	2.92	2.39	2.40	2.45	2.50



Dec. 2014 CME wheat futures (June-Oct. 24, 2014, Great Pacific Trading Co.)



U.S. wheat supply and use

FAPRI-MU, October 2014

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
			million acres			
Area harvested	45.3	46.5	46.9	46.0	46.0	45.9
			bushels per acre			
Yield	47.1	43.9	46.2	46.4	46.8	47.1
			million bushels			
Production	2,135	2,039	2,163	2,134	2,154	2,166
Imports	169	170	165	165	165	165
Beginning stocks	718	590	660	722	714	704
Total supply	3,021	2,798	2,989	3,021	3,033	3,034
Feed use	228	171	186	190	188	188
Other domestic use	1,028	1,040	1,046	1,052	1,058	1,065
Exports	1,176	927	1,036	1,066	1,083	1,084
Total use	2,432	2,138	2,267	2,307	2,329	2,337
Ending stocks	590	660	722	714	704	697
			dollars per bushel			
Price, U.S. farm	6.87	5.88	5.39	5.63	5.87	5.97



Dec. 2014 CME cotton futures (June-Oct. 24, 2014, Great Pacific Trading Co.)

KGZ14 - CME Cotton #2 - Daily OHLC Chart



U.S. cotton supply and use

FAPRI-MU, October 2014

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
			million acres			
Area harvested	7.54	9.88	8.69	8.78	8.74	8.72
			pounds per acre			
Yield	822	790	819	829	836	843
			million bales			
Production	12.91	16.26	14.83	15.16	15.22	15.31
Imports	0.01	0.01	0.01	0.01	0.01	0.01
Beginning stocks	3.80	2.45	4.92	4.90	4.98	5.00
Total supply	16.72	18.71	19.75	20.06	20.21	20.32
Domestic use and residual	3.74	3.80	3.93	4.05	4.11	4.12
Exports	10.53	9.99	10.93	11.04	11.10	11.18
Total use	14.27	13.79	14.85	15.08	15.20	15.31
Ending stocks	2.45	4.92	4.90	4.98	5.00	5.02
			cents per pound			
Price, U.S. farm	77.9	60.0	59.0	58.2	58.9	60.0



Nov. 2014 rough rice futures

(June-Oct. 24, 2014, Great Pacific Trading Co.)



U.S. rice supply and use

FAPRI-MU, October 2014

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	million acres					
Area harvested	2.47	2.91	2.75	2.79	2.75	2.73
	pounds per acre					
Yield	7,692	7,581	7,507	7,578	7,644	7,699
	million hundredweight, rough equivalent					
Production	189.9	220.7	206.7	211.1	210.5	210.4
Imports	23.1	21.3	21.9	22.3	22.8	23.4
Beginning stocks	36.4	31.8	39.0	38.4	39.2	39.4
Total supply	249.4	273.8	267.6	271.7	272.6	273.3
Domestic use and residual	124.9	132.4	134.8	136.0	136.9	138.0
Exports	92.7	102.4	94.5	96.5	96.2	95.8
Total use	217.6	234.8	229.3	232.5	233.2	233.8
Ending stocks	31.8	39.0	38.4	39.2	39.4	39.5
	dollars per hundredweight					
Price, U.S. farm	16.10	14.43	13.56	13.44	13.53	13.69



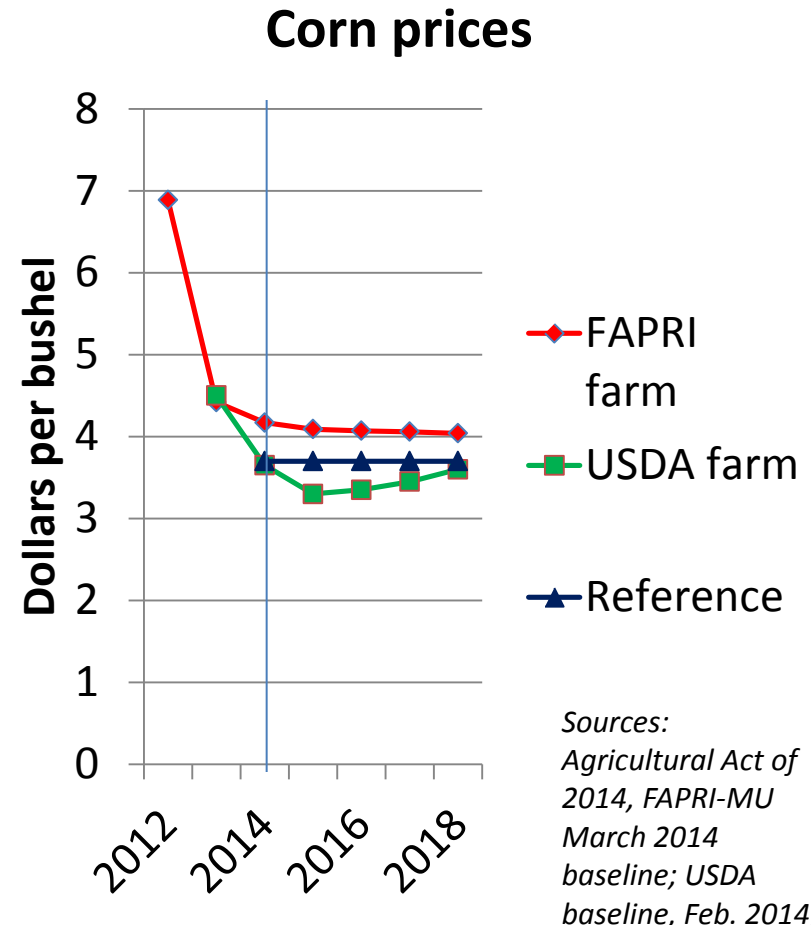
Why prices matter

- Both ARC and PLC depend on U.S. season-average prices
- Lower prices increase payments under both programs, all else equal
- But actual payments under the two programs can differ—sometimes by a lot

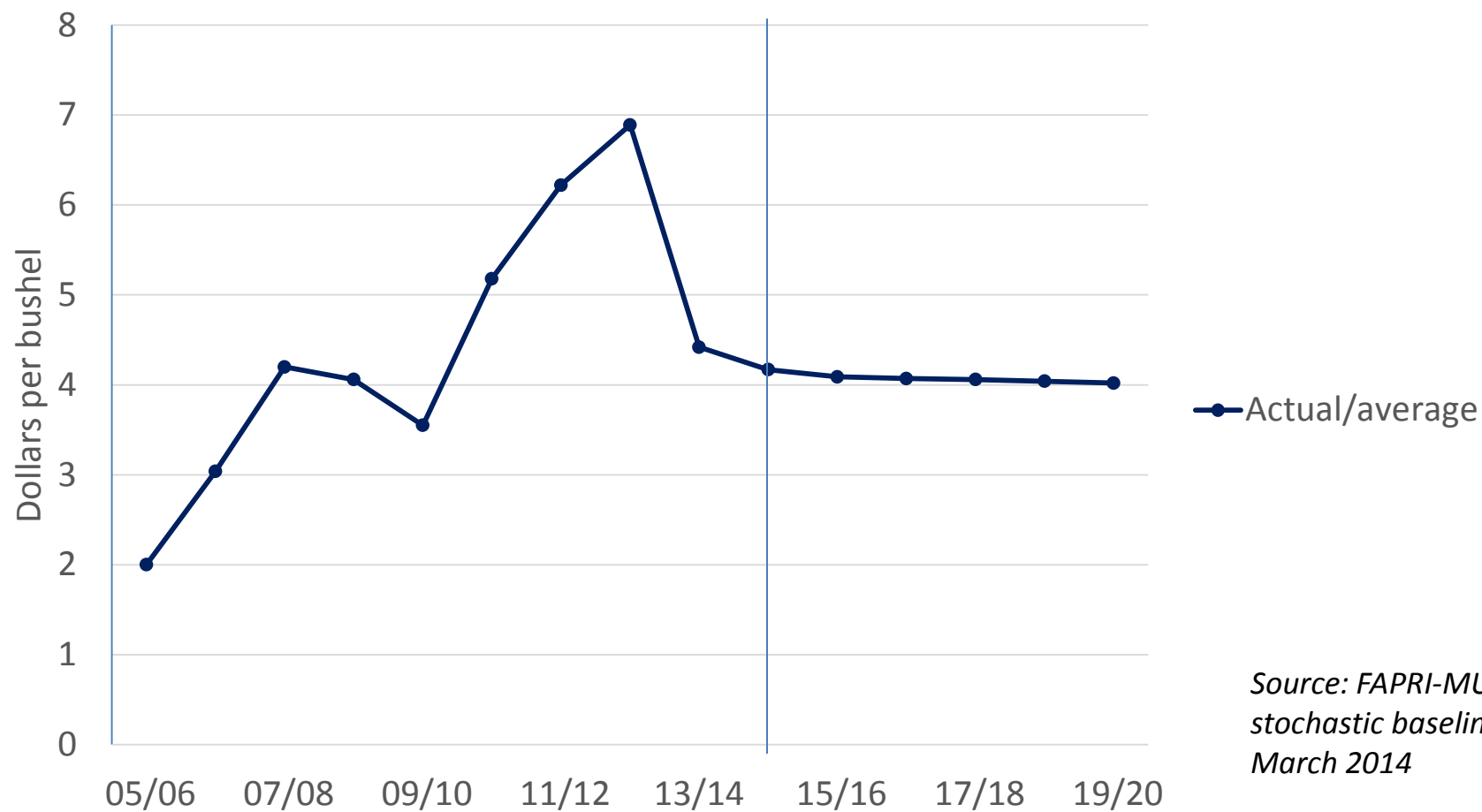


Price-based option for farm support

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 - Payment if annual average farm price is less than reference price
 - Wheat: \$5.50/bu.
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 - Soybeans: \$8.40/bu.
 - Peanuts: \$535/ton
 - Long-grain rice: \$14.00/cwt.
 - Paid on 85% of base acres (tied to historical plantings)



