



Seed Cotton Program Workshop
USDA FSA, LFBF, LSU AgCenter, Mississippi State University Extension Service
Thursday, July 26, 2018
Winnsboro, LA

Seed Cotton Program Workshop

Farm Management Decision Tools for:

*Generic Base Allocation, Program Yield Update, PLC Payment Matrix, and
Projecting 2018 Farm Program Payments*



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www.lsuagcenter.com

Seed Cotton Program Options/Design

- The BBA provision includes seed cotton as a covered commodity beginning with 2018 CY
- Participating producers must make three decisions:
 - 1. Whether to update cotton program yields...
 - 2. Whether to participate in PLC or ARC-CO...
 - 3. How to allocate generic base acres...

Anticipated Election and Signup Deadlines

USDA FSA

- June 29: Producers are mailed letters notifying them of current generic base acres and yields and 2008 to 2012 planting history.
- July: An online decision tool for ARC and PLC becomes available. Producers have opportunity to update yields and allocate generic base acres for ARC and PLC.
- Late July: ARC and PLC one-time elections occur for seed cotton.
- Late July: ARC and PLC sign-up for 2018 starts for farms with seed cotton base acres.

Seed Cotton Payment Yield

CC yield of 900 pounds (with parish substitute yield of 880 pounds)

	2008	2009	2010	2011	2012
Farm Yield	875	1,200	1,250	1,000	925
	880				

Two yield update options are presented:

The first being to retain the farm's CC yield as of 2013 multiplied by a factor of 2.4.

The second option allows for the yield to be updated to 90% of simple average of the 2008-12 yield multiplied by 2.4.

Option Number	PLC Seed Cotton Yield
Option 1	2,160
Option 2	2,270

Seed Cotton Payment Yield

CC yield of 1,000 pounds

	2008	2009	2010	2011	2012
Farm Yield	No Planting	No Planting	No Planting	1,350	No Planting

Two yield update options are presented:

The first being to retain the farm's CC yield as of 2013 multiplied by a factor of 2.4.

The second option allows for the yield to be updated to 90% of simple average of the 2008-12 yield multiplied by 2.4.

Option Number	PLC Seed Cotton Yield
Option 1	2,400
Option 2	2,916

Seed Cotton Payment Yield Decision Tool

Producer decision tool from the LSU AgCenter

Seed Cotton Program Payment Yield Update for CY 2018

Step 1. Enter Farm's Existing CC Lint Yield (lbs./acre)

Step 2. Enter the lint yield per acre per year
Lint Yield Used for Payment Update
For Any Year Cotton Not Planted, Enter "0"

2008	2009	2010	2011	2012
0	0	0	1,350	0
0	0	0	1,350	0

Step 3. Enter the substitute cotton lint yield for your parish
Select your Parish from Drop Down Menu

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Seed Cotton Program Yield Options

Option 1-Retain CC Yield

Option 2-Update Yield from Planting History

User-specified data

Option Number	PLC Seed Cotton Yield
Option 1	2,400
Option 2	2,916

PLC Payment Formula and Weighted Average

- Payment formula for the PLC program is :

$\$0.367 - \text{MAX} (\text{MYA Seed Cotton price or } \$0.250) * \text{Seed Cotton Payment Yield} * 85\%$

- The reference price is a *weighted average* of the lint and the seed as per the USDA.

<u>Parameter</u>	<u>Value</u>
Total U.S. Lint Production (est.)	9,800,000,000 pounds
Total U.S. Seed Production (est.)	13,000,000,000 pounds
Total Cotton Production (est.)	22,800,000,000 pounds
Expected Final MYA Lint Price (est.)	\$0.68 per pound (low end July 2018 WASDE)
Expected Final MYA Seed Price (est.)	\$0.08 per pound (based on \$160 per ton)
Weighted Share of Lint Factor (est.)	0.4298
Weighted Share of Seed Factor (est.)	0.5701

Calculating the PLC Payment Amount

2018 CY Example

<u>Parameter</u>	<u>Value</u>
Reference Price	\$0.367 per pound
Seed Cotton MYA Price	\$0.338 per pound
PLC Payment Rate	\$0.029 per pound
PLC Program Yield	2,400 pounds
PLC Payment Amount (on 85% base)	\$59.16

$\$0.367 - \text{MAX} (\$0.338 \text{ or } \$0.250) * \text{Seed Cotton Payment Yield} * 85\%$

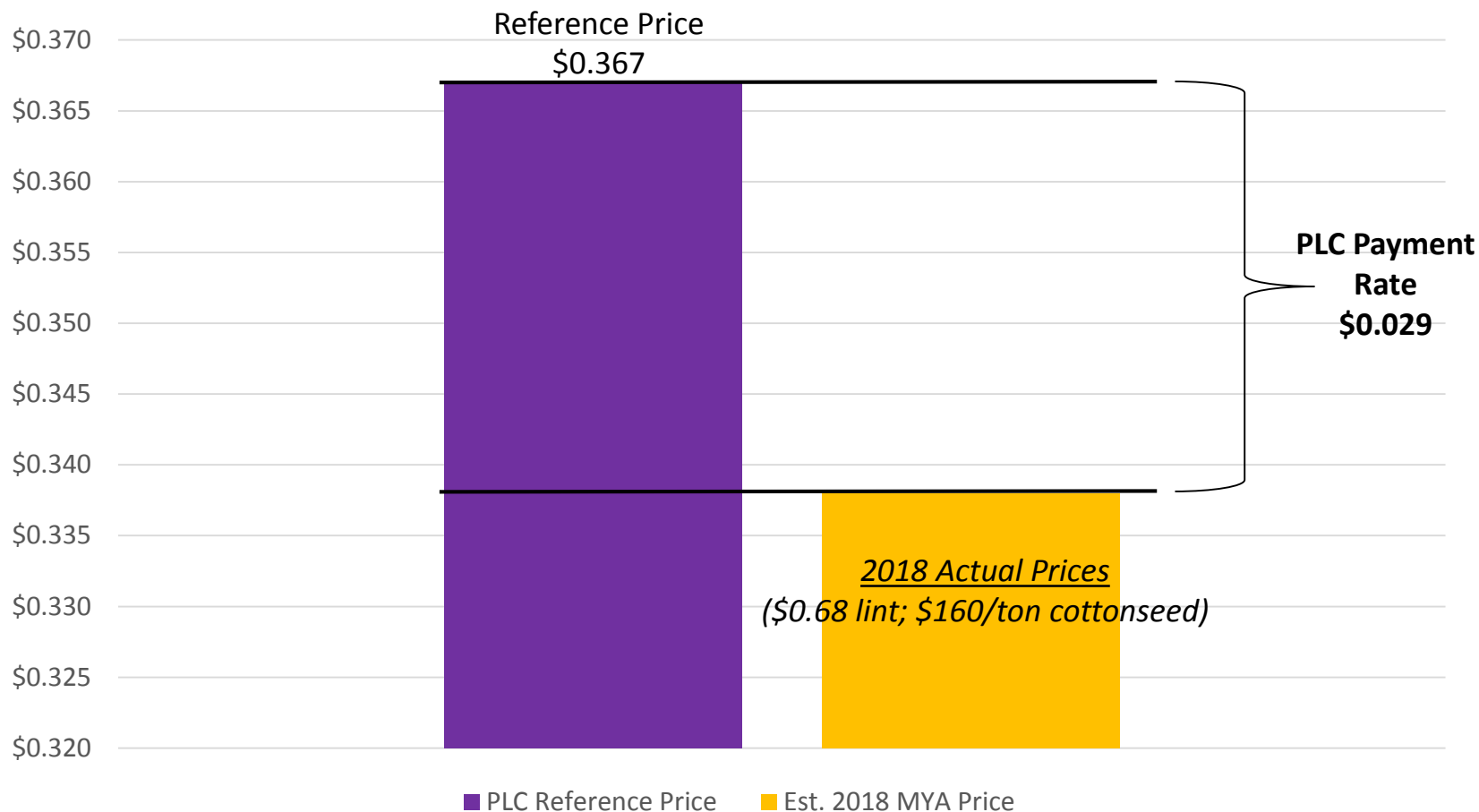
$(\$0.367 - \$0.338) * 2,400 \text{ pounds} * 85\%$

$\$0.029 * 2,400 \text{ pounds} * 85\% = \59.16

Seed cotton program payments are decoupled from planting decisions, consistent with farm programs from other crops in the 2014 farm bill.

Seed Cotton PLC Payment Formula

Illustration of program mechanics and price series calculation



PLC Farm Payment = (Reference Price- 2018 CY Price) * seed cotton base * 85%

Cotton Lint and Cottonseed Weighted Shares

2008 to 2017 production comparison

<u>Year</u>	<u># Bales</u>	<u>Lbs. Lint</u>	<u>Cotton Seed Tons</u>	<u>Lbs. Cotton Seed</u>	<u>Total Lbs.</u>	<u>% Lint Share</u>	<u>% Seed Share</u>
2008	12,394,500	5,949,360,000	4,300,300	8,600,600,000	14,549,960,000	0.40889	0.59111
2009	11,782,600	5,655,648,000	4,148,800	8,297,600,000	13,953,248,000	0.40533	0.59467
2010	17,598,000	8,447,040,000	6,096,100	12,192,200,000	20,639,240,000	0.40927	0.59073
2011	14,722,000	7,066,560,000	5,370,000	10,740,000,000	17,806,560,000	0.39685	0.60315
2012	16,534,000	7,936,320,000	5,666,000	11,332,000,000	19,268,320,000	0.41188	0.58812
2013	12,275,000	5,892,000,000	4,203,000	8,406,000,000	14,298,000,000	0.41209	0.58791
2014	15,753,000	7,561,440,000	5,125,000	10,250,000,000	17,811,440,000	0.42453	0.57547
2015	12,455,000	5,978,400,000	4,043,000	8,086,000,000	14,064,400,000	0.42507	0.57493
2016	16,601,000	7,968,480,000	5,369,000	10,738,000,000	18,706,480,000	0.42597	0.57403
2017	20,223,000	9,707,040,000	6,422,000	12,844,000,000	22,551,040,000	0.43045	0.56955

*On average,
the weighted lint share of production is 42% and the weighted share of seed is 58%.*

