

# Farm Bill Decisions

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## What's new in the 2018 FB?

1. Switch between ARC & PLC, update PLC yields
2. Higher Loan Rates for Marketing Assistance Program and Loan Deficiency Payments
3. Cover Crops terminated according to USDA guidelines are "good farming practice" in Crop Insurance
4. Improved dairy assistance
5. Industrial Hemp defined as ag commodity

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## Learning Objectives

- Highlight ARC/PLC Decisions & Interaction with Crop Insurance
- Illustrate the Supplemental Coverage Option (SCO)
- Review a 7-Step Process for Making ARC/PLC Decisions from Example Farm
- Discuss the PLC Yield Update Process
- Feature the ISU ARC/PLC Payment Analyzer
- Feature the UIUC ARC-IC Payment Analyzer
- Provide ARC/PLC Web Sites

## ARC & PLC

- ☐ 2018 Farm Bill Re-Authorized 2019-23
- ☐ PLC=Price Loss Coverage
  - ✓ Price for covered commodity falls below its effective reference price
- ☐ ARC=Agriculture Risk Coverage
  - ✓ Actual crop revenue (income) declines below a specified guarantee

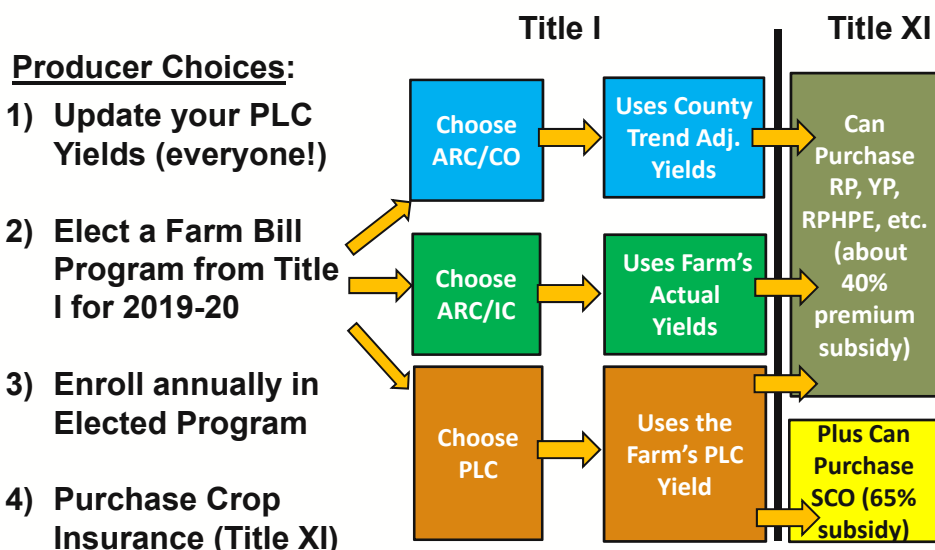
## Summary of Farm Bill Programs

Program	Trigger	Trigger Value	Payment based on:
<b>PLC</b>	Marketing Year Average Price	Effective Price < \$3.70 corn, <\$8.40 soybeans	85% Base Acres by crop and farm #
<b>ARC-CO</b>	County Revenue	86% (5-yr OA County Yields x 5-yr OA MYA Price)	85% Base Acres by crop and farm #
<b>ARC-IC</b>	Total Farm Revenue	86% 5-yr OA Farm Revenue	65% Base Acres summed across farms under ARC-IC

