



MYA Prices and Calculating Payments with the Seed Cotton PLC

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Effective with the 2018 crop, “seed cotton” is now a covered commodity under Title I of the 2014 farm bill and eligible for PLC (Price Loss Coverage) payments. For purposes of the legislation, “seed cotton” is unginning upland cotton—a combination of both cotton (lint) and cottonseed.

Seed cotton is eligible for both PLC and ARC (Agricultural Risk Coverage). This fact sheet discusses the PLC option only¹. This fact sheet is the second in a series of publications that briefly explain the basic workings of this new seed cotton program².

Reference Price and Payment. The Reference Price for seed cotton (SC) is 36.7 cents per lb. This is fixed in legislation and does not change. This is a weighted average “combo price” for lint and seed. A PLC payment is made if the weighted actual MYA (market year average) price is less than 36.7 cents. The MYA “floor price” is 25 cents. This means if the MYA is less than 25 cents, 25 is used. This effectively caps the PLC payment rate at 11.7 cents.

If the SC MYA price is less than 36.7 cents,
SC PLC Payment Rate = 36.7 – (higher of MYA price or 25 cents)

If the SC MYA price is greater than 36.7 cents.
SC PLC Payment Rate = 0

MYA Price. The seed cotton (SC) MYA price is a weighted price based on upland cotton production and total (all) cottonseed production. USDA-NASS publishes these production numbers and MYA prices. The MYA price is calculated as follows:

Upland cotton production (lbs) = million bales x 480 lbs per bale
All cottonseed production (lbs) = million tons x 2,000
Total Pounds = upland cotton (lbs) + total cottonseed (lbs)

Seed cotton (SC) MYA Price = (upland cotton lbs/Total lbs) x upland cotton MYA price
+
(cottonseed lbs/Total Lbs) x cottonseed MYA price

As an example, let’s suppose US upland cotton production were 20 million bales and the MYA price for upland cotton was 70 cents/lb and let’s suppose total or all cottonseed production were 6.53 million tons and the MYA price was \$180 per ton or 9 cents/lb:

Upland cotton production = 20 million bales x 480 lbs = 9,600 million or 9.6 billion lbs

All cottonseed production = 6.53 million tons x 2,000 = 13,060 million or 13.06 billion lbs
 Total Production = 9.6 + 13.06 = 22.66 billion lbs

$$\text{SC MYA Price} = (9.6/22.66) \times \$0.70 + (13.06/22.66) \times \$0.09 = \$0.349 \text{ or } 34.9 \text{ cents/lb}$$

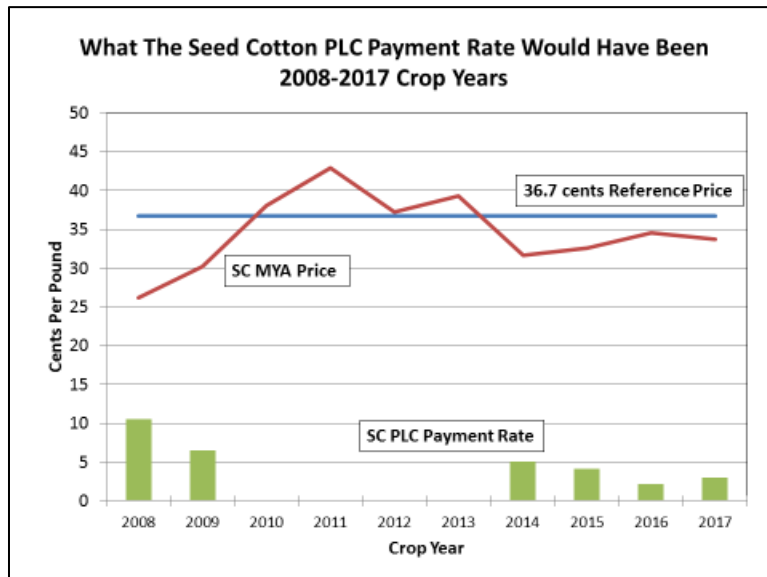
If the MYA price is less than the 36.7 cents reference price, a PLC payments is made. Notice that since this is a “combo price”, the MYA will be impacted by what happens to both prices. A decrease in the MYA price for lint could be partially offset by an increase in the price of cottonseed and vice versa.

What to Expect. Let’s assume this seed cotton (SC) program had been in effect for the past 10 years (2008-2017 or since beginning of the 2008 farm bill). The table below shows what the MYA price for seed cotton (SC) would have been each year using the formulas just described. Upland cotton and cottonseed production for 2017 are the latest USDA projections. Upland cotton and cottonseed prices for 2017 are MYA estimates by the authors based on data to-date.

