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SCO Use by Crop and Region

Nick Paulson
University of Illinois

SCC-76 Annual Meetings 2017

March 31 to April 1

Pensacola, FL

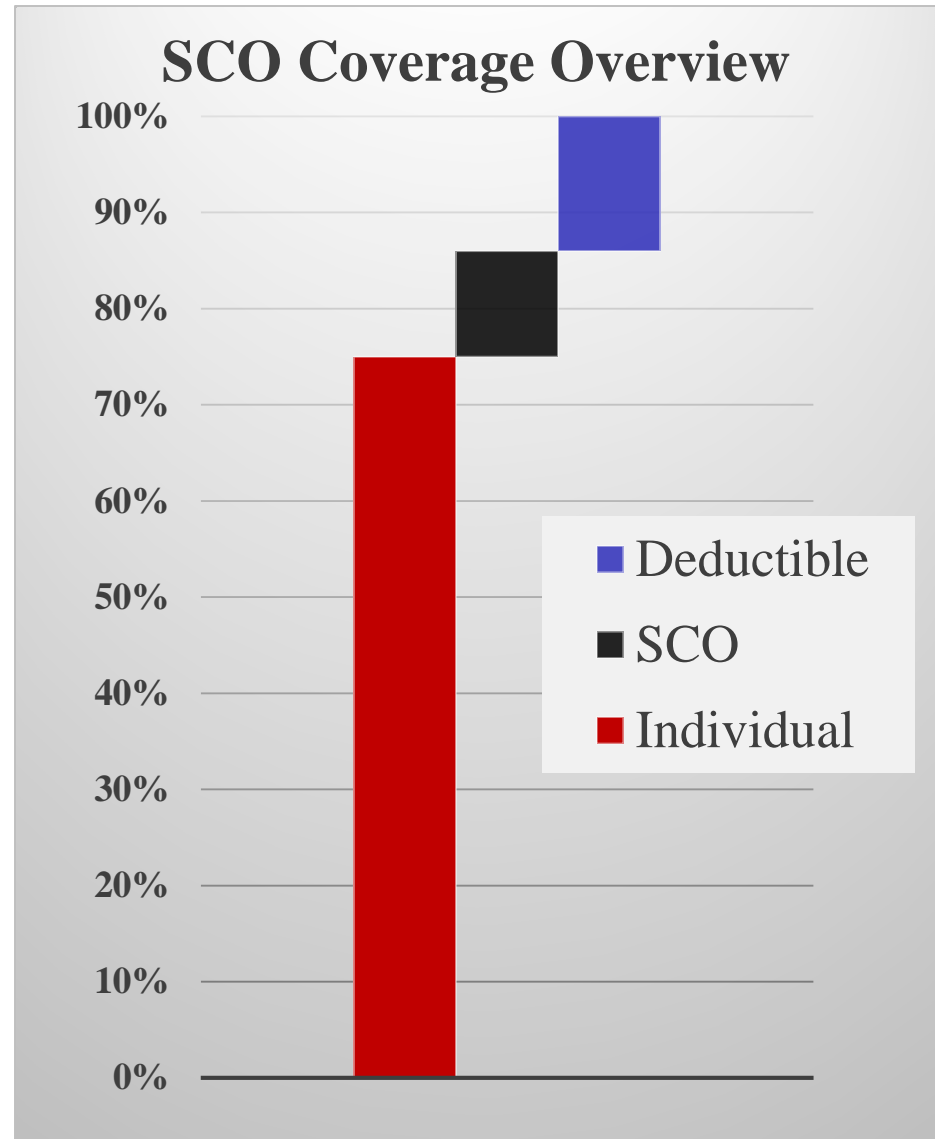
SCO Background

- Supplemental Coverage Option – crop insurance program created in 2014 Farm Bill
- Available starting in 2015, expanded in future years
- Crop base enrolled in ARC-CO or ARC-IC not eligible
- Requires purchase of an individual insurance plan (YP, RP, RP-HPE)

- County-based coverage
 - 86% coverage level
 - Coverage band extends down to coverage level on individual plan
 - County triggers payment and determines relative payment size
 - County loss applied to underlying policy deductible range – determines individual farm-level payment

SCO Background

- Example with 75% RP
- SCO range from 86% to 75%
- County trigger applied to individual deductible



SCO Background

- Yield component
 - Same trend/expected yields used for existing area plans (i.e. GRIP/GRP or ARPI)
- Price component
 - Same futures prices used for existing insurance programs
- Guarantee
 - 86% of county trend yield when coupled with YP
 - 86% of county expected revenue (insurance price x trend yield) when coupled with RP or RP-HPE
- Premiums
 - Set by RMA
 - Flat subsidy rate of 65%

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- Does SCO
 - enter into a producer's optimal risk management portfolio?
 - impact their individual plan and coverage level choices?
 - provide meaningful risk management gains?
- What are the marginal or additional subsidy costs associated with the SCO program and can they be justified?
- Paulson, Schnitkey, and Kelly (2016)