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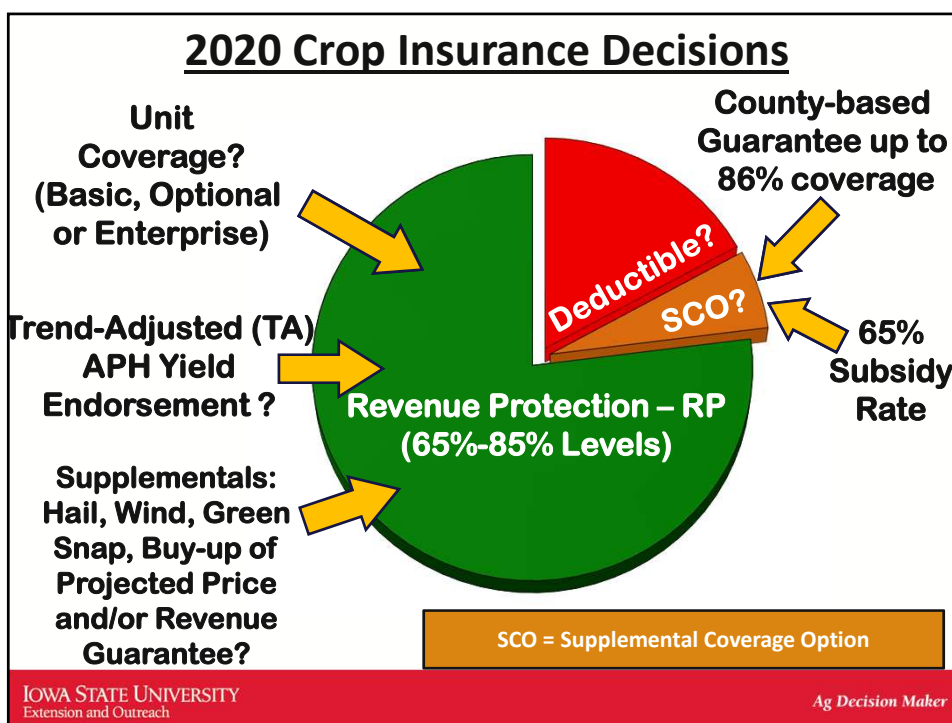
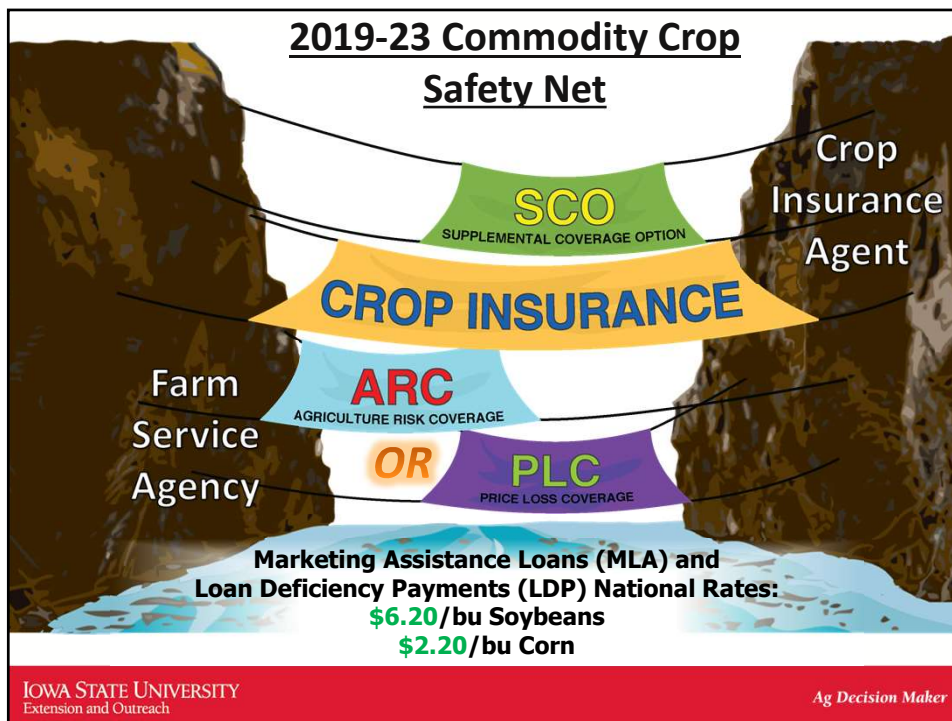
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## ARC/PLC Decisions & Crop Insurance (2019-2020)



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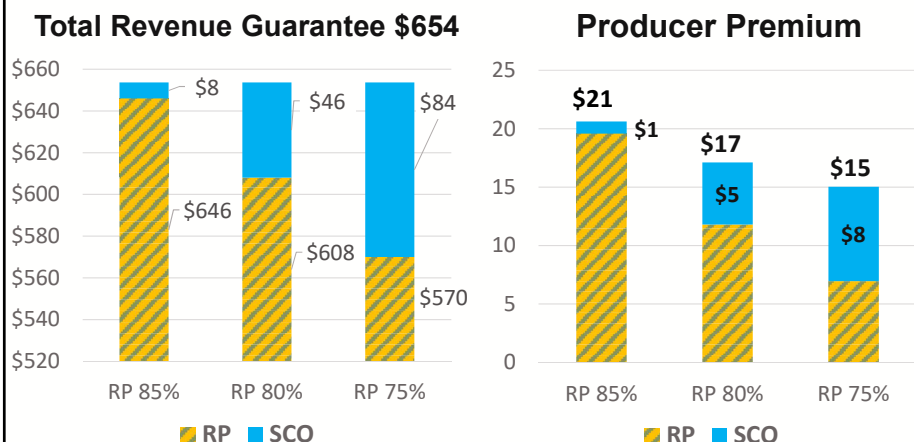
## Supplemental Coverage Option (SCO)

- Endorsement to Crop Insurance contract to cover part of the **deductible** in RP, YP, RPHP, APH
- Triggered by low **County** yields
- SCO indemnity depends on:
  - RP/YP/RPHP/APH liability, and
  - county yield/revenue
- Crop CANNOT be enrolled in ARC
- Buy from insurance agent (65% premium subsidy)

## SCO Indemnity

- Indemnity = (86% - Actual County Yield or Revenue as % of “Normal”) × underlying crop insurance liability
- Indemnity CAP = (86%-coverage level underlying policy) × underlying crop insurance liability

## Example SCO, Story Co - Iowa

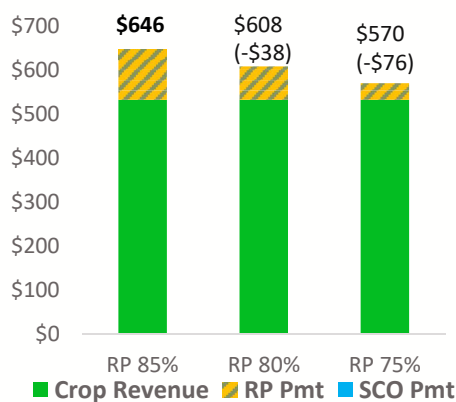


Farm APH 190 bu/a  
 Projected County Yield 176 bu/a  
 Final RP Price \$4/bu

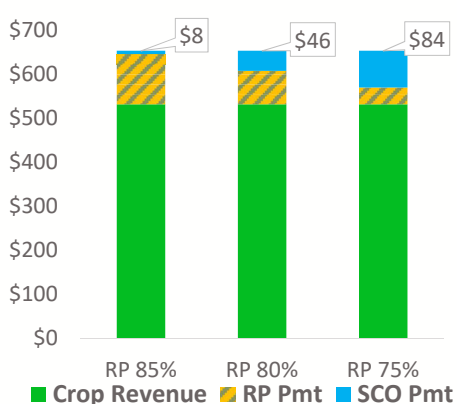
How much of your revenue guarantee would you tie to county revenue instead of farm revenue to save on premiums?

