



The Price Loss Coverage (PLC) Program of the 2014 Farm Bill

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The Agricultural Act of 2014 (also referred to as the 2014 farm bill) contains a major rewrite to the commodity programs along with significant changes to the crop insurance system. Information contained in this research brief will focus on changes contained in the commodity title for corn, soybean, and long grain rice crops produced in Louisiana with emphasis on the program mechanics of the PLC program. The complex policy changes will require producers to evaluate the program choices afforded in the bill to determine which program offers a better risk management safety net for the five-year duration of the farm law. Determining which commodity program to participate in will bear on certain crop insurance eligibility criteria as well. Regardless of program choice, program payment(s) will not be made until after September 30, 2015 for the 2014 crop. Producers will also be faced with whether or not to keep their existing base acres or have the farm's base reallocated, although this will be a landowner decision. This is a key consideration for producers who have a majority cotton base, as cotton will no longer receive traditional Title I commodity support (other than loan protection).

One major change in this farm bill, which covers the 2014 through 2018 crop years, is the repeal of the direct payment (DP) program. In order to achieve substantial commodity title budget savings, the direct payment program became a vulnerable target politically during farm bill markup as these payments were made regardless of market price and were dispersed at a fixed rate. Along with the elimination of direct payments, the countercyclical (CCP) and the average crop revenue election program (ACRE) were also repealed.

Direct payment rates for covered commodities were justified under the 2008 farm bill (including a one-year extension for 2013). The fixed direct payment rate was established at \$2.35 per hundredweight for rice, \$0.44 per bushel for soybeans, \$0.28 per bushel for corn, and \$0.067 per pound for cotton. To examine the share of direct payments relative to major row crops produced in the state, DP are calculated using average USDA FSA Louisiana farm program yields of 42.0 hundredweight for rice, 20.0 bushels for soybeans, 70.7 bushels for corn, and 733.0 pounds for cotton. This equates to a DP of \$98.70 for rice, \$8.80 for soybeans, \$19.80 for corn, and \$49.11 for cotton. For crops such as rice and cotton, the loss of the direct payment program significantly impacts income support to farms- assuming the farm has substantial base acres in one or both of these program crops. Farms with a majority corn and soybean base receive less support from this program relative to rice and cotton crops.

Title I Commodity Support Programs

New commodity support programs contained in Title I of the Agricultural Act of 2014 include a revenue coverage-type support program called Agricultural Risk Coverage (ARC) and a Price Loss Coverage (PLC) price-based program that bears a similar resemblance to the traditional countercyclical program. The program signup period is expected to begin in the fall/winter of 2014/15. Both of these programs are available for all covered commodities beginning in 2014. Producers have the irrevocable election for the 2014 through 2018 crop years to receive PLC or ARC payments. Program choice is made on a covered commodity-by-covered commodity basis and can vary by FSA farm serial number in the state. Program enrollment must be a unanimous decision made by all the producers on the farm. For the PLC program, the payment acres for each covered commodity on a farm equals 85% of the base acres for the covered commodity. Payment acres for the ARC program are dependent upon county-level coverage (85% of base) or the individual farm coverage (65% of base) option selected. If a no commodity support election is made in 2014, producers will not be eligible to receive ARC or PLC support for that crop year. As a default option, they will be automatically enrolled in the PLC program for the subsequent years of the farm bill (2015-2018).

Price Loss Coverage (PLC) Program

A characteristic that is unique to the PLC program is that payment yields for covered commodities can be updated. The decision to update PLC program yields is made by the landowner. The updated yield is equal to 90% of the simple average of the yield per planted acre for the covered commodity on the farm from the 2008 through 2012 crop years. There is a provision that allows for a yield plug of 75% of the county average yield to be used in place of average farm yield for the 2008 through 2012 period in year(s) where the actual farm yield was below 75% of the county average. In calculating the average yield per planted acre, only years that the covered commodity was planted counts towards the yield update; hence there is no penalty for the years in which the crop was not planted. In the event that a landowner elects not to update PLC program yields, existing CCP yields will remain in effect for the duration of the farm bill. If a yield history does not exist on a farm, the USDA Secretary will use his discretion to use similar farm data and/or county average yields to establish a yield history for the farm for the covered commodity.