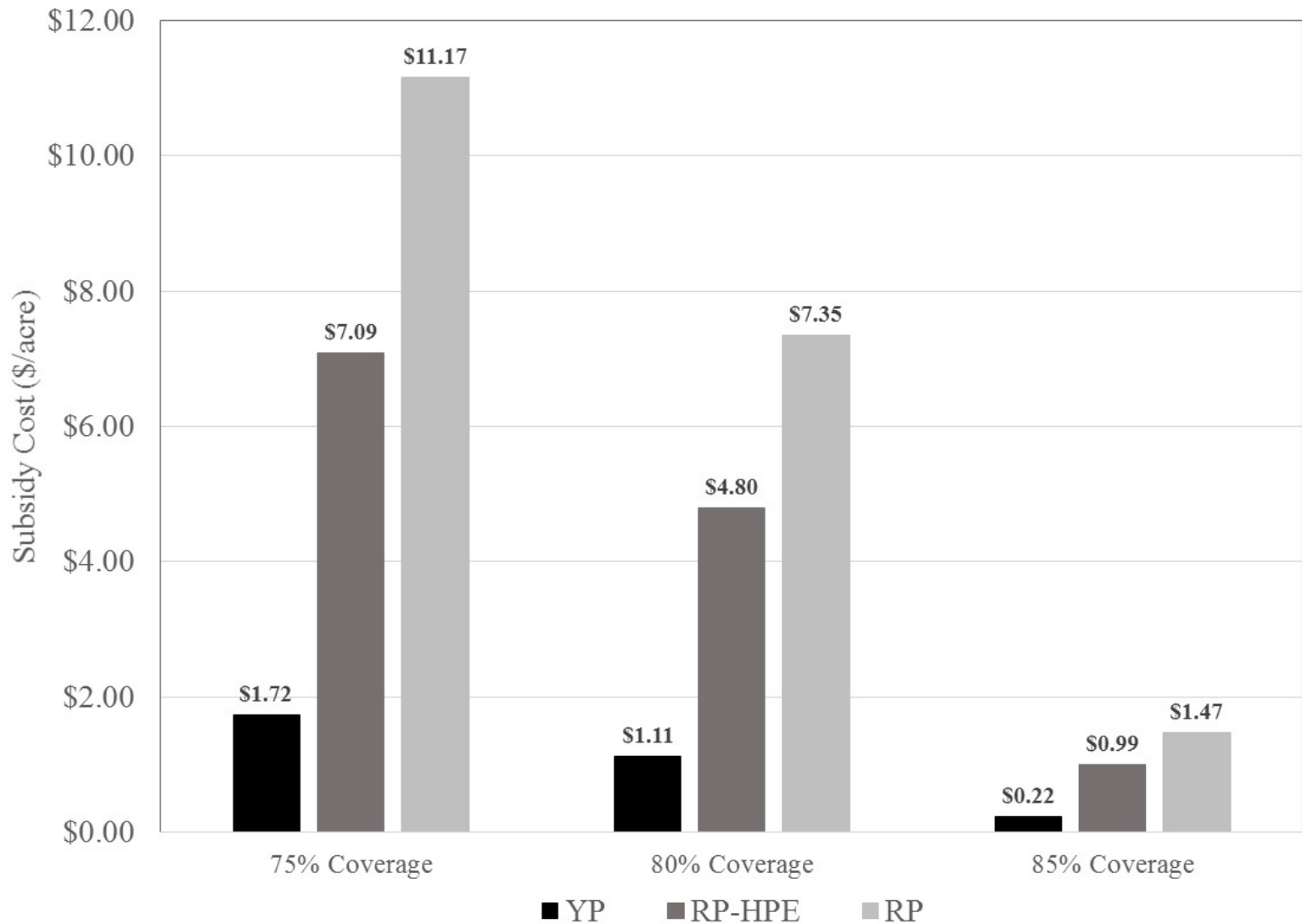
- Does SCO
 - enter into a producer's optimal risk management portfolio? **YES**
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 - provide meaningful risk management gains?
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- Does SCO
 - enter into a producer's optimal risk management portfolio? **YES**
 - impact their individual plan and coverage level choices? **MAYBE**
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- What are the marginal or additional subsidy costs associated with the SCO program and can they be justified?

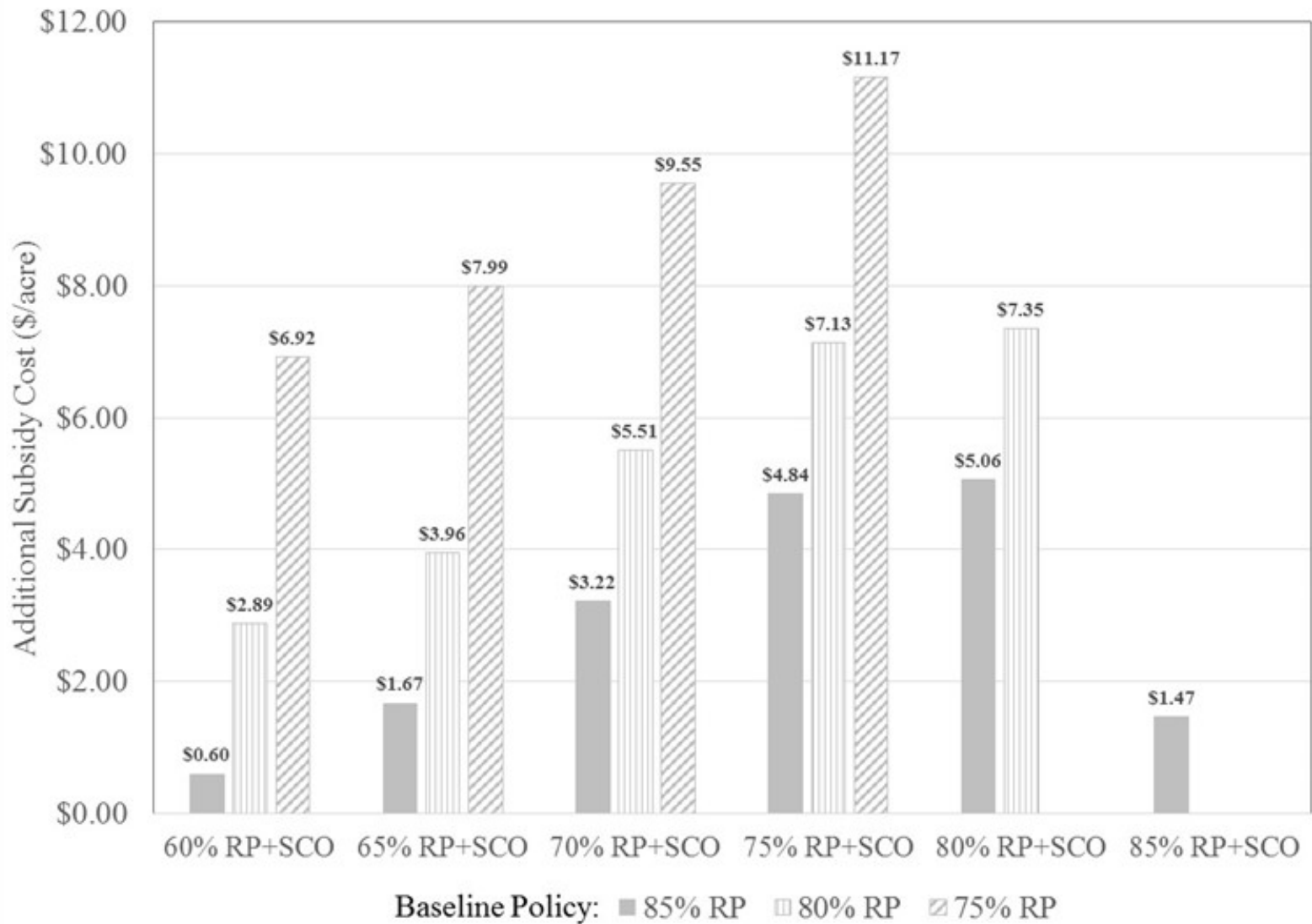
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MAYBE
- What are the marginal or additional subsidy costs associated with the SCO program and can they be justified? **POTENTIALLY LARGE**