SCO might make sense when farm yields move in tandem with county yields. If farm yields disconnected from county yields, SCO less useful

### Revenue with LOW farm yields, HIGH county yields



### Revenue with LOW farm yields, LOW county yields



Low Farm Yield=70% APH = 133 bu/a  
 High County Yield = 88% Normal County Yield = 155 bu/a  
 Low County Yield = 70% Normal County Yield = 123 bu/a

### **ARC/PLC Decisions: A 7-Step Process**

- 1. Try to update to a new PLC yield using 2013 thru 2017 Crop Production Evidence effective for the 2020 crop (due SEPT 30)**
- 2. Find your Farms' Base Acres & Current PLC Yields on FSA 156-EZ form**
- 3. Estimate you County yields for both the 2019 and 2020 Crops (make a list)**

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### **ARC/PLC Decisions: A 7-Step Process**

- 4. Estimate the National Cash Price averages for the 2019-20 and 2020-21 Marketing Years (make another list)**
- 5. Place this information into an ARC/PLC Payment Calculator**
- 6. Compare by Crop, by FSA Farm Number the potential ARC-CO vs. PLC payments for both 2019 and 2020 crops**

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## ARC/PLC Decisions: A 7-Step Process

→ If you had prevented planting acres in 2019, then evaluate potential ARC-IC payments.

**7. Elect and Enroll for 2-Years your program(s) of choice:**

- **ARC-CO and PLC: by crop by FSA farm number**
- **ARC-IC: by FSA farm number (all crops in enrolled farms)**

## **PLC Yield Update Process**

- Everyone should try to Update their PLC Yields, even if they elect ARC-CO or ARC-IC.
- Deadline: September 30, 2020
- To update PLC Yields, need:
  - Production Evidence for 2013 thru 2017 Crops
  - Landowners need to sign the CCC-867 Form (at least 1 landowner)
- Example: current PLC yields Corn 131 bu/a; Soybeans 41 bu/a



## Production Reporting Form Example 1

XYZ Insurance Company, L.L.C. 2013-2017 Annual Yields											
<b>Application Insured Information</b>  <b>JOE FARMER</b> <b>111 150TH ST.</b> <b>BOONE, IA 50099</b>  Mail to: <b>insured@gmail.com</b> Mobile Number: <b>515.555.5555</b>  SSS/EIN <b>*****1111</b>				This form contains the actual yield values reported to RMA for each commodity and farm number on the producer's MPC1 policy for the years 2013-2017. The printed portion of this data is considered a rec type of 1 – RMA data as this is the actual data reported to RMA.							
County	Commodity	Farm Number	Unit Description	2013	2014	2015	2016	2017	Avg Yields	%	New PLC Yield
Boone	Corn	1234	Home Farm	154	152	209	208	221	188.8	.81	153
Boone	Soybeans	1234	Home Farm	24	34	52	55	47	?	.81	?

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## ISU PLC Yield Update Tool (EXAMPLE 1)

FSA Farm Number (Optional):		1234					
	Current PLC Yield	New PLC Yield	Recommendation				
Corn (bu/acre)	131						
Soybeans (bu/acre)	41						
1. Choose an Iowa county from the dropdown menu		Substitute yields <sup>1/</sup>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Corn</th> <th>Soybeans</th> </tr> <tr> <td>143.33</td> <td>40.59</td> </tr> </table>	Corn	Soybeans	143.33	40.59
Corn	Soybeans						
143.33	40.59						
Boone							
Corn							
	2013 Yield	2014 Yield	2015 Yield	2016 Yield	2017 Yield		
Substitute yield <sup>1/</sup>	143.33	143.33	143.33	143.33	143.33		
Your farm <sup>2/</sup>	154.00	152.00	209.00	208.00	221.00		
Higher yield × 90%	138.60	136.80	188.10	187.20	198.90		
Corn yield ratio	90%	90%	90%	90%	90%		
Program yield	124.74	123.12	169.29	168.48	179.01		
					New PLC Yield <sup>3/</sup>		
					153		

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<https://www.extension.iastate.edu/agdm/info/farmbill.html>

### ISU PLC Yield Update Tool (EXAMPLE 1)

FSA Farm Number (Optional):	1234		
	Current PLC Yield	New PLC Yield	Recommendation
Corn (bu/acre)	131	153	Update your PLC corn yield for this farm
Soybeans (bu/acre)	41	38	PLC soybean yield will NOT be updated for this farm

1. Choose an Iowa county from the dropdown menu	Substitute yields <sup>1/</sup>	Corn	Soybeans
Boone		143.33	40.59

Corn					
	2013 Yield	2014 Yield	2015 Yield	2016 Yield	2017 Yield
Substitute yield <sup>1/</sup>	143.33	143.33	143.33	143.33	143.33
Your farm <sup>2/</sup>	154.00	152.00	209.00	208.00	221.00
Higher yield × 90%	138.60	136.80	188.10	187.20	198.90
Corn yield ratio	90%	90%	90%	90%	90%
Program yield	124.74	123.12	169.29	168.48	179.01