Calculating the Seed Cotton MYA Price

Using historical weighted shares for lint and cottonseed equation

Lint Price (\$/lb)	Cottonseed Price (\$/ton)																		
	\$120	\$130	\$140	\$150	\$160	\$170	\$180	\$190	\$200	\$210	\$220	\$230	\$240	\$250	\$260	\$270	\$280	\$290	\$300
\$0.52	0.253	0.256	0.259	0.262	0.265	0.268	0.271	0.274	0.276	0.279	0.282	0.285	0.288	0.291	0.294	0.297	0.300	0.303	0.305
\$0.53	0.257	0.260	0.263	0.266	0.269	0.272	0.275	0.278	0.281	0.284	0.286	0.289	0.292	0.295	0.298	0.301	0.304	0.307	0.310
\$0.54	0.262	0.265	0.267	0.270	0.273	0.276	0.279	0.282	0.285	0.288	0.291	0.294	0.296	0.299	0.302	0.305	0.308	0.311	0.314
\$0.55	0.266	0.269	0.272	0.275	0.277	0.280	0.283	0.286	0.289	0.292	0.295	0.298	0.301	0.304	0.306	0.309	0.312	0.315	0.318
\$0.56	0.270	0.273	0.276	0.279	0.282	0.285	0.287	0.290	0.293	0.296	0.299	0.302	0.305	0.308	0.311	0.314	0.316	0.319	0.322
\$0.57	0.274	0.277	0.280	0.283	0.286	0.289	0.292	0.295	0.297	0.300	0.303	0.306	0.309	0.312	0.315	0.318	0.321	0.324	0.326
\$0.58	0.278	0.281	0.284	0.287	0.290	0.293	0.296	0.299	0.302	0.305	0.307	0.310	0.313	0.316	0.319	0.322	0.325	0.328	0.331
\$0.59	0.283	0.286	0.288	0.291	0.294	0.297	0.300	0.303	0.306	0.309	0.312	0.315	0.317	0.320	0.323	0.326	0.329	0.332	0.335
\$0.60	0.287	0.290	0.293	0.296	0.298	0.301	0.304	0.307	0.310	0.313	0.316	0.319	0.322	0.325	0.327	0.330	0.333	0.336	0.339
\$0.61	0.291	0.294	0.297	0.300	0.303	0.306	0.308	0.311	0.314	0.317	0.320	0.323	0.326	0.329	0.332	0.335	0.337	0.340	0.343
\$0.62	0.295	0.298	0.301	0.304	0.307	0.310	0.313	0.316	0.318	0.321	0.324	0.327	0.330	0.333	0.336	0.339	0.342	0.345	0.347
\$0.63	0.299	0.302	0.305	0.308	0.311	0.314	0.317	0.320	0.323	0.326	0.328	0.331	0.334	0.337	0.340	0.343	0.346	0.349	0.352
\$0.64	0.304	0.307	0.309	0.312	0.315	0.318	0.321	0.324	0.327	0.330	0.333	0.336	0.338	0.341	0.344	0.347	0.350	0.353	0.356
\$0.65	0.308	0.311	0.314	0.317	0.319	0.322	0.325	0.328	0.331	0.334	0.337	0.340	0.343	0.346	0.348	0.351	0.354	0.357	0.360
\$0.66	0.312	0.315	0.318	0.321	0.324	0.327	0.329	0.332	0.335	0.338	0.341	0.344	0.347	0.350	0.353	0.356	0.358	0.361	0.364
\$0.67	0.316	0.319	0.322	0.325	0.328	0.331	0.334	0.337	0.339	0.342	0.345	0.348	0.351	0.354	0.357	0.360	0.363	0.366	0.368
\$0.68	0.320	0.323	0.326	0.329	0.332	0.335	0.338	0.341	0.344	0.347	0.349	0.352	0.355	0.358	0.361	0.364	0.367	0.370	0.373
\$0.69	0.325	0.328	0.330	0.333	0.336	0.339	0.342	0.345	0.348	0.351	0.354	0.357	0.359	0.362	0.365	0.368	0.371	0.374	0.377
\$0.70	0.329	0.332	0.335	0.338	0.340	0.343	0.346	0.349	0.352	0.355	0.358	0.361	0.364	0.367	0.369	0.372	0.375	0.378	0.381
\$0.71	0.333	0.336	0.339	0.342	0.345	0.348	0.350	0.353	0.356	0.359	0.362	0.365	0.368	0.371	0.374	0.377	0.379	0.382	0.385
\$0.72	0.337	0.340	0.343	0.346	0.349	0.352	0.355	0.358	0.360	0.363	0.366	0.369	0.372	0.375	0.378	0.381	0.384	0.387	0.389
\$0.73	0.341	0.344	0.347	0.350	0.353	0.356	0.359	0.362	0.365	0.368	0.370	0.373	0.376	0.379	0.382	0.385	0.388	0.391	0.394
\$0.74	0.346	0.349	0.351	0.354	0.357	0.360	0.363	0.366	0.369	0.372	0.375	0.378	0.380	0.383	0.386	0.389	0.392	0.395	0.398
\$0.75	0.350	0.353	0.356	0.359	0.361	0.364	0.367	0.370	0.373	0.376	0.379	0.382	0.385	0.388	0.390	0.393	0.396	0.399	0.402
\$0.76	0.354	0.357	0.360	0.363	0.366	0.369	0.371	0.374	0.377	0.380	0.383	0.386	0.389	0.392	0.395	0.398	0.400	0.403	0.406
\$0.77	0.358	0.361	0.364	0.367	0.370	0.373	0.376	0.379	0.381	0.384	0.387	0.390	0.393	0.396	0.399	0.402	0.405	0.408	0.410
\$0.78	0.362	0.365	0.368	0.371	0.374	0.377	0.380	0.383	0.386	0.389	0.391	0.394	0.397	0.400	0.403	0.406	0.409	0.412	0.415
\$0.79	0.367	0.370	0.372	0.375	0.378	0.381	0.384	0.387	0.390	0.393	0.396	0.399	0.401	0.404	0.407	0.410	0.413	0.416	0.419

Weighted lint share of production set at 42% and the weighted share of seed set at 58%.

Seed Cotton PLC Payment Estimator Guide

2018 crop year decision aid from the LSU AgCenter

Reference Price (\$/lb)	\$0.367
Lint Program Yield (lbs)	1000.0
Seed Cotton Program Yield (lbs)	2400
Seed Cotton Price Floor (\$/lb)	\$0.250

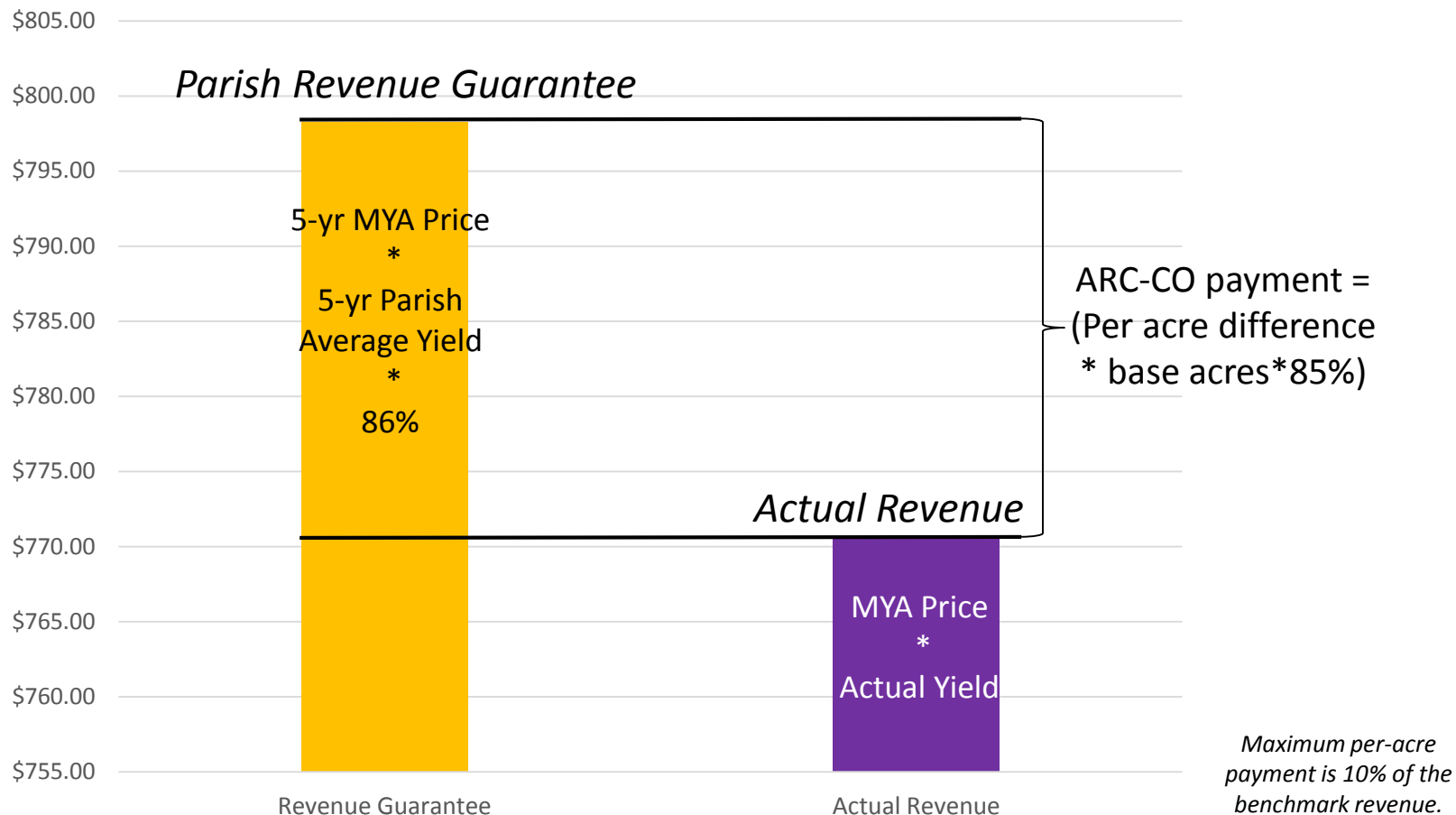
Producer's Specified Estimates of Marketing Year Production of Lint and Cottonseed			
Total U.S. Lint Production (lbs)	9800000000	Weighted Lint Coeff.	0.429825 "Effective Price for Seed Cotton Calculation"
Total U.S. Seed Production (lbs)	13000000000	Weighted Seed Coeff.	0.570175 "Effective Price for Seed Cotton Calculation"

Example PLC Payment for Seed Cotton per base acre (subject to lint and seed production levels)

Lint Price (\$/lb)	Cottonseed Price (\$/ton)																		
	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
\$0.52	\$222.93	\$217.12	\$211.30	\$205.49	\$199.67	\$193.85	\$188.04	\$182.22	\$176.41	\$170.59	\$164.77	\$158.96	\$153.14	\$147.33	\$141.51	\$135.70	\$129.88	\$124.06	\$118.25
\$0.53	\$214.16	\$208.35	\$202.53	\$196.72	\$190.90	\$185.09	\$179.27	\$173.45	\$167.64	\$161.82	\$156.01	\$150.19	\$144.37	\$138.56	\$132.74	\$126.93	\$121.11	\$115.30	\$109.48
\$0.54	\$205.40	\$199.58	\$193.76	\$187.95	\$182.13	\$176.32	\$170.50	\$164.69	\$158.87	\$153.05	\$147.24	\$141.42	\$135.61	\$129.79	\$123.97	\$118.16	\$112.34	\$106.53	\$100.71
\$0.55	\$196.63	\$190.81	\$185.00	\$179.18	\$173.36	\$167.55	\$161.73	\$155.92	\$150.10	\$144.29	\$138.47	\$132.65	\$126.84	\$121.02	\$115.21	\$109.39	\$103.57	\$97.76	\$91.94
\$0.56	\$187.86	\$182.04	\$176.23	\$170.41	\$164.60	\$158.78	\$152.96	\$147.15	\$141.33	\$135.52	\$129.70	\$123.89	\$118.07	\$112.25	\$106.44	\$100.62	\$94.81	\$88.99	\$83.17
\$0.57	\$179.09	\$173.27	\$167.46	\$161.64	\$155.83	\$150.01	\$144.20	\$138.38	\$132.56	\$126.75	\$120.93	\$115.12	\$109.30	\$103.49	\$97.67	\$91.85	\$86.04	\$80.22	\$74.41
\$0.58	\$170.32	\$164.51	\$158.69	\$152.87	\$147.06	\$141.24	\$135.43	\$129.61	\$123.80	\$117.98	\$112.16	\$106.35	\$100.53	\$94.72	\$88.90	\$83.09	\$77.27	\$71.45	\$65.64
\$0.59	\$161.55	\$155.74	\$149.92	\$144.11	\$138.29	\$132.47	\$126.66	\$120.84	\$115.03	\$109.21	\$103.40	\$97.58	\$91.76	\$85.95	\$80.13	\$74.32	\$68.50	\$62.69	\$56.87
\$0.60	\$152.79	\$146.97	\$141.15	\$135.34	\$129.52	\$123.71	\$117.89	\$112.07	\$106.26	\$100.44	\$94.63	\$88.81	\$83.00	\$77.18	\$71.36	\$65.55	\$59.73	\$53.92	\$48.10
\$0.61	\$144.02	\$138.20	\$132.39	\$126.57	\$120.75	\$114.94	\$109.12	\$103.31	\$97.49	\$91.67	\$85.86	\$80.04	\$74.23	\$68.41	\$62.60	\$56.78	\$50.96	\$45.15	\$39.33
\$0.62	\$135.25	\$129.43	\$123.62	\$117.80	\$111.99	\$106.17	\$100.35	\$94.54	\$88.72	\$82.91	\$77.09	\$71.27	\$65.46	\$59.64	\$53.83	\$48.01	\$42.20	\$36.38	\$30.56
\$0.63	\$126.48	\$120.66	\$114.85	\$109.03	\$103.22	\$97.40	\$91.59	\$85.77	\$79.95	\$74.14	\$68.32	\$62.51	\$56.69	\$50.87	\$45.06	\$39.24	\$33.43	\$27.61	\$21.80
\$0.64	\$117.71	\$111.90	\$106.08	\$100.26	\$94.45	\$88.63	\$82.82	\$77.00	\$71.19	\$65.37	\$59.55	\$53.74	\$47.92	\$42.11	\$36.29	\$30.47	\$24.66	\$18.84	\$13.03
\$0.65	\$108.94	\$103.13	\$97.31	\$91.50	\$85.68	\$79.86	\$74.05	\$68.23	\$62.42	\$56.60	\$50.79	\$44.97	\$39.15	\$33.34	\$27.52	\$21.71	\$15.89	\$10.07	\$4.26
\$0.66	\$100.17	\$94.36	\$88.54	\$82.73	\$76.91	\$71.10	\$65.28	\$59.46	\$53.65	\$47.83	\$42.02	\$36.20	\$30.39	\$24.57	\$18.75	\$12.94	\$7.12	\$1.31	\$0.00
\$0.67	\$91.41	\$85.59	\$79.77	\$73.96	\$68.14	\$62.33	\$56.51	\$50.70	\$44.88	\$39.06	\$33.25	\$27.43	\$21.62	\$15.80	\$9.99	\$4.17	\$0.00	\$0.00	\$0.00
\$0.68	\$82.64	\$76.82	\$71.01	\$65.19	\$59.37	\$53.56	\$47.74	\$41.93	\$36.11	\$30.30	\$24.48	\$18.66	\$12.85	\$7.03	\$1.22	\$0.00	\$0.00	\$0.00	\$0.00
\$0.69	\$73.87	\$68.05	\$62.24	\$56.42	\$50.61	\$44.79	\$38.97	\$33.16	\$27.34	\$21.53	\$15.71	\$9.90	\$4.08	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.70	\$65.10	\$59.29	\$53.47	\$47.65	\$41.84	\$36.02	\$30.21	\$24.39	\$18.57	\$12.76	\$6.94	\$1.13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.71	\$56.33	\$50.52	\$44.70	\$38.89	\$33.07	\$27.25	\$21.44	\$15.62	\$9.81	\$3.99	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.72	\$47.56	\$41.75	\$35.93	\$30.12	\$24.30	\$18.49	\$12.67	\$6.85	\$1.04	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.73	\$38.80	\$32.98	\$27.16	\$21.35	\$15.53	\$9.72	\$3.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.74	\$30.03	\$24.21	\$18.40	\$12.58	\$6.76	\$0.95	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.75	\$21.26	\$15.44	\$9.63	\$3.81	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.76	\$12.49	\$6.67	\$0.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.77	\$3.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Seed Cotton ARC-CO Payment Formula

