

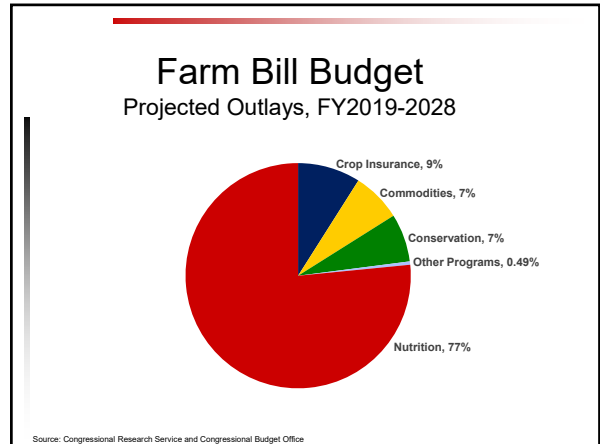
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2018 FARM BILL Commodity Title - ARC versus PLC Agriculture Risk Coverage, Price Loss Coverage

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Version 4.2



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The Agriculture Improvement Act of 2018: COMMODITY PROGRAMS

Covered commodities in 2019-23

- Corn, Wheat, Soybeans, Other Oilseeds, Oats, Barley, Grain Sorghum, Rice, Pulse Crops, and Peanuts.

Other oilseeds: Sunflower, Rapeseed, Canola, Safflower, Flaxseed, Mustard Seed, Crambe, Sesame Seed, other designated by Secretary.

Pulse Crops: Lentils, Dry peas, Small and Large Chickpeas.

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Changes to ARC-CO, part 1.

County Location: The 2018 Farm Bill makes payments on the county where the farm is located.

RMA Yields: Yields from crop insurance will be given preference in the calculation of county yields in the 2018 Farm Bill. For the 2014 Farm Bill, National Agricultural Statistical Service (NASS) data were given first preference

80% of t-yield: For 2018, 80% of the t-yield is yield as the floor on county yields. For 2014, 70% of the t-yield was the plug yield.

Trend-Adjusted Yields: For 2018, county yields are trend adjusted before calculating benchmark yield. The trend adjustment was not used in 2014 Farm Bill.

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Changes to ARC-CO, part 2.

Effective Reference Price: For 2018, there is an effective reference price that can be higher than the reference price if 85% of the five-year Olympic average is above the reference price. The 2014 ARC-CO program did not have this escalator provision.

Lagged Calculation: For the 2018 Farm Bill, benchmark yields and prices used in calculating benchmark yields, prices, and revenues are lagged one year. The 2014 Farm Bill did not lag data.

Multiple Decision Points: For the 2018 Farm Bill, the choice between commodity title programs is not binding over the life of the 2018 Farm Bill. By March 15th, 2020, farmers and land owners will choose for the 2019 and 2020 program years.

Multiple Decision Points: A yearly decision then can be made for 2021, 2022, and 2023. For the 2014 Farm Bill, the commodity title choice was made for all program years from 2014 to 2018.

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Terminology

- Covered commodities
 - Think “program crops”
- Price Loss Coverage (PLC)
 - Think “Countercyclical Payment with no Direct Payment” (or “pre-1996 target price program”).
- Agricultural Risk Coverage (ARC)
 - Think “Group Risk Income Protection (GRIP) with different methods of determining yield and price” (GRIP is an insurance product, ARC is an “insurance-like” commodity program).

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Terminology Cont.