New PLC Yield <sup>3/</sup>

153

Soybeans					
	2013 Yield	2014 Yield	2015 Yield	2016 Yield	2017 Yield
Substitute yield <sup>1/</sup>	40.59	40.59	40.59	40.59	40.59
Your farm <sup>2/</sup>	24.00	34.00	52.00	55.00	47.00
Higher yield × 90%	36.53	36.53	46.80	49.50	42.30
Soybean yield ratio	90%	90%	90%	90%	90%
Program yield	32.88	32.88	42.12	44.55	38.07

New PLC Yield <sup>3/</sup>

38

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## Yield Update for the PLC Program

### Form CCC-867 Entry Example: Corn

**THE FARM PLC YIELD UPDATE DECISION** is made by an owner of the farm identified in Item 5 above. If FSA receives conflicting yield update from another owner, owners will be required to resolve their dispute providing CCC with written evidence of the dispute resolution by the end of the yield update period.

**FARM YIELD UPDATE**

7. I agree to update the PLC yield for the covered commodity, identified in Item 6 above, based on 90 percent of the farm's 2013 through 2017 average yield per planted acre, excluding any year(s) when no acreage was planted times a national factor determined by dividing the 2008-12 national yield by the 2013-2017 national yield. The covered commodity's national yield factor is 90%.

7A. 2013 Yield	7B. 2014 Yield	7C. 2015 Yield	7D. 2016 Yield	7E. 2017 Yield	7F. Total	7G. Average Yield	7H. Multiplied by 2.4 (If Seed Cotton)	7I. Multiplied by 90%	7J. Multiplied by yield Factor (PLC Yield)
154	152	209	208	221	944	188.8		169.92	152.93

8. Owner's Name and Address (Including Zip Code)  
 Joe Farmer  
 111 150th St.  
 Boone, IA 50099

9A. Signature of Owner (By)	9B. Title/Relationship of the Individual Signing in the Representative Capacity	9C. Date (MM-DD-YYYY)

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# Yield Update for the PLC Program

## Form CCC-867 Entry Example: Soybeans

**THE FARM PLC YIELD UPDATE DECISION** is made by an owner of the farm identified in Item 5 above. If FSA receives conflicting yield update from another owner, owners will be required to resolve their dispute providing CCC with written evidence of the dispute resolution by the end of the yield update period.

### FARM YIELD UPDATE

7. I agree to update the PLC yield for the covered commodity, identified in Item 6 above, based on 90 percent of the farm's 2013 through 2017 average yield per planted acre, excluding any year(s) when no acreage was planted times a national factor determined by dividing the 2008-12 national yield by the 2013-2017 national yield. The covered commodity's national yield factor is 90%.

7A. 2013 Yield	7B. 2014 Yield	7C. 2015 Yield	7D. 2016 Yield	7E. 2017 Yield	7F. Total	7G. Average Yield	7H. Multiplied by 2.4 (If Seed Cotton)	7I. Multiplied by 90%	7J. Multiplied by yield Factor (PLC Yield)
40.59	40.59	52	55	47	235.18	47.04		42.33	38

8. Owner's Name and Address (Including Zip Code)

The FSA software will not let you update a PLC yield if the updated yield is lower than the old PLC yield

9A. Signature of Owner (By)

9B. Title/Relationship of the Individual Signing in the Representative Capacity

9C. Date (MM-DD-YYYY)

10A. Signature of CCC Representative

10B. Date (MM-DD-YYYY)

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## ISU PLC Yield Update Tool (EXAMPLE 2)

FSA Farm Number (Optional):	9999				
	Current PLC Yield	New PLC Yield	Recommendation		
Corn (bu/acre)	150	130	PLC corn yield will NOT be updated for this farm		
Soybeans (bu/acre)	40	43	Update your PLC soybean yield for this farm		

1. Choose an Iowa county from the dropdown menu	Substitute yields <sup>1/</sup>	Corn	Soybeans
Wright		140.88	39.48

Corn					
	2013 Yield	2014 Yield	2015 Yield	2016 Yield	2017 Yield
Substitute yield <sup>1/</sup>	140.88	not planted	140.88	not planted	140.88
Your farm <sup>2/</sup>	54.00	not planted	128.00	not planted	200.00
Higher yield × 90%	126.79		126.79		180.00
Corn yield ratio	90%	90%	90%	90%	90%
Program yield	114.11		114.11		162.00
	New PLC Yield <sup>3/</sup>				
	130				

Soybeans					
	2013 Yield	2014 Yield	2015 Yield	2016 Yield	2017 Yield
Substitute yield <sup>1/</sup>		39.48		39.48	
Your farm <sup>2/</sup>	not planted	50.00	not planted	55.00	not planted
Higher yield × 90%		45.00		49.50	
Soybean yield ratio	90%	90%	90%	90%	90%
Program yield		40.50		44.55	
	New PLC Yield <sup>3/</sup>				
	43				

<sup>1/</sup> Substitute yield is 75% of 2013-2017 simple county average yield per planted acre.

<sup>2/</sup> If yield evidence is not available for a given year the crop was grown, enter the substitute yield for "Your Farm".

<sup>3/</sup> The new PLC yield is the simple average of annual program yields.

