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Farm Service Agency's ARC vs. PLC on Wheat, Feedgrains and Soybeans¹

Marketing Year Average (MYA) wheat Price for 2013/14 was \$6.87, 2012/13 was \$7.77, 2011/12 was \$7.24, and 2010/11 was \$5.70. The MYA 2009/10 price was below the statute price for wheat of \$5.50, therefore the statute price was used as the 5th price to calculate the 5 year Olympic average price for setting 2014 Agriculture Risk Coverage (ARC) on wheat. The high year price of \$7.77 and the low price of \$5.50 was dropped from the Olympic average and then the Farm Service Agency (FSA) averaged the remaining 3 years of prices; \$6.87, \$7.24, and \$5.70 and then divided by 3 with a result equal to \$6.60. The \$6.60 price for ARC on wheat is final.

The current KSU estimated MYA wheat price for 2014/15 is \$6.17 and will be updated monthly based on the latest NASS prices and updated KSU estimates. Based on the current KSU estimate, the 5-year Olympic average wheat price will be higher in year 2 (MYA 2015/16) of the 5 year Farm Bill. This is because it is a moving Olympic average price and the MYA 2009/10 price drops out of the average. The 2010/11 MYA price of \$5.70 would be replaced with the higher price for 2014/15, currently estimated at \$6.17, and would increase the 3 year average above \$6.60. Half of the MYA price is determined in the first 3 months of the Marketing Year that starts on June 1. By signup, the estimate for the 2014/15 MYA wheat price will have less error because more of the NASS prices will have been published.

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There are clearly a range of prices for 2014/15 that will determine the ARC payment, if any, for the first year of the 5 year Farm Bill. Table 1 shows a combination of prices and county yields that would determine the ARC wheat payment for 2014. The ARC payment is limited to 10% of the reference revenue; 5 year Olympic average price times 5 year Olympic average yield.

The alternative is the Price Loss Coverage (PLC) program. If the current year's MYA price falls below the statute price of \$5.50, then farmers would be paid the difference. The PLC wheat reference price of \$5.50 does not change during the life of the Farm Bill.

Table 1 shows different possible payments for PLC and ARC on 2014 wheat. It will take a price below \$5.50 to trigger PLC payments on 2014 wheat. However, it will require a 2014 MYA wheat price below \$4.86 before PLC payments will exceed ARC payments with an average yield, unless the farmer's APH is above the ARC county average. The current KSU estimated price is \$6.17, but the 2014 price will be near final prior to sign-up. Based on this price estimate, it is unlikely that PLC will pay on 2014 wheat.

ARC is also not expected to pay on 2014 wheat unless the county yield is below average. However, the 2015 wheat reference price is expected to increase and make ARC more attractive.

PLC will be the preferred product if the wheat farmer expects very low prices in the later years. Wheat prices below \$5 will likely be required before PLC will be preferred to ARC. The other consideration is that farmers not enrolled in ARC are eligible to purchase additional crop insurance coverage under the Supplemental Coverage Option (SCO).

USDA has stated that farmers who later elect ARC will be allowed to cancel their SCO coverage prior to acreage reporting date. However, I would suggest one maintain or increase their basic crop insurance coverage before they add the SCO. If one were to later enroll in ARC, they would lose a large share of their coverage if they reduced their crop insurance coverage and shifted more of their coverage to SCO that is now cancelled.

Sorghum is a clear case for PLC. Sorghum has a "high" reference price of \$3.95. The PLC and ARC payments under different price and yield scenarios are presented in table 2. As shown in table 2, it will require low yields and prices above \$3.95 before ARC would pay more. For crop yields in 2015 and beyond, I think one has to assume average yields when making the enrollment decision.

Soybeans with an average yield will need a MYA price approaching \$7 before PLC will pay more than ARC. The last 3 years of the Farm Bill could find prices low enough to generate PLC payments greater than ARC but that appears

unlikely. The PLC and ARC soybean payments under different price and yields scenarios are presented in table 3.