Illustration of program mechanics and parish revenue series calculation



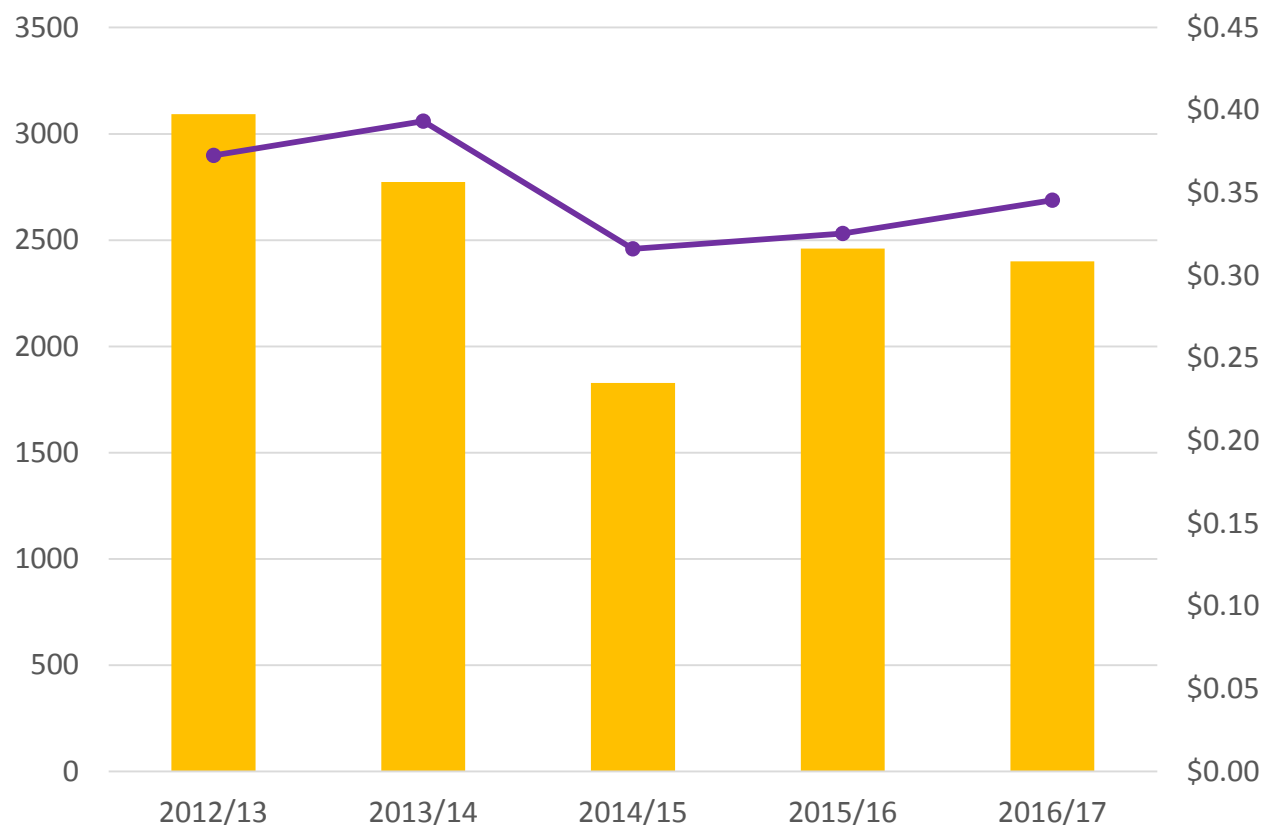
Tensas Parish example for ARC-CO. Seed cotton price for 2018 estimated at \$0.338 and actual yield set at 2,280.

Seed Cotton ARC-CO Program

2018 crop year Tensas Parish Example, ARC-CO Program Mechanics

Seed Cotton Yield

Seed Cotton MYA



Seed Cotton ARC-CO Program

2018 crop year Tensas Parish Example

Year	Seed Cotton Price	Cotton Yield	Seed Cotton Yield
2013	\$0.3727	1,289	3,093
2014	\$0.3933	1,156	2,774
2015	\$0.3161	762	1,828
2016	\$0.3254	1,029	2,469
2017	\$0.3300	961	2,306

5-year Olympic Average Price = \$0.3689; 5-year Olympic Average Yield = 2,516 lbs

Benchmark Revenue = \$928.15 per acre

*Revenue Guarantee = 86% * \$928.15 = \$798.21 per acre*

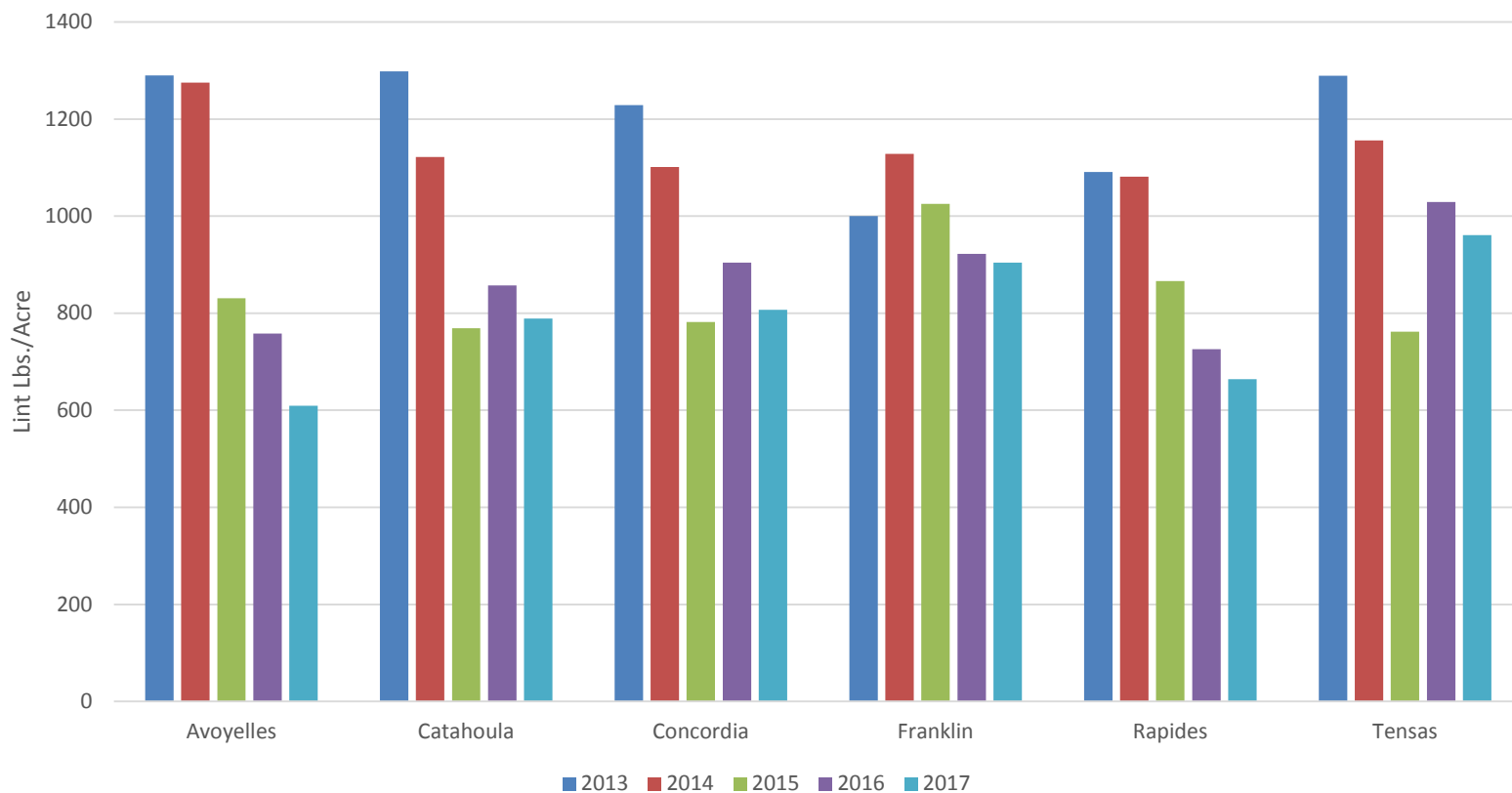
2018 Actual MYA Price Projection of \$0.361 and Seed Cotton Yield of 2,280 (950 lint)

2018 Actual Revenue of \$823.08, which is MORE than \$798.21 guarantee;

ARC-CO payment NOT TRIGGERED

Trends in Seed Cotton Program Yields

2018 CY Yield Example



Seed Cotton ARC-CO Program

2018 CY Yield Example

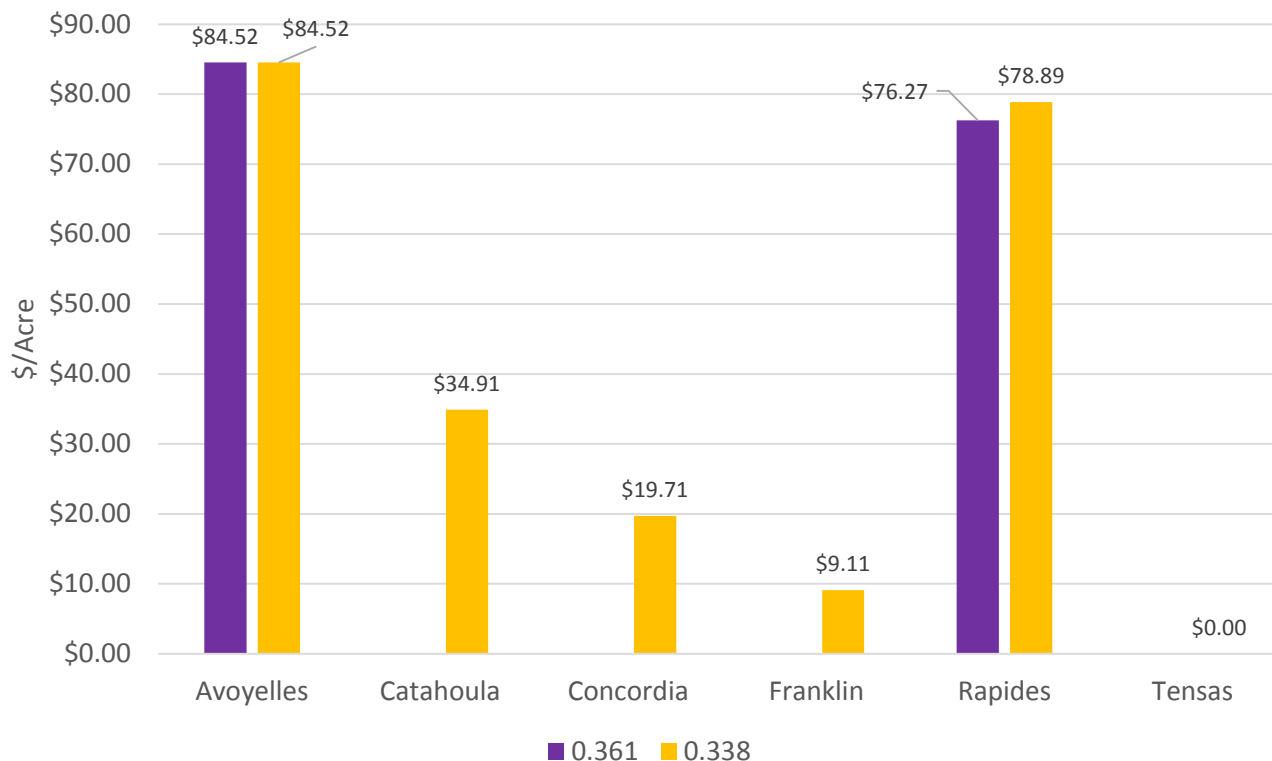
Parish	Lint Yield Trigger	Seed Cotton Yield Trigger
Avoyelles	896	2,150
Catahoula	866	2,078
Concordia	879	2,111
Franklin	924	2,218
Rapides	773	1,855
Tensas	984	2,362

Avoyelles, Catahoula, Concordia, Franklin, Rapides, and Tensas yields levels selected at 800; 900; 850; 1,000; 850; and 1,000 pounds of lint per acre.

