

# Using the Supplemental Coverage Option in 2024

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Managing Risk with ARC, PLC, and SCO: 2024 Tradeoffs and Tools  
February 2, 2024

## Introduction

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- Supplemental Coverage Option (SCO) 101
- Key SCO Considerations
- SCO/PLC vs ARC
  - Historic performance
  - 2024

# SCO 101

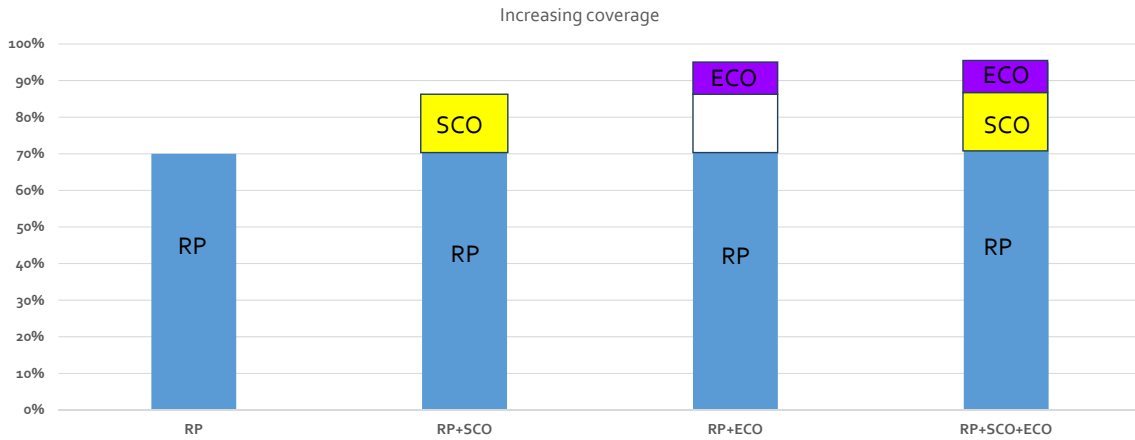
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## Overall concept

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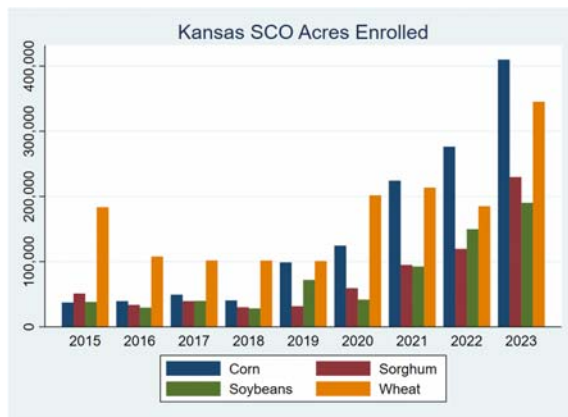
- County-based trigger\*
- SCO increases underlying YP or RP coverage to 86%
- ECO (Enhanced Coverage Option)
  - 2 coverage choices: 86 to 90% **OR** 86 to 95%
  - Can be used with YP or RP
  - SCO optional
  - Can be used with ARC, *cannot* be used with ARP or AYP

# High coverage policies: SCO, ECO



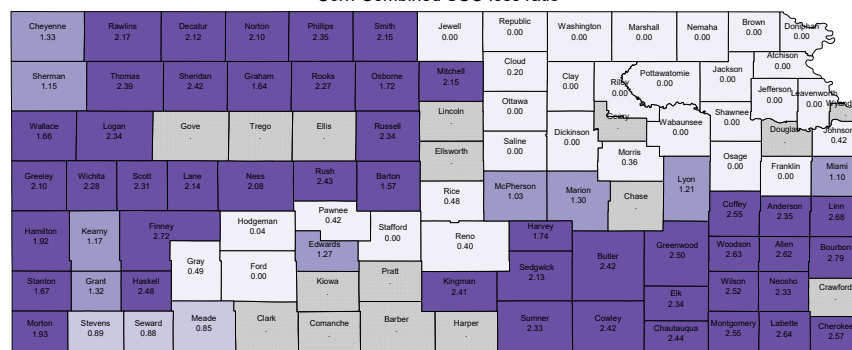
## SCO use limited, but growing

- Why?
- New product
- Additional cost
- ARC
- Other types of risk management used

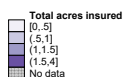


# 2022 – high corn loss ratios in NW and SE

Corn-Combined SCO loss ratio



Source: The data used in this map was downloaded on Feb. 1, 2024 from the USDA Risk Management Agency Summary of Business.