Additional Subsidy Cost



Additional Subsidy Cost



In Practice?

- Results all based on a simulation model of a risk averse farmer
- Does evidence exist in practice?
- Use RMA SOB data to look at:
 - Amount of use
 - Differences by and across:
 - Crops and regions
 - Coverage levels

SCO Use in 2015

Table 1. Measures of SCO and STAX Use in 2015 by Commodity

Commodity	SCO/STAX Liability (\$ million)	Individual Plan Liability (\$ million)	SCO/STAX % of Liability	SCO/STAX % of Policies	SCO/STAX % of Units
Barley	\$1.1	\$520	0.21%	0.42%	0.73%
Corn	\$19	\$38,809	0.05%	0.27%	0.30%
Cotton (SCO)	\$0.5	\$2,716	0.02%		
Cotton (STAX)	\$229	\$2,716	7.79%	18.56%	21.49%
Rice	\$80	\$1,415	5.35%	16.95%	16.71%
Sorghum	\$6.1	\$1,094	0.56%	1.73%	2.08%
Soybean	\$16	\$23,466	0.07%	0.28%	0.36%
Wheat	\$70	\$8,265	0.84%	4.31%	4.94%

Note: Computed from the Risk Management Agency's Summary of Business for 2015

Insurance Coverage and Program Choice

Table 2. Average 2015 Crop Insurance Coverage Level and Base Acre Enrollment in PLC by Commodity

Commodity	Average Crop Insurance Coverage Level	% Base Acres Enrolled in PLC Program
Barley	70.3%	74.8%
Corn	76.3%	6.6%
Cotton	67.0%	n/a
Rice	66.9%	99.7%
Sorghum	67.6%	66.4%
Soybean	75.1%	3.1%
Wheat	70.7%	42.5%

Note: Average coverage level is for all RP, RP-HPE, and YP policies weighted by net acres.