2018 Actual MYA Price Projection of \$0.338 (\$0.68 lint price; \$160 ton cottonseed price)

Seed Cotton ARC-CO Program

2018 CY Program Example with Varying Prices



**2018 Actual MYA Price Projection of \$0.361 (\$0.72/lb. lint and \$180/ton seed)
\$0.338 (\$0.68/lb. lint and \$160/ton seed)**

Seed Cotton ARC-CO Program – *Preliminary Look*

2018 crop year multi-parish example

- What about geographical variability?



Parish	2018 Seed Cotton ARC-CO Payment (\$/base ac)*
Avoyelles	\$84
Catahoula	\$34
Concordia	\$19
Franklin	\$9
Rapides	\$78
Tensas	\$0

*2018 Actual MYA Price Projection of \$0.338 and Seed Cotton Yield equal to previous 2-yr average; lint price of \$0.68 and \$160 ton cottonseed.

Generic Base Conversion/Reallocation

Producer/Landowner decisions

- Have a one-time option to:
 - 1. Convert 80% of generic base acres to seed cotton base. (with 20% of base unassigned)
 - 2. Allocate generic acres to covered commodities (including seed cotton) to the proportional share of the 2009-12 planting history
- A farm cannot increase the total amount of base acres through this process
- Base acres applicable for the 2018 CY and for the new farm bill (2019-2022)

Generic Base Acre Conversion/Reallocation

Summary points

- If a farm has *over*-planted their generic base acres in cotton, **all** planted cotton acres will be eligible for the program
- If a farm has *under* planted their generic base in cotton, that farm will **lose** a portion of their generic base acres upon enrollment in the program
- One acre of one ***covered*** commodity must have been planted during 2009-2016 on that farm's generic base to avoid forfeiture of all generic base for that farm

Seed Cotton Program Default Elections

If unanimous decision is NOT made

- Default program election:
 - *PLC*
- Default seed cotton program yield:
 - *CC lint yield (multiplied by a factor of 2.4)*
- Default generic allocation:
 - *The higher of 2009-12 average cotton plantings or 80% of generic base acres*

Generic Base Acres

Example 1

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	1,000 acres
Total Generic Acres on the Farm	700 acres
<u>2009-2012 Average Plantings</u>	--
Cotton	400
Corn	250
Soybeans	250
Grain Sorghum	100

1

MAX of (80% * 700 generic acres) or (2009 – 2012 average cotton plantings of 400 acres)

80% * 700 = 560 acres of seed cotton base (with 140 acres unassigned)

<u>Parameter</u>	<u>Value</u>
Seed Cotton	$700 * (400/1,000) = 280$ base acres
Corn	$700 * (250/1,000) = 175$ base acres
Soybeans	$700 * (250/1,000) = 175$ base acres
Grain Sorghum	$700 * (100/1,000) = 70$ base acres

2

Converting/Reallocating Base Acres

2018 CY decision tool from the LSU AgCenter

Seed Cotton Program Option: Convert Generic Base Acres to Seed Cotton Base Acres <u>OR</u> Reallocate Generic Base Acres							
Total Generic Base on Farm	700.00						
Planted Acreage	2009	2010	2011	2012	Average		
Corn	250.00	250.00	250.00	250.00	250.00		
Cotton	400.00	400.00	400.00	400.00	400.00		
Rice (Long Grain)	0.00	0.00	0.00	0.00	0.00		
Rice (Medium Grain)	0.00	0.00	0.00	0.00	0.00		
Peanuts	0.00	0.00	0.00	0.00	0.00		
Sorghum	100.00	100.00	100.00	100.00	100.00		
Soybeans	250.00	250.00	250.00	250.00	250.00		
Wheat	0.00	0.00	0.00	0.00	0.00		
Total Plantings	1000.00						
Generic Base Acre Conversion (Option #1)							
Seed Cotton Base	560.00						
Unassigned Base	140.00						
Generic Base Acre Reallocation (Option #2)							
Planted Acreage	2009	2010	2011	2012	Average	All. Percent	Reall. Base Acres
Corn	250.00	250.00	250.00	250.00	250.00	0.250	175.00
Seed Cotton	400.00	400.00	400.00	400.00	400.00	0.400	280.00
Rice (Long Grain)	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Rice (Medium Grain)	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Peanuts	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Sorghum	100.00	100.00	100.00	100.00	100.00	0.100	70.00
Soybeans	250.00	250.00	250.00	250.00	250.00	0.250	175.00
Wheat	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Total Plantings	1000.00					1.000	700.00

Generic Base Acres (w/Rice Plantings)

Example 2

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	1,000 acres
Total Generic Acres on the Farm	700 acres
<u>2009-2012 Average Plantings</u>	--
Cotton	250
Corn	250
Soybeans	250
Rice	250

1

MAX of (80% * 700 generic acres) or (2009 – 2012 average cotton plantings of 400 acres)

80% * 700 = 560 acres of seed cotton base (with 140 acres unassigned)

<u>Parameter</u>	<u>Value</u>
Seed Cotton	$700 * (250/1,000) = 175$ base acres
Corn	$700 * (250/1,000) = 175$ base acres
Soybeans	$700 * (250/1,000) = 175$ base acres
Rice	$700 * (250/1,000) = 175$ base acres

2

Converting/Reallocating Base Acres

2018 CY decision tool from the LSU AgCenter

Seed Cotton Program Option: Convert Generic Base Acres to Seed Cotton Base Acres <u>OR</u> Reallocate Generic Base Acres							
Total Generic Base on Farm	700.00						
Planted Acreage	2009	2010	2011	2012	Average		
Corn	250.00	250.00	250.00	250.00	250.00		
Cotton	250.00	250.00	250.00	250.00	250.00		
Rice (Long Grain)	250.00	250.00	250.00	250.00	250.00		
Rice (Medium Grain)	0.00	0.00	0.00	0.00	0.00		
Peanuts	0.00	0.00	0.00	0.00	0.00		
Sorghum	0.00	0.00	0.00	0.00	0.00		
Soybeans	250.00	250.00	250.00	250.00	250.00		
Wheat	0.00	0.00	0.00	0.00	0.00		
Total Plantings	1000.00						
Generic Base Acre Conversion (Option #1)							
Seed Cotton Base	560.00						
Unassigned Base	140.00						
Generic Base Acre Reallocation (Option #2)							
Planted Acreage	2009	2010	2011	2012	Average	All. Percent	Reall. Base Acres
Corn	250.00	250.00	250.00	250.00	250.00	0.250	175.00
Seed Cotton	250.00	250.00	250.00	250.00	250.00	0.250	175.00
Rice (Long Grain)	250.00	250.00	250.00	250.00	250.00	0.250	175.00
Rice (Medium Grain)	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Peanuts	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Sorghum	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Soybeans	250.00	250.00	250.00	250.00	250.00	0.250	175.00
Wheat	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Total Plantings	1000.00					1.000	700.00

Generic Base Acres (w/High Cotton Plantings)

Example 3

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	800 acres
Total Generic Acres on the Farm	500 acres
<u>2009-2012 Average Plantings</u>	--
Cotton	600
Corn	200

1

MAX of (80% * 500 generic acres) or (2009 – 2012 average cotton plantings of 600 acres)
 = 500 acres of seed cotton base (cannot exceed generic base)

W/ THIS OPTION THE RESULT IS NO UNASSIGNED BASE !

<u>Parameter</u>	<u>Value</u>
Seed Cotton	$500 * (600/800) = 375$ base acres
Corn	$500 * (200/800) = 125$ base acres

2

Converting/Reallocating Base Acres

2018 CY decision tool from the LSU AgCenter

Seed Cotton Program Option: Convert Generic Base Acres to Seed Cotton Base Acres OR Reallocate Generic Base Acres							
Total Generic Base on Farm	→ 500.00						
Planted Acreage	2009	2010	2011	2012	Average		
Corn	200.00	200.00	200.00	200.00	200.00		
Cotton	600.00	600.00	600.00	600.00	600.00		
Rice (Long Grain)	0.00	0.00	0.00	0.00	0.00		
Rice (Medium Grain)	0.00	0.00	0.00	0.00	0.00		
Peanuts	0.00	0.00	0.00	0.00	0.00		
Sorghum	0.00	0.00	0.00	0.00	0.00		
Soybeans	0.00	0.00	0.00	0.00	0.00		
Wheat	0.00	0.00	0.00	0.00	0.00		
Total Plantings	800.00						
Generic Base Acre Conversion (Option #1)							
Seed Cotton Base	500.00						
Unassigned Base	0.00						
Generic Base Acre Reallocation (Option #2)							
Planted Acreage	2009	2010	2011	2012	Average	All. Percent	Reall. Base Acres
Corn	200.00	200.00	200.00	200.00	200.00	0.250	125.00
Seed Cotton	600.00	600.00	600.00	600.00	600.00	0.750	375.00
Rice (Long Grain)	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Rice (Medium Grain)	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Peanuts	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Sorghum	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Soybeans	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Wheat	0.00	0.00	0.00	0.00	0.00	0.000	0.00
Total Plantings	800.00					1.000	500.00

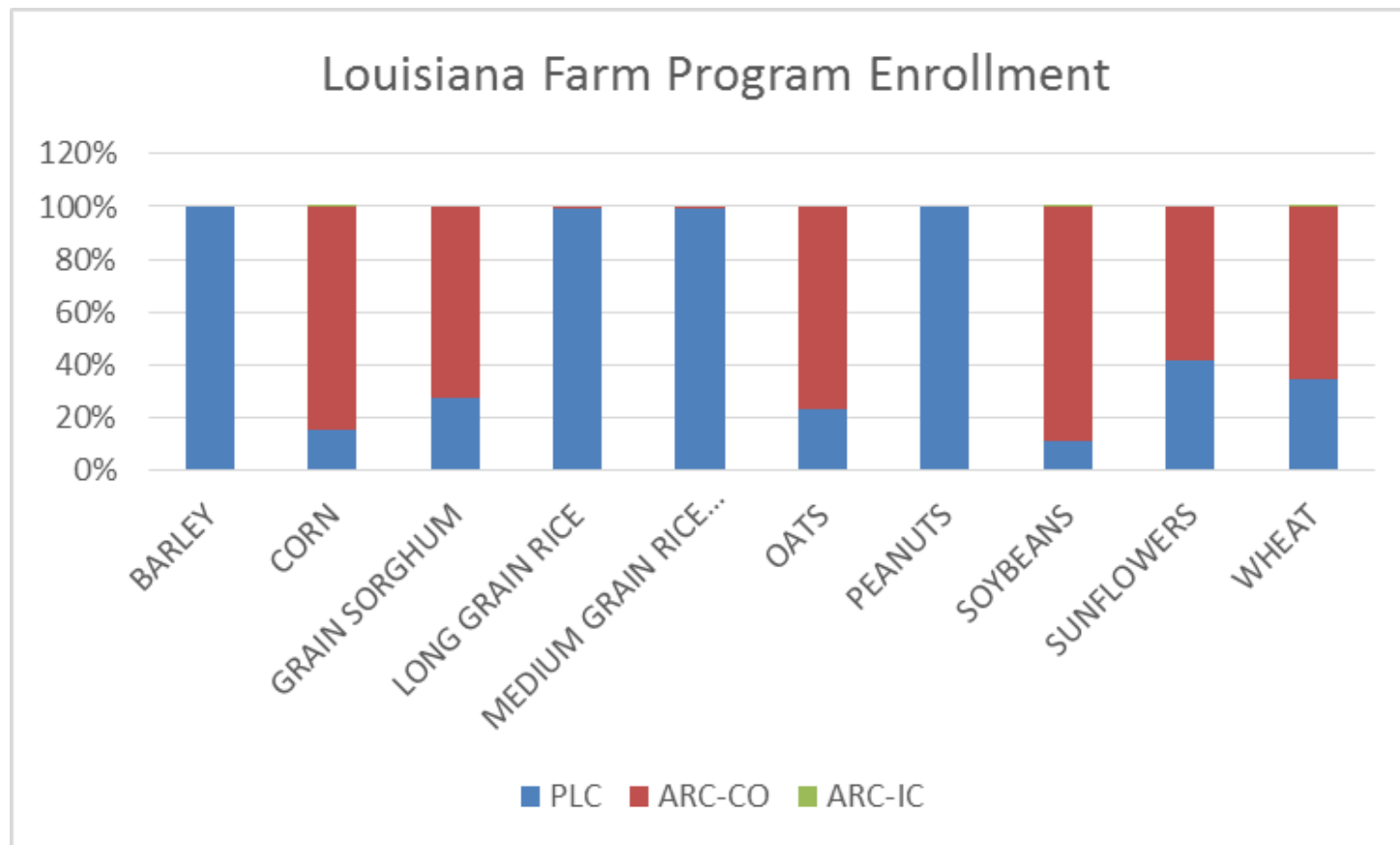
Estimating the Value of Base Acres

Economic considerations in projecting program payments



Title I Program Participation

Louisiana Farm Data



Source: USDA-FSA.