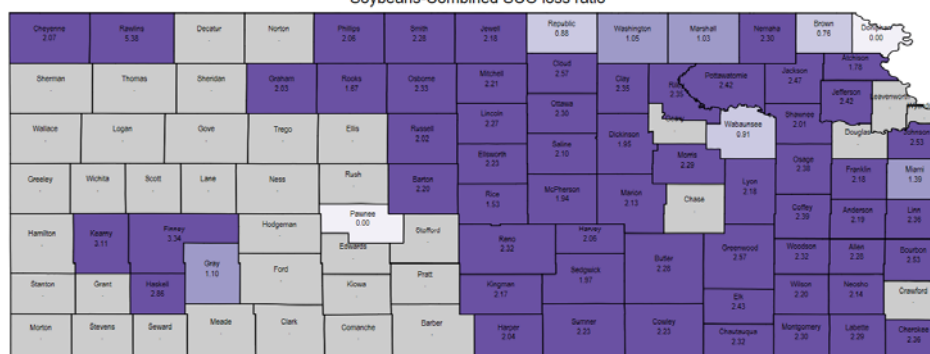


All SCO indemnities and premiums for all practices were summed at the county level to estimate a "combined" loss ratio.

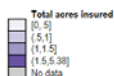


# 2022 – high soybean loss ratios in Eastern KS

Soybeans-Combined SCO loss ratio



Source: The data used in this map was downloaded on Feb. 1, 2024 from the USDA Risk Management Agency Summary of Business.



All SCO indemnities and premiums for all practices were summed at the county level to estimate a "combined" loss ratio.





# Key Considerations

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## Three key characteristics

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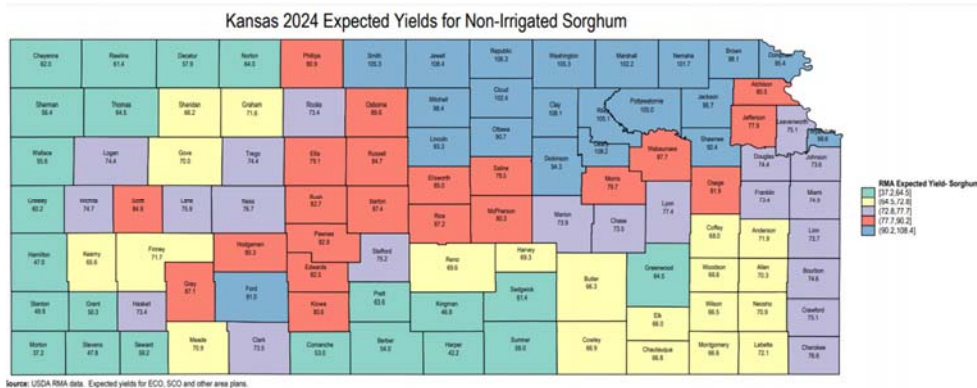
1. SCO costs more and pays out more often
2. Payouts are not triggered by farm-level losses
3. Long term perspective



## 2. SCO policies have a county trigger

- Liabilities are based on a producer's underlying guarantee, but losses are calculated based on county yields
  - County expected yield is 50 bushels per acre, actual yield is 40 bushels per acre
  - Suppose there is a 20% yield decline. Assuming NO change to prices, payout would be equivalent to 6% (86%-80%) of the producer's expected revenue

## KS county yield maps, 1990-2024



<https://agmanager.info/crop-insurance/kansas-crop-insurance-maps>

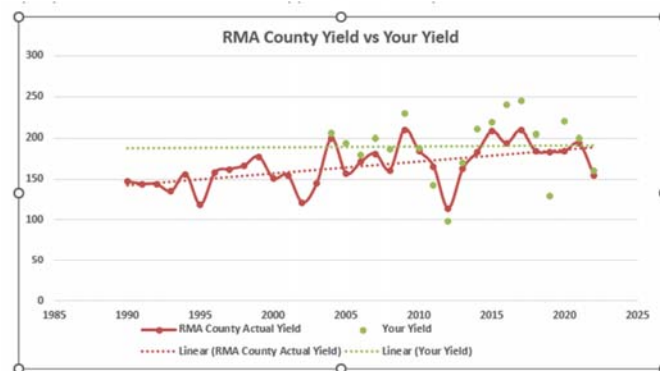


## KS county yield correlation tool

Spreadsheet based tool on AgManager.info

Producer can enter yields back to 1990 to analyze correlation with RMA county yields