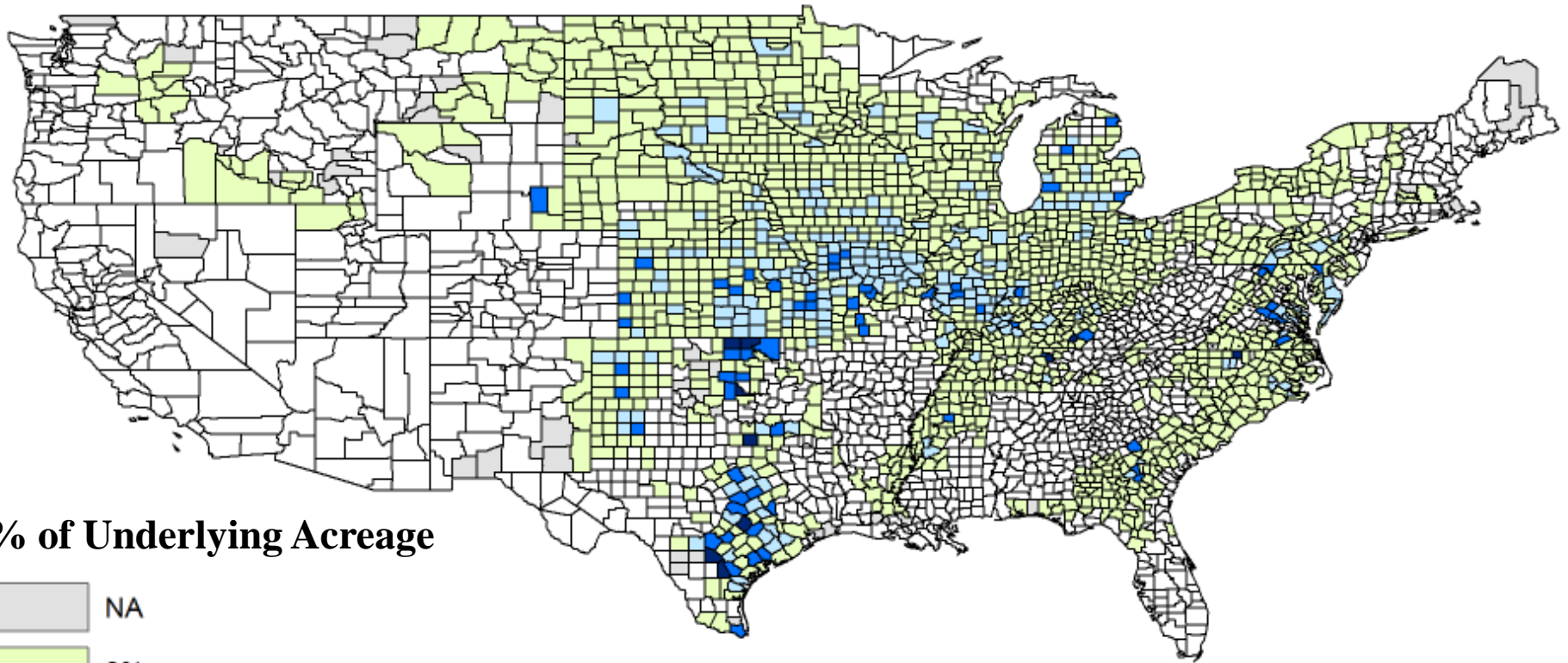
SCO Net Acres

Crop	Year	SCO-RP	SCO-RPHPE	SCO-YP
Corn	2015	260,363	989	14,623
Soybean	2015	259,475	1,177	21,871
Rice	2015	211,305	44,291	328,474
Wheat	2015	2,502,714	20,691	114,146

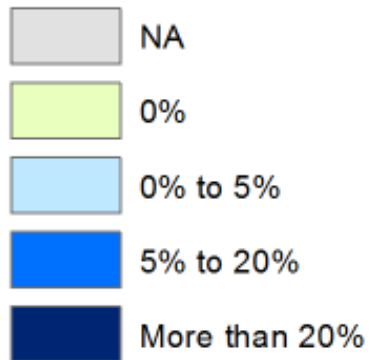
SCO Acres as Percentage of Underlying Plan

Crop	Year	SCO-RP	SCO-RPHPE	SCO-YP
Corn	2015	0.37%	0.15%	0.42%
Soybean	2015	0.39%	0.19%	0.58%
Rice	2015	29.1%	59.4%	23.9%
Wheat	2015	6.19%	7.33%	3.10%