Estimating the Value of Base Acres

Economic considerations

- What was my 2009-2012 planting history?
- Should I build (reallocate) commodity base?
- Determining the “value” of base?
- Making a program projection: **What do I need to know?**

Program elections for covered commodities planted to generic acres are a result of prior decisions made with 2014 Farm Bill sign-up

ARC-CO Payment per Base Acre – Decision Tool

2017 CY example for corn in Franklin Parish

ARC-CO Farm Program Payment Estimate for the 2017 Crop Year (Payment occurring in October of 2018)

Corn (all)

Franklin Parish

Historic Farm Program Parameters:

Benchmark Revenue^{1/} \$759.04

ARC-CO Payment Maximum Rate^{2/} \$75.90

Revenue Guarantee^{3/} \$652.77

Grower-specified Parameters:

Estimated Parish Yield for 2017 185

Estimated MYA Price for 2017 \$3.40

Estimated ARC-CO Payments for Corn in Franklin Parish for the 2017 CY										
	Final Reported National MYA Price for 2017									
Yield	\$3.20	\$3.25	\$3.30	\$3.35	\$3.40	\$3.45	\$3.50	\$3.55	\$3.60	\$3.65
175	\$75.90	\$75.90	\$75.27	\$66.52	\$57.77	\$49.02	\$40.27	\$31.52	\$22.77	\$14.02
177	\$75.90	\$75.90	\$68.67	\$59.82	\$50.97	\$42.12	\$33.27	\$24.42	\$15.57	\$6.72
179	\$75.90	\$71.02	\$62.07	\$53.12	\$44.17	\$35.22	\$26.27	\$17.32	\$8.37	\$0.00
181	\$73.57	\$64.52	\$55.47	\$46.42	\$37.37	\$28.32	\$19.27	\$10.22	\$1.17	\$0.00
183	\$67.17	\$58.02	\$48.87	\$39.72	\$30.57	\$21.42	\$12.27	\$3.12	\$0.00	\$0.00
185	\$60.77	\$51.52	\$42.27	\$33.02	\$23.77	\$14.52	\$5.27	\$0.00	\$0.00	\$0.00
187	\$54.37	\$45.02	\$35.67	\$26.32	\$16.97	\$7.62	\$0.00	\$0.00	\$0.00	\$0.00
189	\$47.97	\$38.52	\$29.07	\$19.62	\$10.17	\$0.72	\$0.00	\$0.00	\$0.00	\$0.00
191	\$41.57	\$32.02	\$22.47	\$12.92	\$3.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
193	\$35.17	\$25.52	\$15.87	\$6.22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
195	\$28.77	\$19.02	\$9.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

^{1/} The 2017 benchmark revenue is calculated as the Olympic average of 2012-2016 parish yield multiplied by the Olympic average of the 2012-2016 national MYA prices.

^{2/} The ARC-CO maximum payment rate is set (capped) at 10% of the 2017 benchmark revenue, as previously determined.

^{3/} The 2017 revenue guarantee is set at 86% of the benchmark revenue amount.

The 2017 USDA NASS reported yield of 185 bu/ac used as proxy with the 2017/18 projected MYA price of \$3.40/bu.

ARC-CO Payment per Base Acre – Decision Tool

2018 CY example for corn in Franklin Parish

ARC-CO Farm Program Payment Estimate for the 2018 Crop Year (Payment occurring in October of 2019)

Corn (all)

Franklin Parish

Historic Farm Program Parameters:

Benchmark Revenue^{1/} \$695.60

ARC-CO Payment Maximum Rate^{2/} \$69.56

Revenue Guarantee^{3/} \$598.22

Grower-specified Parameters:

Estimated Parish Yield for 2018 185

Estimated MYA Price for 2018 \$3.80

Estimated ARC-CO Payments for Corn in Franklin Parish for the 2018 CY										
	Final Reported National MYA Price for 2018									
Yield	\$3.60	\$3.65	\$3.70	\$3.75	\$3.80	\$3.85	\$3.90	\$3.95	\$4.00	\$4.05
175	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
177	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
179	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
181	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
183	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
185	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
187	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
189	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
191	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
193	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
195	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

1/ The 2018 benchmark revenue is calculated as the Olympic average of 2013-2017 parish yield multiplied by the Olympic average of the 2013-2017 national MYA prices.

2/ The ARC-CO maximum payment rate is set (capped) at 10% of the 2018 benchmark revenue, as previously determined.

3/ The 2018 revenue guarantee is set at 86% of the benchmark revenue amount.

The 2017 USDA NASS reported yield used as proxy coupled with July 2018 WASDE corn price.

How sensitive is the revenue guarantee in 2018 to changes in actual yields and MYA prices?

ARC-CO Payment per Base Acre – Decision Tool

2018 CY example for corn in Franklin Parish w/ lower price and yield

ARC-CO Farm Program Payment Estimate for the 2018 Crop Year (Payment occurring in October of 2019)

Corn (all)

Franklin Parish

Historic Farm Program Parameters:

Benchmark Revenue^{1/} \$695.60

ARC-CO Payment Maximum Rate^{2/} \$69.56

Revenue Guarantee^{3/} \$598.22

Grower-specified Parameters:

Estimated Parish Yield for 2018 173

Estimated MYA Price for 2018 \$3.45

Estimated ARC-CO Payments for Corn in Franklin Parish for the 2018 CY										
Final Reported National MYA Price for 2018										
Yield	\$3.25	\$3.30	\$3.35	\$3.40	\$3.45	\$3.50	\$3.55	\$3.60	\$3.65	\$3.70
163	\$68.47	\$60.32	\$52.17	\$44.02	\$35.87	\$27.72	\$19.57	\$11.42	\$3.27	\$0.00
165	\$61.97	\$53.72	\$45.47	\$37.22	\$28.97	\$20.72	\$12.47	\$4.22	\$0.00	\$0.00
167	\$55.47	\$47.12	\$38.77	\$30.42	\$22.07	\$13.72	\$5.37	\$0.00	\$0.00	\$0.00
169	\$48.97	\$40.52	\$32.07	\$23.62	\$15.17	\$6.72	\$0.00	\$0.00	\$0.00	\$0.00
171	\$42.47	\$33.92	\$25.37	\$16.82	\$8.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
173	\$35.97	\$27.32	\$18.67	\$10.02	\$1.37	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
175	\$29.47	\$20.72	\$11.97	\$3.22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
177	\$22.97	\$14.12	\$5.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
179	\$16.47	\$7.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
181	\$9.97	\$0.92	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
183	\$3.47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

1/ The 2018 benchmark revenue is calculated as the Olympic average of 2013-2017 parish yield multiplied by the Olympic average of the 2013-2017 national MYA prices.

2/ The ARC-CO maximum payment rate is set (capped) at 10% of the 2018 benchmark revenue, as previously determined.

3/ The 2018 revenue guarantee is set at 86% of the benchmark revenue amount.

The 2018 actual yield was reduced by 12 bushels, and the actual MYA price was decreased to \$3.45 per bushel. The result is that an ARC-CO corn payment for Franklin Parish was triggered (\$1.37/ac) in 2018. Again, how sensitive is the revenue guarantee in 2018 (a function of the 2013-17 yields and MYA prices) to changes in yields and prices?

ARC-CO Payment per Base Acre – Decision Tool

2017 CY example for irrigated soybeans in Franklin Parish

ARC-CO Farm Program Payment Estimate for the 2017 Crop Year (Payment occurring in October of 2018)

Soybeans (irrigated)

Franklin Parish

Historic Farm Program Parameters:

Benchmark Revenue ^{1/}	\$557.31
ARC-CO Payment Maximum Rate ^{2/}	\$55.73
Revenue Guarantee ^{3/}	\$479.29

Grower-specified Parameters:

Estimated Parish Yield for 2017	59
Estimated MYA Price for 2017	\$9.35

Estimated ARC-CO Payments for Soybeans in Franklin Parish for the 2017 CY										
	Final Reported National MYA Price for 2017									
Yield	\$9.15	\$9.20	\$9.25	\$9.30	\$9.35	\$9.40	\$9.45	\$9.50	\$9.55	\$9.60
49	\$30.94	\$28.49	\$26.04	\$23.59	\$21.14	\$18.69	\$16.24	\$13.79	\$11.34	\$8.89
51	\$12.64	\$10.09	\$7.54	\$4.99	\$2.44	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
59	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
61	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
67	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

^{1/} The 2017 benchmark revenue is calculated as the Olympic average of 2012-2016 parish yield multiplied by the Olympic average of the 2012-2016 national MYA prices.

^{2/} The ARC-CO maximum payment rate is set (capped) at 10% of the 2017 benchmark revenue, as previously determined.

^{3/} The 2017 revenue guarantee is set at 86% of the benchmark revenue amount.

The 2017 USDA NASS reported yield of 59 bu/ac used as proxy with the 2017/18 projected MYA price of \$9.35/bu.

ARC-CO Payment per Base Acre – Decision Tool

2017 CY example for irrigated soybeans in Franklin Parish

ARC-CO Farm Program Payment Estimate for the 2018 Crop Year (Payment occurring in October of 2019)

Soybeans (irrigated)

Franklin Parish

Historic Farm Program Parameters:

Benchmark Revenue ^{1/}	\$515.56
ARC-CO Payment Maximum Rate ^{2/}	\$51.56
Revenue Guarantee ^{3/}	\$443.38

Grower-specified Parameters:

Estimated Parish Yield for 2018	59
Estimated MYA Price for 2018	\$9.25

Estimated ARC-CO Payments for Soybeans in Franklin Parish for the 2018 CY

	Final Reported National MYA Price for 2018									
Yield	\$9.05	\$9.10	\$9.15	\$9.20	\$9.25	\$9.30	\$9.35	\$9.40	\$9.45	\$9.50
49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
59	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
61	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
67	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

1/ The 2018 benchmark revenue is calculated as the Olympic average of 2013-2017 parish yield multiplied by the Olympic average of the 2013-2017 national MYA prices.

2/ The ARC-CO maximum payment rate is set (capped) at 10% of the 2018 benchmark revenue, as previously determined.

3/ The 2018 revenue guarantee is set at 86% of the benchmark revenue amount.

The 2017 USDA NASS reported yield of 59 bu/ac used as proxy with the July WASDE 2018/19 projected MYA price of \$9.25/bu.

ARC-CO Payment per Base Acre – Decision Tool

2018 CY example for soybeans in Franklin Parish w/ lower price and yield

ARC-CO Farm Program Payment Estimate for the 2018 Crop Year (Payment occurring in October of 2019)

Soybeans (irrigated)

Franklin Parish

Historic Farm Program Parameters:

Benchmark Revenue^{1/} \$517.35

ARC-CO Payment Maximum Rate^{2/} \$51.73

Revenue Guarantee^{3/} \$444.92

Grower-specified Parameters:

Estimated Parish Yield for 2018 52

Estimated MYA Price for 2018 \$8.50

Estimated ARC-CO Payments for Soybeans in Franklin Parish for the 2018 CY

Yield	Final Reported National MYA Price for 2018									
	\$8.30	\$8.35	\$8.40	\$8.45	\$8.50	\$8.55	\$8.60	\$8.65	\$8.70	\$8.75
42	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73
44	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73
46	\$51.73	\$51.73	\$51.73	\$51.73	\$51.73	\$51.62	\$49.32	\$47.02	\$44.72	\$42.42
48	\$46.52	\$44.12	\$41.72	\$39.32	\$36.92	\$34.52	\$32.12	\$29.72	\$27.32	\$24.92
50	\$29.92	\$27.42	\$24.92	\$22.42	\$19.92	\$17.42	\$14.92	\$12.42	\$9.92	\$7.42
52	\$13.32	\$10.72	\$8.12	\$5.52	\$2.92	\$0.32	\$0.00	\$0.00	\$0.00	\$0.00
54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
56	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
58	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

1/ The 2018 benchmark revenue is calculated as the Olympic average of 2013-2017 parish yield multiplied by the Olympic average of the 2013-2017 national MYA prices.

2/ The ARC-CO maximum payment rate is set (capped) at 10% of the 2018 benchmark revenue, as previously determined.

3/ The 2018 revenue guarantee is set at 86% of the benchmark revenue amount.

The 2018 actual yield was reduced by 7 bushels, and the actual MYA price was decreased to \$8.50 per bushel. The result is that an ARC-CO soybean payment for Franklin Parish was triggered (\$2.92/ac) in 2018.