<https://agmanager.info/crop-insurance/crop-insurance-papers-and-information/kansas-yield-correlation-tool>

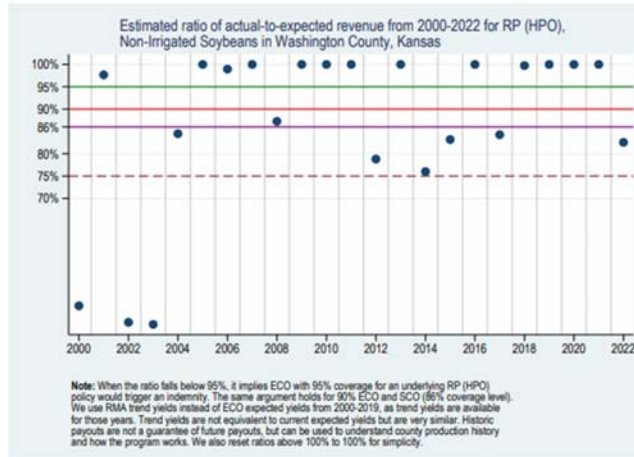


Result 2	Strength of Correlation
Correlation of your yields to county yields	Negative -1 to zero
0.80	Weak 0 to 0.3
	Moderate 0.3 to 0.7
	High 0.7 to 1

## 3. SCO policies are a long-term decision

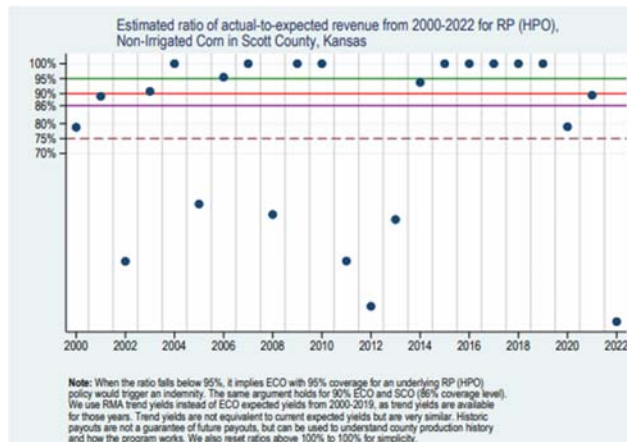
- High coverage policies, including SCO, require a different paradigm for risk management
  - Large(r) investment in risk management
  - You can go a few years with no indemnity

### 3. Variation in payouts



Note: Washington Co. has relatively high/stable yields compared to many other KS counties/crops

### 3. Variation in payouts



# SCO/PLC vs ARC – performance through 2022

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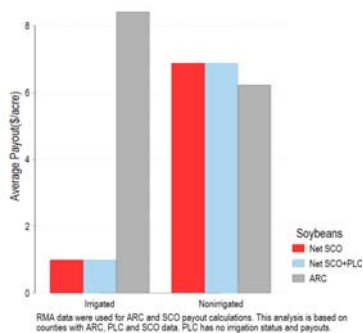
## Study on historic performance

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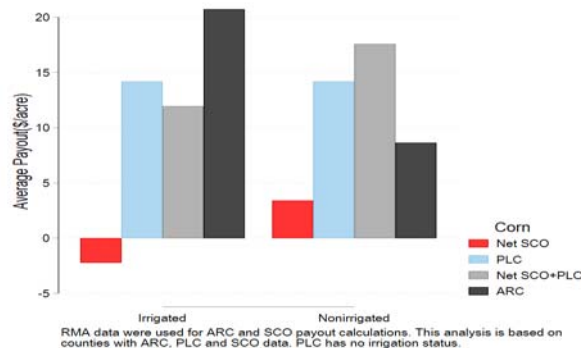
- Estimated net SCO, ARC, and PLC payouts for all KS counties from 2015-2022
  - Assumed an underlying 75% RP policy
  - Separated counties into two groups based on 2022 ARC irrigation reporting
- Key findings
  - PLC paid out much more over average than ARC over the period for wheat, sorghum, and non-irrigated corn
    - Payouts similar for counties with combined ARC corn yields
    - ARC payouts higher for irrigated corn, soybeans
  - ARC generally outperformed SCO early in the study period
  - SCO would have paid out much more than ARC in the 2022 drought