Corn with an average yield will need a price below \$3.30 before PLC will pay more than ARC. A price that low is possible on the 2014 crop. However, the price is the Marketing Year Average price, and normally is higher than the harvest futures price that is used to settle crop insurance claims. The PLC and ARC corn payments under different price and yield scenarios are presented in table 3.

Large corn-soybean farmers might want to consider putting their soybeans in ARC and their corn in PLC. If they are large, then if one of those programs makes a large payment, they are likely to hit the payment limit of \$125,000. Once a farmer has hit the payment limit, then the fact that one of the other programs paid more does not matter.

These commodity programs and their outcomes will be covered in great detail during the Risk and Profit Conference. I encourage farmers and other to take advantage of this educational program. Farmers and others who would like to register by credit card need to click on the link:

<http://commerce.cashnet.com/KSUAGECON>

More information is available at:

http://www.agmanager.info/events/risk_profit/2014/default.asp

Table 1. Wheat ARC Payments vs. PLC Payments Under Different Yields and Prices for 2014/15 Marketing Year

			ARC	PLC						
5 Yr. Olympic Avg. County/Prog. yield/APH			35	35						
5 Yr. Oly. Avg. MYA (Final Wheat Reference Price)			\$6.60	N/A						
Reference Revenue/Price/Crop Ins. Price			\$231	\$5.50						
% MYA										
Price	Price/	% Yd loss	(41%)	(34%)	(27%)	(19%)	(10%)	%	10%	20%
Loss	Pynt Yr	Yield	21	23	26	28	32	35	39	42
PLC Pymt			←-----ARC Payment-----→							
20%	\$7.92	\$0.00	\$23.10	\$16.79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
10%	\$7.26	\$0.00	\$23.10	\$23.10	\$13.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
%	\$6.60	\$0.00	\$23.10	\$23.10	\$23.10	\$11.55	\$0.00	\$0.00	\$0.00	\$0.00
(3%)	\$6.44	\$0.00	\$23.10	\$23.10	\$23.10	\$16.23	\$0.00	\$0.00	\$0.00	\$0.00
(5%)	\$6.27	\$0.00	\$23.10	\$23.10	\$23.10	\$20.79	\$1.03	\$0.00	\$0.00	\$0.00
(7%)	\$6.12	\$0.00	\$23.10	\$23.10	\$23.10	\$23.10	\$5.97	\$0.00	\$0.00	\$0.00
(10%)	\$5.96	\$0.00	\$23.10	\$23.10	\$23.10	\$23.10	\$10.78	\$0.00	\$0.00	\$0.00
(12%)	\$5.82	\$0.00	\$23.10	\$23.10	\$23.10	\$23.10	\$15.48	\$0.00	\$0.00	\$0.00
(14%)	\$5.67	\$0.00	\$23.10	\$23.10	\$23.10	\$23.10	\$20.06	\$0.22	\$0.00	\$0.00
(16%)	\$5.53	\$0.00	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$5.18	\$0.00	\$0.00
(18%)	\$5.39	\$3.85	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$10.01	\$0.00	\$0.00
(22%)	\$5.12	\$13.29	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$19.45	\$1.52	\$0.00
(26%)	\$4.86	\$22.25	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$11.38	\$0.00
(30%)	\$4.62	\$30.76	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$20.75	\$4.57
(33%)	\$4.39	\$38.85	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$14.28
(37%)	\$4.17	\$46.53	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10
(40%)	\$3.96	\$53.83	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10	\$23.10

Table 2. Sorghum ARC Payments vs. PLC Payments Under Different Yields and Prices for 2014/15 Marketing Year