- MYA = Market Year Average Price
- Statutory Reference Price for 2019 - 23 = Price set by Law
 - \$3.70 Corn \$8.40 Soybeans \$5.50 Wheat
- Effective Price: (Effective Price used in ARC-CO and ARC-IC)
 - Greater of National Marketing Year Average price (MYA) for the crop or National Loan Rate
- Effective Reference Price = Used if 85% of Olympic Moving Average MYA Price is greater than the Statutory Reference Price.
 - Corn $\$3.70 / .85 = \4.35 , Soybeans $\$8.40 / .85 = \9.88 , Wheat $\$5.50 / .85 = \6.47
- Olympic Average = 5 years, throw high and low, use average of middle 3.
- Benchmark Revenue = Olympic Yield X Olympic Price (minimum = Reference Price)
- Coverage guarantee = 86% of benchmark revenue

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Decisions for owners/producers on Farm Service Agency (FSA) farms

1. Update Yields
 - One-time opportunity for owners to update PLC yields.
2. Choose PLC or ARC-County or ARC-Individual
 - Choice will initially be made for 2019 and 2020
 - Make a yearly choice after that: 2021, 2022, 2023

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PLC Yield Update Decision

- Owner has 1-time opportunity to update PLC yields for 2020-23. (not 2019)
- Decision made on a covered commodity-by-covered-commodity basis.
- Updated yields used for PLC payments.
- Updated yield for corn and soybeans = 81% of 2013-17 farms average yield, Wheat = 85.91%
- Plug Yield = 75% of county T Yield is floor for each year.
- Can use Crop Insurance records and reports
- If increases yield --- do it!

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PLC versus ARC Decision

- Producer(s) have choice of Price Loss Coverage (PLC) or Agricultural Risk Coverage (ARC) programs
- PLC provides price-based payments for prices less than the "Reference Price" level
- ARC provides revenue-based payments for revenue less than a "Coverage Guarantee" level
 - Revenue = Price X Yield
- ARC available as County ARC (ARC-CO) or Individual ARC (ARC-IC)

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Price Loss Coverage - PLC

- PLC: Provides payment if Effective Price is less than Reference Price
- Effective price: (Effective Price used in ARC-CO and ARC-IC)
 - Greater of National Marketing Year Average price (MYA) for the crop or National Loan Rate

Ex: 2018 MYA price for corn and soybeans is September 1, 2018 through August 31, 2019

- Reference price for 2014-23:
 - \$3.70 Corn \$8.40 Soybeans \$5.50 Wheat
 - Loan Rates \$2.20 Corn \$6.20 Soybeans \$3.38 Wheat

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Price Loss Coverage - PLC

- PLC calculation
 - Payment Rate = Reference Price – (greater of) MYA price or loan rate (payment rate = 0 if MYA > RP)
 - Total Payment = Payment rate X PLC yield X 85% of crop's base acres
- (updated PLC yields for 2020 forward)

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Agricultural Risk Coverage - ARC

- ARC: Provides revenue-based payment if "Actual Revenue" less than "Coverage Guarantee"
- Coverage guarantee = 86% of benchmark revenue
- Two ARC options
 - ARC-CO: Based on county yield & MYA price or Reference Price. May be used with PLC on a farm on a crop-by-crop basis (ex: ARC-CO for soy and PLC for wheat on a farm)
 - ARC-IC: Based on farm yield & MYA price Reference Price. If chosen, must be used for all crops on farm (not used with PLC/ARC-CO). Pays on 65% of total base acres versus 85%

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ARC-Co calculation

Benchmark Revenue =
 5-year Olympic average MYA price X
 5-year Olympic average county yield
 (Olympic average excludes high and low)

Coverage Guarantee =
 86% of Benchmark Revenue

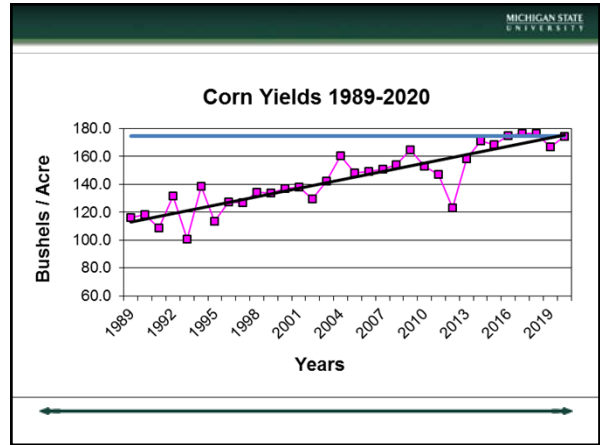
Actual Revenue =
 MYA price X county yield for crop year