# Payouts varied by irrigation status

**Average Annual Soybeans Payouts for 53 Kansas counties, 2015-2022**

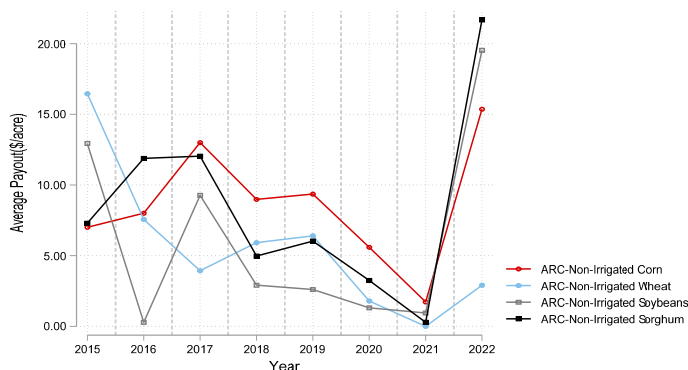


**Average Annual Corn Payouts for 79 Kansas counties, 2015-2022**



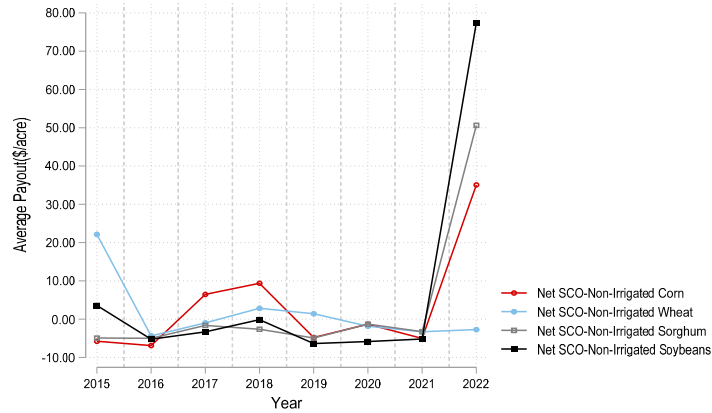
## Non-irrigated ARC payouts highest in early years and 2022, peak at \$15-\$20 per acre

**Average ARC Payouts by Crop for selected Kansas counties, 2015-2022**



# Average non-irrigated SCO payments \$30-\$80 per acre in 2022 for corn, beans, and sorghum

Average Net SCO by Crop and Irrigation Status for all selected Kansas counties\*, 2015-2022



