

2024 FARM BILL DETAILS & DECISIONS

PURDUE AGCAST, EPISODE 157

Michael Langemeier, Associate Director, Center for Commercial Agriculture

James Mintert, Director, Center for Commercial Agriculture

Bradley Lubben, Extension Associate Professor, Policy Specialist & Director, North
Central Extension Risk Management Education Center, University of Nebraska-Lincoln
Department of Agricultural Economics

FEBRUARY 2024



Center for Commercial Agriculture



Dr. Bradley D. Lubben

Extension Associate Professor, Policy Specialist, and
Director, North Central Extension Risk Management Education Center
University of Nebraska-Lincoln Department of Agricultural Economics

E-mail: brad.lubben@unl.edu

Web information:

agecon.unl.edu/lubben

cap.unl.edu

ncerme.org



ARC & PLC – Projected 2023 Crop Payment Rates (Paid in 2024)

Commodity	Effective Reference Price	ARC Benchmark Price	Projected National Marketing Year Average Price	Projected PLC Payment Rate	Projected % Price Change Needed to Trigger PLC	Projected % Price Change from ARC Benchmark	Projected % Revenue Change Needed to Trigger ARC
Corn	\$3.70	\$3.98	\$4.85	\$0.00	-24%	22%	-29%
Grain Sorghum	\$3.95	\$4.31	\$4.85	\$0.00	-19%	12%	-24%
Soybeans	\$8.40	\$9.57	\$12.90	\$0.00	-35%	35%	-36%
Wheat	\$5.50	\$5.50	\$7.30	\$0.00	-25%	33%	-35%

* Payment rates for PLC and trigger levels for PLC and ARC based on projected prices from USDA-WAOB and USDA-FSA along with author calculations as of December 2023.



Price Loss Coverage (PLC)

Effective Reference Prices for 2024

$$\text{Effective Reference Price} = \text{Min of } \left[\text{Max of } \left[\begin{array}{l} \text{Statutory Reference Price} \\ 85\% \times 5\text{-year Olympic Average Price} \\ 115\% \times \text{Statutory Reference Price} \end{array} \right] \right]$$

Commodity	Statutory Reference Price (MIN)	Marketing Year Average Price					Olympic Average Price	85% of Olympic Average Price	115% of Statutory Reference Price (MAX)	2024 Effective Reference Price
		2018	2019	2020	2021	2022				
Corn	\$3.70	\$3.61	\$3.56	\$4.53	\$6.00	\$6.54	\$4.71	\$4.01	\$4.26	\$4.01
Grain Sorghum	3.95	3.26	3.34	5.04	5.94	5.94	4.77	4.06	4.54	4.06
Soybeans	8.40	8.48	8.57	10.80	13.30	14.20	10.89	9.26	9.66	9.26
Wheat	5.50	5.16	4.58	5.05	7.63	8.83	5.95	5.05	6.33	5.50

* Prices through 2022 from USDA-NASS, USDA-WAOB, and USDA-FSA as of December 2023.



Agriculture Risk Coverage – ARC-CO

Effective ARC Prices for 2024

$$\text{ARC – CO Benchmark Revenue} = \text{ARC – CO Benchmark Yield} \times \text{ARC – CO Benchmark Price}$$

$$\text{ARC – CO Guarantee} = \text{ARC – CO Benchmark Revenue} \times 86\%$$

Commodity	2024 Effective Reference Price	Higher of Marketing Year Average Price or Effective Reference Price*					Olympic Average Price	86% of Olympic Average Price	2024 Effective ARC Price
		2018	2019	2020	2021	2022			
Corn	\$4.01	\$3.61 4.01	\$3.56 4.01	\$4.53 4.01	\$6.00 4.01	\$6.54 4.01	\$4.85	\$4.17	\$4.17
Grain Sorghum	4.06	3.26 4.06	3.34 4.06	5.04 4.06	5.94 4.06	5.94 4.06	5.01	4.31	4.31
Soybeans	9.26	8.48 9.26	8.57 9.26	10.80 9.26	13.30 9.26	14.20 9.26	11.12	9.56	9.56
Wheat	5.50	5.16 5.50	4.58 5.50	5.05 5.50	7.63 5.50	8.83 5.50	6.21	5.34	5.34

* Prices through 2022 from USDA-NASS, USDA-WAOB, and USDA-FSA as of December 2023. Prices lower than the reference price are replaced in the calculation by the effective reference price.