Note: This process and timeline has not been finalized as of the release of this research report.

PLC payments are made if the effective price for the crop year is less than the reference price for the covered commodity. The effective price is the higher of the national market year average (MYA) price or the loan rate. Payments are not dependent on the planting of a covered commodity or the planting of applicable base acreage on a farm, unless the covered commodity is planted on generic base acres. In summary, the PLC program relies on national MYA price, a legislatively-established reference price, and a farm-level yield for payment calculation. Payment is made on 85% of base acres.

The Agricultural Act of 2014 established reference prices for covered commodities that are in effect for the 2014 to 2018 crop years. Reference prices are used in both the PLC and ARC program payment calculation formulas. The operational parameters of these legislatively-established prices act similar to the target price provision of the countercyclical program of the 2008 farm bill. Table 1 provides a comparison of target prices and reference prices for selected commodities.

Table 1. Reference prices for covered commodities as compared to the CCP target prices of the 2008 bill.

Covered Commodity	Unit	CCP Target Price	Reference Price
Wheat	bushel	\$4.17	\$5.50
Corn	bushel	\$2.63	\$3.70
Grain Sorghum	bushel	\$2.63	\$3.95
Rice (long and medium grain)	hundredweight	\$10.50	\$14.00
Soybeans	bushel	\$6.00	\$8.40
Upland Cotton	pound	\$0.71	N/A

In order to illustrate the effect that the PLC program would have relative to an anticipated market price for each commodity, historical production data from 2008 to 2012 was compiled for corn produced in Tensas parish, soybeans produced in Morehouse parish, and long grain rice produced in Acadia parish, Louisiana. Data was obtained from USDA NASS parish statistics and used to represent the yield per planted acre for a farming operation per locale per crop. Two important assumptions are made throughout these examples: (1) it is assumed that producer would elect to participate in the PLC program and (2) the landowner would elect to update the program yields. Recall, PLC payments are made on 85% of the base acres for the covered commodity.

For the purposes of updating the PLC program payment yield, parish-level production and planting data for corn produced in Tensas parish was compiled from USDA NASS production data from 2008-2012. Note that for the purpose of updating PLC program yields, the process will be based on the yield history of the specific farm. The updated PLC program yield for this representative farm in Tensas Parish appears in Table 2 and is intended to serve as an average yield measure.

Table 2. Updated corn PLC program yield for a representative farming operation in Tensas Parish, LA.

Year	'Farm' Yield per Planted acre (bu)
2008	136.40
2009	128.98
2010	123.92
2011	117.77
2012	174.22
2008-12 Average Yield	136.26
PLC Program Update Yield	122.63

Mathematically, the updated program yield is equal to the 2008 through 2012 yield per planted acre of the farm divided by five (which is the time span of the update period). The simple average yield per planted acre over the five year period is 136.26 bushels. This is then multiplied by a factor of 0.90 to establish an updated farm PLC program yield for corn at 122.63 bushels.

For the purposes of updating the PLC program payment yield, parish-level production and planting data for soybeans produced in Morehouse parish was compiled from USDA NASS production data from

2008-2012. Recall, that the decision to update program yield for covered commodities is a decision made by the landowner using farm specific-data. The process for updating the soybean and Acadia parish long grain rice farm payment yields (Table 3 and 4) are performed in the identical way in which the corn program yield was calculated in the example above.

Table 3. Updated PLC soybean program yield for a representative farming operation in Morehouse Parish, LA.

Year	'Farm' Yield per Planted acre (bu)
2008	30.27
2009	37.35
2010	46.07
2011	47.14
2012	49.70
2008-12 Average Yield	42.11
PLC Program Update Yield	37.90

Table 4. Updated PLC long grain rice program yield for a representative farming operation in Acadia Parish, LA.

Year	'Farm' Yield per Planted acre (cwt)
2008	61.16
2009	64.31
2010	63.36
2011	65.39
2012	64.84
2008-12 Average Yield	63.81
PLC Program Update Yield	57.43

As an alternative approach to selecting an anticipated national market price for each of the 2014 through 2018 crop years, the tables below (Tables 5, 6, and 7) provide a declining series of commodity price levels under the reference price that would trigger PLC payments relative to the updated program yields that were obtained from the preceding tables. Note that the market price levels selected for the PLC payment examples are presented for illustrative purposes and do not reflect any pricing forecast or outlook.