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Olympic Average MYA Price Calculations

	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	Adj. O.A.
Corn	\$4.46	\$3.70	\$3.61	\$3.36	\$3.36	
Adj.	\$4.46	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70
Soybeans	\$13.00	\$10.10	\$8.95	\$9.47	\$9.33	
Adj.	\$13.00	\$10.10	\$8.95	\$9.47	\$9.33	\$9.63
Wheat	\$6.87	\$5.99	\$4.89	\$3.89	\$4.72	
Adj.	\$6.87	\$5.99	\$5.50	\$5.50	\$5.50	\$5.66

MYA price for corn and soybeans is September 1 through August 31
 Wheat is June 1 through May 31



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ARC-Co calculation

Payment Rate =
 If Coverage Guarantee > Actual Revenue
 Payment = lesser of CG – AR
 or 10% of Benchmark Revenue

Total Payment = Payment rate X 85% of base acres

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PLC		ARC-Co	
Reference Price	\$ 3.70	Benchmark Price	\$ 3.70
MYA Price -	\$ 3.50	Benchmark Yield X	<u>165.1</u>
Payment Rate/bu	\$ 0.20	Benchmark Revenue	\$ 610.87
PLC Yield X	<u>130</u>	X	<u>86%</u>
Per Acre	\$ 26.00	Coverage Guarantee	\$ 525.35
85%	\$ 22.10	Max Payment 10%	\$ 61.09
Base Acres X	<u>100</u>	Actual Revenue	
Total Payment	\$ 2,210	MYA Price	\$ 3.50
		County Yield X	<u>145</u>
		Actual Revenue	\$ 507.50
		Payment Rate	\$ 17.85
		85%	\$ 15.17
		Base Acres X	<u>100</u>
		Total Payment	\$ 1,517

Ag Risk Coverage – Individual (ARC-IC)

- Combines revenues from all commodity crops for a “Whole Farm” concept
- Payments are made when the ARC-IC Actual Revenue is less than the ARC-IC Guarantee (86% Benchmark) for ALL covered commodities (base crops) on ALL farms enrolled in ARC-IC in the state for the producer.
- The payment rate is the difference in the ARC-IC Guarantee and the ARC-IC Actual Revenue, but can be no higher than 10% of the ARC-IC Benchmark Revenue for all covered commodities on the farm.
- Payments made on 65% of total base acres on the farm.
- Election is by FARM.

ARC-IC Program Factors

- Only Enrolled Farms are included in revenue calculations
- Payments ARE dependent on the planting of covered commodities on enrolled farms
- Establishment of Historic and Yearly YIELD reports are required
- Benchmark Revenues, Guarantees, Actual Revenues and payment rates are calculated at the farm level and weighted by the producer’s share of the covered commodities planted on all farms enrolled in ARC-IC

ARC-IC 2019 Example (one farm)

Step 1: Producer Provides historic benchmark yields. Annual Revenue is calculated for each crop.

HISTORIC MARKETING YEAR AVG (MYA) PRICES								PRODUCER PROVEN YLD (BU/A)							
Crop	2013	2014	2015	2016	2017	*2019		Crop	2013	2014	2015	2016	2017	*2019	
Corn	\$4.46	\$3.70	\$3.70	\$3.70	\$3.70	\$3.85		Corn	190	210	220	245	240	178	
Soy	\$13.00	\$10.10	\$8.95	\$9.47	\$9.33	\$9.00		Soy	45	54	62	68	64	43	

*2019 MYA prices are projections only to the marketing year ends August 2020

The Olympic Average of the Annual Revenues are calculated throwing out the high and low, averaging the three remaining. (These are recalculated each year, 2019-2023, to reflect the most recent 5 years with a lag year.)