ARC & PLC – Projected 2024 Crop Payment Rates (Paid in 2025)

Commodity	PLC	ARC		Projected Price**	Downside Price/Revenue Risk Covered by ARC/PLC	
	Effective Reference Price	Benchmark Price	Effective Price at Benchmark Yield*		Projected Price Change to Trigger PLC	Projected Revenue Change to Trigger ARC
Corn	\$4.01	\$4.85	\$4.17	\$4.47	-10%	-7%
Grain Sorghum	\$4.06	\$5.01	\$4.31	\$4.31	-6%	-0%
Soybeans	\$9.26	\$11.12	\$9.56	\$10.94	-15%	-13%
Wheat	\$5.50	\$6.21	\$5.34	\$6.38	-13%	-16%

* Effective price for ARC based on 86% of benchmark price that would trigger ARC payments assuming no yield loss from benchmark yield.

** Projected prices for 2024 based on projections from FAPRI as of August 2023.



ARC & PLC – Potential 2024 Crop Payment Rates (Paid in 2025)

Program Selection		PLC minus ARC-CO		State = Illinois, County = Champaign, Crop = Corn, Year = 2024									
Price Change		\$ 0.15		ARC-CO Benchmark Yield = 224.84, Benchmark Price = \$4.85, Guarantee \$937.81									
Yield Change		5		PLC Yield = 180, Effective Reference Price = \$4.01									
-2024													
County	2024 Market Year Average Price												
Yield	\$3.25	\$3.40	\$3.55	\$3.70	\$3.85	\$4.00	\$4.15	\$4.30	\$4.45	\$4.60	\$4.75		
250	24	18	27	36	24	2	0	0	0	0	0		
245	24	4	12	20	24	2	0	0	0	0	0		
240	24	1	-3	5	12	2	0	0	0	0	0		
235	24	1	-18	-11	-4	2	0	0	0	0	0		
230	24	1	-22	-27	-21	-14	0	0	0	0	0		
225	24	1	-22	-43	-37	-31	-4	0	0	0	0		
220	24	1	-22	-45	-53	-48	-22	0	0	0	0		
215	24	1	-22	-45	-68	-65	-39	-12	0	0	0		
210	24	1	-22	-45	-68	-82	-57	-30	-3	0	0		
205	24	1	-22	-45	-68	-91	-75	-48	-22	0	0		
200	24	1	-22	-45	-68	-91	-92	-67	-41	-16	0		

* A positive value indicates that PLC will pay more, a negative value indicates that ARC-CO will pay more.



ARC & PLC – Potential 2024 Crop Payment Rates (Paid in 2025)

Program Selection		PLC minus ARC-CO		State = Illinois, County = Champaign, Crop = Soybeans, Year = 2024								
Price Change		\$ 0.40		ARC-CO Benchmark Yield = 71.09, Benchmark Price = \$11.12, Guarantee \$679.85								
Yield Change		2		PLC Yield = 60, Effective Reference Price = \$9.26								
-2024												
County	2024 Market Year Average Price											
Yield	\$7.75	\$8.15	\$8.55	\$8.95	\$9.35	\$9.75	\$10.15	\$10.55	\$10.95	\$11.35	\$11.75	
81	33	40	36	16	0	0	0	0	0	0	0	
79	20	27	33	16	0	0	0	0	0	0	0	
77	10	13	19	16	0	0	0	0	0	0	0	
75	10	-1	4	9	0	0	0	0	0	0	0	
73	10	-11	-10	-6	0	0	0	0	0	0	0	
71	10	-11	-25	-21	-13	0	0	0	0	0	0	
69	10	-11	-31	-36	-29	-5	0	0	0	0	0	
67	10	-11	-31	-51	-45	-22	0	0	0	0	0	
65	10	-11	-31	-51	-61	-38	-16	0	0	0	0	
63	10	-11	-31	-51	-67	-55	-34	-12	0	0	0	
61	10	-11	-31	-51	-67	-67	-51	-30	-9	0	0	

* A positive value indicates that PLC will pay more, a negative value indicates that ARC-CO will pay more.