		ARC	PLC								
5 Yr. Olympic Avg. County/Prog. yield/APH		70	70								
5 Yr. Oly. Avg. MYA (Est. Sorghum Reference Price)		\$4.20	N/A								
Reference Revenue/Price/Crop Ins. Price		\$294	\$3.95								
%	MYA										
Price	Price/	% Yd loss	(41%)	(34%)	(27%)	(19%)	(10%)	%	10%	20%	
Loss	Pymt Yr	Yield	41	46	51	57	63	70	77	84	
		PLC Pymt	-----ARC Payment-----								
20%	\$5.04	\$0.00	\$29.40	\$21.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
10%	\$4.62	\$0.00	\$29.40	\$29.40	\$17.08	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
%	\$4.20	\$0.00	\$29.40	\$29.40	\$29.40	\$14.70	\$0.00	\$0.00	\$0.00	\$0.00	
(2%)	\$4.12	\$0.00	\$29.40	\$29.40	\$29.40	\$19.46	\$0.00	\$0.00	\$0.00	\$0.00	
(4%)	\$4.03	\$0.00	\$29.40	\$29.40	\$29.40	\$24.13	\$0.00	\$0.00	\$0.00	\$0.00	
(6%)	\$3.95	\$0.00	\$29.40	\$29.40	\$29.40	\$28.70	\$3.80	\$0.00	\$0.00	\$0.00	
(8%)	\$3.87	\$5.32	\$29.40	\$29.40	\$29.40	\$29.40	\$8.78	\$0.00	\$0.00	\$0.00	
(10%)	\$3.80	\$10.75	\$29.40	\$29.40	\$29.40	\$29.40	\$13.66	\$0.00	\$0.00	\$0.00	
(11%)	\$3.72	\$16.06	\$29.40	\$29.40	\$29.40	\$29.40	\$18.45	\$0.00	\$0.00	\$0.00	
(13%)	\$3.65	\$21.27	\$29.40	\$29.40	\$29.40	\$29.40	\$23.13	\$0.00	\$0.00	\$0.00	
(15%)	\$3.57	\$26.38	\$29.40	\$29.40	\$29.40	\$29.40	\$27.73	\$2.72	\$0.00	\$0.00	
(17%)	\$3.50	\$31.38	\$29.40	\$29.40	\$29.40	\$29.40	\$29.40	\$7.72	\$0.00	\$0.00	
(18%)	\$3.43	\$36.28	\$29.40	\$29.40	\$29.40	\$29.40	\$29.40	\$12.62	\$0.00	\$0.00	
(20%)	\$3.36	\$41.08	\$29.40	\$29.40	\$29.40	\$29.40	\$29.40	\$17.42	\$0.00	\$0.00	
(22%)	\$3.30	\$45.79	\$29.40	\$29.40	\$29.40	\$29.40	\$29.40	\$22.13	\$0.00	\$0.00	
(23%)	\$3.23	\$50.41	\$29.40	\$29.40	\$29.40	\$29.40	\$29.40	\$26.75	\$4.14	\$0.00	
(25%)	\$3.17	\$54.93	\$29.40	\$29.40	\$29.40	\$29.40	\$29.40	\$29.40	\$9.11	\$0.00	

Table 3. Soybean ARC Payments vs. PLC Payments Under Different Yields and Prices for 2014/15 Marketing Year

