



Cooperative Extension Service

User's Guide for Interactive PLC, ARC, and LDP in Excel

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Estimating PLC, ARC, and LDP

Receipts from government programs for Price Loss Coverage (PLC), Agricultural Risk Coverage (ARC), and Loan Deficiency Payments (LDP) are potential revenue for farms when realized prices or yields are below legislated threshold levels. Table 1 presents variables for data entry and calculations of PLC payments and ARC payments by the interactive Excel program. White cells indicate variables for data entry by users, and colored cells are calculated by the interactive program.

The program contains a worksheet as presented in Table 1 for owned or land cash rented and a worksheet for land that is share rented. Users enter the expected national price in the sections for PLC and ARC. For ARC, users enter the expected county yield. Farm PLC payment yields and county Olympic average yields for ARC may be entered directly. As an alternative, annual yields may be entered in the lower sections of Table 1, and the program will transfer the calculated yields into the proper sections for PLC and ARC calculations. Users may directly enter Olympic national prices for ARC calculations. As an alternative, the interactive program contains a worksheet as presented in Table 2 for calculating Olympic average national prices that will be transferred to Table 1 for ARC calculations. Olympic average national prices are calculated in line 19 of Table 2. Users should note that once PLC payment yields, Olympic average county yields, or Olympic average national prices are entered directly, the capability for the interactive program to transfer these calculations is voided and values must be entered manually.

Users enter the number of payment acres (base acres) for each crop according to the program in which the crop is enrolled. Crops with no acreage in a program should be entered with 0 acres. For owned land or land cash rented, the share percent should be entered as 100%. For the share rent worksheet, the share percent should be entered according to the rental agreement. The totals for PLC payments and ARC payments are transferred to the worksheet for ARC national price presented as Table 2.

Table 1. Data Entry and Calculations for PLC and ARC

Price Loss Coverage									Agricultural Risk Coverage (County)								
Price and Yield	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Wheat	Total	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Wheat	Total	
National Price	4.00	10.00	5.00	6.50	4.50	450.00	5.75		4.00	10.00	5.00	6.50	4.50	450.00	5.75		
County Yield, Planted, Actual									200.0	60.0	180.0	180.0	90.0	2,000.0	50.0		
Olympic Average County Yield, Planted									174.5	46.9	160.9	160.9	66.9	1,721.3	48.9		
Olympic Average National Price									5.29	12.27	6.38	6.72	5.10	557.33	6.70		
Payment Yield	139.6	41.4	135.9	135.9	53.4	1,549.2	40.4										
Payment Acres (Base Acres)	0	0	200	0	0	0	0		0	200	0	0	0	0	0		
Share Percent	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	100%	100%		
Payment (PLC or ARC)	0	0	30,035	0	0	0	0	30,035	0	0	0	0	0	0	0	0	
Payment Rate	0.00	0.00	1.30	0.00	0.00	85.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Maximum Payment Rate, if Applicable									92.27	57.51	102.60	108.15	34.10	95.94	32.77		
Reference Price	3.70	8.40	6.30	6.30	3.95	535.00	5.50		3.70	8.40	6.30	6.30	3.95	535.00	5.50		
Effective Price	4.00	10.00	5.00	6.50	4.50	450.00	5.75										
ARC Guarantee									793.52	494.57	882.34	930.09	293.29	825.05	281.83		
Benchmark Revenue									922.69	575.08	1,025.98	1,081.50	341.03	959.36	327.71		
Benchmark Component (ARC Individual)																	
Actual Crop Revenue									800.00	600.00	900.00	1,170.00	405.00	900.00	287.50		
Revenue Component (ARC Individual)																	
National Loan Rate	1.95	5.00	2.93	2.93	1.95	355.00	2.94		1.95	5.00	2.93	2.93	1.95	355.00	2.94		

Year	Farm Yield							County Yield						
	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Wheat	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Wheat
2014								200.2	55.8	180.2	180.2	91.2	1,721.3	53.5
2013								192.9	44.5	169.5	169.5	90.3	1,721.3	55.6
2012	168.1	51.8	166.4	166.4	60.9	1,721.3	44.5	168.1	51.8	166.4	166.4	60.9	1,721.3	44.5
2011	128.1	44.3	132.8	132.8	49.6	1,721.3	48.6	128.1	44.3	132.8	132.8	49.6	1,721.3	48.6
2010	162.5	41.5	146.9	146.9	45.2	1,721.3	39.4	162.5	41.5	146.9	146.9	45.2	1,721.3	39.4
2009	159.7	44.9	156.3	156.3	57.4	1,721.3	39.3							
2008	157.1	47.5	152.7	152.7	83.8	1,721.3	52.3							