Again, how sensitive is the revenue guarantee in 2018 (a function of the 2013-17 yields and MYA prices) to changes in yields and prices?

PLC Payment per Base Acre– Decision Tool

2018 CY example for long grain rice

PLC Payment Estimator

Long Grain Rice

Expected MYA Price	\$11.20	(\$/cwt)
Reference Price	\$14.00	(\$/cwt)
Will a PLC Payment Trigger?	Yes	
PLC Payment Rate	\$2.80	(\$/cwt)
Farm's PLC Payment Yield	55.00	(cwt/ac)

PLC Payment Amount **\$154.00** **(\$/ac)**

PLC Payment Amount (per Base Acre) \$130.90

\$11.20 July WASDE midpoint price projection

Illustration at Farm's Program Yield

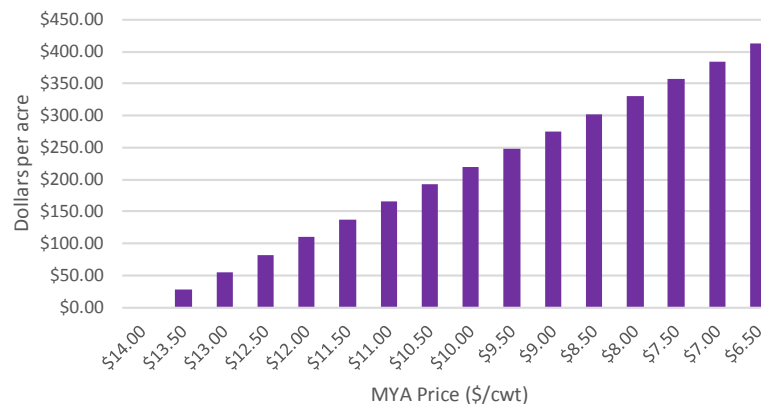
55.00

	Price	PLC Pymt.
	\$14.00	\$0.00
	\$13.50	\$27.50
	\$13.00	\$55.00
	\$12.50	\$82.50
	\$12.00	\$110.00
	\$11.50	\$137.50
	\$11.00	\$165.00
	\$10.50	\$192.50
	\$10.00	\$220.00
	\$9.50	\$247.50
	\$9.00	\$275.00
	\$8.50	\$302.50
	\$8.00	\$330.00
	\$7.50	\$357.50
	\$7.00	\$385.00
	\$6.50	\$412.50

Declining MYA Price and
Corresponding PLC Payment per ac

(Loan Rate set at \$6.50 per cwt)

PLC Program Payment for Long Grain Rice (\$/ac)



Program Payment per Base Acre

Retroactive look back at Franklin Parish, LA

- Evaluate payments (\$/ac) from 2014-18

<u>Covered Commodity</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Corn - ARC-CO	\$67	\$99	\$92	\$24	\$0
Soybeans - ARC-CO	\$0	\$61	\$38	\$0	\$0
(Seed Cotton - PLC)	\$122	\$100	\$51	\$89	\$59
Grain Sorghum – ARC-CO	\$41	\$41	\$35	\$0	\$0

*USDA NASS Projected MYA prices \$3.40 and \$3.80 for corn; \$9.40 and \$9.20 for soybeans; \$11.60 and \$11.20 for long grain rice; \$3.20 and \$3.60 for grain sorghum; and \$0.674 and \$0.68 for cotton lint in **2017 and 2018**. Prices applied where applicable to commodity base acres on the farm. PLC program yields for long grain rice and seed cotton are 5,500 pounds and 2,400 pounds, respectively.*

Generic Base Acres – Franklin Parish

Example 1 revisited

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	1,000 acres
Total Generic Acres on the Farm	700 acres
<u>2009-2012 Average Plantings</u>	--
Cotton	400
Corn	250
Soybeans	250
Grain Sorghum	100

1

*MAX of (80% * 700 generic acres) or (2009 – 2012 average cotton plantings of 400 acres)*

*80% * 700 = 560 acres of seed cotton base (with 140 acres unassigned)*

<u>Parameter</u>	<u>Value</u>
Seed Cotton	$700 * (400/1,000) = 280$ base acres
Corn	$700 * (250/1,000) = 175$ base acres
Soybeans	$700 * (250/1,000) = 175$ base acres
Grain Sorghum	$700 * (100/1,000) = 70$ base acres

2

Generic Base Acres 2018 CY – Franklin Parish

Example 1 revisited with option 1

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	1,000 acres
Total Generic Acres on the Farm	700 acres
Generic Base Conversion	--
Seed Cotton	560
Unassigned	140

1

<u>Parameter</u>	<u>Value</u>
Seed Cotton	560*\$59= \$33,040
Unassigned \$0 per base ac	\$0
TOTAL	\$33,040

Generic Base Acres 2018 CY – Franklin Parish

Example 1 revisited with option 2

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	1,000 acres
Total Generic Acres on the Farm	700 acres
Generic Base Reallocation	--
Seed Cotton	280
Corn	175
Soybeans	175
Grain Sorghum	70

2

<u>Parameter</u>	<u>Value</u>
Seed Cotton	$280 * \$59 = \$16,520$
Corn	$175 * \$0 = 0$
Soybean	$175 * \$0 = \0
Grain Sorghum	$70 * \$0 = \0
TOTAL	\$16,520

Generic Base Acres (w/High Cotton Plantings) – Franklin Parish *Example 3 revisited*

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	800 acres
Total Generic Acres on the Farm	500 acres
2009-2012 Average Plantings	--
Cotton	600
Corn	200

MAX of (80% * 500 generic acres) or (2009 – 2012 average cotton plantings of 600 acres)
 = 500 acres of seed cotton base (cannot exceed generic base)

W/ THIS OPTION THE RESULT IS NO UNASSIGNED BASE !

<u>Parameter</u>	<u>Value</u>
Seed Cotton	$500 * (600/800) = 375$ base acres
Corn	$500 * (200/800) = 125$ base acres

Generic Base Acres 2018 CY – Franklin Parish

Example 3 revisited with option 1

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	1,000 acres
Total Generic Acres on the Farm	700 acres
Generic Base Conversion	--
Seed Cotton	500
Unassigned	0

1

W/ THIS OPTION THE RESULT IS NO UNASSIGNED BASE !

<u>Parameter</u>	<u>Value</u>
Seed Cotton	500*\$59= \$29,500
Unassigned \$0 per base ac	\$0
TOTAL	\$29,500

Generic Base Acres 2018 CY – Franklin Parish

Example 3 revisited with option 2

<u>Parameter</u>	<u>Value</u>
Total Base Acres on the Farm	1,000 acres
Total Generic Acres on the Farm	700 acres
Generic Base Reallocation	--
Seed Cotton	375
Corn	125

2

<u>Parameter</u>	<u>Value</u>
Seed Cotton	$375 * \$59 = \$22,125$
Corn	$125 * \$0 = \0
TOTAL	\$22,125

ARC-CO Program Thresholds for Corn

Parish Yield Needed to Trigger Program Payment

2018 MYA Price @ \$3.30 Bushel	
Avoyelles	157
Catahoula	170
Concordia	169
Franklin	180
Pointe Coupee	180
Rapides	154
Tensas	169

*What if there is
a decline in the
2018 CY MYA
price?*

2018 MYA Price @ \$3.80 Bushel	
Avoyelles	136
Catahoula	148
Concordia	147
Franklin	156
Pointe Coupee	156
Rapides	134
Tensas	147

Determining the yield threshold needed at the parish-level needed to trigger and ARC-CO farm program payment (by varying the estimated 2018 MYA prices for the commodity).

ARC-CO Program Thresholds for Soybeans

Parish Yield Needed to Trigger Program Payment

2018 MYA Price @ \$8.00 Bushel

Avoyelles	49
Catahoula	57
Concordia	59
Franklin	60
Pointe Coupee	54
Rapides	53
Tensas	63

*What if there is
a decline in the
2018 CY MYA
price?*

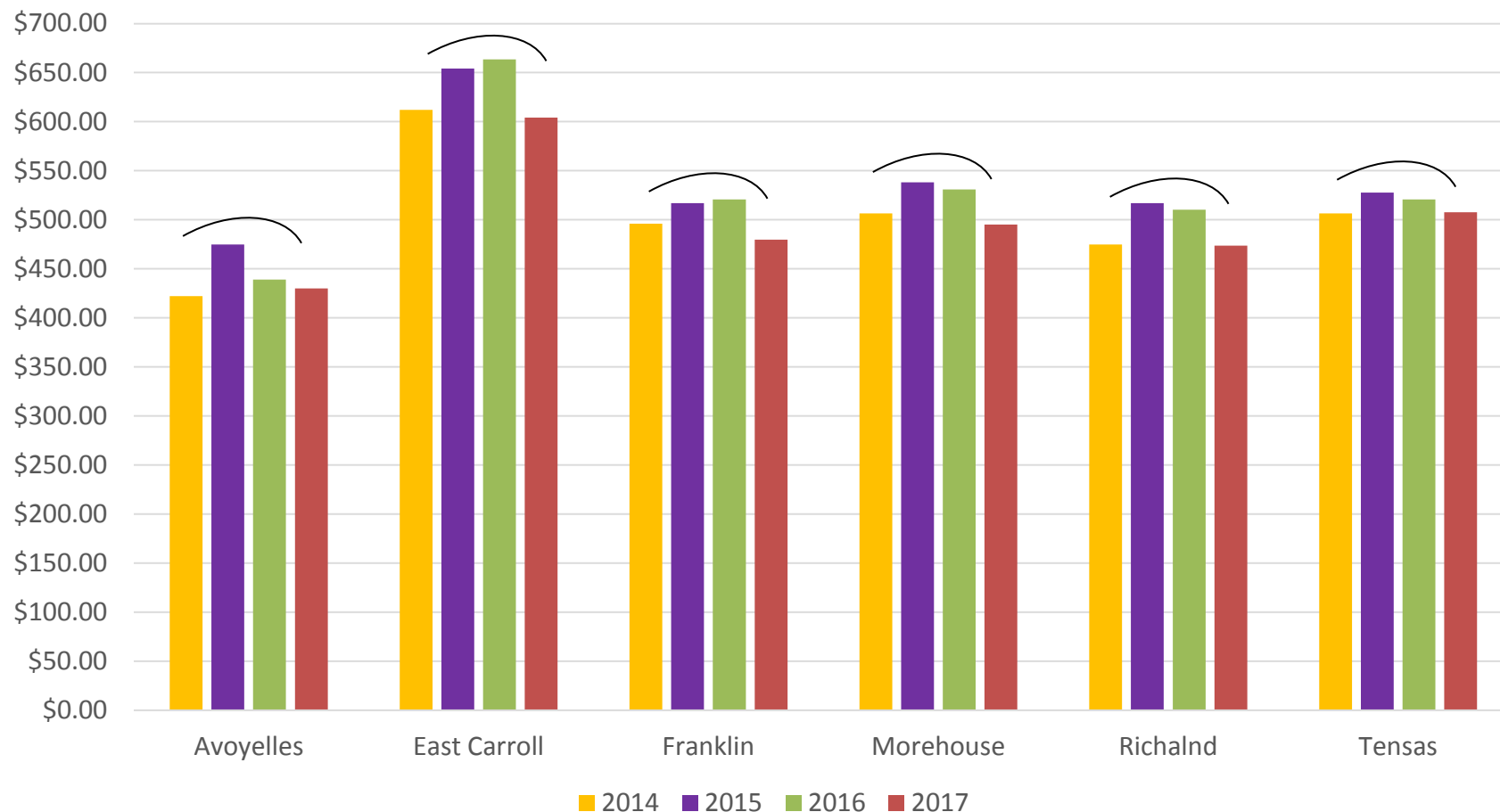
2018 MYA Price @ \$9.25 Bushel

Avoyelles	42
Catahoula	49
Concordia	51
Franklin	52
Pointe Coupee	47
Rapides	45
Tensas	55

Determining the yield threshold needed at the parish-level needed to trigger and ARC-CO farm program payment (by varying the estimated 2018 MYA prices for the commodity).

ARC-CO Revenue Guarantee Levels

Selected soybean-producing parishes – an illustration of program mechanics



Avoyelles and Morehouse represent all production, while the irrigation practice is considered for all other parishes.