Table 5. PLC payment for a representative corn farm in Tensas Parish, LA with an updated PLC program yield of 122.63 bushels.

Corn MYA Price (\$/bu)	PLC Payment Rate (\$/bu)	PLC Payment per Corn Base Acre
> \$3.70	\$0.00	\$0.00
\$3.65	\$0.05	\$5.21
\$3.60	\$0.10	\$10.42
\$3.55	0.15	\$15.64
\$3.50	0.20	\$20.85
\$3.45	0.25	\$26.06
\$3.40	0.30	\$31.27
\$3.35	0.35	\$36.48
\$3.30	0.40	\$41.69
\$3.25	0.45	\$46.91
\$3.20	0.50	\$52.12
Note: An updated PLC program yield of 122.63 bushels was used in PLC payment calculation, reflecting average Tensas Parish, LA corn production data.		

In the highlighted pricing example contained in Table 5, if the national MYA price for corn in 2014 were to be \$3.50 per bushel, then the PLC program would trigger a payment. This is due to the fact that the PLC program criteria for payment is met since the current year's MYA price of \$3.50 per bushel (which is well above the \$1.95 loan rate) is less than the \$3.70 reference price for corn. PLC payment calculation is determined by applying the following calculation:

$$\begin{aligned}
 &(\$3.70 \text{ reference price} - \$3.50 \text{ national MYA price in 2014}) = \$0.20 \text{ per bushel payment rate} \\
 &(\$0.20 \text{ per bushel payment rate} * 122.63 \text{ bushel updated PLC program yield} * 85\%) \\
 &= \$20.85 \text{ payment per base acre}
 \end{aligned}$$

Similar to the approach used to calculate the corn PLC payment, Table 6 provides an example specific to a soybean farming operation that is located in Morehouse Parish, LA. Recall, the operational parameters of the PLC program, afforded to all eligible covered commodities in the 2014 farm bill, is a function of national MYA price and the reference price for that particular covered commodity. Farm-level data is only used to determine the farm's program yield. In the soybean example that follows, if the 2014 national MYA price were to be \$8.30 per bushel (which is above the \$5.00 loan rate), the resulting PLC payment would be \$3.22 per base acre. The PLC program payment calculation is determined by the following calculation:

$$\begin{aligned}
 &(\$8.40 \text{ reference price} - \$8.30 \text{ national MYA price in 2014}) = \$0.10 \text{ per bushel payment rate} \\
 &(\$0.10 \text{ per bushel payment rate} * 37.90 \text{ bushel updated PLC program yield} * 85\%) \\
 &= \$3.22 \text{ payment per base acre}
 \end{aligned}$$

Table 6. PLC payment for a representative soybean farm in Morehouse Parish, LA with an updated PLC program yield of 37.90 bushels.

Soybean MYA Price (\$/bu)	PLC Payment Rate (\$/bu)	PLC Payment per Soybean Base Acre
> \$8.40	\$0.00	\$0.00
\$8.35	\$0.05	\$1.61
\$8.30	\$0.10	\$3.22
\$8.25	\$0.15	\$4.83
\$8.20	\$0.20	\$6.44
\$8.15	\$0.25	\$8.05
\$8.10	\$0.30	\$9.66
\$8.05	\$0.35	\$11.25
\$8.00	\$0.40	\$12.89
\$7.95	\$0.45	\$14.50
\$7.90	\$0.50	\$16.11
Note: An updated PLC program yield of 37.90 bushels was used in PLC payment calculation, reflecting average Morehouse Parish, LA soybean production data.		

Table 7. PLC payment for a representative rice farm in Acadia Parish, LA with an updated PLC program yield of 57.43 hundredweight.