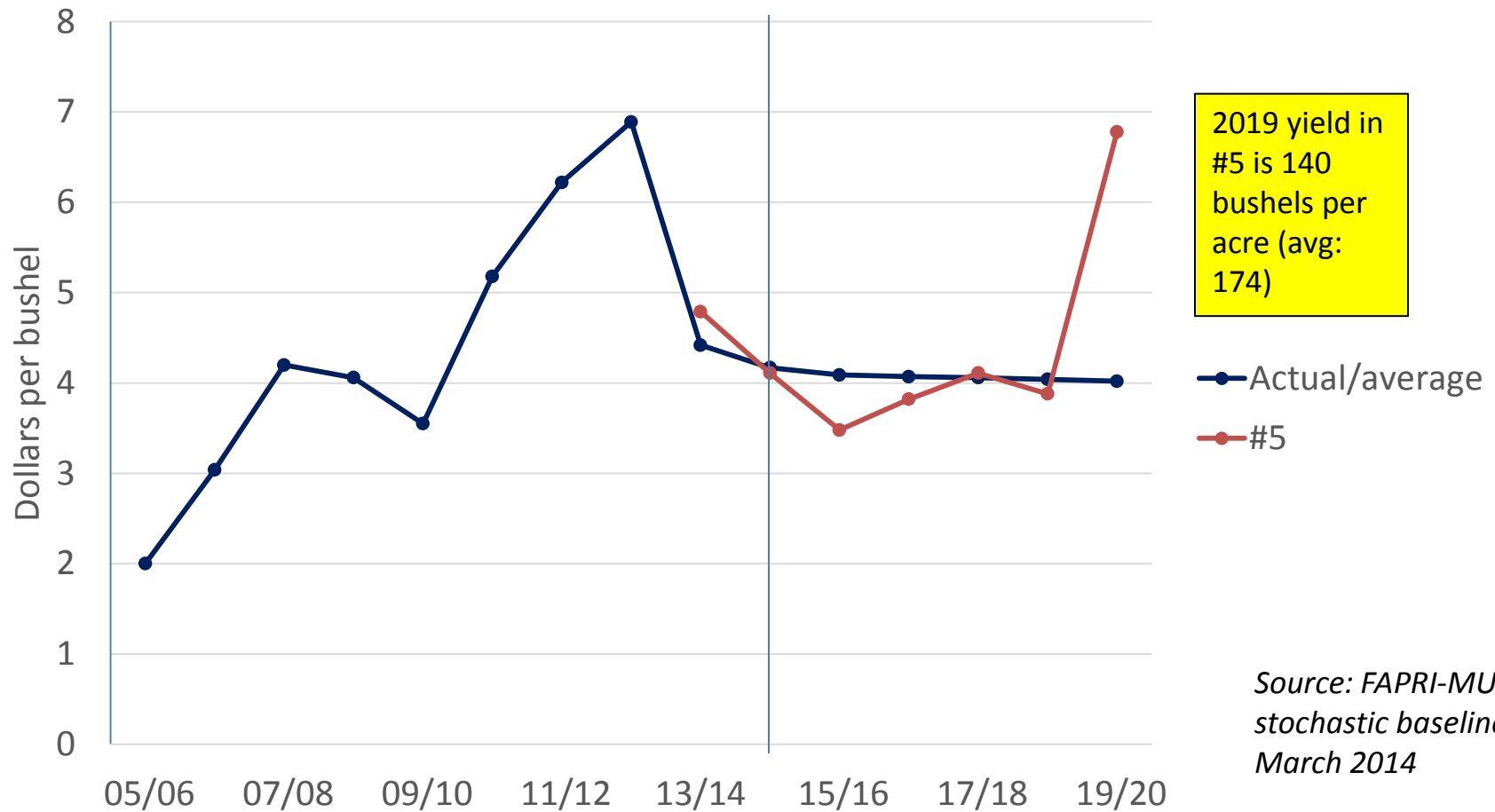
U.S. farm prices for corn



Source: FAPRI-MU
stochastic baseline,
March 2014



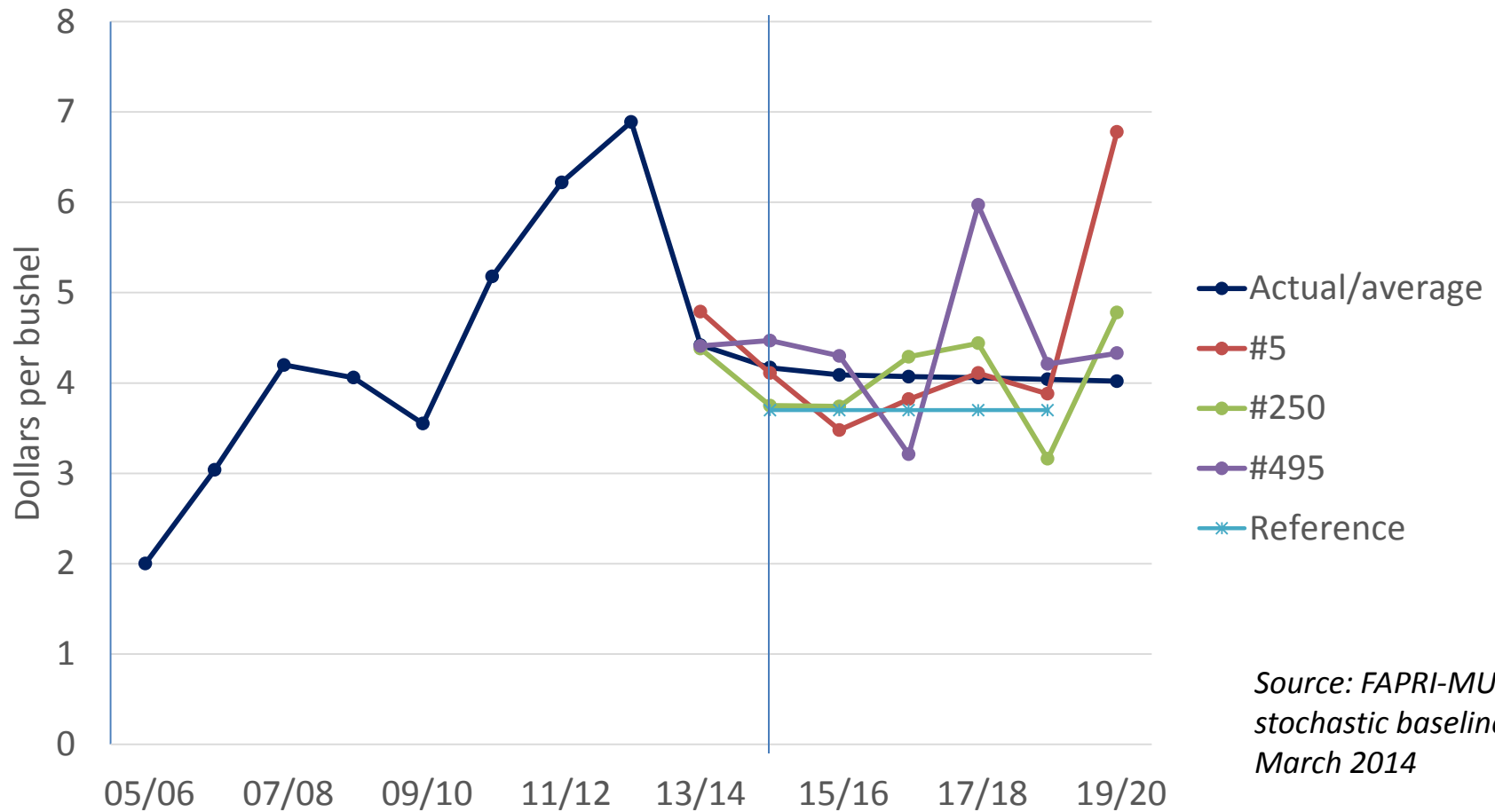
U.S. farm prices for corn



Source: FAPRI-MU
stochastic baseline,
March 2014



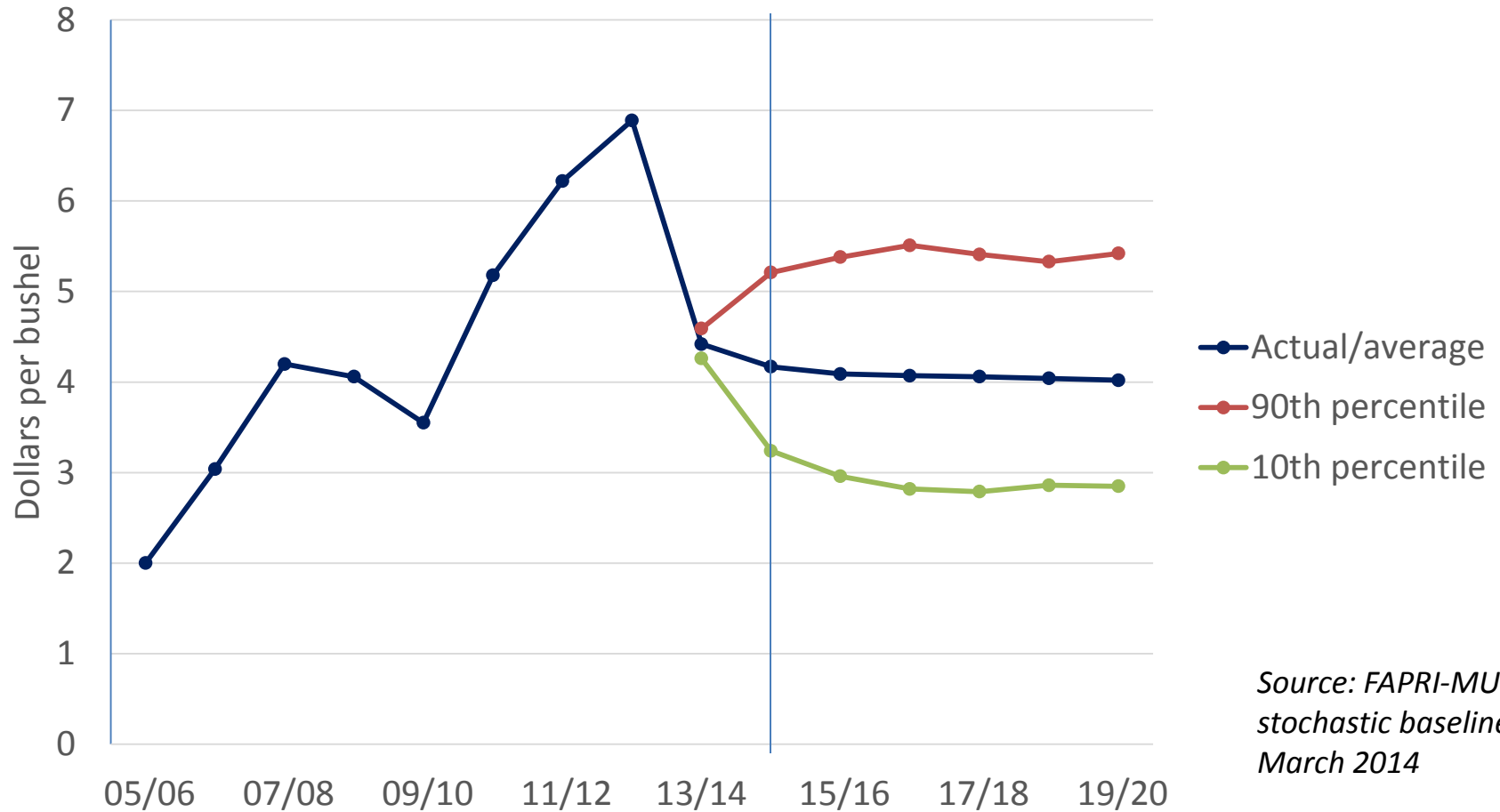
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stochastic baseline,
March 2014