ARC-CO Program Thresholds for Grain Sorghum

Parish Yield Needed to Trigger Program Payment

2018 MYA Price @ \$3.10 Bushel	
Avoyelles	107
Catahoula	97
Concordia	108
Franklin	75
Pointe Coupee	110
Rapides	106
Tensas	109

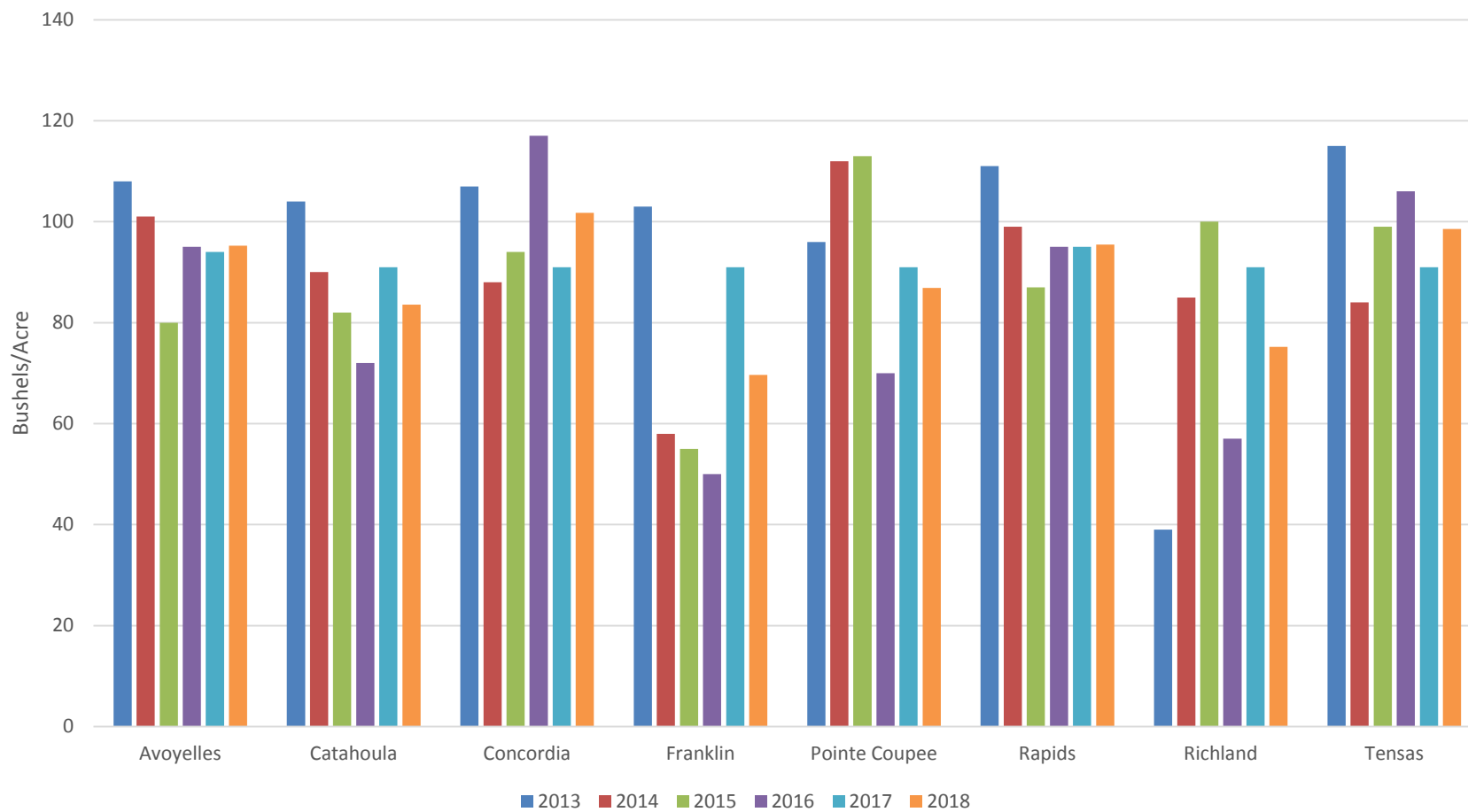
*What if there is
a decline in the
2018 CY MYA
price?*

2018 MYA Price @ \$3.60 Bushel	
Avoyelles	92
Catahoula	83
Concordia	93
Franklin	65
Pointe Coupee	95
Rapides	92
Tensas	94

Determining the yield threshold needed at the parish-level needed to trigger and ARC-CO farm program payment (by varying the estimated 2018 MYA prices for the commodity).

Trends in Grain Sorghum Yields

Parameters For Estimating 2017 and 2018 Program Payments



ARC-CO Program Thresholds for Wheat

Parish Yield Needed to Trigger Program Payment

2018 MYA Price @ \$4.50 Bushel	
Avoyelles	33
Catahoula	48
Concordia	48
Franklin	48
Pointe Coupee	42
Rapides	48
Tensas	47

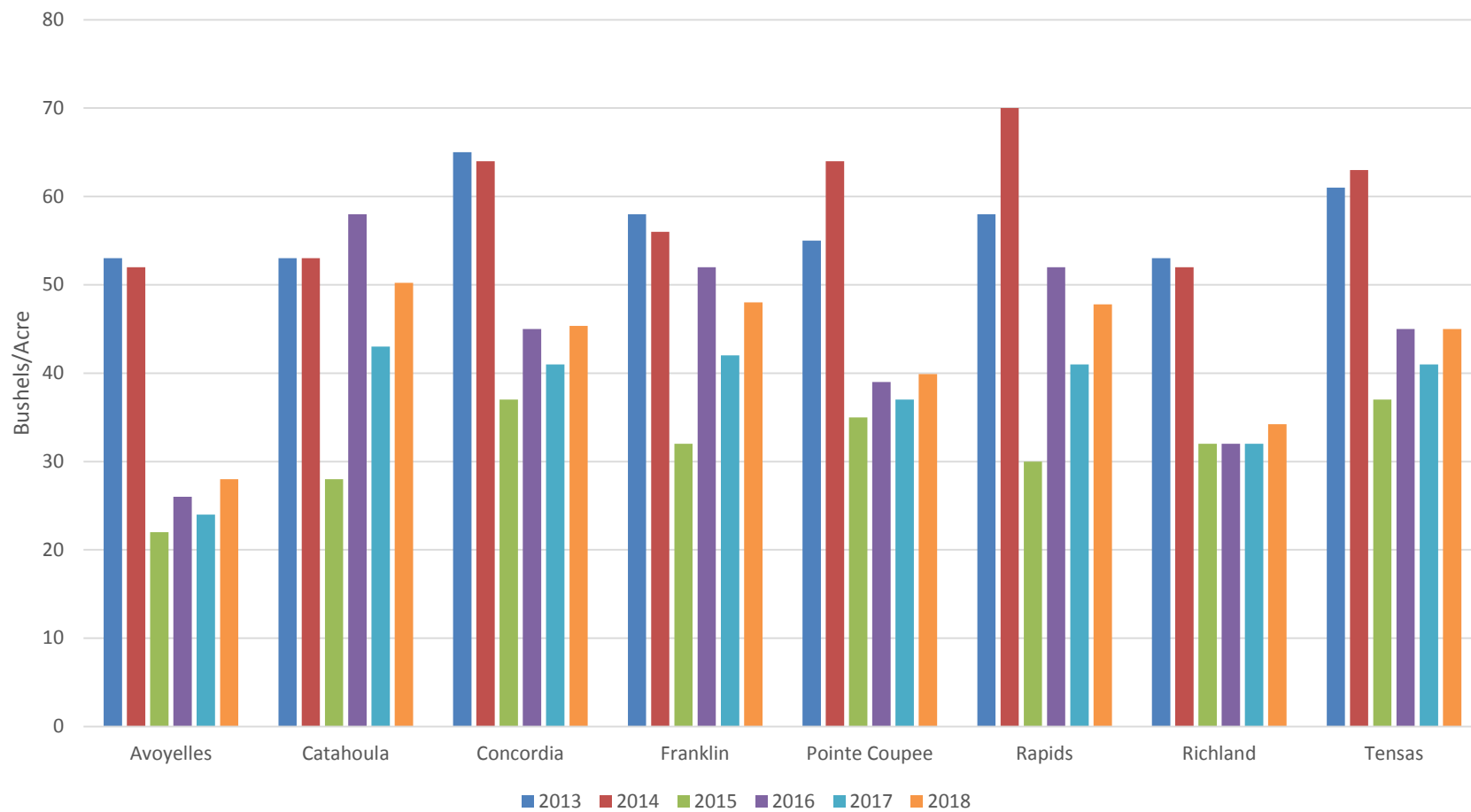
*What if there is
a decline in the
2018 CY MYA
price?*

2018 MYA Price @ \$5.00 Bushel	
Avoyelles	29
Catahoula	43
Concordia	43
Franklin	43
Pointe Coupee	38
Rapides	44
Tensas	42

Determining the yield threshold needed at the parish-level needed to trigger and ARC-CO farm program payment (by varying the estimated 2018 MYA prices for the commodity).

Trends in Wheat Yields

Parameters For Estimating 2017 and 2018 Program Payments



Wheat ARC-CO Payments

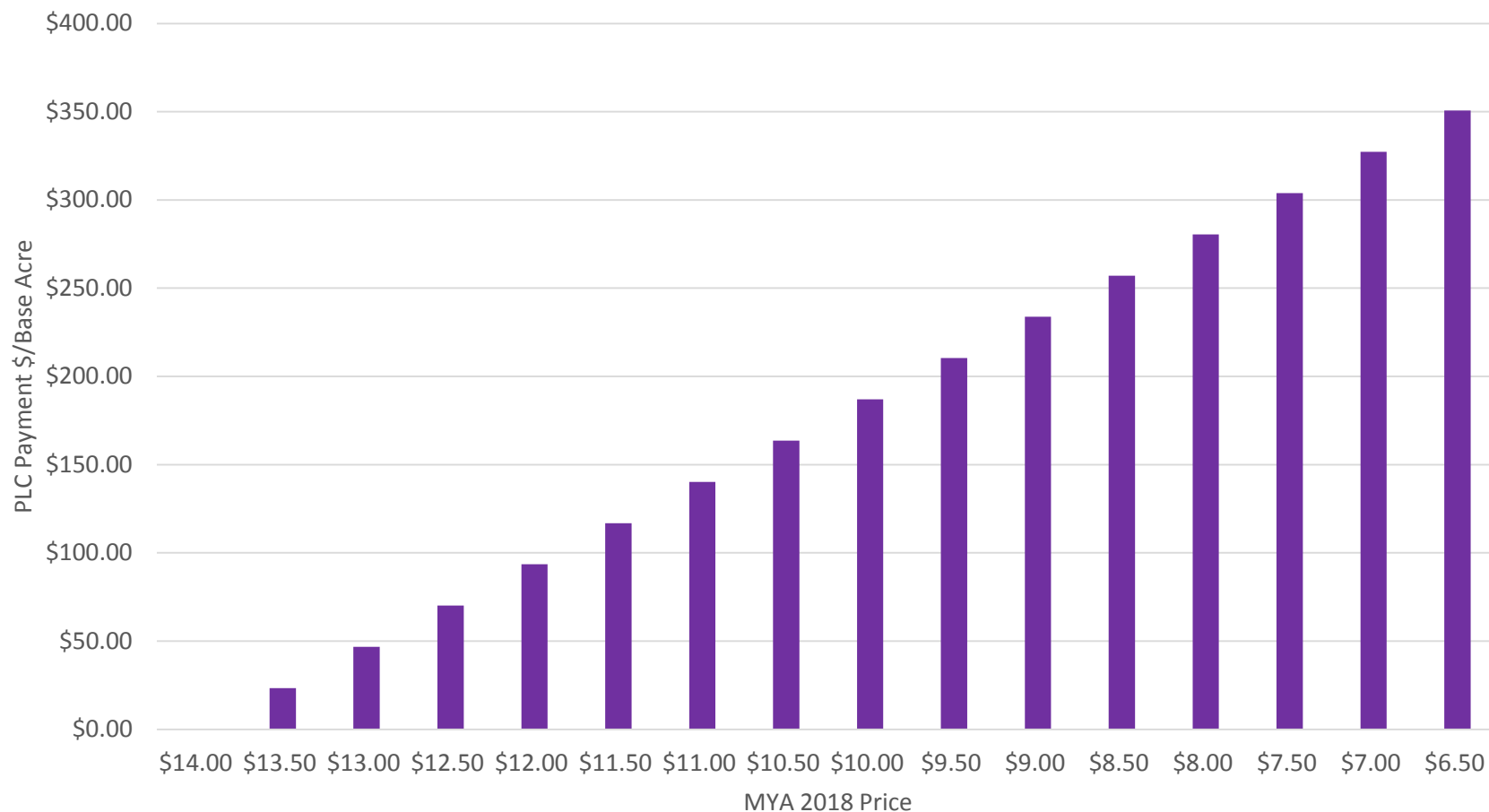
Parameters For Estimating 2017 and 2018 Program Payments

Parish	2018 ARC-CO Payment
Avoyelles	\$26
Catahoula	\$0
Concordia	\$17
Franklin	\$4
Pointe Coupee	\$13
Rapides	\$6
Richland	\$17
Tensas	\$14