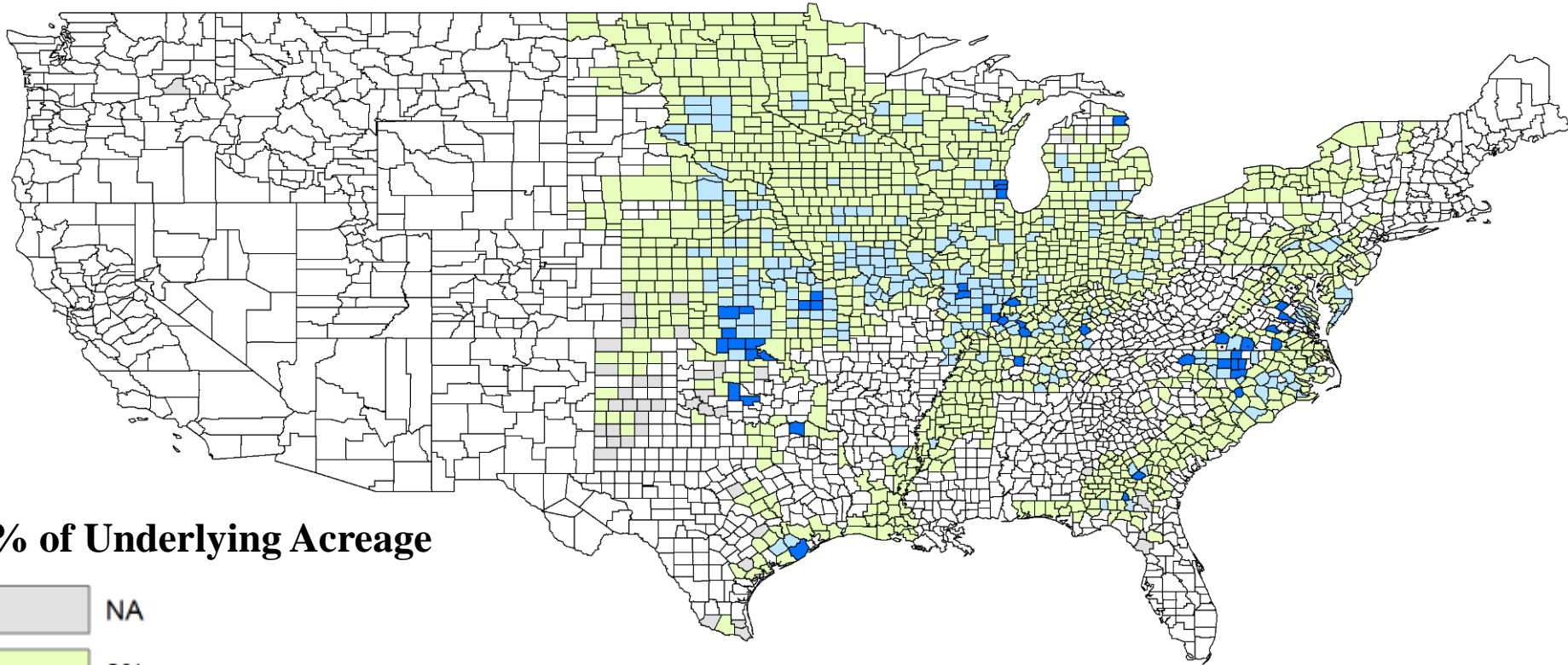
SCO – Corn, RP, 2015



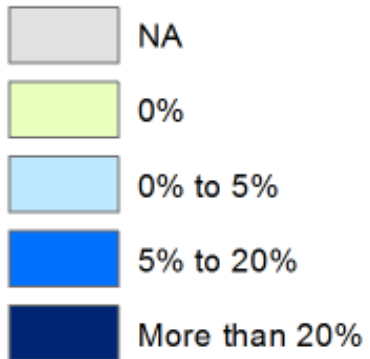
% of Underlying Acreage



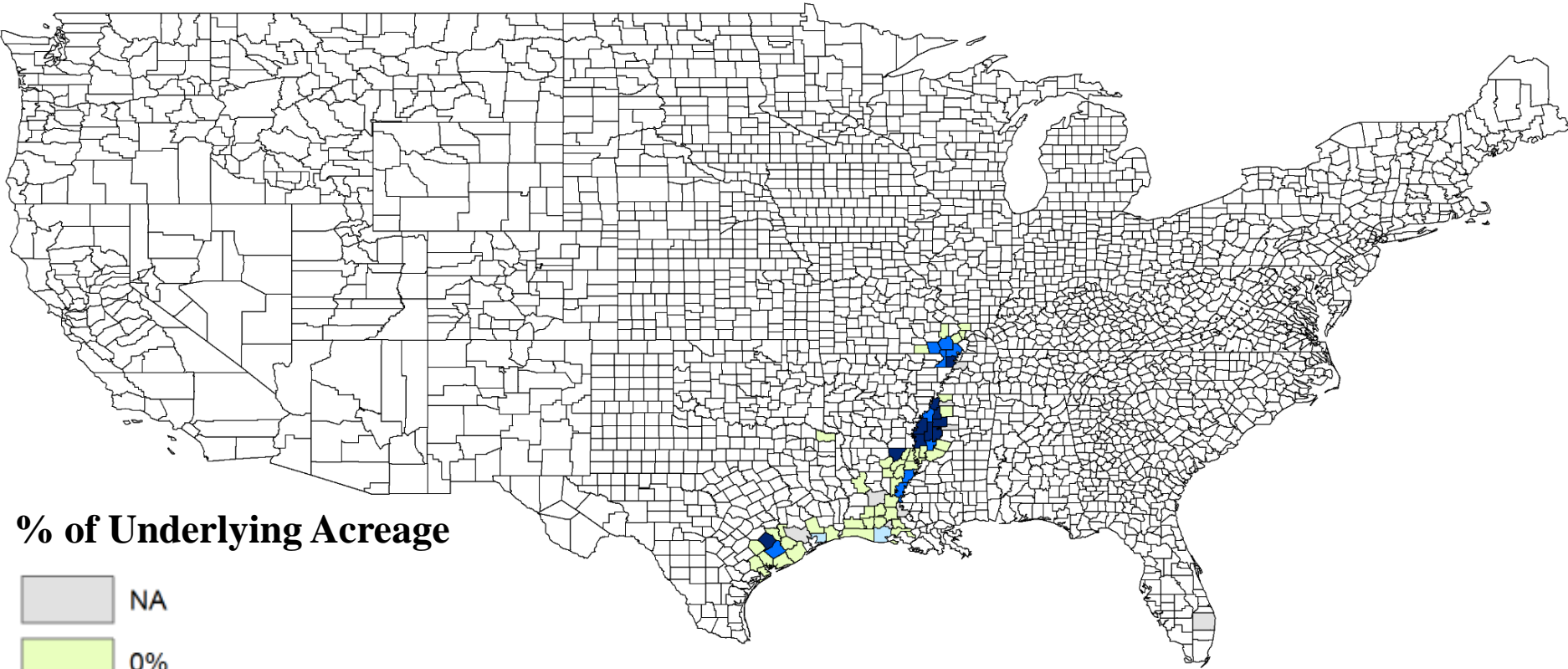
SCO – Soybeans, RP, 2015



% of Underlying Acreage