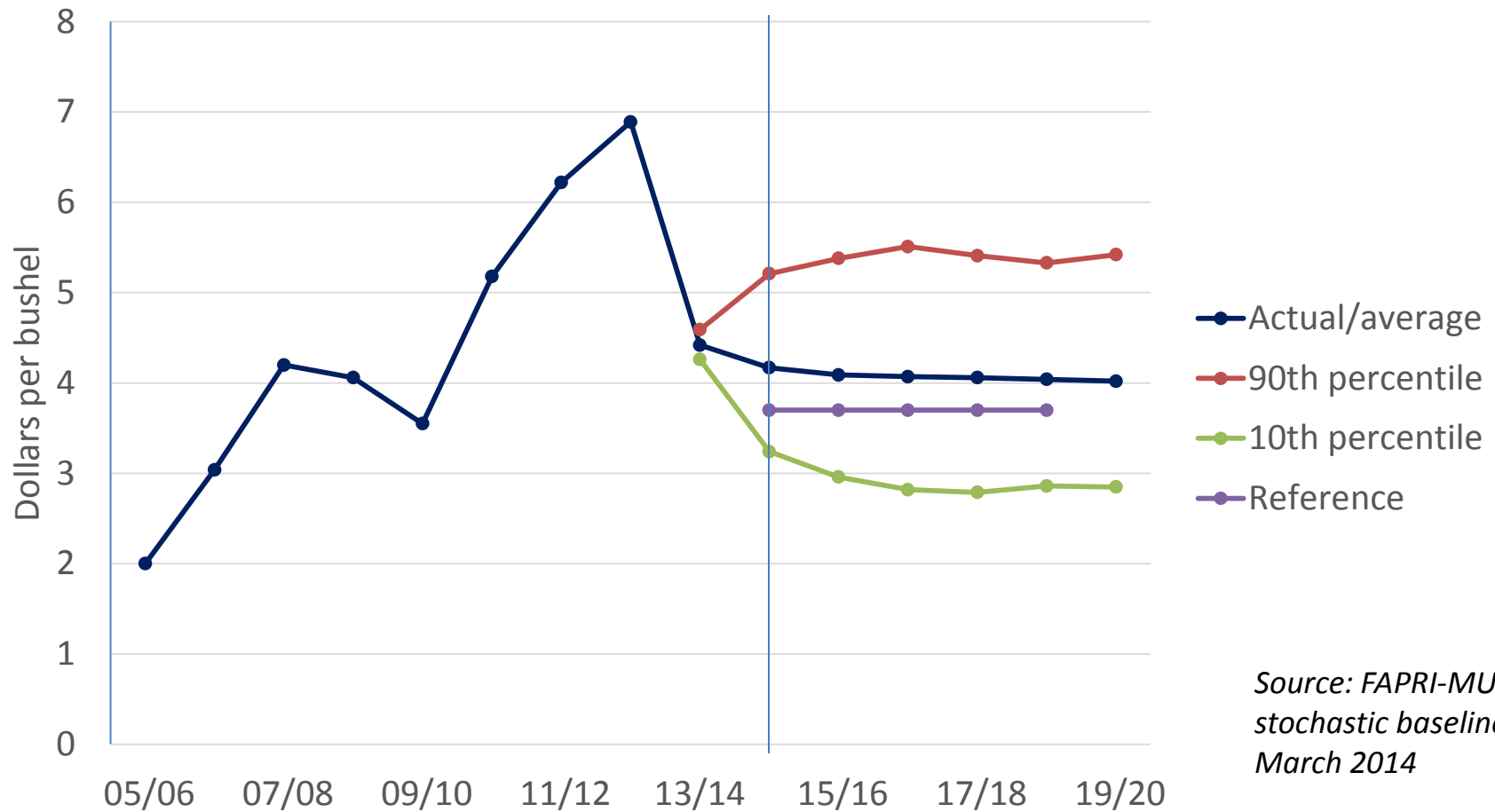
U.S. farm prices for corn



Source: FAPRI-MU
stochastic baseline,
March 2014



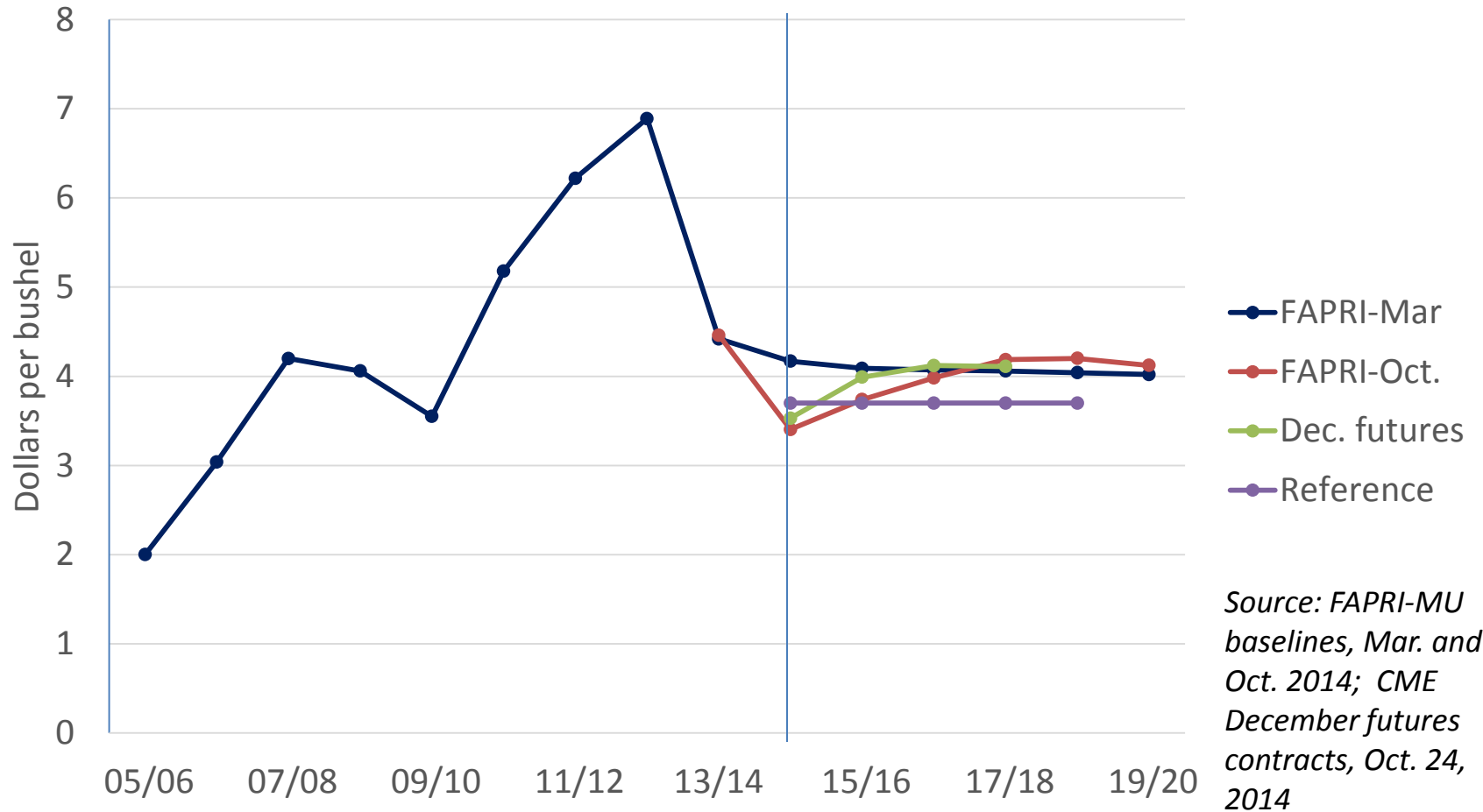
U.S. farm prices for corn



Source: FAPRI-MU
stochastic baseline,
March 2014

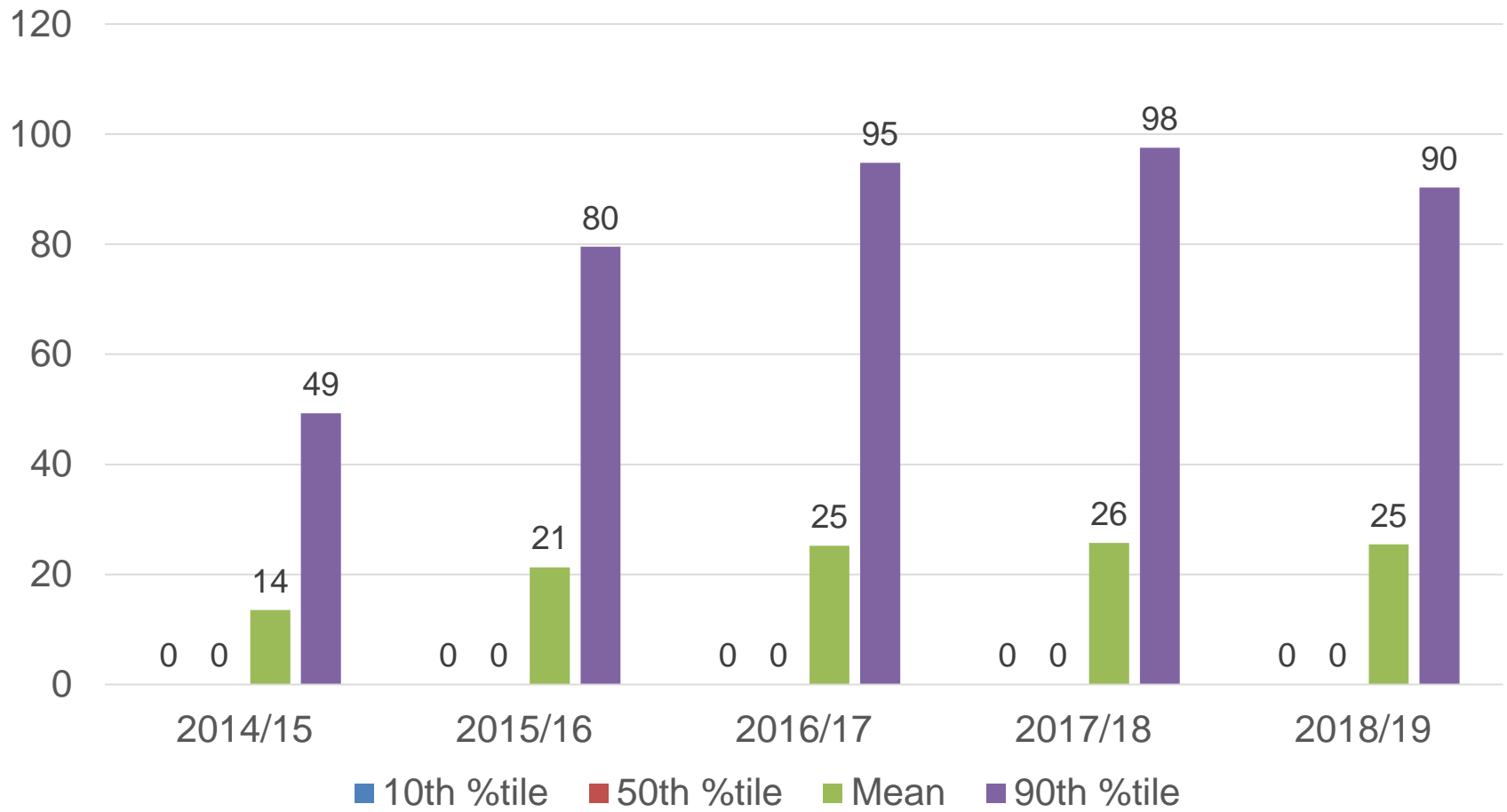


U.S. farm and futures prices for corn



Corn PLC payments

(Dollars per base acre for participating producers)

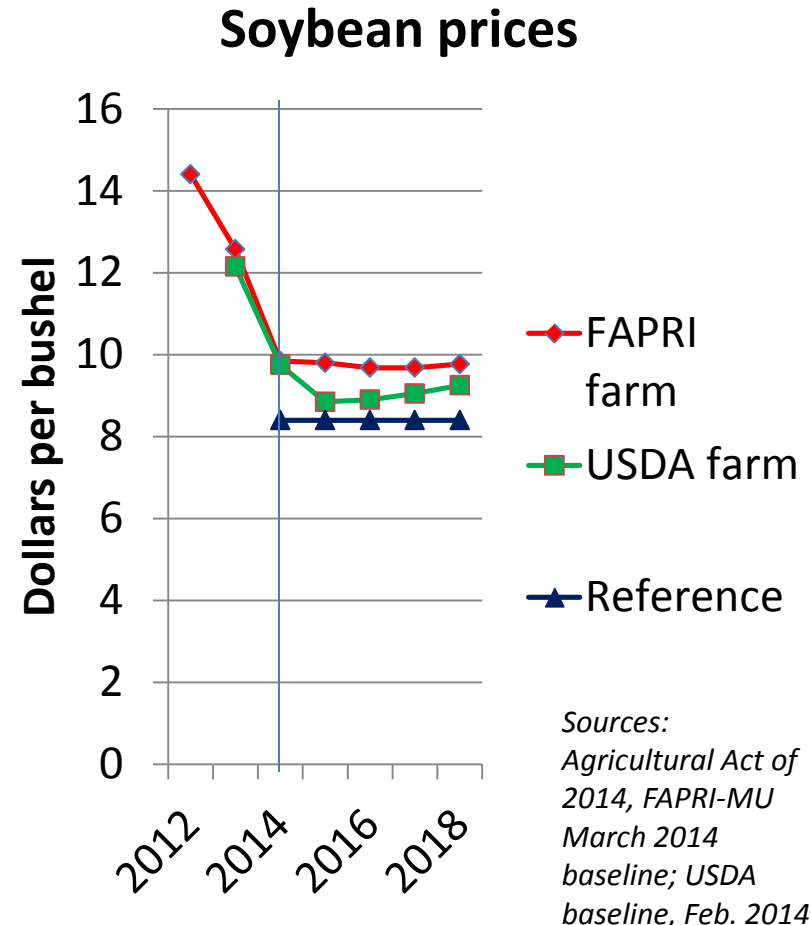


Source: FAPRI-MU March 2014 stochastic baseline

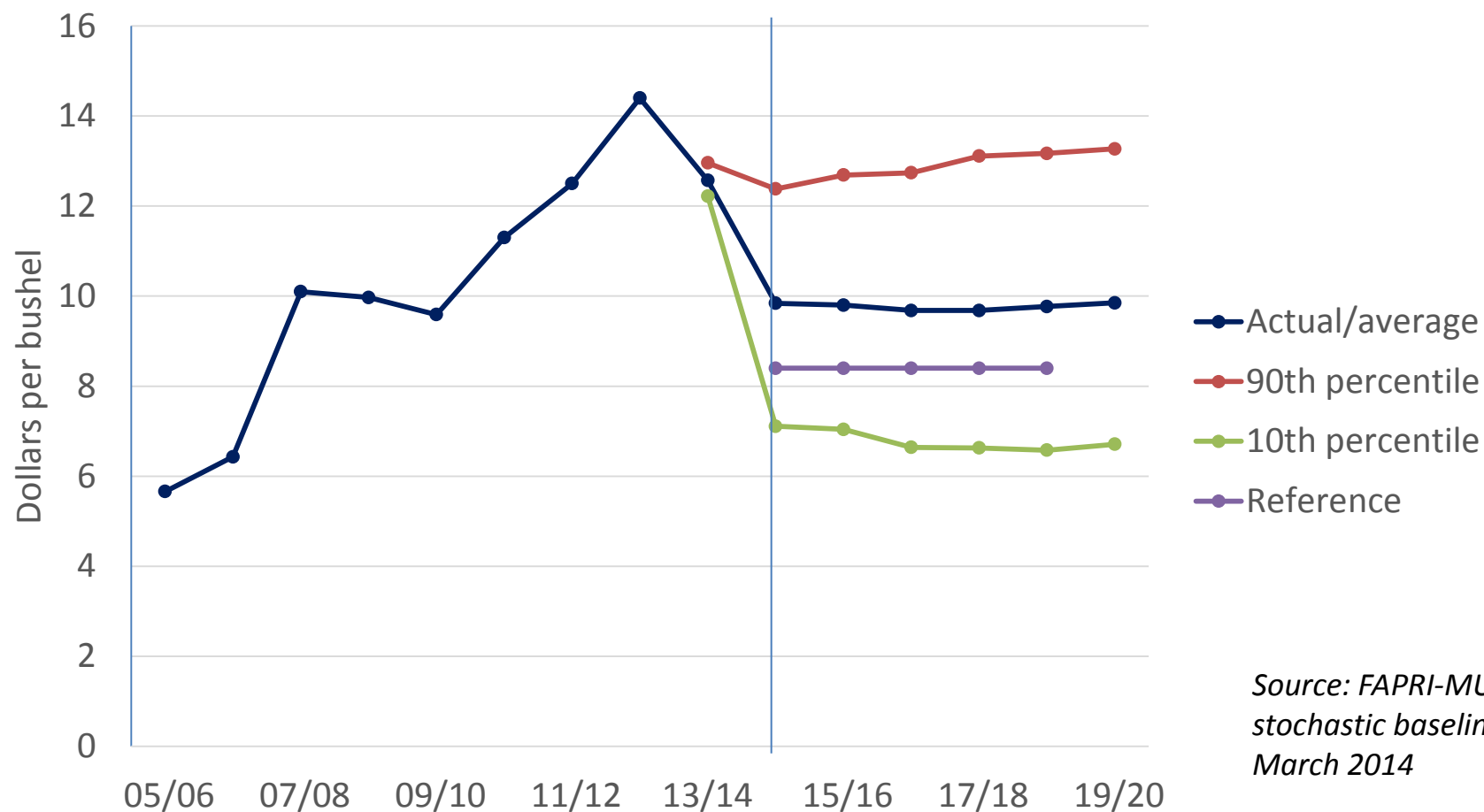


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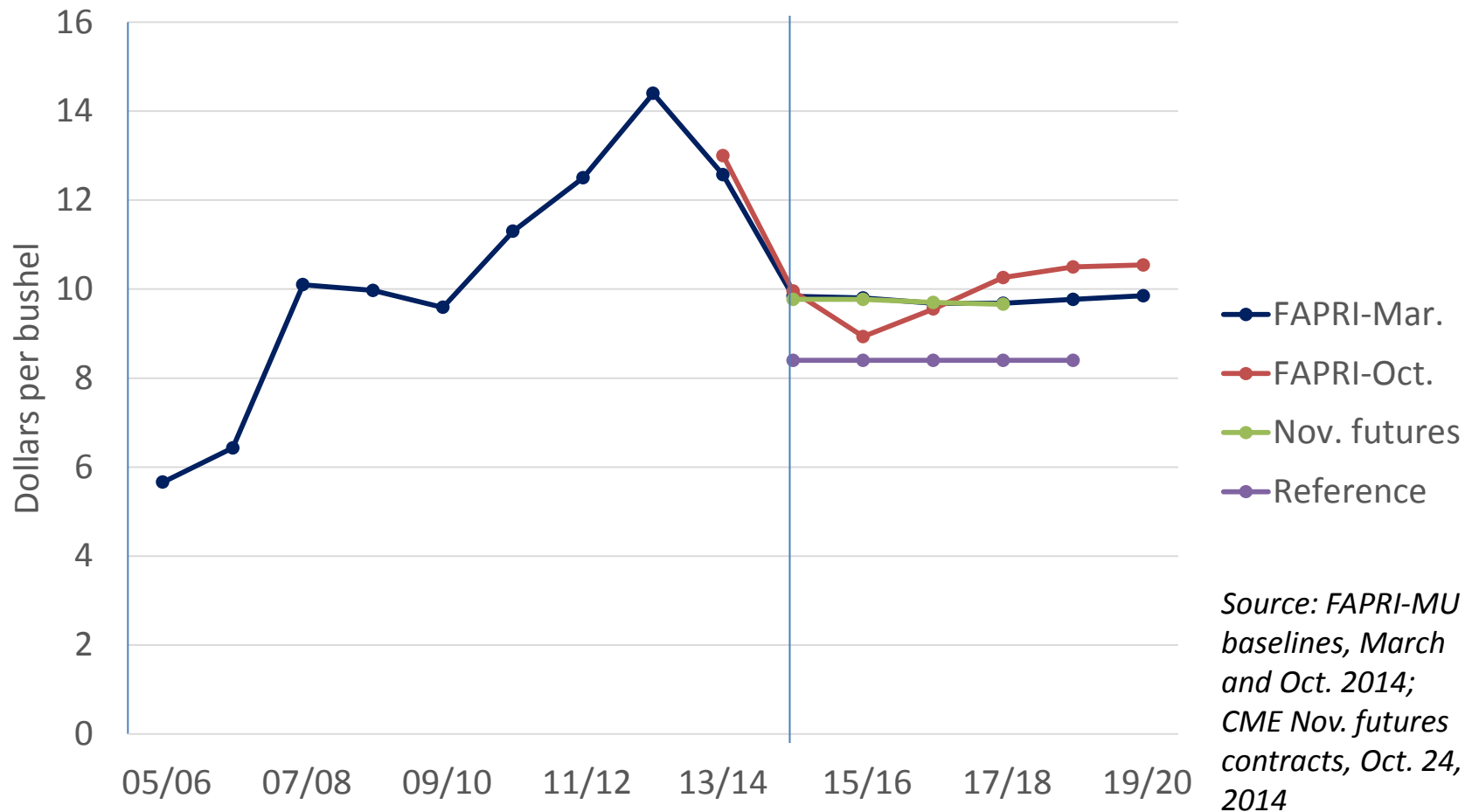
U.S. farm prices for soybeans