## Price Loss Coverage

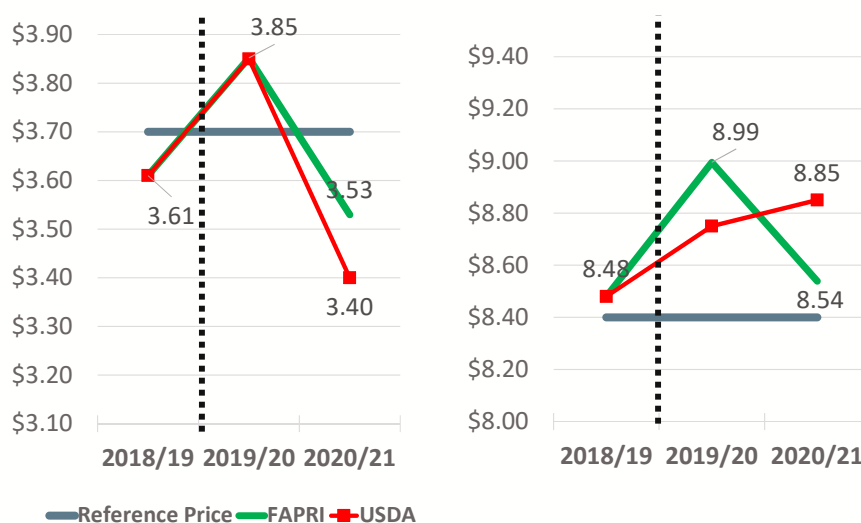
Payments made when the effective price is less than the effective reference price for a covered commodity.

- Effective Price is the higher of Marketing Year Avg. Price for the crop or the National Loan Rate for the crop.
- Effective Reference Price: Higher of Statutory Reference Price (\$3.70 c, \$8.40 s) and 85% of the 5-year Olympic average price, up to statutory reference price  $\times 1.15$ .
- Payments made on 85% of base acres
- Payments made regardless of commodity planting

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## Projected vs PLC Effective Reference Prices for Corn & Beans



## ARC-CO Program

Payments made when the Actual County Revenue is less than the ARC-CO Guarantee for a covered commodity.

- Actual Co Revenue = Co Yield × Marketing Year Avg Price
- ARC-CO Guarantee = 86% Benchmark Revenue
- Benchmark Revenue = 5y O.Avg Price × 5y O.Avg Yield
  - Use Highest of Trend-Adjusted Yields, 80% T-yield as yield plug
  - Use Effective Reference Price if ERP > actual MYA price
- Max payment = 10% Benchmark Revenue
- Payments made on 85% of base acres
- Payments made regardless of commodity planting

## Example Farm 1: Boone, IA

- FSA Farm # 1234
- Operator Joe Farmer
- Uses Price projections from FAPRI (alternative USDA, or any other price projection)
- What are the projected PLC and ARC-CO payments for this farm?

## FSA-156EZ Form: Example 1 Farm

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Form: FSA-156EZ



Farm: 1234  
Prepared: Nov 15, 2019  
Crop Year: 2019

Operator Name : Joe Farmer  
Farms Associated with Operator : 11-111-1235  
CRP Contract Number(s) : None  
Recon ID : None

- Boone County, Iowa
- Farm # 1234
- Operator Joe Farmer

- Corn Base Acres = 80
- Soybean Base Acres = 70

- Updated PLC Corn Yield = 153
- PLC Soybean Yield = 41

DCP Crop Data					
Crop Name	Base Acres	CCC-505CRP Reduction Acres	CTAP Yield	PLC Yield	HIP
Corn	80	0	0	153	
Soybeans	70	0	0	41	
<b>Total</b>	<b>150</b>	<b>0</b>	<b>0</b>		

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## ISU ARC/PLC Payment Estimator Example 1 (Corn)

1. Select the cell below and choose an Iowa county from the dropdown menu

Boone

### Estimated Payments for Corn Base Acres in Boone County, Iowa

Marketing Year Average (MYA)	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	USDA Projections
Price	\$ 4.46	\$ 3.70	\$ 3.61	\$ 3.36	\$ 3.36	\$ 3.61	\$ 3.85	\$ 3.53				FAPRI Projections
Higher MYA, Effective Ref. Price	\$ 4.46	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.85	\$ 3.70			
Olympic Price	\$ 5.29	\$ 5.29	\$ 4.79	\$ 3.95	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.70				

### 2. Agricultural Risk Coverage, County Option (ARC-County)

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
County Yield	154.0	180.0	192.0	208.0	192.0	193.0	185.0	190.0			
RMA Trend Adjusted Yield	167.9	198.6	206.6	219.2	207.7	206.0	207.0	205.0			
Olympic Yield							204.3	207			
Benchmark Revenue	\$755.91	\$765.90									
85% Guarantee of Benchmark Revenue	\$650.08	\$650.08									
Net Revenue Guarantee	\$650.08	\$650.08									
10% Payment Cap Rate	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Payment Cap	\$ 75.59	\$ 76.59									
Actual Revenue	\$712.25	\$670.70									
Profit/Loss	\$ 62.17	\$ 12.03									
Adjustment for payments made on 85% of base acres	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
ARC-CO Payment / base acre after sequestration	\$ -	\$ -									

### 3. Price Loss Coverage (PLC)

Year	2019	2020-23
Enter Farm PLC Yield	131	153
Statutory Reference Price	\$ 3.70	\$ 3.70
National Loan Rate	\$ 2.20	\$ 2.20
Cap on Effective Reference Price	\$ 4.26	\$ 4.26

Year	2019-20	2020-21	2021-22	2022-23	2023-24
PLC Yield	131	153	153	153	153
85% of Olympic Price	\$ 3.15	\$ 3.15			
Effective Reference Price	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.70	\$ 3.70
Adjustment for payments made on 85% of base acres	85%	85%	85%	85%	85%
Payment / bushel / base acre after sequestration	\$ -	\$ 0.13	\$ 1.19	\$ 1.19	\$ 1.19
PLC Payment based on farm yield / base acre	\$ -	\$ 20.61			