## Corn prices

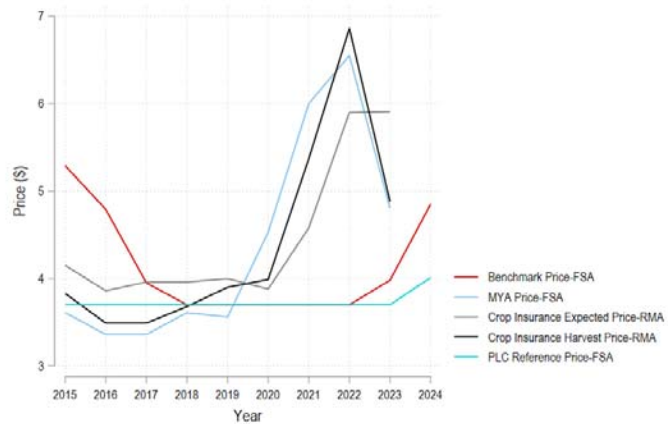
2024/25 FSA Benchmark Price

\$4.85

Dec 24'/harvest futures

\$4.78

In discovery for most states



Source: USDA FSA and RMA

## Grain sorghum prices

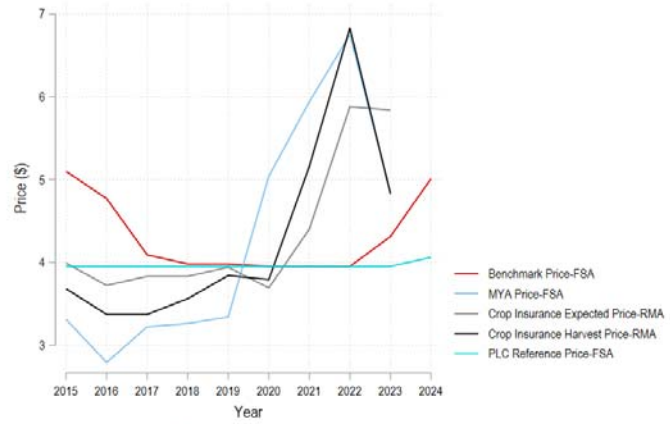
2024/25 FSA Benchmark Price

\$5.01

Dec 24'/harvest futures

\$4.79

In discovery for most states



Source: USDA FSA and RMA

## Soybean prices

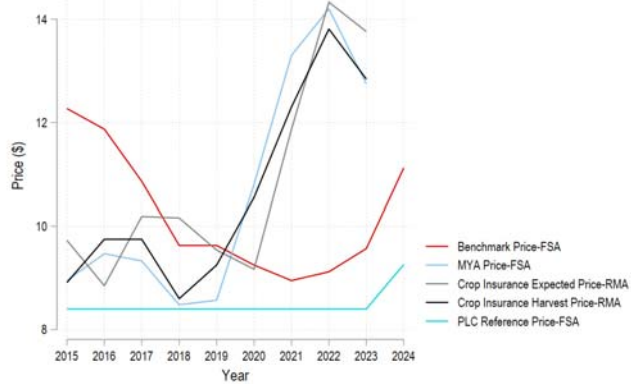
2024/25 FSA Benchmark Price

\$11.12

Dec 24'/harvest futures

\$11.85

In discovery for most states



Source: USDA FSA and RMA

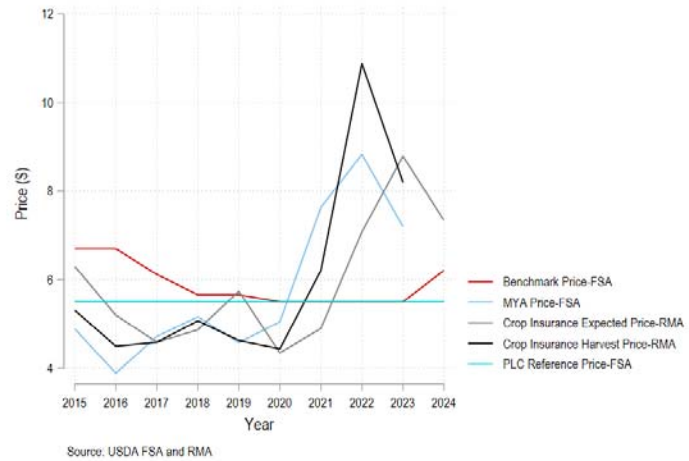
## Wheat prices

2024/25 FSA Benchmark Price

\$6.21

July 24'/harvest futures (winter wheat)

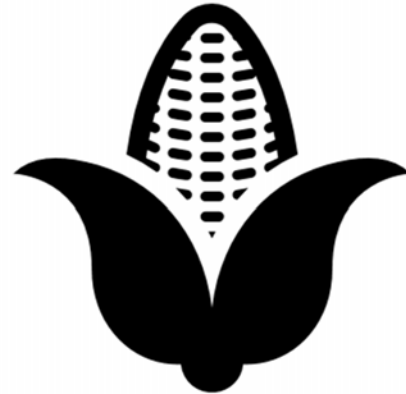
\$7.34



## SCO/PLC vs ARC – looking forward

# A new price environment?

2024 Projected Price \$4.77 (not final)  
2023 Projected Price \$5.91 (\$4.88)  
2022 Projected Price: \$5.90 (\$6.86)  
2021 Projected Price: \$4.58 (\$5.37)  
2020 Projected Price: \$3.88 (\$3.99)  
2019 Projected Price: \$4.00 (\$3.90)



## 2024 revenue guarantee vs costs

### Irrigated corn: SW KS

Ag manager estimate

+**\$1132** revenue  
-**\$562** direct expenses  
-**\$469** indirect expenses  
=\$101 profit

70% RP guarantee: \$792 – covers direct expenses, around half of indirect

RP + SCO guarantee: \$974 – covers nearly all expenses

### Non-irrigated soybeans: NE KS

Ag manager estimate

+**\$675** revenue  
-**\$267** direct expenses  
-**\$193** indirect expenses  
=\$215 profit