Source: FAPRI-MU
stochastic baseline,
March 2014

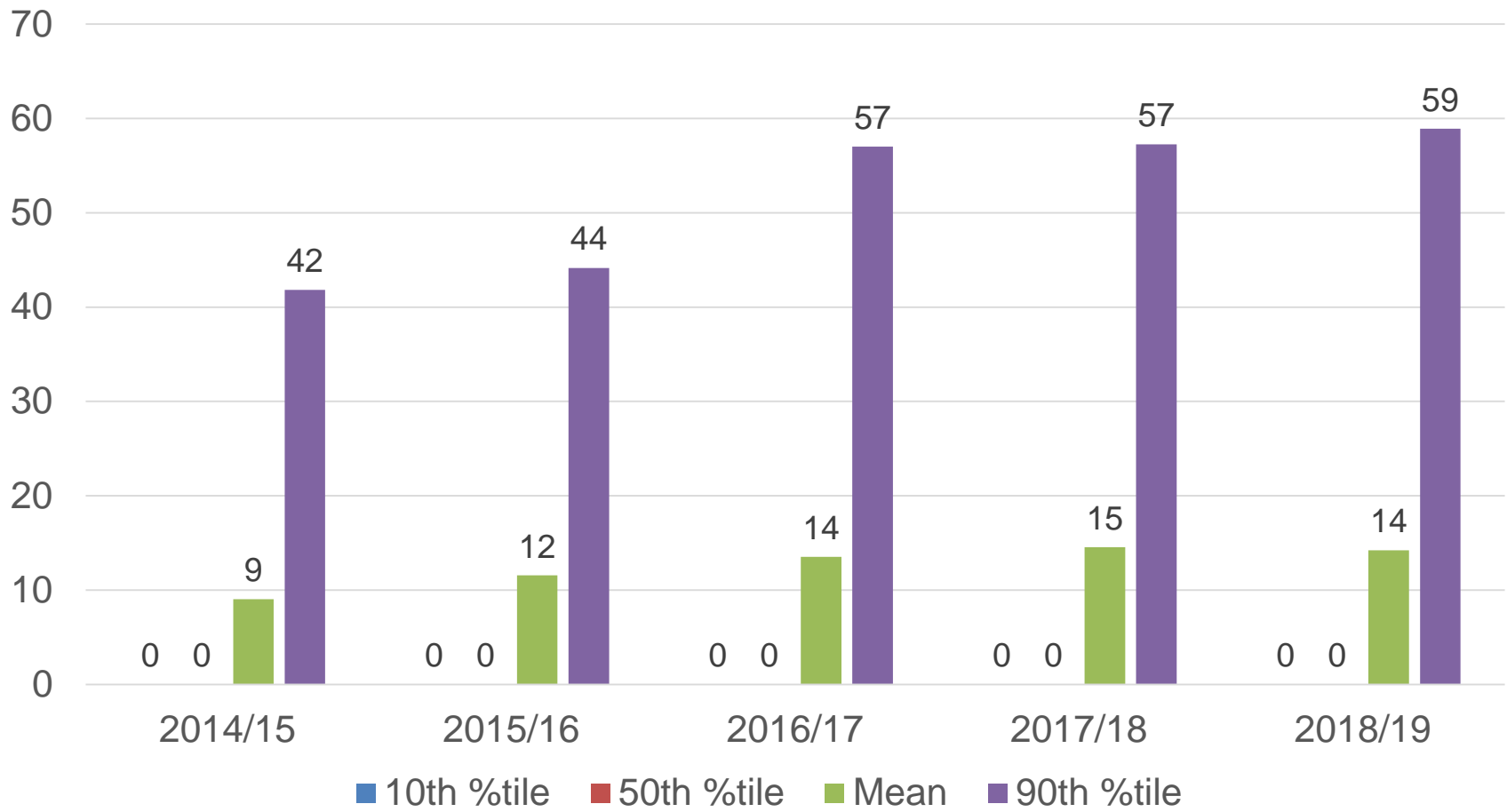


U.S. farm and futures prices for soybeans



Soybean PLC payments

(Dollars per base acre for participating producers)

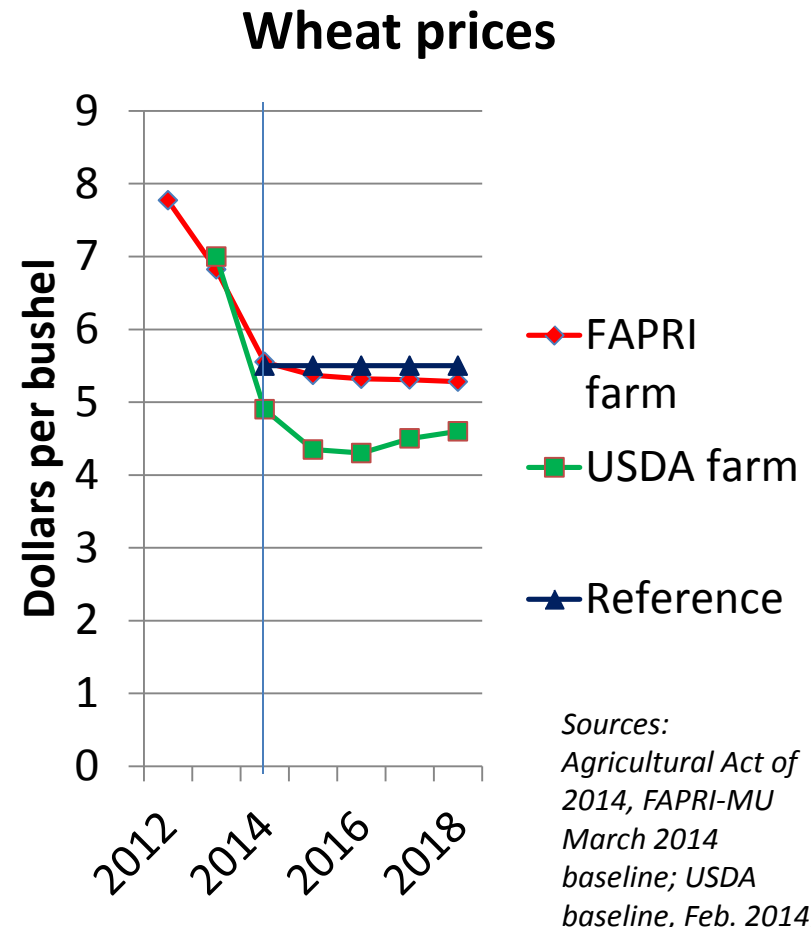


Source: FAPRI-MU March 2014 stochastic baseline

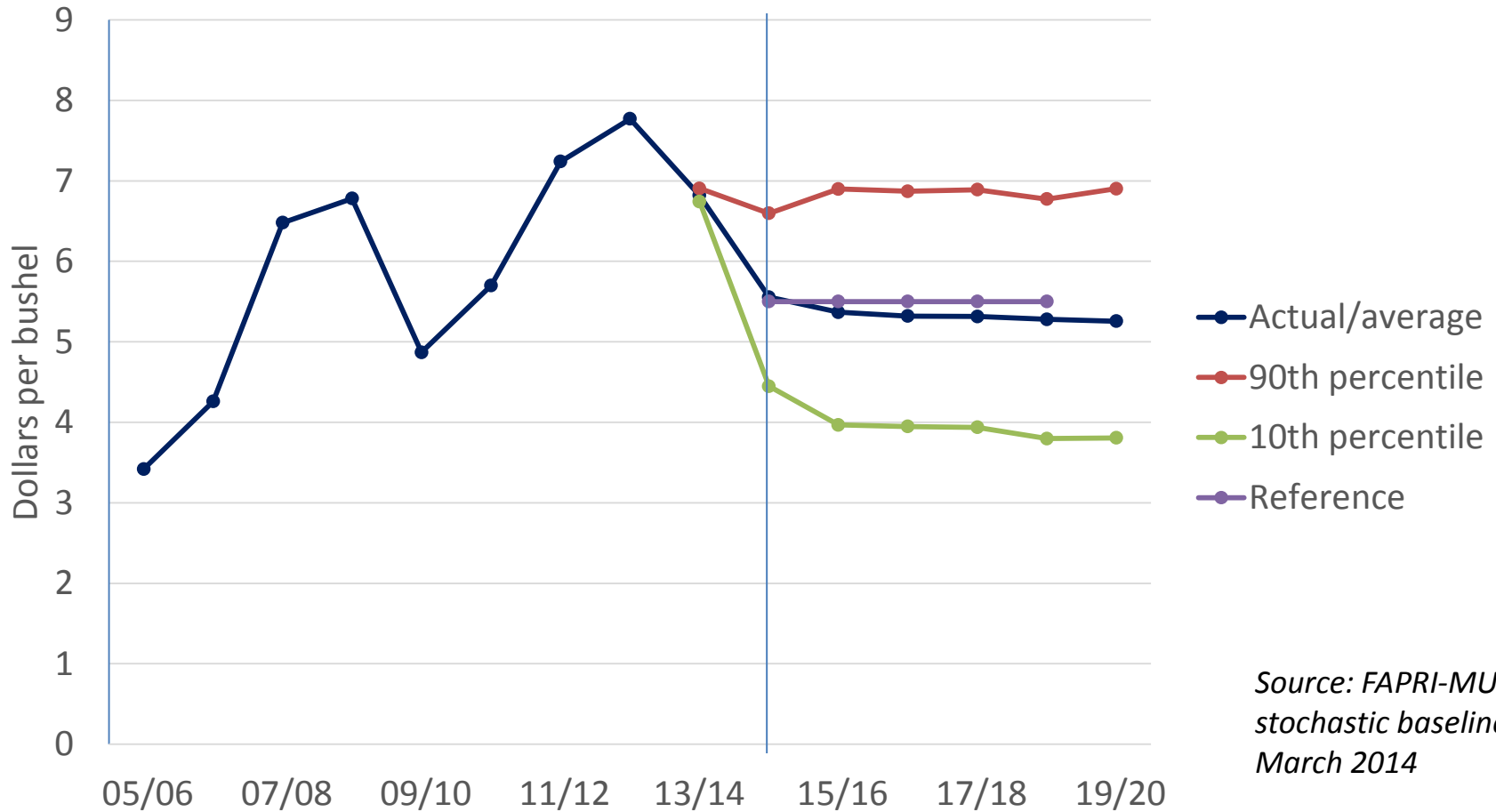


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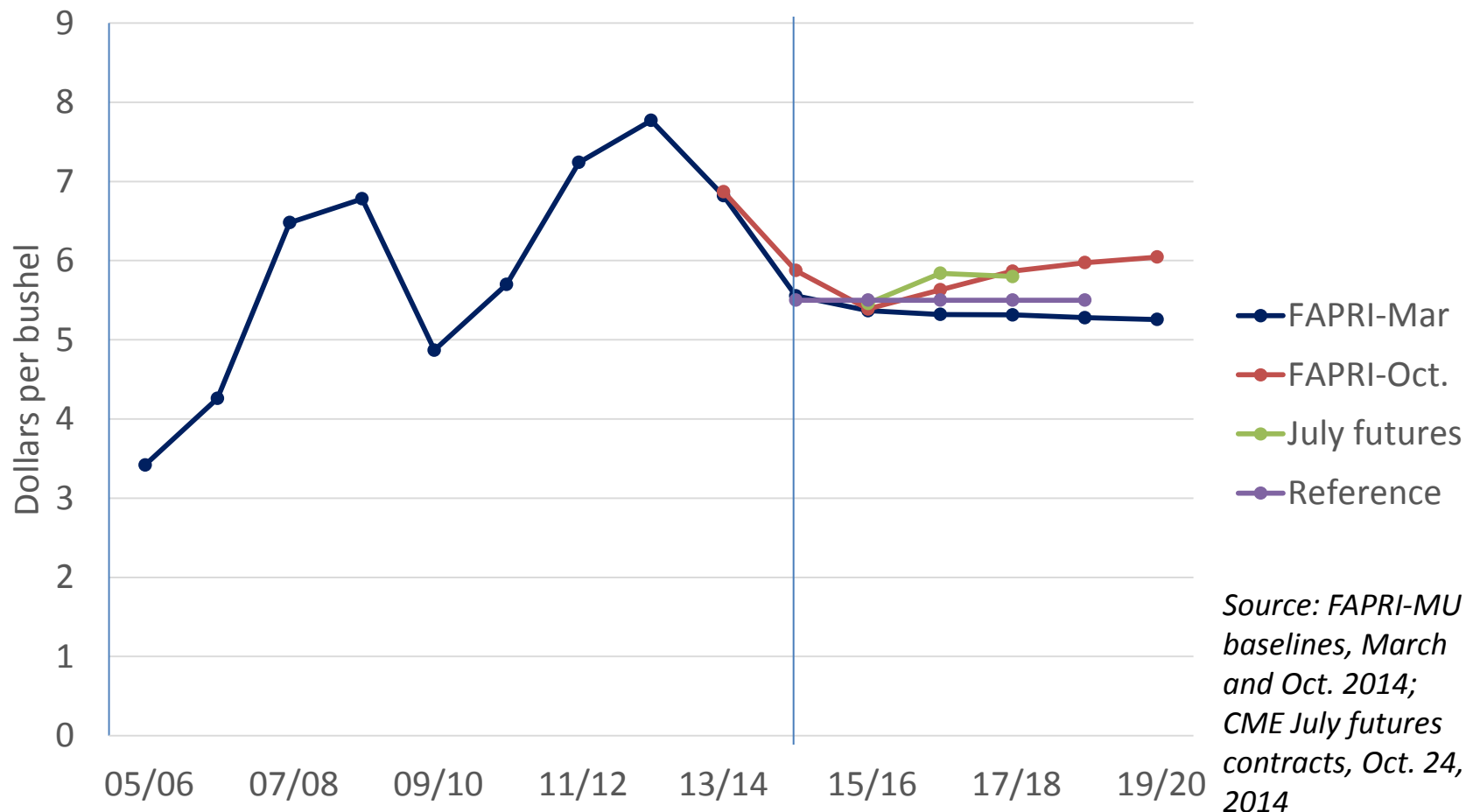
U.S. farm prices for wheat