ISU ARC/PLC Payment Estimator <b>Example 1 (Soybeans)</b>												
<b>Estimated Payments for Soybean Base Acres in Boone County, Iowa</b>												
Marketing Year Average (MYA)	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	USDA Projections
Price	\$ 13.00	\$ 10.10	\$ 8.95	\$ 9.47	\$ 9.33	\$ 8.48	\$ 9.00	\$ 8.54				FAPRI Projections
Higher MYA, Effective Ref. Price	\$ 13.00	\$ 10.10	\$ 8.95	\$ 9.47	\$ 9.33	\$ 8.48	\$ 9.00	\$ 8.54				
Olympic Price	\$ 12.27	\$ 12.27	\$ 11.87	\$ 10.86	\$ 9.63	\$ 9.63	\$ 9.25					
<b>2. Agricultural Risk Coverage, County Option (ARC-County)</b>												
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Yields												
County Yield	41.0	50.0	54.0	61.0	56.0	55.0	50.0	55.0				
RMA Trend Adjusted Yield	46.6	53.9	57.6	63.0	59.2	60.0	61.0	59.0				
Olympic Yield							56.9	59				
Benchmark Revenue	\$ 547.79	\$ 545.75										
85% Guarantee of Benchmark Revenue	85%	85%							85%	85%	85%	
Net Revenue Guarantee	\$ 471.10	\$ 469.35										
10% Payment Cap Rate	10%	10%							10%	10%	10%	
Payment Cap	\$ 54.78	\$ 54.58										
Actual Revenue	\$ 450.00	\$ 469.70										
Profit/Loss	\$ (21.10)	\$ 0.35										
Adjustment for payments made on 85% of base acres	85%	85%							85%	85%	85%	
ARC-CO Payment / base acre after sequestration	\$ 16.71	\$ -										2019-2023 \$ 16.71
<b>3. Price Loss Coverage (PLC)</b>												
Enter Farm PLC Yield	2019	2020-23										
Statutory Reference Price	\$ 8.40	\$ 8.40										
National Loan Rate	\$ 6.20	\$ 6.20										
Cap on Effective	\$ 9.66	\$ 9.66										
PLC Yield	41	41										
85% of Olympic Price	\$ 8.19	\$ 7.86										
Effective Reference Price	\$ 8.40	\$ 8.40	\$ 8.40	\$ 8.40	\$ 8.40	\$ 8.40	\$ 8.40	\$ 8.40				
Adjustment for payments made on 85% of base acres	85%	85%	85%	85%	85%	85%	85%	85%				
Payment / bushel / base acre after sequestration	\$ -	\$ -	\$ -	\$ 1.74	\$ 1.74	\$ 1.74	\$ 1.74	\$ 1.74				
PLC Payment based on farm yield / base acre	\$ -	\$ -										2019-2023 \$ -
Example farm: Corn base acres in PLC & Soybean base acres in ARC-CO												

## Farms with prevented planting: ARC-IC Program

Payments are made when the ARC-IC Actual Revenue is less than the ARC-IC Guarantee for ALL covered commodities on ALL farms enrolled in ARC-IC in the state for the producer.

- ARC-IC Guarantee = 86% ARC-IC Benchmark Revenue
- Max Payment = 10% ARC-IC Benchmark Revenue
- **Payments made on 65% of base acres**
- ARC-IC benchmarks, guarantees and actual revenues are calculated at the farm level and WEIGHTED to the producer's share of the covered commodities planted across all enrolled ARC-IC farm(s) in the state.

Source: Iowa State FSA Office



## ARC-IC Calculations Require Lots of Information

- Download the What-If Tool:

<https://farmdoc.illinois.edu/2018-farm-bill>



- For only 1 farm, use tab “arc-ic”
- For multiple farms, use tab “ arc-ic-multi”
- How to use it video:  
<https://www.youtube.com/watch?v=nsjT-hegdp8>

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## ARC-IC Example

- Need 2013-2017 yield history
- Indicate whether the crop was planted
- If planted, Used Yield = higher of (farm yield, 80% County T-Yield)
- If NOT planted, Used Yield = County Yield

**2019 ARC-IC Payment Calculator**  
(Calculates ARC-IC Payments for a single FSA farm for 2019)

**Input**

State:   
 County:   
 No of Crops:

Number Crop  
 1   
 2   
 3

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**Corn Benchmark Calculation**

Yield Calculation				Price Calculation			
Year	Planted	Farm Yield <sup>1</sup>	80% of T-Yield <sup>2</sup>	County Yield	Used Yield <sup>3</sup>	MYA Price	Effective Price
2013	Yes	180.0	137.6	173.0	180.0	4.46	3.70
2014	No		137.6	173.5	173.5	3.70	3.70
2015	Yes	167.0	137.6	212.6	167.0	3.61	3.70
2016	No		137.6	208.6	208.6	3.36	3.70
2017	Yes	220.0	136.0	213.3	220.0	3.36	3.70

**Benchmark Revenue Calculation**

Year	Used Yield <sup>1</sup>	Used Price <sup>2</sup>	Revenue
2013	180.0	4.46	802.80
2014	173.5	3.70	641.95
2015	167.0	3.70	617.90
2016	208.6	3.70	771.82
2017	220.0	3.70	814.00
85% of Olympic Average			3.02
Statutory Reference Price			3.70
Effective Reference Price <sup>3</sup>			3.70
<b>Benchmark Revenue<sup>4</sup></b>			<b>738.86</b>