Crop	2013	2014	2015	2016	2017	Olympic Avg.	*2019
Corn	\$847.40	\$777.00	\$814.00	\$906.50	\$888.00	\$849.80	\$685.30
Soy	\$585.00	\$545.40	\$554.90	\$643.96	\$597.12	\$579.01	\$387.00

ARC-IC 2019 Example – “Concept of Weighting to the Producer’s Share”

Step 2: Calculate Benchmark Revenues for each covered commodity planted. The “Overall” Benchmark Revenue is **weighted** based on number of covered commodities planted across ALL ARC-IC farms.

Percentage of covered commodities planted for each crop, by farm, divided by the total acres of covered commodities on the ARC-IC farm(s):

CROP	PLANTED ACRES	% Of Covered Commodity Planted	Calculations
Corn	200	50%	(200 / 400)
Soybeans	200	50%	(200 / 400)
Hay	50	NOT a covered Commodity – Exclude Acres	
Total	450		

NOTE: These percentages are used in “weighting” the producer’s revenues.

ARC-IC 2019 Example

Step 2 Continued:
Weighted Benchmark Revenues by crop:

Corn: $\$849.80 \times 50\% = \424.90
 Soybeans: $\$579.01 \times 50\% = \289.51

Total: $\$424.90 + \$289.51 = \$714.41$

Note: The 2019 Payment is Capped at 10% of the weighted benchmark revenue, **\$71.44/acre**

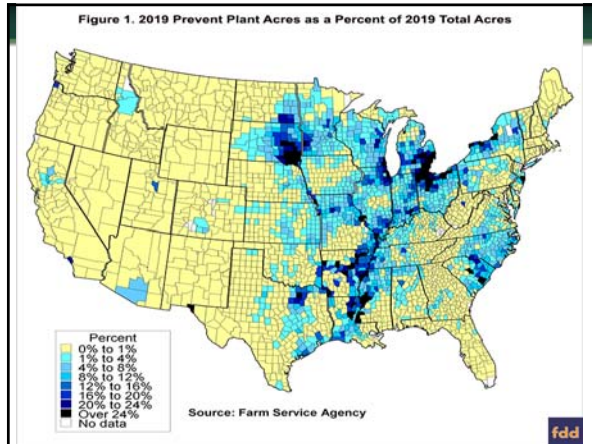
ARC-IC 2019 Example

Step 3: Calculate the **ARC-IC Guarantee 86%**
 $86\% \times \$714.41 = \614.39

Step 4: Calculate **Actual Year Revenue**, weighted to the Producer’s share by crop and total acres.
 Corn: $\$685.30 \times 50\% = \342.65
 Soybeans: $\$387.00 \times 50\% = \193.50
 Total: $\$342.65 + \$193.50 = \$536.15$

Max Payment = \$71.44/ac Difference = \$78.24

Step 5: Calculate the Payment:
 $65\% \times \text{Total Base Acres} \times \text{ARC-IC Guarantee} - \text{Actual Year Revenue}$
*Not to Exceed 10% of Weighted Farm Benchmark Revenue
 $65\% \times 100 \text{ Base Acres} \times \$71.44 = \$4,643.60$
 (10% cap = \$71.44/acre, \$78.24 loss EXCEEDS the cap)



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ARC-IC & Prevent Plant (100%)

- Producers who experienced 100% Prevent Plant (PP) of all covered commodities on a farm in 2019 should review the ARC-IC program for details.
- 100% Prevent Plant acres are considered “planted” for the FSA ARC-IC program. This will result in a zero actual year yield & revenue for all base acres.
- What crop was going to be planted?
- The 100% Prevent Plant provision applies all years.
- The ARC/PLC Election is binding for 2019 and 2020. However, elections can be changed for 2021-2023 by the producers on the farm.