70% RP guarantee: \$473 – covers all direct and indirect expenses

RP + SCO guarantee: \$580 – covers expenses and part of profit margin



## SCO and ARC guarantee may be similar for some counties

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- ARC – better value under some outcomes
- SCO plus PLC
  - You have to pay
  - PLC provides protection high(er) yield years
  - SCO (HPO) provides more drought protection
- Unknowns can change this
  - RMA county yields/APH vs FSA benchmark yields
  - RMA harvest price vs FSA MYA price
  - Base acres

## ARC vs SCO – Nemaha Co. Soybeans

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**ARC (combined)**  
52 bu/acre (5y OA yield)  
X  
\$11.12 (5y OA price)  
=\$576 Benchmark revenue

Maximum payout ~ \$58

**SCO (non-irrigated)**  
51 bu/acre APH  
X  
\$11.94 (Current harvest futures)  
= \$609 Expected revenue

Maximum payout with underlying  
75% RP ~ \$67

# ARC vs SCO – Finney Co. Irrigated Corn

## ARC (irrigated)

198 bu/acre (5y OA yield)

X

\$4.85 (5y OA price)

= \$961 Benchmark revenue

Maximum payout ~ \$96

## SCO (irrigated)

205 bu/acre APH

X

\$4.77 (Current harvest futures)

= \$978 Expected revenue

Maximum payout with underlying  
75% RP ~ \$108

# Protection under different outcomes

Lower yield and higher price than expected

Higher yield and price than expected

No insurance or other payouts! This is a good year with better than average yields and prices higher at harvest than planting.

Lower yield and lower price than expected

Higher yield and lower price than expected

# Protection under different outcomes

Lower yield and higher price than expected

Higher yield and price than expected

Lower yield and lower price than expected

Higher yield and lower price than expected

This is a typical situation for a year with generally high yields nationwide driving down prices. Assuming sufficiently high yields, PLC provides the most protection here. ARC and SCO will only pay out if there is a deep drop in prices and small increase in yields.

# Protection under different outcomes

Lower yield and higher price than expected

Higher yield and price than expected

Lower yield and lower price than expected

Higher yield and lower price than expected

This is a difficult year. Unless yield and price declines are very small, ARC and SCO are both likely to trigger. PLC will trigger if the price decline is sufficiently large.

# Protection under different outcomes

Lower yield and higher price than expected

This outcome is typically of widespread drought years. PLC will not trigger. Due to HPO, SCO typically provides more protection than ARC under this outcome.

Higher yield and price than expected

Lower yield and lower price than expected

Higher yield and lower price than expected

## SCO: the bottom line



SCO may be attractive for producers who want to protect their profit margins and are willing to pay additional premium for this



Take a long-term perspective, consider all high coverage policies



Consider operation vs county yield trends

# SCO and the ARC/PLC decision

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- The difference between ARC/PLC from 2015-2022 was larger than SCO in most cases, but annual differences were significant
- SCO and ARC guarantees will likely be similar for many county/crop combinations this year
  - Unless harvest futures substantially drop in February...
  - SCO + PLC provider broader protection, but you pay
  - ARC – better value under some outcomes
- For a producer that wants to protect a larger share of expected revenue, ARC + ECO would be an interesting option to explore, especially for crops with a larger gap between PLC reference price and ARC Olympic ave. price

Questions?  
Comments?  
Thank you!

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# SCO and ECO Resources

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**KS crop insurance maps:** <https://agmanager.info/crop-insurance/kansas-crop-insurance-maps>

**KS yield correlation tool:** <https://agmanager.info/crop-insurance/crop-insurance-papers-and-information/kansas-yield-correlation-tool>

**ECO-SCO payout calculator:** <https://agmanager.info/crop-insurance/crop-insurance-papers-and-information/2024-supplemental-coverage-option-sco-and>

**Historic KS ARC, PLC, and SCO Payouts:**  
<https://agmanager.info/events/risk-and-profit-conference/previous-conference-proceedings/2023-risk-and-profit-conference/7>

# Related Resources

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## Margin Protection

<https://agmanager.info/news/recent-videos/managing-risk-arc-plc-and-sco-2023-webinar-recording-and-slides>

<https://agmanager.info/crop-insurance/crop-insurance-papers-and-information/margin-protection-insurance-basics-and>

## Coming soon

2024 SCO and ECO Update (2023 version - <https://agmanager.info/crop-insurance/crop-insurance-papers-and-information/high-coverage-crop-insurance-policies-2023>)

Summary of study of historic analysis of ARC, PLC, and SCO Payouts