2018 Actual Price Set at \$5.00/bushel and Yield Set At Previous 3 Year Average

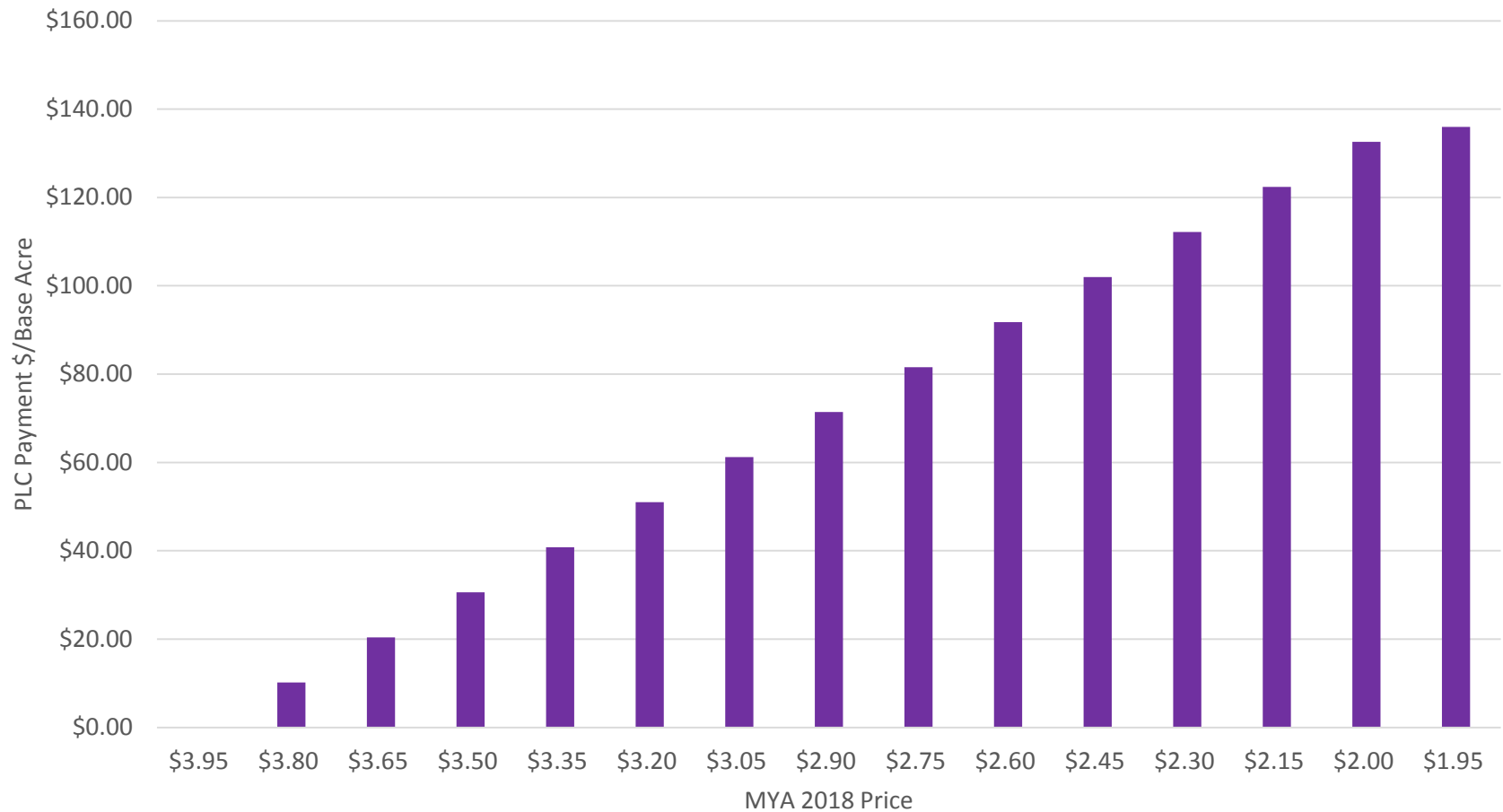
PLC Program for Rice

Estimated Program Payments for 2018 CY (55.0 CWT Yield)



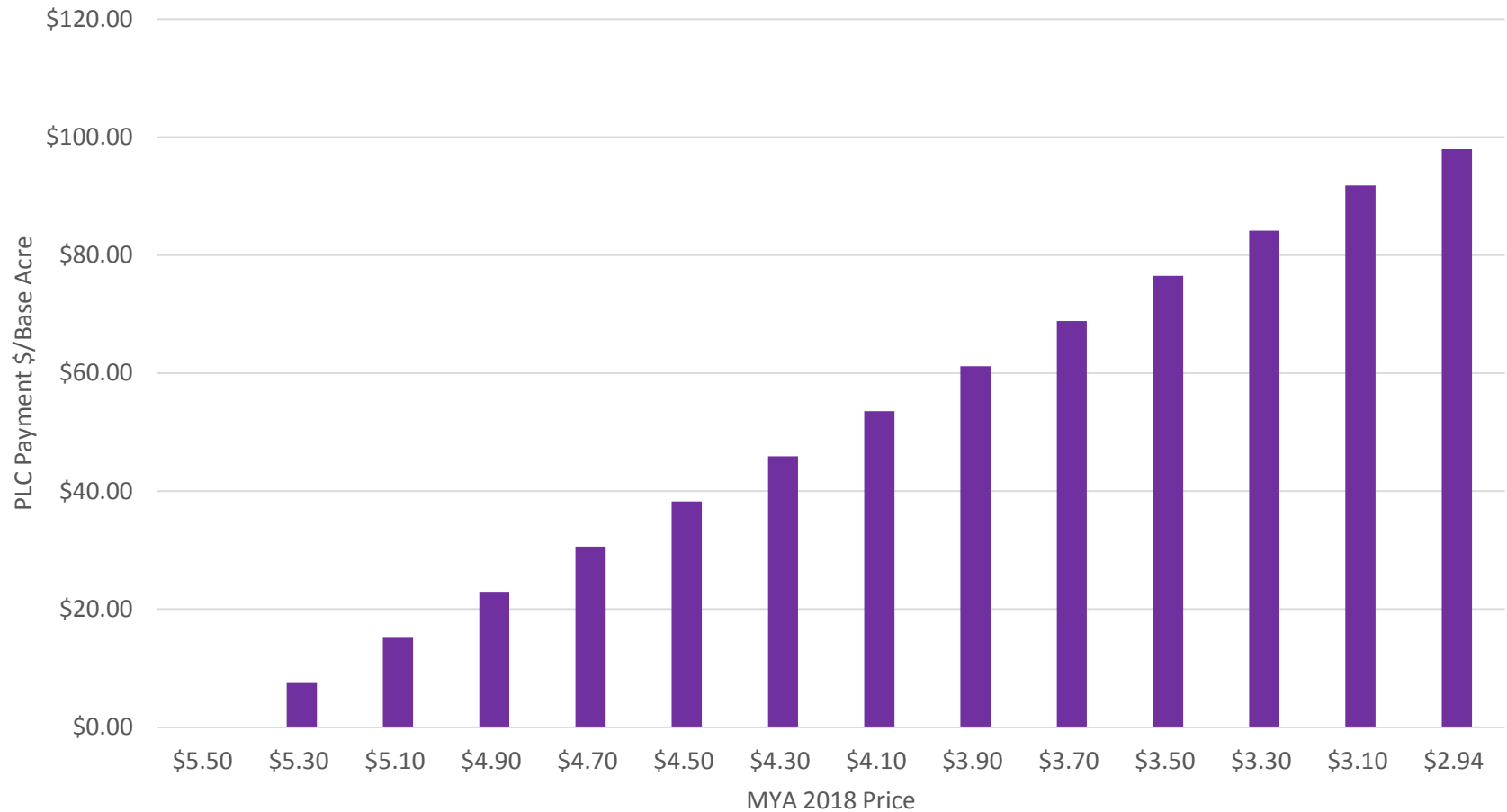
PLC Program for Sorghum

Estimated Program Payments for 2018 CY (80 Bushel Yield)



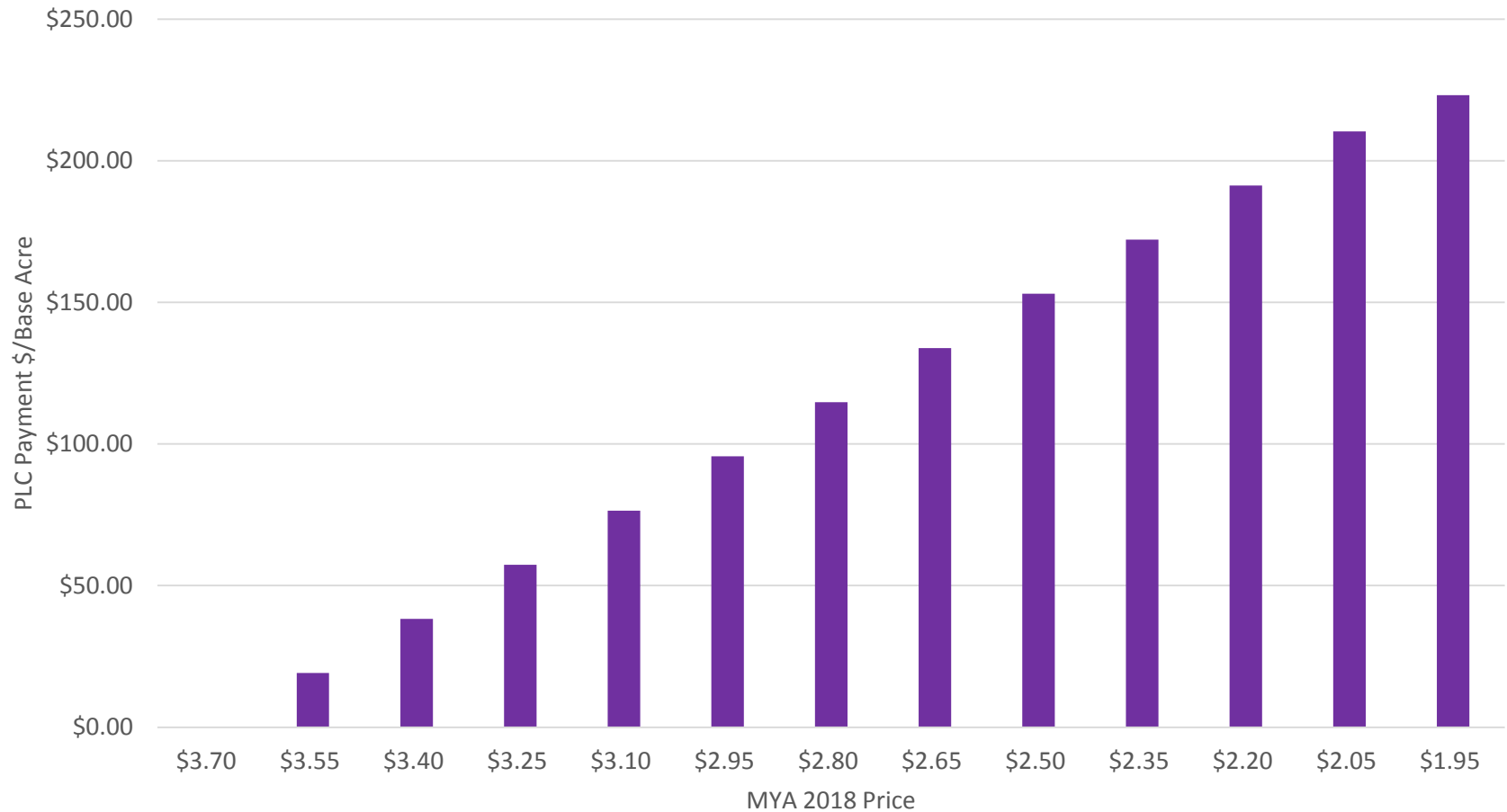
PLC Program for Wheat

Estimated Program Payments for 2018 CY (45 Bushel Yield)



PLC Program for Corn

Estimated Program Payments for 2018 CY (150 Bushel Yield)



Supplemental Materials for Title I

Addendum

Decision Support Tool (Topic)	Report	Excel File
Seed Cotton Program Yield Update	✓	✓
Seed Cotton PLC Payment Est.	✓	✓
Generic Base Acre Reallocation	✓	✓
2017&2018 ARC-CO Payment Tracker	✓	✓
PLC Payment Estimator ^{1/}	✓	✓
2014-2016 ARC-CO Payment History	✓	

^{1/} PLC payment estimator tool provided for corn, grain sorghum, soybeans, long grain rice, medium grain rice, soybeans, and wheat commodities.

http://www.lsuagcenter.com/portals/our_offices/departments/ag-economics-agribusiness/extension_outreach

Farm program payment information is presented for educational purposes.



Appreciation is extended to the Louisiana Farm Bureau Federation, Cotton Incorporated, the Louisiana Cotton and Grain Association, the Louisiana Soybean and Grain Research and Promotion Board, and the USDA Louisiana Farm Service Agency for their continued support of the LSU AgCenter and the Department of Agricultural Economics & Agribusiness.





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