Long Grain Rice MYA Price (\$/cwt)	PLC Payment Rate (\$/cwt)	PLC Payment per Rice Base Acre
> \$14.00	\$0.00	\$0
\$13.95	\$0.05	\$2.44
\$13.90	\$0.10	\$4.88
\$13.85	\$0.15	\$7.32
\$13.80	\$0.20	\$9.76
\$13.75	\$0.25	\$12.20
\$13.70	\$0.30	\$14.64
\$13.65	\$0.35	\$17.09
\$13.60	\$0.40	\$19.53
\$13.55	\$0.45	\$21.97
\$13.50	\$0.50	\$24.41
\$13.45	\$0.55	\$26.85
\$13.40	\$0.60	\$29.29
\$13.35	\$0.65	\$31.73
\$13.30	\$0.70	\$34.17
Note: An updated PLC program yield of 57.43 hundredweight was used in PLC payment calculation, reflecting average Acadia Parish, LA rice production data.		

In the long grain rice example that is presented for Acadia Parish, LA, if the national MYA price for long grain rice in 2014 were to be \$13.75 per cwt (which is above the \$6.50 loan rate), then the PLC program payment calculation is determined by the following calculation:

$$\begin{aligned}
 &(\$14.00 \text{ reference price} - \$13.75 \text{ national MYA price in 2014}) = \$0.25 \text{ payment rate per hundredweight} \\
 &(\$0.25 \text{ per cwt. payment rate} * 57.43 \text{ cwt updated PLC program yield} * 85\%) \\
 &= \$12.20 \text{ payment per base acre}
 \end{aligned}$$

Since the PLC program payment is a function of the national market price, reference price, and program yield of the farm; the greater the price decline from the commodity's reference price level, the greater the PLC payment for that covered commodity. The PLC program provides deep price coverage to the commodity in times of substantial market price declines utilizing a price floor to combat market uncertainties. A series of payment graphs are presented in the appendix section of this research brief for corn, soybeans, and long grain rice crop in order to illustrate the full effect of the PLC program when the MYA price for each commodity experiences significant decline.

Payment Limits

The total amount of payments received for any crop year under PLC, ARC, marketing loan gains, or loan deficiency payments may not exceed \$125,000 per individual (or \$250,000 for a married couple). Within 180 days after enactment of the Agricultural Act of 2014, the USDA shall promulgate an opportunity for notice and comment on regulations to define the term 'significant contribution of active personal management'. If a regulatory guideline is established on the number of individuals who may be 'actively engaged' in farming with respect to the farming operation, a significant contribution of active personal management would be determined to be the basis to meet the requirement of being actively engaged in farming and eligible to receive payments. This does not apply to operations comprised solely of family members. The requirements of any regulation promulgated pursuant to will begin in the 2015 crop year. A person or legal entity shall not be eligible to receive any benefit if the average adjusted gross income, or AGI, (for three years) exceeds \$900,000.

Summary Points on Farm Program Language - Relating to the PLC Program

- Traditional DP and CCP programs are eliminated.
- Existing base acreage may be retained or be reallocated.
- Commodity support offered as a choice of revenue protection (ARC) or price protection (PLC) on a covered commodity-by-covered commodity basis that can vary from farm-to-farm.
- The program decision is irrevocable for the 2014-2018 crop years. The signup period is expected to begin in the fall of 2014 or winter of 2015.
- Program yields can be updated for crops participating in the PLC program.
- PLC payments are decoupled.
- PLC program payments are a function of farm-level yields, reference prices, and national market prices.
- PLC payments are paid on 85% of base acres.
- As an added component to the safety net, the supplemental coverage insurance option (SCO) can be added to an existing crop insurance policy for PLC enrolled covered commodities.
- Payment limit is \$125,000 per legal entity and is the sum of ARC, PLC, LDP, and MAL programs.
- The language of the bill is subject to final rule and regulations that will be issued by USDA.

Note: Information for this report was obtained from the legislative language of the Agricultural Act of 2014, as signed by President Obama on February 7, 2014. This preliminary information is based on interpretation of the legislative text and is subject to final rule and regulation issued by USDA.

References

H.R.2642 - 113th Congress: Agriculture Reform, Food, and Jobs Act of 2013. Accessed March 13, 2014. <http://www.govtrack.us/congress/bills/113/hr2642>

USDA Farm Service Agency. "What's in the 2014 Farm Bill for Farm Service Agency Customers". 2014 Farm Bill Fact Sheet. March 2014

USDA NASS. Quick Stats. Accessed March 7, 2014. http://www.nass.usda.gov/Quick_Stats/Lite/



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Appendix

Figure 1. Corn PLC payment per base acre given significant price decline, relative to a 122.63 bushel program payment yield.