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ARC-IC 2019 100 % PP Farm Example

Farm #1: 100% Prevent Plant Corn with **NO** other covered commodity planted on the farm. (Not 0.1 acres)

Corn: Benchmark Revenue = \$849.80
 Guarantee (86%) = \$730.83
 Actual Revenue (**0 Yield**) = \$0.00
 \$730.83 - \$0.00 = \$730.83 loss
 10% CAP Benchmark Revenue = **\$84.98/acre**

ARC-IC payment Calculation:
 100 Base Acres X 65% X \$84.98 = **\$5,523.70**

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Supplemental Coverage Option (SCO)

- SCO is a crop insurance product available for the 2014-2023 crop years.
- Producer(s) who do not have ARC are eligible for SCO, producer(s) that elect ARC not eligible for SCO.
- SCO Can be purchased if have no FSA base acres.
- Covers planted acres versus FSA Base acres.
- Producers may purchase SCO coverage for a portion of the crop insurance deductible.
- Covers portion of deductible from 86% down to level of coverage purchased by producer.

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Supplemental Coverage Option (SCO)

- Priced by Risk Management Agency, premium subsidized at 65%.
- SCO uses crop insurance prices and county yield to calculate revenue (like a GRIP policy)
- Compare: Cost of 70% policy + cost of SCO from 70% to 86% versus cost of an 85% policy.
- Consider Prevent Plant Crop Insurance reduction if use lower Crop Insurance level.
- Pays after RMA county yields are finalized – July.

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Managing Risk

FSA Risk Tools			Correlates to Planted		Farm	County	Max Payment of Loss
	Price?	Yield?	Acers?	Yield?	Yield?	Yield?	
PLC	Yes-MYA	No	No	No	No	No	Reference Price - Loan Rate
ARC-Co	Yes-MYA	Yes	No	No	Yes	Yes	10% of Benchmark Revenue
ARC-IC	Yes-MYA	Yes	Yes	Yes	No	No	10% of Benchmark Revenue
RMA Crop Insurance Products							
Supplemental Coverage Option	Yes-Futures	Yes	Yes	No	Yes	Yes	100% SCO Loss down to Crop Insurance Level
Revenue Protection	Yes-Futures	Yes	Yes	Yes	No	No	100% from Coverage Level
Yield Protection	No	Yes	Yes	Yes	No	No	100% from Coverage Level

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What Should I Do?

- I. Gather information - FSA
Historical Yields (each farm 2013 - 2017)
Get 2019 county average yields
- II. Run Calculators
– test possible variables of county yield and MYA price
 1. Decide - Update Yields if can increase
 2. Decide - PLC, ARC-CO or ARC-IC
- III. Learn more and sign-up – don't wait!



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Betz Bias - Tendencies for Program Choice

- Low County Yields for Both Corn and Soys : ARC - Co
- 100% Prevent Plant: ARC-IC
- Low Farm Yields, down 30-40% with average or good county yields: Look at ARC - IC

IF No 100% Prevent Plant or No Low Yields then:

- Wheat: PLC plus SCO
- Soybeans: ARC - Co
- Corn: ??? PLC plus SCO but look at ARC-Co
- Maybe Split Corn Decision???
- Farms with high PLC Yield : PLC plus SCO
- Farms with low PLC yield: ARC-Co
- Each County and Each Farm can be different.

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Conclusions

1. The 2018 farm bill continues the evolution of farm programs toward crop insurance and “insurance like” commodity programs.
2. Decisions on commodity programs (PLC/ARC-CO/ARC-IC) must be made in the context of an overall risk management strategy.
3. There are very few (no?) iron-clad rules for making decisions – look at multiple scenarios.
4. USDA Programs and price instability mean 2019-2023 will be “back to the future” (farm programs matter).

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Announced Dates

- March 15, 2020 – Deadline for 2019/'20 sign up
- If you miss the March 15th deadline you will not get any payment for 2019 and the 2020 PLC/ARC program alternative will be defaulted to the 2014 choice made then.
- www.canr.msu.edu/farm_Management/decision-tools
- 2019 County Arc/PLC Calculator and PowerPoint slides
- Today Sign Up – You can change your decisions up until March 15th. With an Appointment.
- Get er Done!