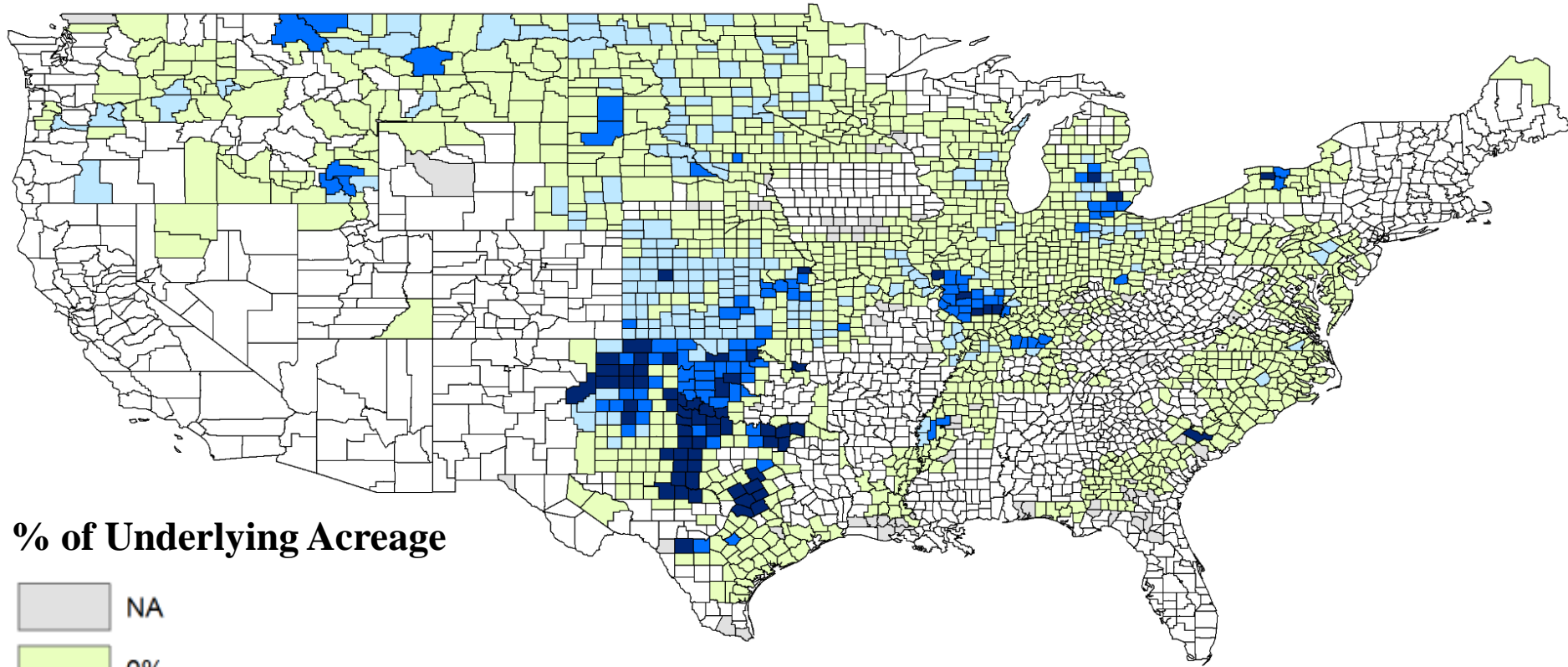
SCO – Rice, RP, 2015



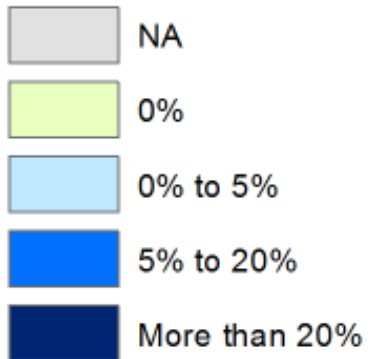
% of Underlying Acreage

- NA
- 0%
- 0% to 5%
- 5% to 20%
- More than 20%

SCO – Wheat, RP, 2015

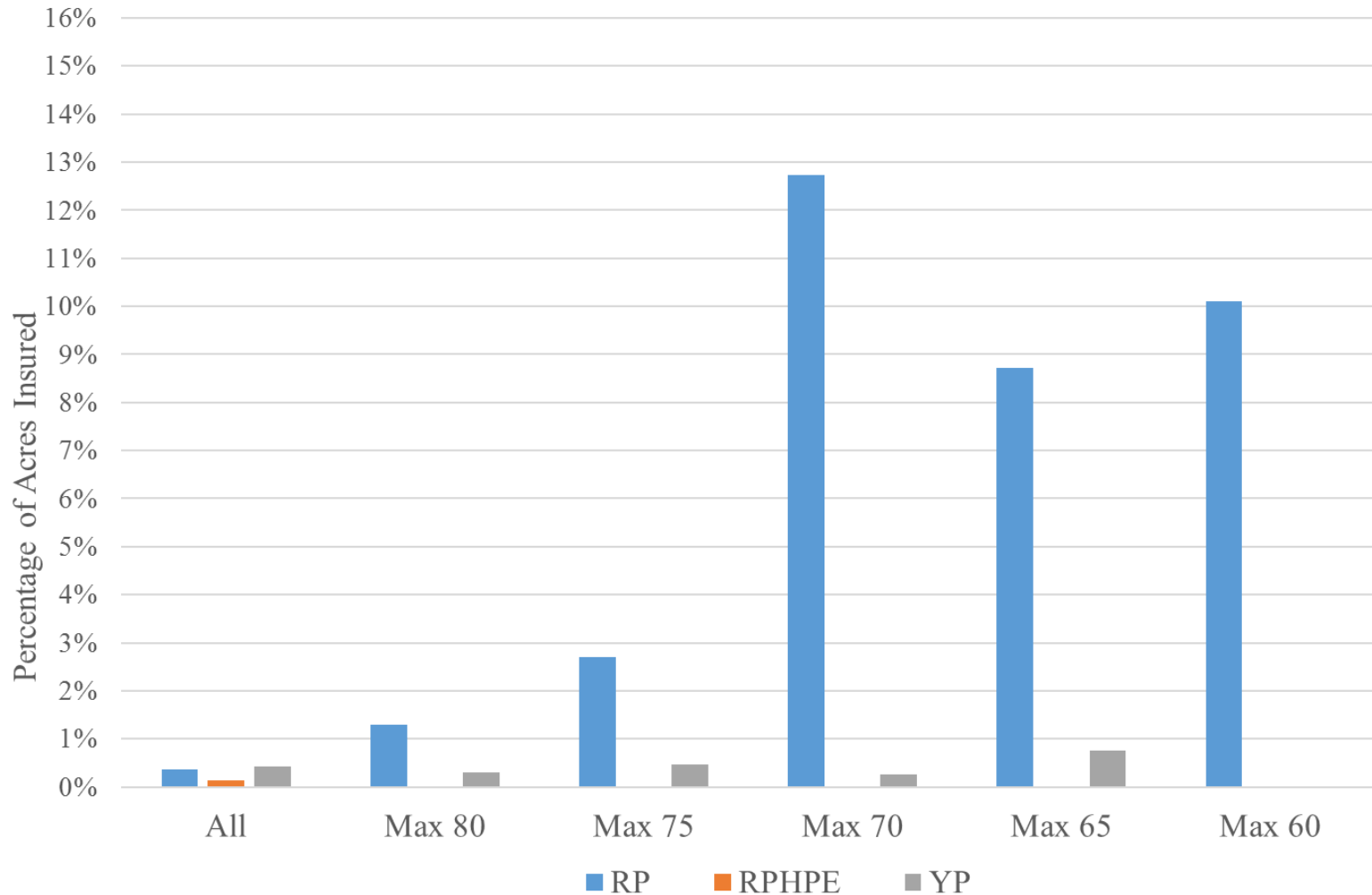