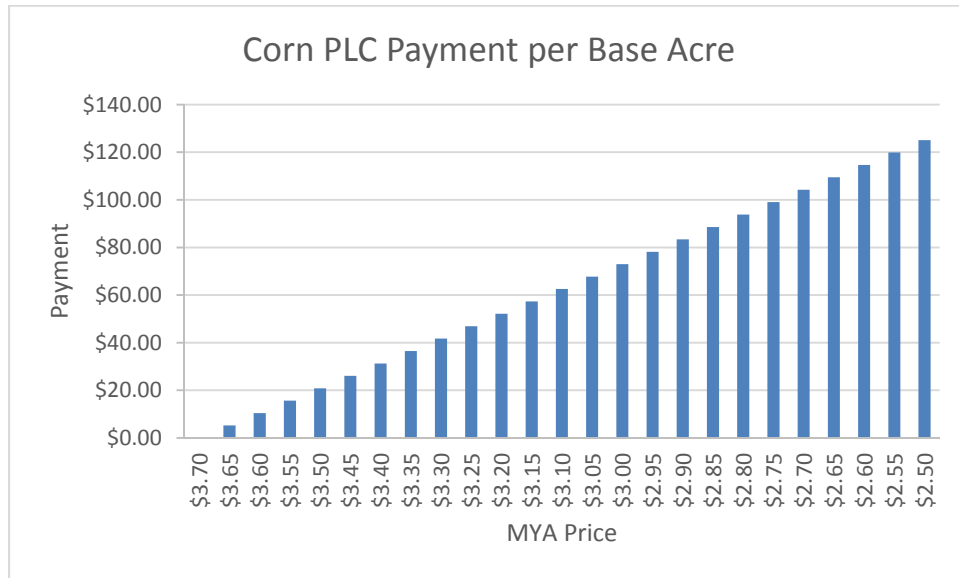


Figure 2. Soybean PLC payment per base acre given significant price decline, relative to a 37.90 bushel program payment yield.

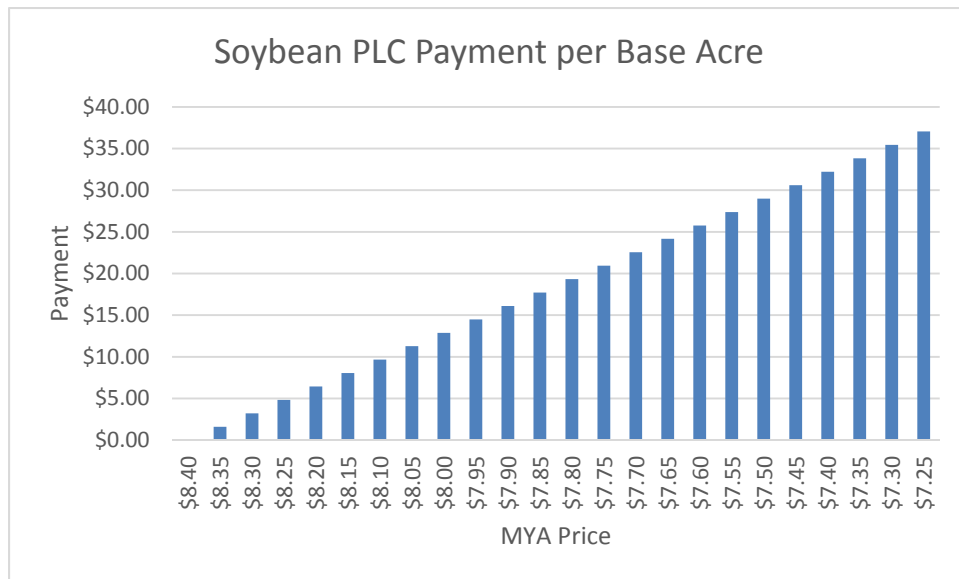


Figure 3. Long grain rice PLC payment per base acre given significant price decline, relative to a 57.43 hundredweight program payemnt yield.