Calculation of Seedcotton (SC) Weighted Average Market Year Average Price									
What It Would Have Been for 2008-2017									
Crop	Upland Cotton			All Cottonseed			Total Lbs ⁴	SC Price ⁵	
	Price ¹	Bales ²	Lbs ³	Price ¹	Tons ²	Lbs ³			
2008	47.8	12.395	5,950	223	11.15	4,300	14,550	26.136	
2009	62.9	11.783	5,656	158	7.90	4,149	13,953	30.194	
2010	81.5	17.578	8,437	161	8.05	6,096	20,630	38.091	
2011	88.3	14.722	7,067	260	13.00	5,370	17,807	42.883	
2012	72.5	16.534	7,936	252	12.60	5,666	19,268	37.272	
2013	77.9	12.275	5,892	246	12.30	4,203	14,298	39.333	
2014	61.3	15.753	7,561	194	9.70	5,125	17,811	31.606	
2015	61.2	12.455	5,978	227	11.35	4,043	14,064	32.540	
2016	68.0	16.601	7,968	195	9.75	5,369	18,706	34.563	
2017	70.0	20.570	9,874	140	7.00	6,725	23,324	33.670	

SOURCES: USDA-NASS [Crop Production](#) and [Agricultural Prices](#) and USDA [World Agricultural Supply and Demand Estimates](#) .
 1/ Upland cotton marketing year average (MYA), cents per lb; cottonseed is MYA dollars per ton and cents per lb. 2017 are estimates.
 2/ Cotton is upland cotton, million 480-lb bales; cottonseed is million tons. 2017 is projected.
 3/ Million lbs
 4/ Million lbs, cotton plus cottonseed
 5/ Seed cotton weighted MYA price; (cotton lbs/total lbs) x cotton price + (cotton seed lbs/total lbs) x cottonseed price

For these 10 years, the SC MYA price averaged 34.63 cents per lb. The SC MYA price would have been below the SC PLC Reference Price 6 out of the 10 years. Over the 10 years, including zero years, the PLC payment rate would have averaged 3.15 cents/lb per year.



Base Acres. This seed cotton program applies only to farms with Generic Base (former cotton base under the 2008 farm bill) and that have planted cotton or a covered commodity during 2009-2016. If a farm currently has no Generic Base, none is earned under this program. If a farm has Generic Base but has planted no cotton or covered commodity in 2009-2016, the Generic Base will become “unassigned” base and ineligible for ARC/PLC.

Any PLC payment will be made on seed cotton base acres. Landowners will be given several options to choose from to convert Generic Base to seed cotton base or base of seed cotton and other covered commodities like peanuts, corn, soybeans, wheat, etc. This will be based on the farms planting history from 2009-2012. This is the same window of history that was used in the “retain” or “reallocate” decision for the 2014 farm bill. Payments are made on base acres, not acres planted. There is no requirement to plant cotton or any other covered commodity to be eligible for a seed cotton payment. Payment, if any, is made on 85% of base acres.

Payment Yield. If a farm has Generic Base (former cotton base), that base also has a cotton CCP (countercyclical payment) yield already established for it under the 2008 farm bill. This was the yield used to make countercyclical payments under the 2008 farm bill.

For purposes of the seed cotton program, landowners will be given the option of keeping this current CCP yield or updating it to 90% of the average yield for 2008-2012. This is the same window of history that was given for covered commodities to update PLC payment yields for the 2014 farm bill.

The seed cotton payment yield will be the CCP yield times 2.4.

Payment Example. The following is a hypothetical example of how a seed cotton (SC) PLC payment would be calculated assuming a SC MYA price of 33.5 cents/lb.

Base Acres	87 acres		
CCP Yield	900 lbs	Seed cotton payment yield	900 x 2.4 = 2,160 lbs
SC MYA Price	33.5 cents		

$$\text{SC PLC Payment Rate} = 36.7 - 33.5 = 3.2 \text{ cents per lb}$$

$$\text{SC PLC Payment} = \$0.032 \times 2,160 \text{ lbs} \times 87 \text{ acres} \times 85\% = \$5,111 \text{ for this farm (FSN)}$$

$$\text{Payment Per Acre of Base} = \$5,111 / 87 = \$58.75$$

Payments Calculator. The seed cotton MYA price is a weighted price—as illustrated, dependent on upland cotton production and cottonseed production and the MYA price for both. It is a “combo price”. The following is a table of estimated SC PLC payments at varying combinations of lint price and cottonseed price. The table shows the seed cotton (SC) PLC Payment *per lb of seedcotton payment yield per acre of base*. This makes it easy and convenient for a producer to estimate what the SC PLC Payment would be for his/her specific situation.