Source: FAPRI-MU
stochastic baseline,
March 2014

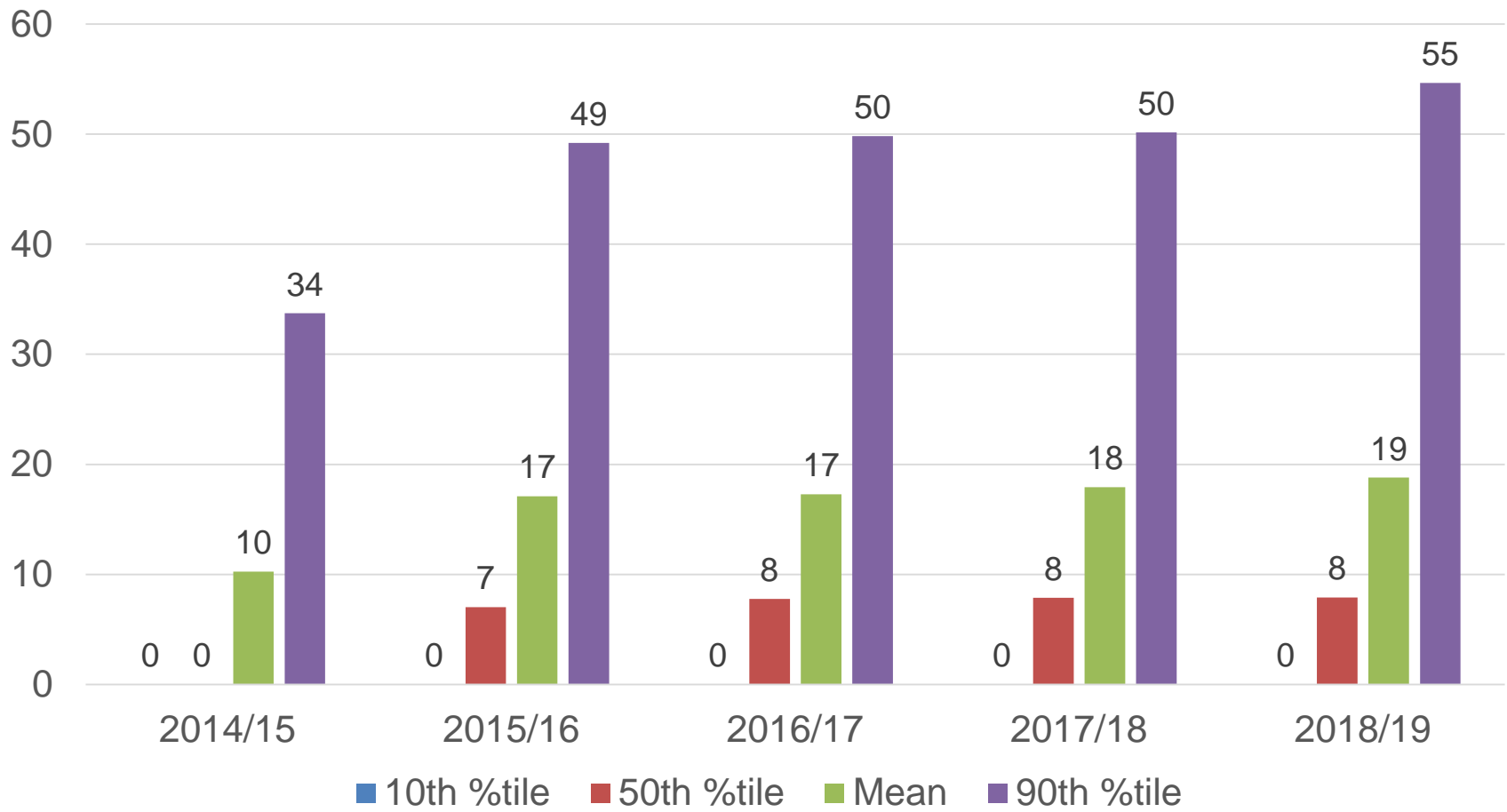


U.S. farm and futures prices for wheat



Wheat PLC payments

(Dollars per base acre for participating producers)

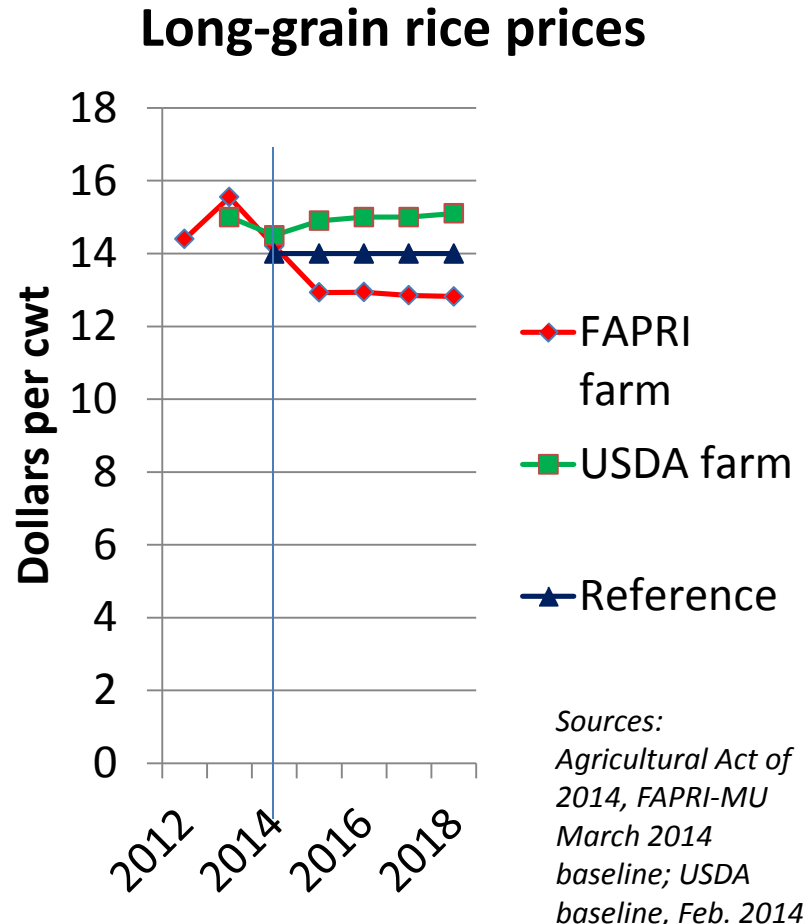


Source: FAPRI-MU March 2014 stochastic baseline

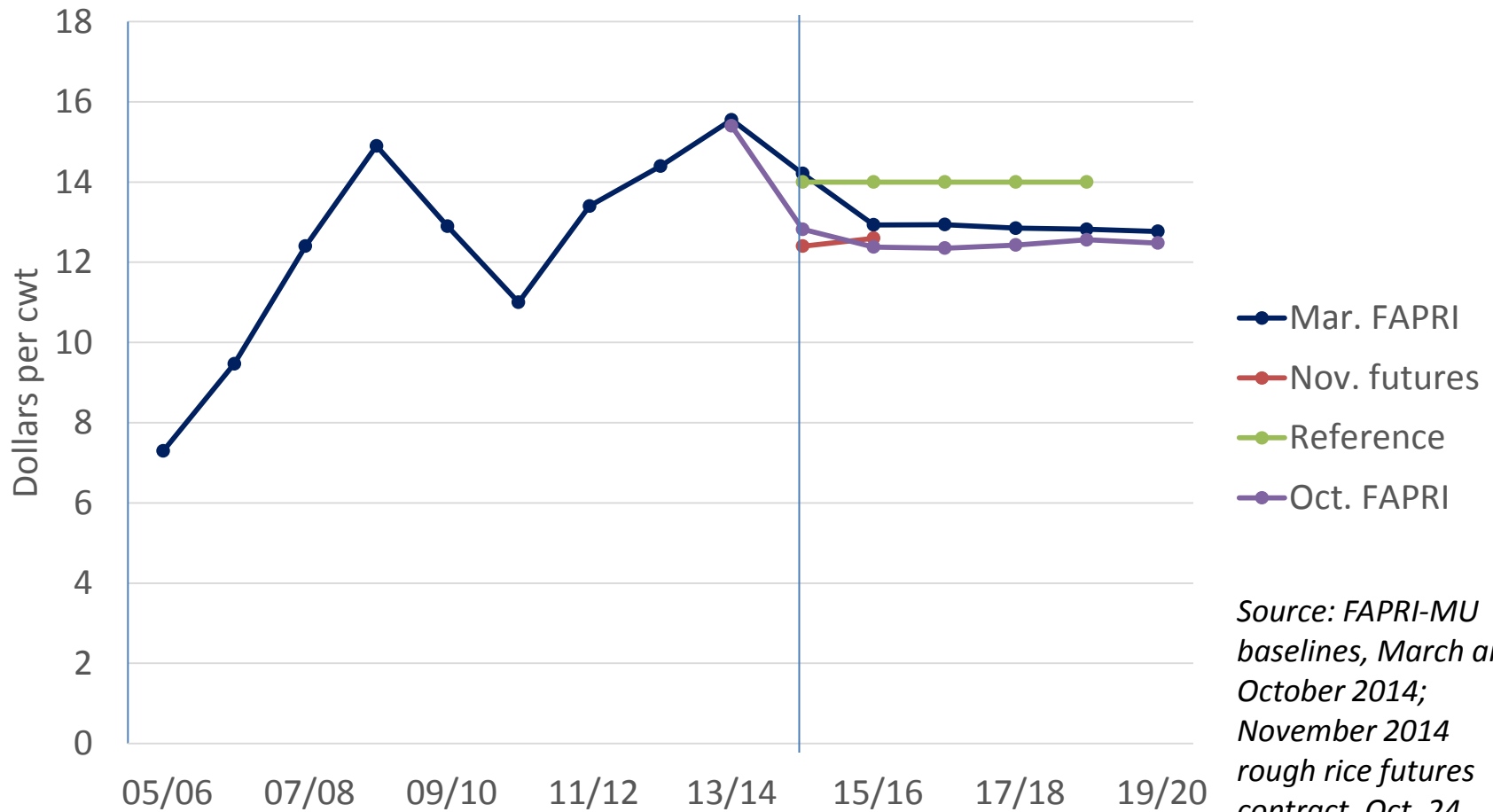


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 - Corn: \$3.70/bu.
 - Soybeans: \$8.40/bu.
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 - Long-grain rice: \$14.00/cwt.
 - Paid on 85% of base acres (tied to historical plantings)



U.S. farm prices for long-grain rice

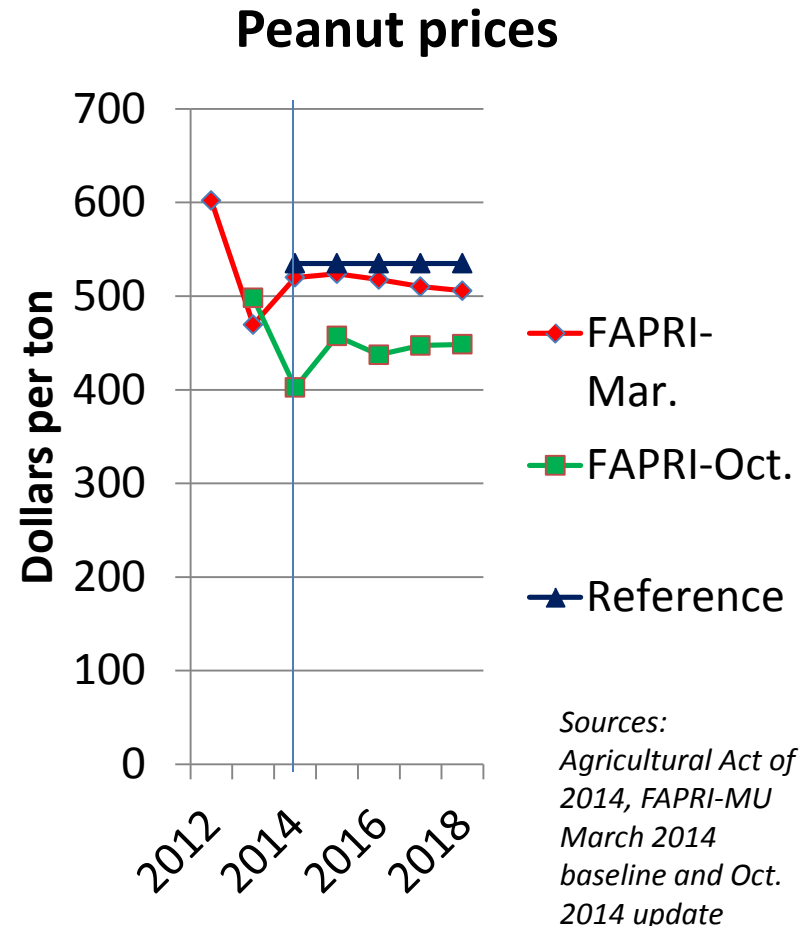


Source: FAPRI-MU
baselines, March and
October 2014;
November 2014
rough rice futures
contract, Oct. 24,
2014