Table 2. National Price for 2015 ARC Olympic Averages

Total PLC & ARC Receipts	
PLC	97,614
ARC	0

National Price							
Year	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Wheat
2014	3.65	10.20	5.63	6.80	3.81	426.00	6.00
2013	4.46	13.00	6.93	7.07	4.28	498.00	6.87
2012	6.89	14.40	6.53	6.62	6.33	602.00	7.77
2011	6.22	12.50	6.03	6.44	5.99	636.00	7.24
2010	5.18	11.30	4.95	6.75	5.02	450.00	5.70

National Price (Applied)							
	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Wheat
	3.70	10.20	6.30	6.80	3.95	535.00	6.00
	4.46	13.00	6.93	7.07	4.28	535.00	6.87
	6.89	14.40	6.53	6.62	6.33	602.00	7.77
	6.22	12.50	6.30	6.44	5.99	636.00	7.24
	5.18	11.30	6.30	6.75	5.02	535.00	5.70
Olympic Average	5.29	12.27	6.38	6.72	5.10	557.33	6.70

The interactive program contains a worksheet presented as Table 3 for calculating weighted averages of PLC payment yields for farms with more than one FSA farm number. For each farm, users enter the PLC payment yield and the corresponding acreage. Weighted averages are calculated as totals for each crop at the bottom of Table 3. Totals are entered by users into the corresponding PLC payment yield cell represented by Table 1. The worksheet calculates weighted average payment yields for up to 30 FSA farm numbers

Table 3. Work File for Calculating Weighted Average PLC Payment Yields

Enter yield and acreage for each farm. Do not enter 0. Clear with "delete" key farm yields with 0 acreage.

Farm	Corn		Soybean		Rice, LG		Rice, MG		Sorghum		Peanut		Wheat	
	Yield	Acres	Yield	Acres	Yield	Acres	Yield	Acres	Yield	Acres	Yield	Acres	Yield	Acres
1	220.0	1,000	60.0	1,000	180.0	1,000	180.0	1,000	100.0	500	2.2500	250	70.0	500
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Total	220.0	1,000	60.0	1,000	180.0	1,000	180.0	1,000	100.0	500	2.2500	250	70.0	500

Table 4 presents the worksheet contained in the interactive program for calculating loan deficiency payments (LDP) or marketing loan gains. White cells indicate variables for data entry by users, and colored cells are calculated by the interactive program. The worksheet contains a section for owned land or land cash rented and a section for land that is share rented. Users should enter the corresponding percent of revenue received in each section. Users enter the expected farm price, expected farm yield, and acreage. Total loan deficiency payments are calculated by the program and transferred to the section of the worksheet labeled Total LDP Receipts.

Table 4. Data Entry and Calculations for LDP and Marketing Loan Gains

Total LDP Receipts									
0									
LDP - Owned & Cash Rented Land									
Price and Yield	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Cotton	Wheat	Total
Farm Price	4.00	10.00	5.00	6.50	4.50	450.00	0.62	5.75	
Farm Yield	220.0	60.0	180.0	180.0	110.0	2.2500	1200	70.0	
Share Percent	100%	100%	100%	100%	100%	100%	100%	100%	
Acreage	0	200	200	0	0	0	0	0	
Marketing Loan Gains	0	0	0	0	0	0	0	0	0
LDP Rate Paid	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	
National Loan Rate	1.95	5.00	2.93	2.93	1.95	355.00	0.52	2.94	
Expected: National Price - AWP	NA	NA	0.00	1.00	NA	NA	0.14	NA	
LDP - Share Rented Land									
Price and Yield	Corn	Soybean	Rice, LG	Rice, MG	Sorghum	Peanut	Cotton	Wheat	Total
Farm Price	4.00	10.00	5.00	6.50	4.50	450.00	0.62	5.75	
Farm Yield	220.0	60.0	180.0	180.0	110.0	2.2500	1200	70.0	
Share Percent	75%	75%	75%	75%	75%	75%	75%	75%	
Acreage	0	600	600	0	0	0	0	0	
Marketing Loan Gains	0	0	0	0	0	0	0	0	0
LDP Rate Paid	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	
National Loan Rate	1.95	5.00	2.93	2.93	1.95	355.00	0.52	2.94	
Expected: National Price - AWP	NA	NA	0.00	1.00	NA	NA	0.14	NA	



University of Arkansas, United States Department of Agriculture and County Governments Cooperating.

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