% of Underlying Acreage



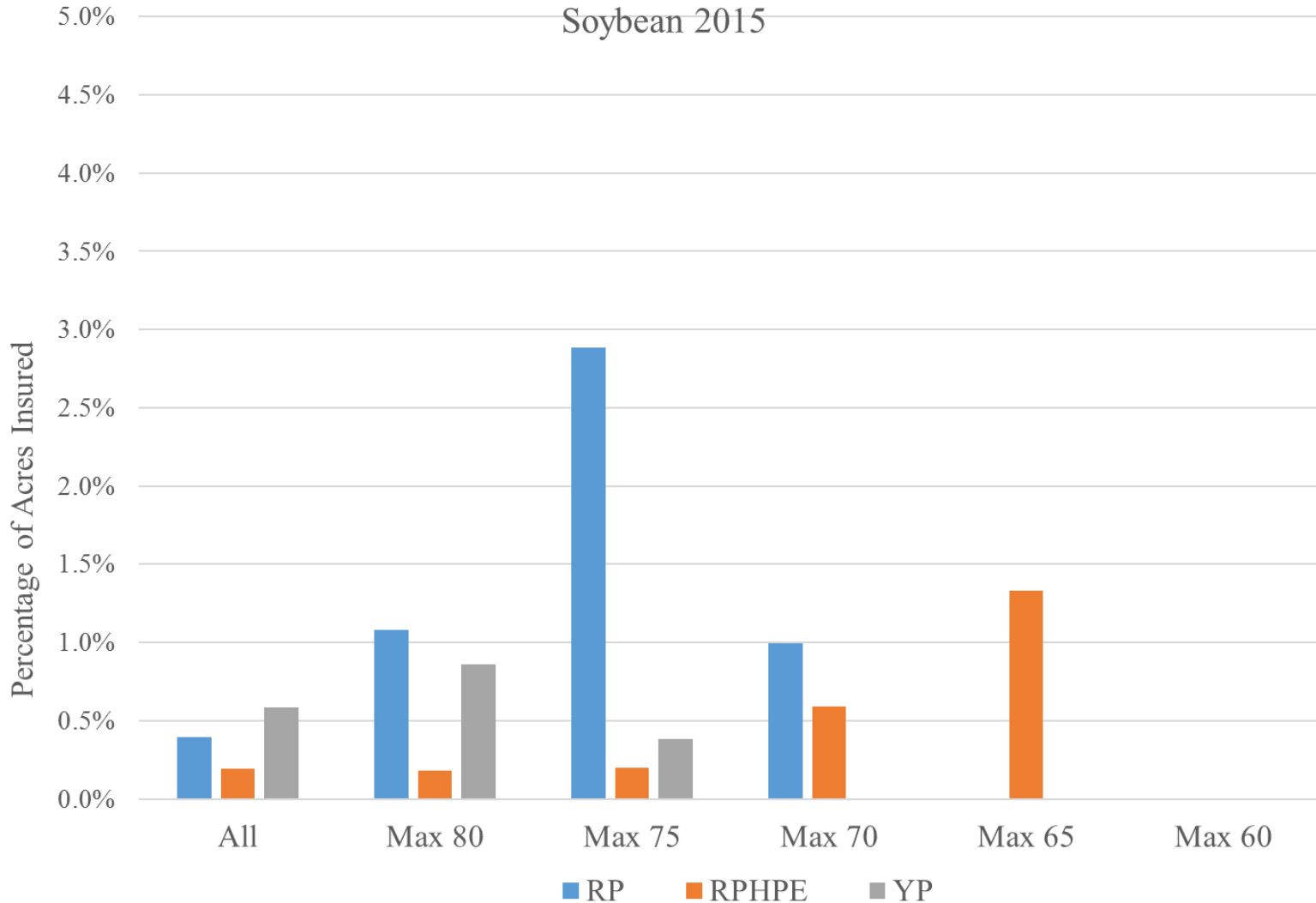
Corn by Plan and Coverage - 2015

Acres Insured with SCO by Plan and Max Available Coverage Level,
Corn 2015



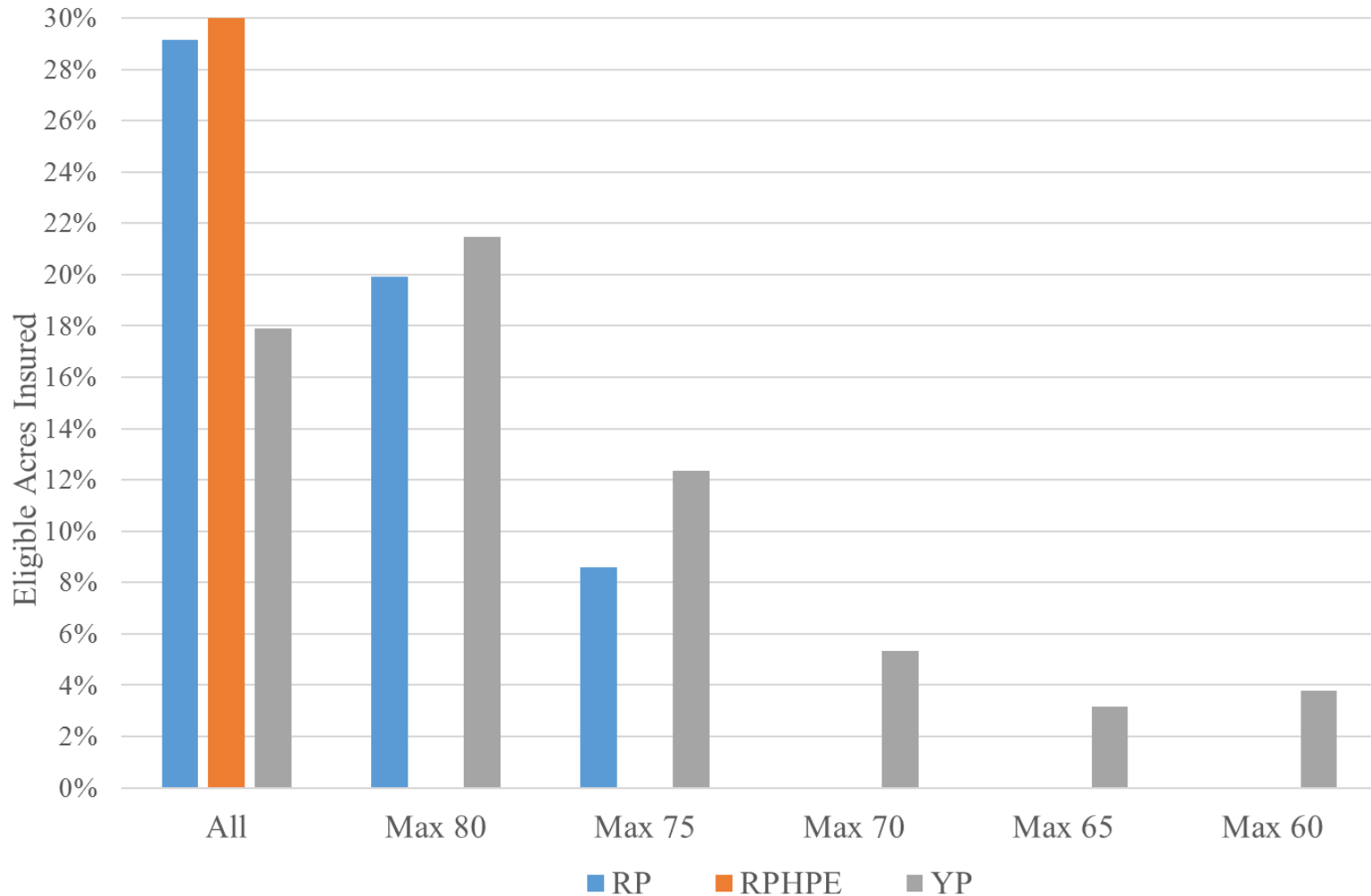