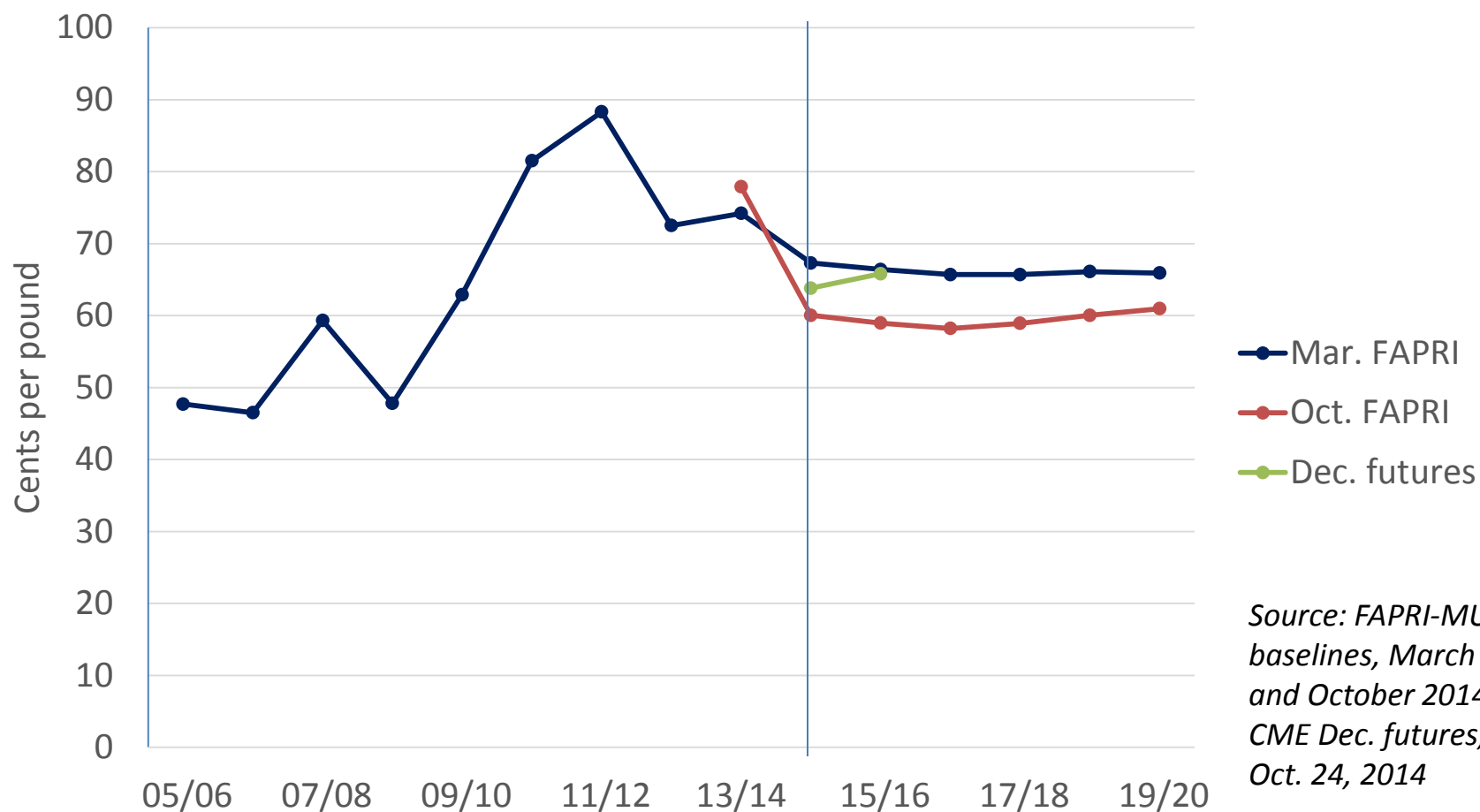


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U.S. farm prices for upland cotton

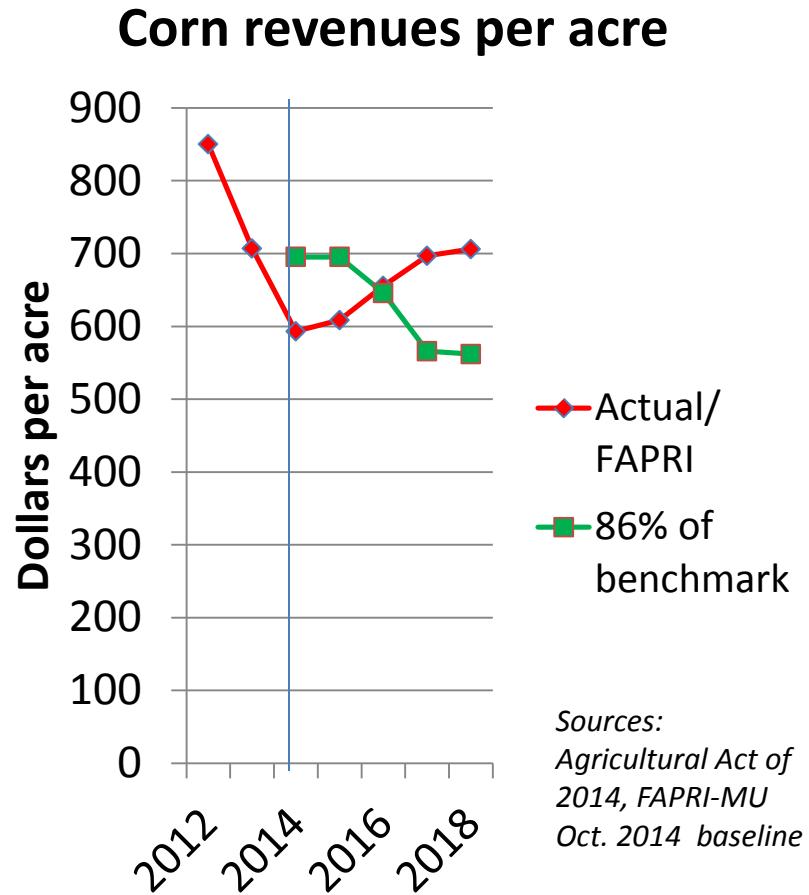


Source: FAPRI-MU
baselines, March
and October 2014;
CME Dec. futures,
Oct. 24, 2014



Revenue-based option for farm support

- Agriculture Risk Coverage (ARC)
 - Payment if per-acre revenues fall below trigger
 - For this example, using national yields, but actual program uses county- or farm-level yields
 - Paid on share of base acreage
 - 85% if choose county option
 - 65% if choose farm option (all crops on farm)



ARC-CO calculation example

Audrain Co., MO corn, using NASS yields

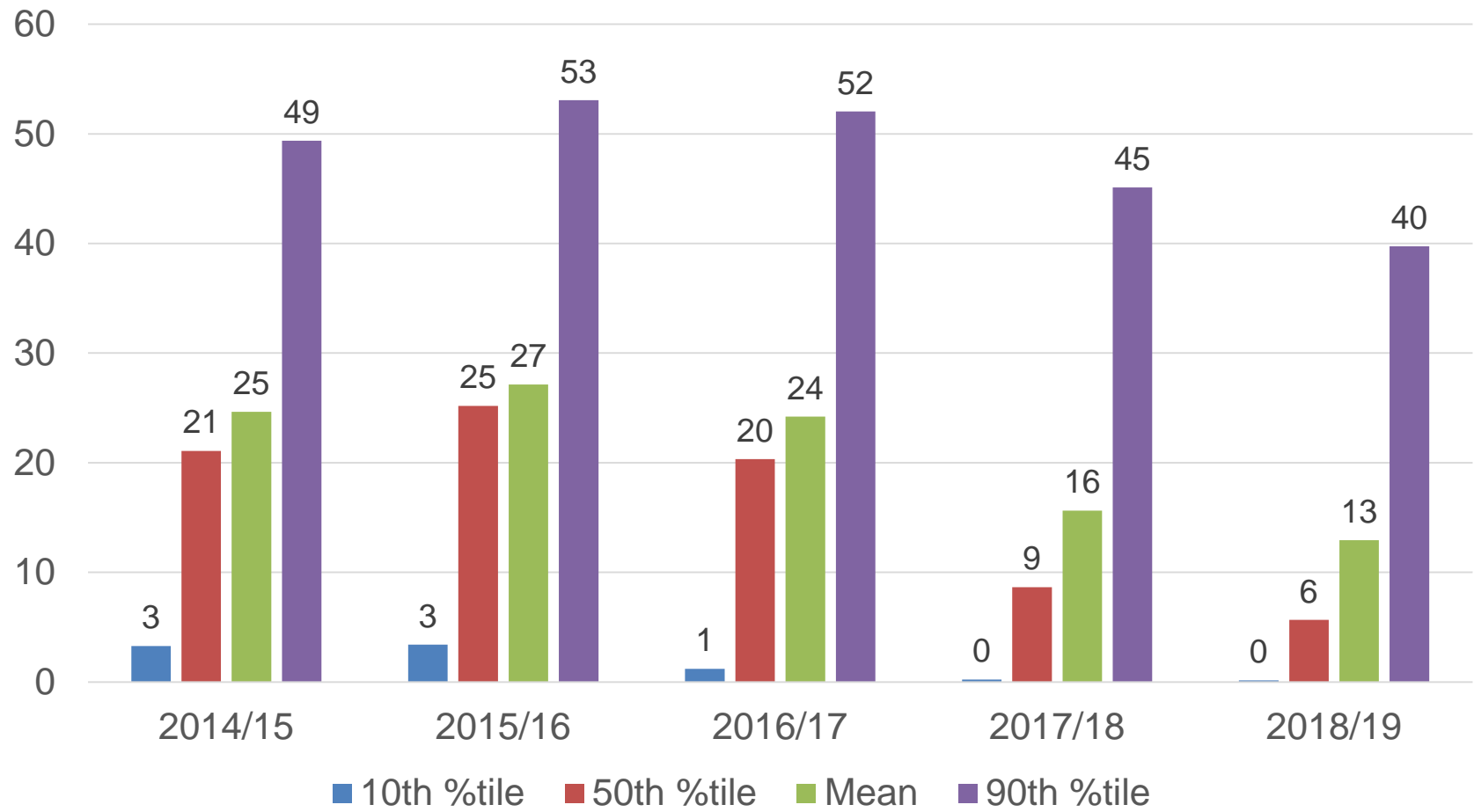
	Max of (national avg. farm price, reference price)	County yield	Revenue
2009/10	\$3.70/bu.	146.0 bu./a.	
2010/11	\$5.18	122.3	
2011/12	\$6.22	105.2	
2012/13	\$6.89	33.4*	
2013/14	\$4.46	124.3	
Olympic average	\$5.29	117.3	
2014/15 benchmark revenue			\$621
86% of benchmark			\$534
1 st option triggering payments	\$3.40	<157	<\$534
2 nd option triggering payments	<\$3.14	170	<\$534

*Note: this yield would be replaced by a plug yield, but regardless, it is dropped as the lowest of the five years.



Corn ARC payments

(Dollars per base acre for participating producers)