			ARC	PLC						
5 Yr. Olympic Avg. County/Prog. yield/APH			40	40						
5 Yr. Oly. Avg. MYA (Est. Soybean Reference Price)			\$13.03	N/A						
Reference Revenue/Price/Crop Ins. Price			\$521	\$8.40						
% MYA										
Price	Price/	% Yd loss	(41%)	(34%)	(27%)	(19%)	(10%)	%	10%	20%
Loss	Pynt Yr	Yield	24	26	29	32	36	40	44	48
PLC Pymt			-----ARC Payment-----							
20%	\$15.64	\$0.00	\$52.12	\$37.88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
10%	\$14.33	\$0.00	\$52.12	\$52.12	\$30.28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
%	\$13.03	\$0.00	\$52.12	\$52.12	\$52.12	\$26.06	\$0.00	\$0.00	\$0.00	\$0.00
(5%)	\$12.38	\$0.00	\$52.12	\$52.12	\$52.12	\$47.17	\$2.61	\$0.00	\$0.00	\$0.00
(10%)	\$11.76	\$0.00	\$52.12	\$52.12	\$52.12	\$52.12	\$24.89	\$0.00	\$0.00	\$0.00
(14%)	\$11.17	\$0.00	\$52.12	\$52.12	\$52.12	\$52.12	\$46.05	\$1.37	\$0.00	\$0.00
(19%)	\$10.61	\$0.00	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$23.71	\$0.00	\$0.00
(23%)	\$10.08	\$0.00	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$44.94	\$4.61	\$0.00
(26%)	\$9.58	\$0.00	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$26.79	\$0.00
(30%)	\$9.10	\$0.00	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$47.86	\$11.46
(34%)	\$8.64	\$0.00	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$33.30
(37%)	\$8.21	\$7.51	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12
(40%)	\$7.80	\$23.94	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12
(43%)	\$7.41	\$39.54	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12
(46%)	\$7.04	\$54.36	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12
(49%)	\$6.69	\$68.45	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12
(51%)	\$6.35	\$81.82	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12	\$52.12

Table 4. Corn ARC Payments vs. PLC Payments Under Different Yields and Prices for 2014/15 Marketing Year

			ARC	PLC							
5 Yr. Olympic Avg. County/Prog. yield/APH			140	140							
5 Yr. Olympic Avg. MYA (Est. Corn Reference Price)			\$4.46	N/A							
Reference Revenue/Price/Crop Ins. Price			\$624	\$3.70							
%	MYA										
Price	Price/	% Yd loss	(41%)	(34%)	(27%)	(19%)	(10%)	%	10%	20%	
Loss	Pymt Yr	Yield	83	92	102	113	126	140	154	168	
			PLC Pymt <-----ARC Payment----->								
20%	\$5.35	\$0.00	\$62.44	\$45.38	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
10%	\$4.91	\$0.00	\$62.44	\$62.44	\$36.28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
%	\$4.46	\$0.00	\$62.44	\$62.44	\$62.44	\$31.22	\$0.00	\$0.00	\$0.00	\$0.00	
(3%)	\$4.35	\$0.00	\$62.44	\$62.44	\$62.44	\$43.86	\$0.00	\$0.00	\$0.00	\$0.00	
(5%)	\$4.24	\$0.00	\$62.44	\$62.44	\$62.44	\$56.19	\$2.77	\$0.00	\$0.00	\$0.00	
(7%)	\$4.13	\$0.00	\$62.44	\$62.44	\$62.44	\$62.44	\$16.13	\$0.00	\$0.00	\$0.00	
(10%)	\$4.03	\$0.00	\$62.44	\$62.44	\$62.44	\$62.44	\$29.15	\$0.00	\$0.00	\$0.00	
(12%)	\$3.93	\$0.00	\$62.44	\$62.44	\$62.44	\$62.44	\$41.84	\$0.00	\$0.00	\$0.00	
(14%)	\$3.83	\$0.00	\$62.44	\$62.44	\$62.44	\$62.44	\$54.22	\$0.58	\$0.00	\$0.00	
(16%)	\$3.74	\$0.00	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$13.99	\$0.00	\$0.00	
(18%)	\$3.64	\$8.08	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$27.07	\$0.00	\$0.00	
(22%)	\$3.46	\$33.58	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$52.56	\$4.12	\$0.00	
(26%)	\$3.29	\$57.80	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$30.76	\$0.00	
(30%)	\$3.12	\$80.81	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$56.07	\$12.36	
(33%)	\$2.97	\$102.67	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$38.59	
(37%)	\$2.82	\$123.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	
(40%)	\$2.68	\$143.16	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	\$62.44	