2024 Farm Program Decisions

Crop Insurance/Risk Management Considerations

- **ARC provides shallow-loss revenue protection that may substitute for higher levels of crop insurance coverage**
 - **ARC protects revenue risk from 86% down to 76% of the ARC benchmark that may be in the producer's crop insurance deductible range, but...**
 - **ARC-CO protection is tied to county-level risk of crops in the farm's base and pays on just 85% of base acres**
 - **ARC-IC protection is tied to farm-level risk of planted crops on the farm, but pays on just 65% of base acres**





2024 Farm Program Decisions

Crop Insurance/Risk Management Considerations

- **PLC provides price protection that may substitute for price risk management at price levels near or below reference prices**
 - **PLC may complement crop insurance purchases, particularly YP, but PLC protection is limited to program yields and base acres**
 - **PLC enrollment (technically, not enrolling in ARC) allows the producer to also consider the Supplemental Coverage Option (SCO)**





2024 Farm Program Details and Decisions

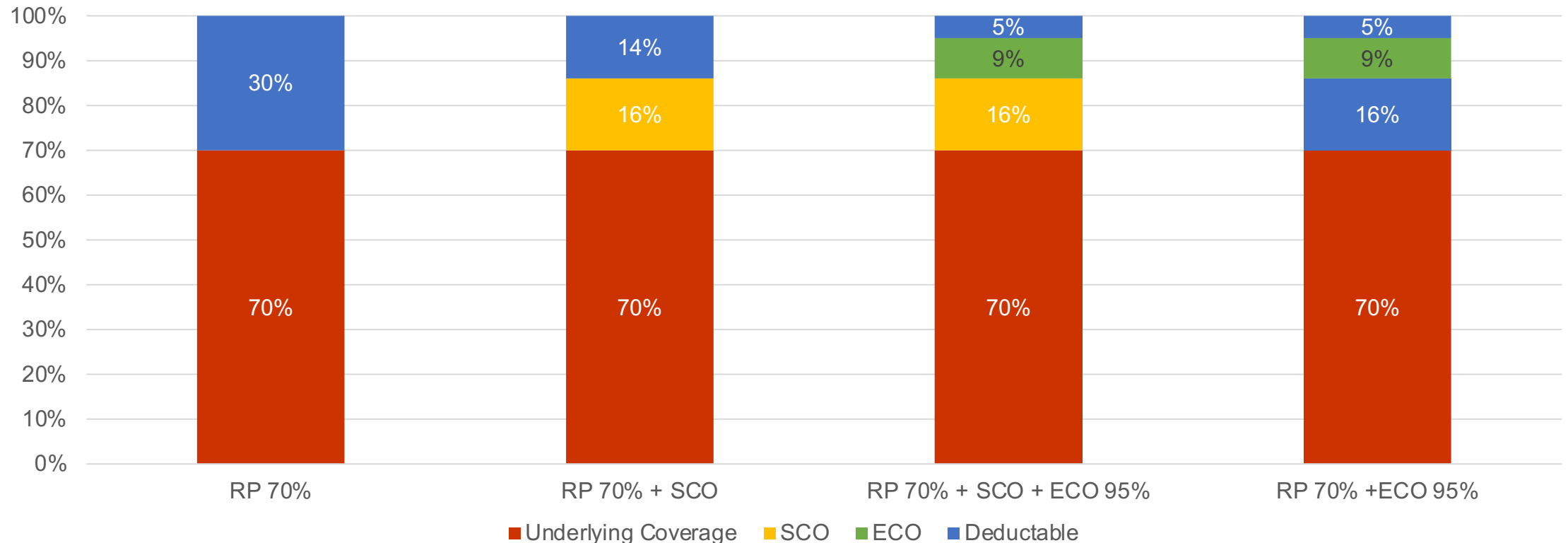
ARC v PLC or ARC v PLC + SCO

- **Supplemental coverage option (SCO) is available as a supplement to underlying crop insurance coverage**
 - **SCO provides county-level coverage from 86% down to underlying coverage level**
- **SCO is not available if enrolled in ARC**
 - **SCO closely mimics ARC when it covers revenue above an RP or RP-HPE policy at 75%**
 - **ARC covers losses from 86% to 76% of benchmark revenue (average price x county average trend-adjusted yield)**
 - **SCO would cover losses from 86% to 75% based on insurance price x county yield guarantee**
- **SCO has a premium cost, unlike ARC, but the cost is subsidized**
 - **If the expected indemnity over time equals the total premium, then the expected indemnity from SCO should exceed the farmer-paid premium**
- **SCO has limited usage to date – may not be a big factor for most**
 - **SCO-RP was purchased on only 3-4% of RP acres in Nebraska in 2023 (for corn, sorghum, soybeans, and wheat)**





SCO & ECO Example



ECO is another county triggered product and is available on all insured acres regardless of program enrollment. Coverage from 95% or 90% down to 86%. ECO is subsidized.

Purdue Commercial AgCast

available on major podcast providers and on the Center's website

<https://purdue.edu/commercialag>



Center for Commercial Agriculture