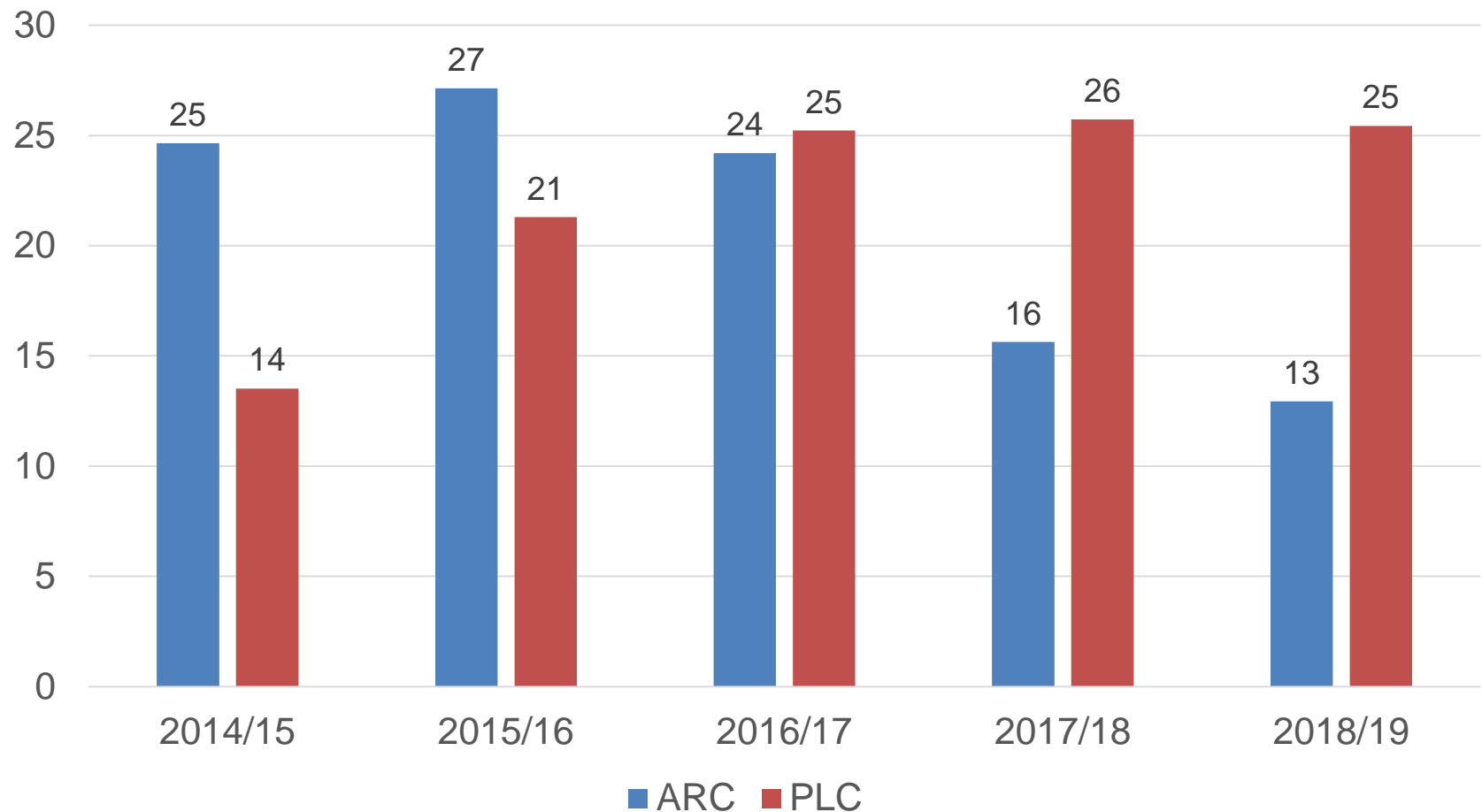


Source: FAPRI-MU March 2014 stochastic baseline



Avg. corn ARC and PLC payments

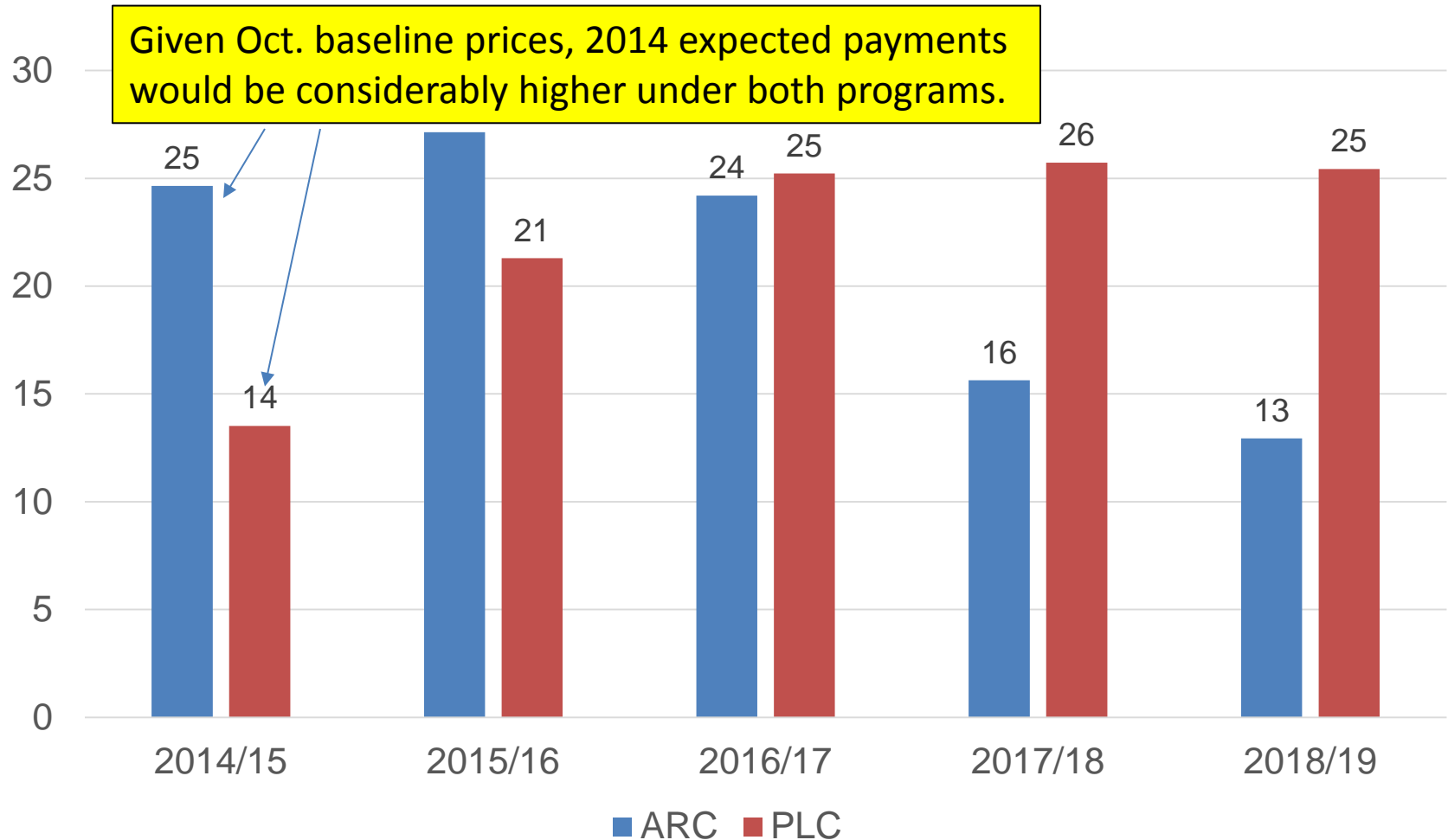
(Dollars per base acre for participating producers)



Source: FAPRI-MU March 2014 stochastic baseline



U.S. avg. corn ARC and PLC payments (Dollars per base acre for participating producers)

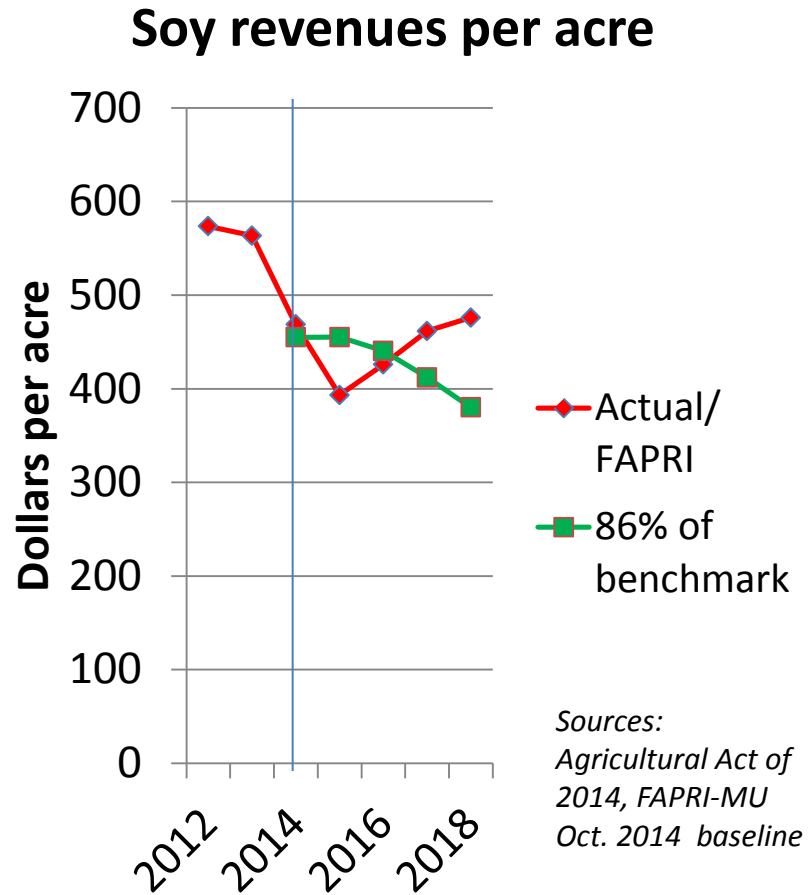


Source: FAPRI-MU March 2014 stochastic baseline

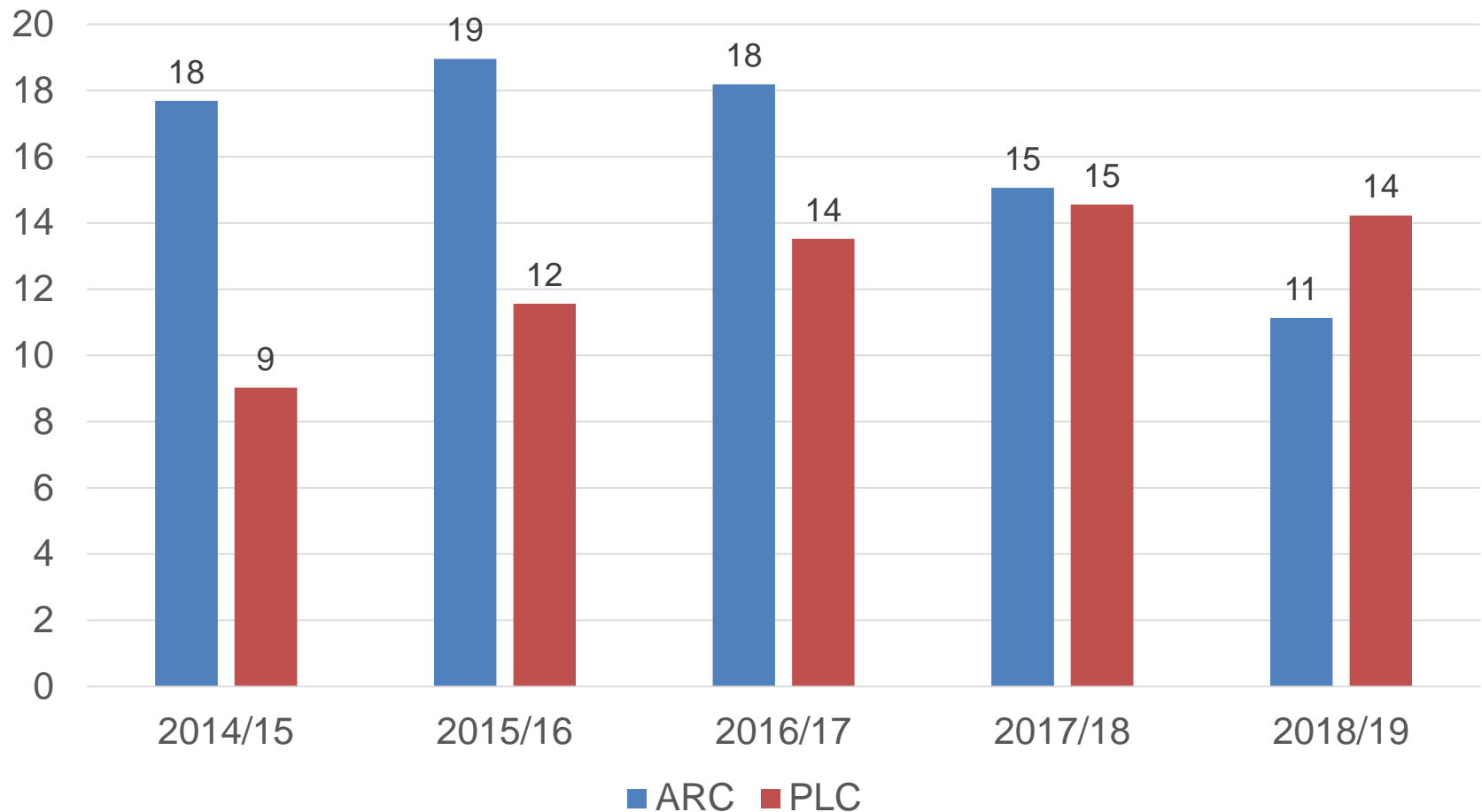


Revenue-based option for farm support

- Agriculture Risk Coverage (ARC)
 - Payment if per-acre revenues fall below trigger
 - For this example, using national yields, but actual program uses county- or farm-level yields
 - Paid on share of base acreage
 - 85% if choose county option
 - 65% if choose farm option (all crops on farm)



Avg. soybean ARC and PLC payments (Dollars per base acre for participating producers)