Suppose the MYA price for cotton (lint) is 70 cents/lb and the MYA price for cotton seed is \$180/ton or 9 cents/lb. From the table, the PLC payment rate per lb per acre would be 1.52 cents. Suppose the farm has 90 acres of seed cotton base and a seed cotton payment yield of 2,160 lbs:

$$\begin{aligned} \text{SC PLC Payment} &= \$0.0152 \times 2,160 = \$32.83 \text{ per acre of seed cotton base} \\ \text{Total SC PLC Payment} &= \$32.83 \times 90 \text{ acres of base} = \$2,955 \text{ for the farm (FSN)} \end{aligned}$$

Payment is received on only 85% of base acres but this has already been factored into the payments table. The payment rate of 1.52 cents allocated over all base acres would be equivalent to 1.79 cents received on 85% of base acres.

Estimated Seedcotton (SC) PLC Payment Rate Per Lb Per Acre of SC Base, Cents Per Lb ¹											
Cotton Cents/Lb	Cottonseed (\$/Ton)										
	140	150	160	170	180	190	200	210	220	230	240
55	7.92	7.67	7.43	7.18	6.94	6.69	6.45	6.21	5.96	5.72	5.47
56	7.56	7.31	7.07	6.82	6.58	6.33	6.09	5.84	5.60	5.36	5.11
57	7.20	6.95	6.71	6.46	6.22	5.97	5.73	5.48	5.24	4.99	4.75
58	6.83	6.59	6.35	6.10	5.86	5.61	5.37	5.12	4.88	4.63	4.39
59	6.47	6.23	5.98	5.74	5.50	5.25	5.01	4.76	4.52	4.27	4.03
60	6.11	5.87	5.62	5.38	5.13	4.89	4.65	4.40	4.16	3.91	3.67
61	5.75	5.51	5.26	5.02	4.77	4.53	4.28	4.04	3.80	3.55	3.31
62	5.39	5.15	4.90	4.66	4.41	4.17	3.92	3.68	3.43	3.19	2.95
63	5.03	4.78	4.54	4.30	4.05	3.81	3.56	3.32	3.07	2.83	2.58
64	4.67	4.42	4.18	3.93	3.69	3.45	3.20	2.96	2.71	2.47	2.22
65	4.31	4.06	3.82	3.57	3.33	3.08	2.84	2.60	2.35	2.11	1.86
66	3.95	3.70	3.46	3.21	2.97	2.72	2.48	2.23	1.99	1.75	1.50
67	3.59	3.34	3.10	2.85	2.61	2.36	2.12	1.87	1.63	1.38	1.14
68	3.22	2.98	2.74	2.49	2.25	2.00	1.76	1.51	1.27	1.02	0.78
69	2.86	2.62	2.37	2.13	1.89	1.64	1.40	1.15	0.91	0.66	0.42
70	2.50	2.26	2.01	1.77	1.52	1.28	1.04	0.79	0.55	0.30	0.06
71	2.14	1.90	1.65	1.41	1.16	0.92	0.67	0.43	0.19	0.00	0.00
72	1.78	1.54	1.29	1.05	0.80	0.56	0.31	0.07	0.00	0.00	0.00
73	1.42	1.17	0.93	0.69	0.44	0.20	0.00	0.00	0.00	0.00	0.00
74	1.06	0.81	0.57	0.32	0.08	0.00	0.00	0.00	0.00	0.00	0.00
75	0.70	0.45	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	0.34	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1/ This is the seedcotton(SC) PLC Payment Rate on a per lb, per acre of base basis. For example, if the MYA price for cotton is 70 cents and the MYA price for cottonseed is \$160 per ton, the rate/lb/base acre would be 2.01 cents. If the farm had a SC Payment Yield of 2,280 lbs, the SC PLC Payment would be .0201 x 2,280 = \$45.83 per acre of base. If the farm had 100 acres of base, the total SC PLC payment for the farm would be \$45.83 x 100 = \$4,583.

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1/ There is an ARC option that can be chosen instead of PLC. ARC is revenue based depending on both yield and price. Because of relatively low prices and in some cases county yields in recent years, ARC may not provide as much of a safety net as PLC.

2/ The first publication in this series is "The Bipartisan Budget Act of 2018: What Farmers and Landowners Need to Know About Cotton and Generic Base", AGECON-18-02, Department of Agricultural and Applied Economics, University of Georgia, <http://blog.extension.uga.edu/aaecext/2018/02/the-bipartisan-budget-act-of-2018-what-farmers-and-landowners-need-to-know-about-cotton-and-generic-base/>