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## ARC-IC Example

Benchmark Revenue Calculation:  
5-y Olympic Avg. of annual Revenues

### 2019 ARC-IC Payment Calculator

(Calculates ARC-IC Payments for a single FSA farm for 2019)

#### Input

State Iowa  
County Wright  
No of Crops 2

Number	Crop
1	Corn
2	Soybeans
3	



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#### Corn Benchmark Calculation

Yield Calculation						Price Calculation		
Year	Planted	Farm Yield	80% of T-Yield	County Yield	Used Yield <sup>1</sup>	MYA Price	Effective Price	Used Price <sup>2</sup>
Bushel/acre						\$ per Bu		
2013	Yes	180.0	137.6	173.0	180.0	4.46	3.70	4.46
2014	No		137.6	173.5	173.5	3.70	3.70	3.70
2015	Yes	167.0	137.6	212.6	167.0	3.61	3.70	3.70
2016	No		137.6	208.6	208.6	3.36	3.70	3.70
2017	Yes	220.0	136.0	212.3	220.0	3.36	3.70	3.70

Benchmark Revenue Calculation				Effective Reference Price	MYA Price
Year	Yield <sup>1</sup>	Price <sup>2</sup>	Revenue	Price Calculation	Year Price
2013	180.0	4.46	802.80		2013 4.46
2014	173.5	3.70	641.95		2014 3.70
2015	167.0	3.70	617.90		2015 3.61
2016	208.6	3.70	771.82		2016 3.36
2017	220.0	3.70	814.00		2017 3.36
				85% of Olympic Average	3.02
				Statutory Reference Price	3.70
				Effective Reference Price <sup>3</sup>	3.70
Benchmark Revenue <sup>4</sup>			738.86		

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## ARC-IC Example

#### Soybeans Benchmark Calculation

Yield Calculation						Price Calculation		
Year	Planted	Farm Yield	80% of T-Yield	County Yield	Used Yield <sup>1</sup>	MYA Price	Effective Price	Used Price <sup>2</sup>
Bushel/acre						\$ per Bu		
2013	No		37.6	46.7	46.7	13.00	8.40	13.00
2014	yes	50.0	37.6	44.5	50.0	10.10	8.40	10.10
2015	No		37.6	61.9	61.9	8.95	8.40	8.95
2016	yes	54.0	37.6	61.0	54.0	9.47	8.40	9.47
2017	No		37.6	58.9	58.9	9.33	8.40	9.33

Benchmark Revenue Calculation				Effective Reference Price	MYA Price
Year	Yield <sup>1</sup>	Price <sup>2</sup>	Revenue	Price Calculation	Year Price
2013	46.7	13.00	606.84		2013 13.00
2014	50.0	10.10	505.00		2014 10.10
2015	61.9	8.95	554.27		2015 8.95
2016	54.0	9.47	511.38		2016 9.47
2017	58.9	9.33	549.26		2017 9.33
				85% of Olympic Average	8.19
				Statutory Reference Price	8.40
				Effective Reference Price <sup>3</sup>	8.40
Benchmark Revenue <sup>4</sup>			538.30		

- The Benchmark Revenues for each crop are WEIGHTED by planted acres in 2019 to calculate the Benchmark Revenue for the Farm

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## ARC-IC Example with 100% Prevented Acres Entire Farm

2019 ARC-IC Payment (Payment Assumes One FSA Farm Enrolled in ARC)

Crop	2019 Acres		2019		Loan Rate	Revenue <sup>1</sup>	Benchmark Revenue
	Planted	Plant	Farm Yield	MYA Price			
Corn	0	100			2.20	0.00	738.86
Soybeans	150				6.20	0.00	538.30
Total	0	250					
Benchmark Revenue <sup>2</sup>				618.52	(\$ per base acre)		
Guarantee <sup>3</sup>				531.93	(\$ per base acre)		
Farm Revenue <sup>4</sup>				0.00	(\$ per base acre)		
ARC-IC Payment <sup>5</sup>				40.20	(\$ per base acre)		

Prevent plant acres are considered planted with no yields → high ARC-IC Payment

<sup>1</sup> Equals yield times higher of MYA price or loan rate.

<sup>2</sup> Equals the average of benchmark revenues, weighted by acres planted, unless all prevent plant acres. In this case, weighted by prevent plant acres.

<sup>3</sup> Equals 86% of benchmark revenue.

<sup>4</sup> Equals the crop revenue for each crop, weighted by acres. If no planted acres and all prevent plant acres, farm revenue is \$0.

<sup>5</sup> When guarantee is greater than farm revenue, payment equals higher of guarantee minus farm revenue or 10% of benchmark revenue, times .65.

## ARC-IC Example Only with Corn Prevented Acres

2019 ARC-IC Payment (Payment Assumes One FSA Farm Enrolled in ARC)

Crop	2019 Acres		2019		Loan Rate	Revenue <sup>1</sup>	Benchmark Revenue
	Planted	Plant	Farm Yield	MYA Price			
Corn	150	100			2.20	0.00	738.86
Soybeans			50	9.00	6.20	450.00	538.30
Total	150	100					
Benchmark Revenue <sup>2</sup>				538.30	(\$ per base acre)		
Guarantee <sup>3</sup>				462.94	(\$ per base acre)		
Farm Revenue <sup>4</sup>				450.00	(\$ per base acre)		
ARC-IC Payment <sup>5</sup>				8.41	(\$ per base acre)		

Benchmark Revenue is Lower because it gives a weight of 100% to soybean revenue, and 0% to corn revenue → Lower Guarantee

Farm Revenue is >0

Both effects results in LOWER ARC-IC Payment than under 100% prevented planting: \$8.41 vs. \$40.20

<sup>1</sup> Equals yield times

<sup>2</sup> Equals the average of benchmark revenues, weighted by acres planted, unless all prevent plant acres. In this case, weighted by prevent plant acres.