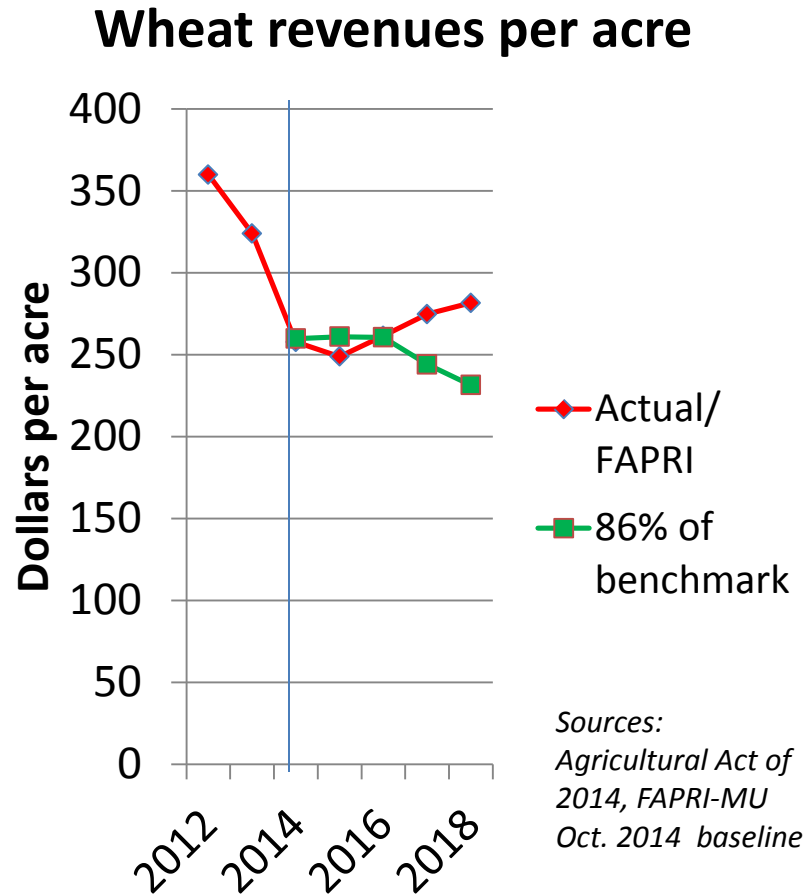


Source: FAPRI-MU March 2014 stochastic baseline

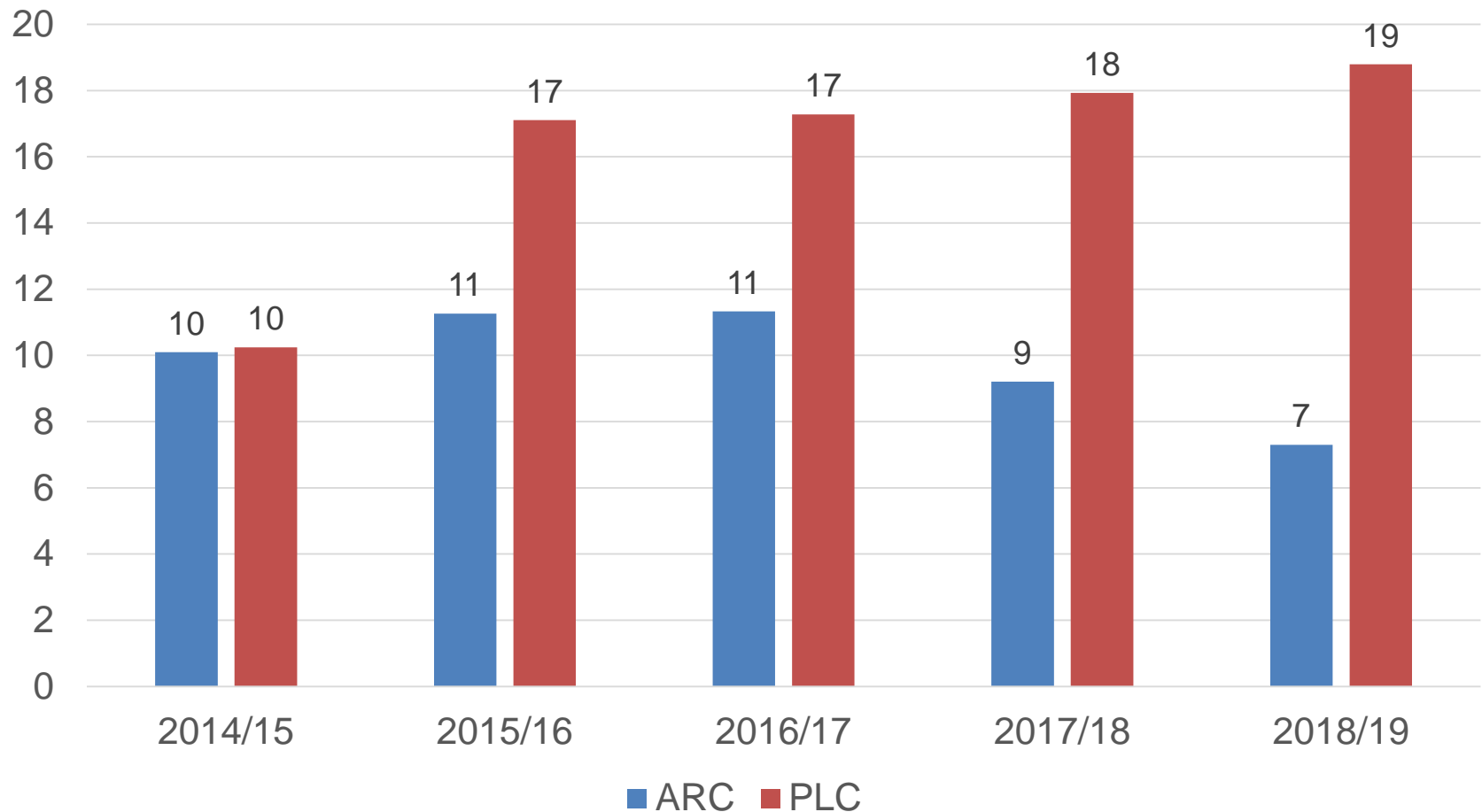


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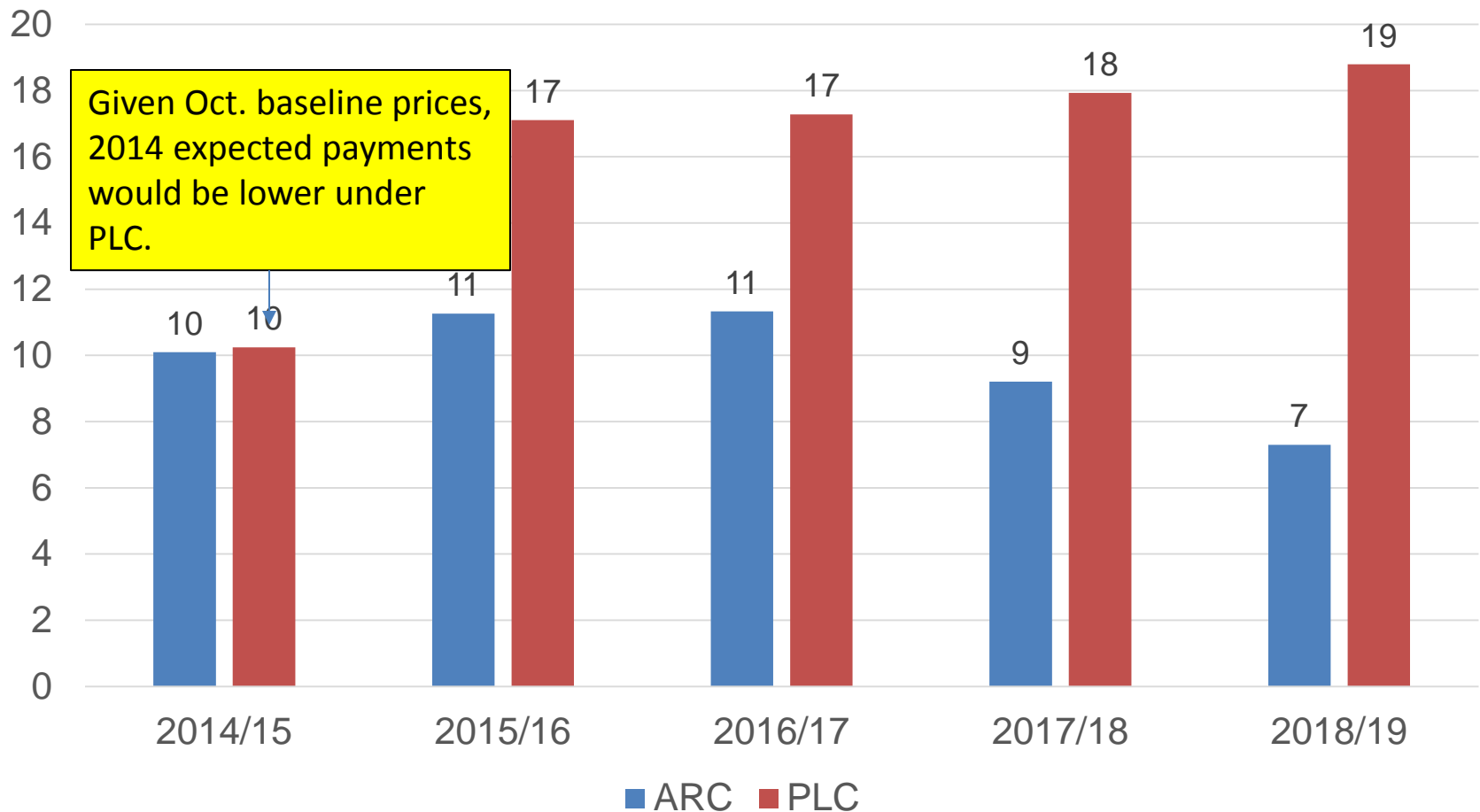
Avg. wheat ARC and PLC payments (Dollars per base acre for participating producers)



Source: FAPRI-MU March 2014 stochastic baseline



Avg. wheat ARC and PLC payments (Dollars per base acre for participating producers)

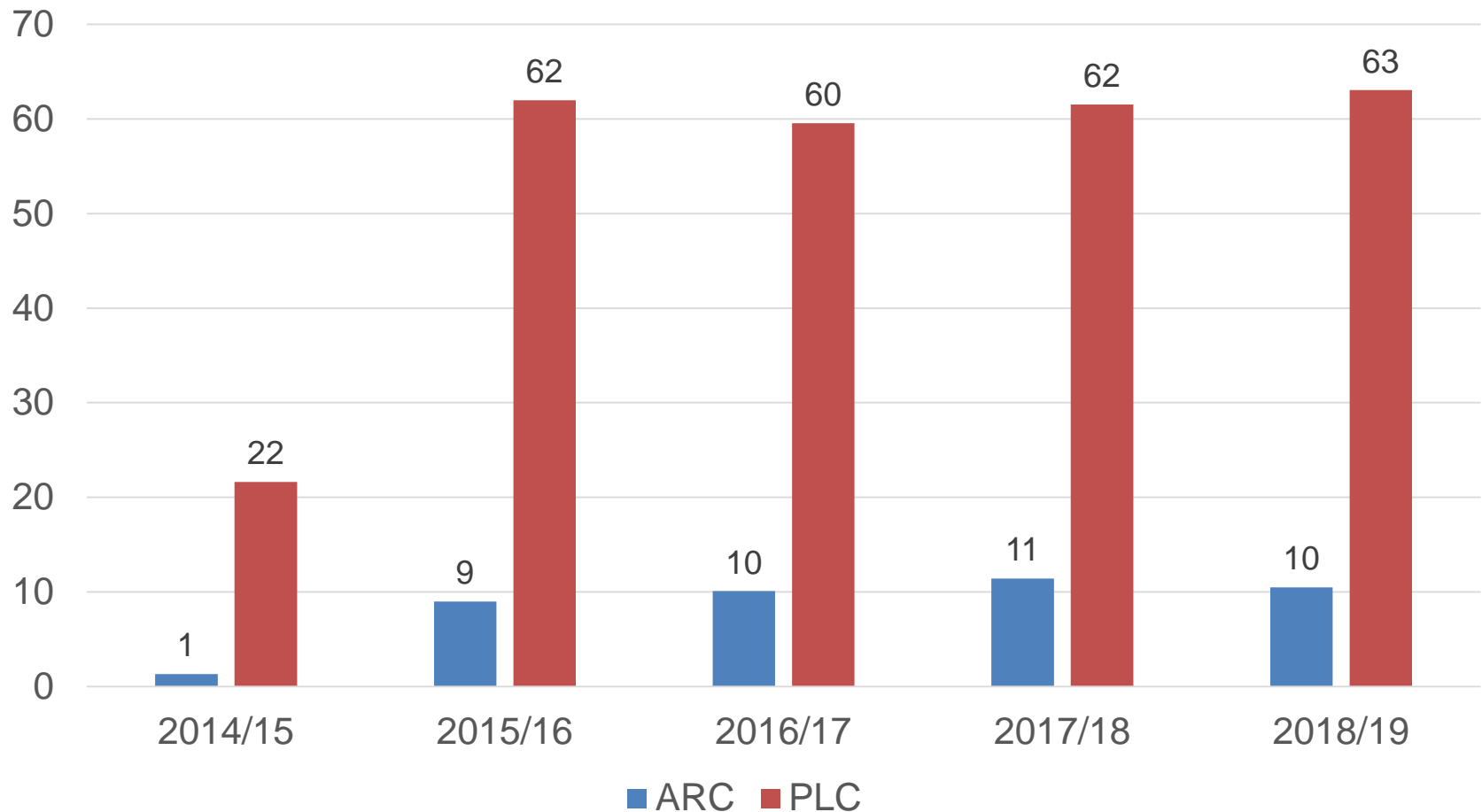


Source: FAPRI-MU March 2014 stochastic baseline



Avg. rice ARC and PLC payments

(Dollars per base acre for participating producers)

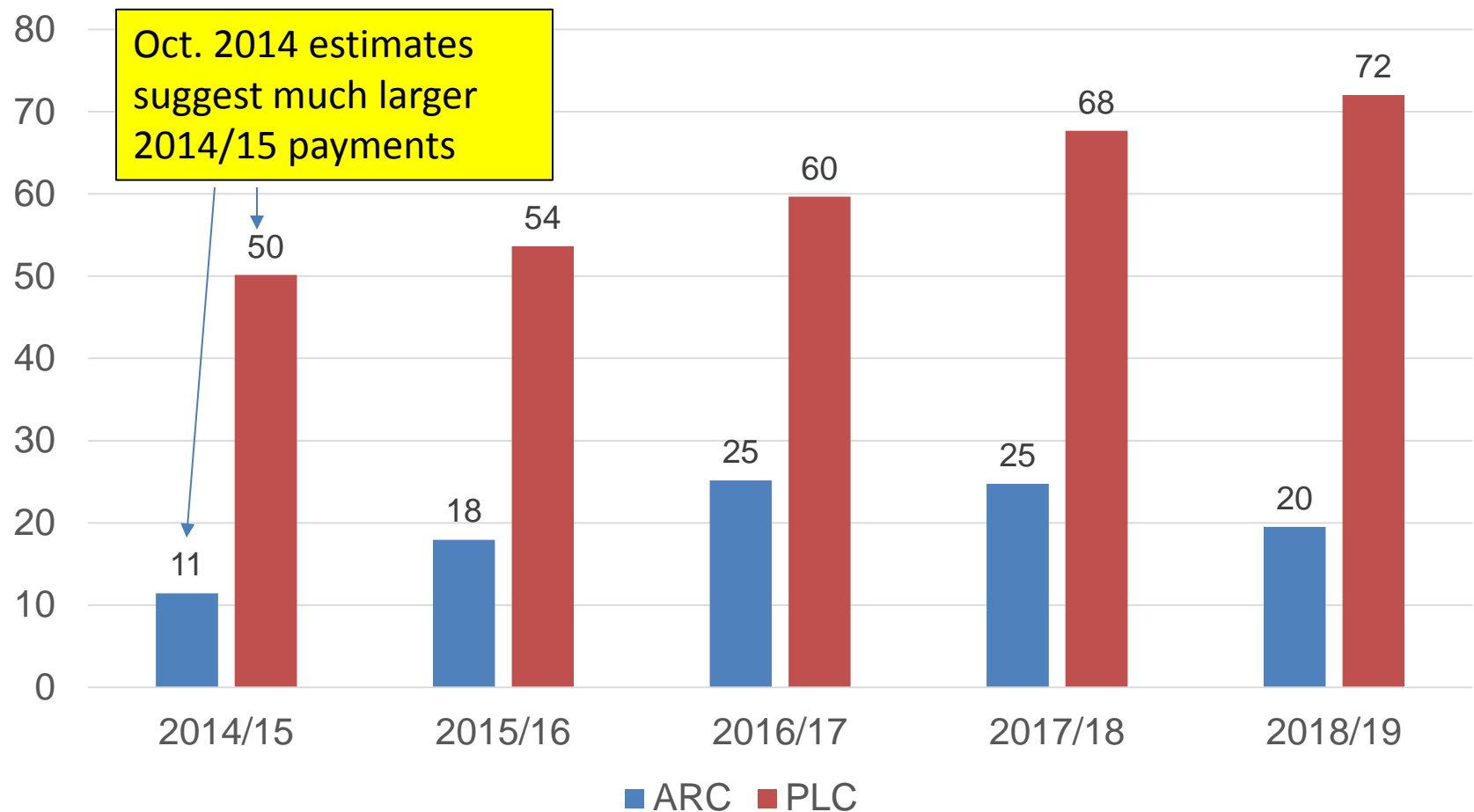


Source: FAPRI-MU March 2014 stochastic baseline



Avg. peanut ARC and PLC payments

(Dollars per base acre for participating producers)



Source: FAPRI-MU March 2014 stochastic baseline



Back to Audrain Co., MO corn

2014/15 crop year payments

2014/15 national season-average corn price	PLC payment per base acre (program yield= 100 bu./a.)	ARC payment per base acre if county yield is 130 bu./a.	ARC payment per base acre if county yield is 150 bu./a.	ARC payment per base acre if county yield is 170 bu./a.
3.00	\$59.50	\$52.74	\$52.74	\$20.10
3.20	\$42.50	\$52.74	\$45.60	\$0
3.40	\$25.50	\$52.74	\$20.10	\$0
3.60	\$8.50	\$52.74	\$0	\$0
3.80	\$0	\$33.70	\$0	\$0
4.00	\$0	\$11.60	\$0	\$0



Final comments

- No one knows what future prices will be
- But choices depend on expectations of future prices
 - Every year: which crops to plant
 - ARC/PLC and crop insurance choices
- Recommendations
 - Use the tools to look at payment implications of different assumptions about future average prices
 - In making program choices, think both about likely payments and about the risks you most want to manage



Thanks!

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