<sup>3</sup> Equals 86% of benchmark revenue.

<sup>4</sup> Equals the crop revenue for each crop, weighted by acres. If no planted acres and all prevent plant acres, farm revenue is \$0.

<sup>5</sup> When guarantee is greater than farm revenue, payment equals higher of guarantee minus farm revenue or 10% of benchmark revenue, times .65.

## ARC/PLC Web Sites

- **USDA Farm Service Agency (FSA)**  
[https://www.fsa.usda.gov/programs-and-services/arcplc\\_program/index](https://www.fsa.usda.gov/programs-and-services/arcplc_program/index)
- **ISU Ag Decision Maker**
  - (Farm Bill Information, Sequenced Videos, ARC/PLC Payment Estimator)  
[www.extension.iastate.edu/agdm/info/farmbill.html](http://www.extension.iastate.edu/agdm/info/farmbill.html)
- **Farm Doc – U of IL Extension Economics**
  - (Daily e-Newsletter articles, Webinars, ARC/PLC Tool)  
<https://go.illinois.edu/fd-ARCPLC>
- **FAPRI – University of Missouri**
  - (October U.S. Baseline Outlook & Crop Price Projections)  
[www.fapri.missouri.edu](http://www.fapri.missouri.edu)
- **Texas A & M University**
  - Farm Bill Decision Aid Tool  
<https://agrilifeextension.tamu.edu/solutions/farm-bill-decision-aid-tool/>

## Thank you for your attention!

### Questions? Comments?

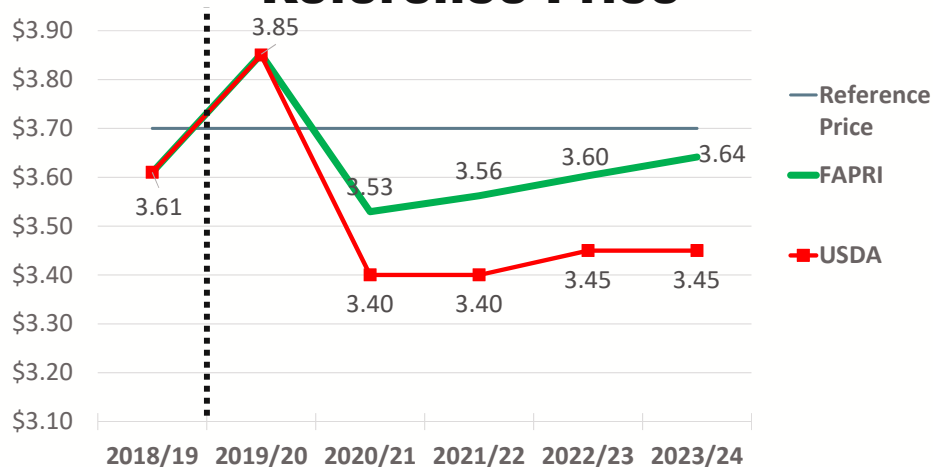
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<https://www2.econ.iastate.edu/faculty/plastina/>

## Corn: Projected Prices & PLC Reference Price

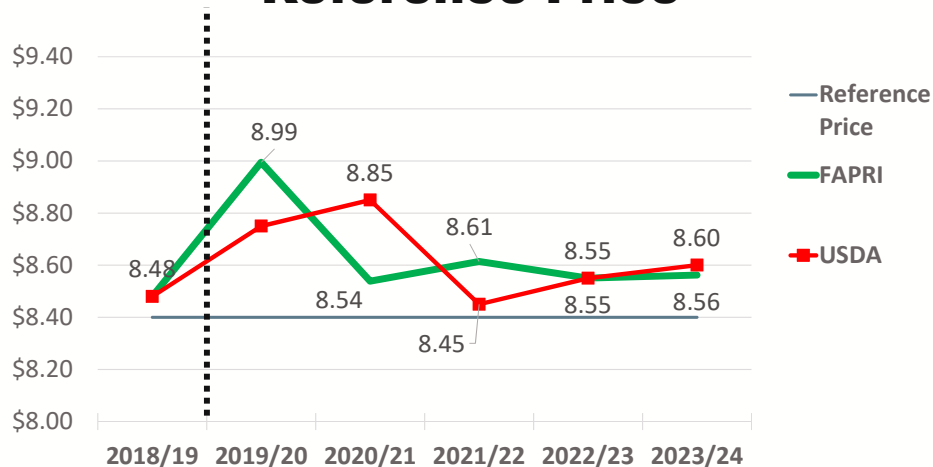


Sources: USDA/OCE WASDE Feb 10, 2020 & Long-Term Agricultural Projections Feb 2020; FAPRI-MU Bulletin #04-19. Nov 2019.

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## Soybeans: Projected Prices & PLC Reference Price



Sources: USDA/OCE WASDE Feb 10, 2020 & Long-Term Agricultural Projections Feb 2020; FAPRI-MU Bulletin #04-19. Nov 2019.

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