Soybean by Plan and Coverage - 2015

Acres Insured with SCO by Plan and Max Available Coverage Level,
Soybean 2015



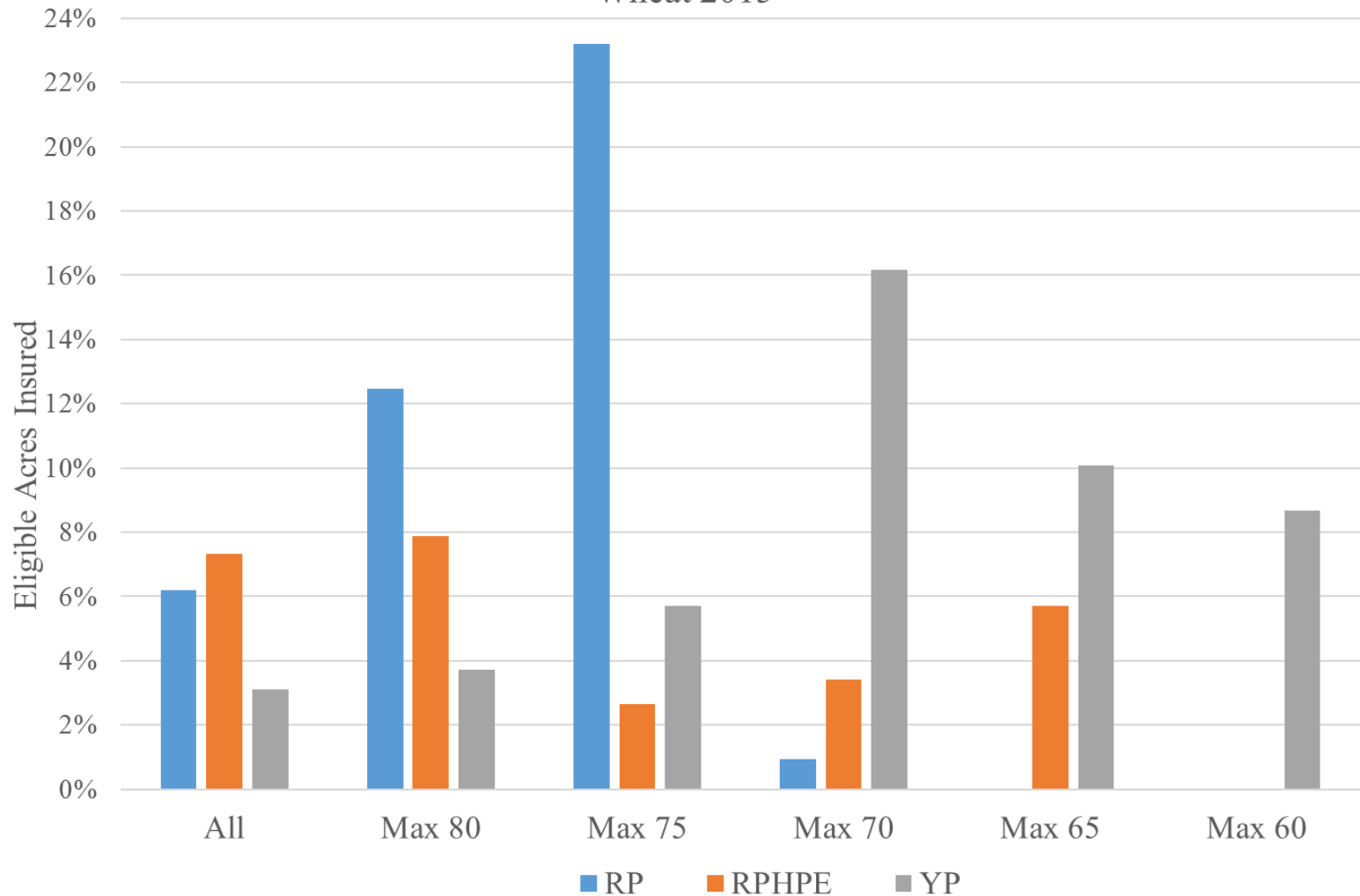
Rice by Plan and Coverage - 2015

Acres Insured with SCO by Plan and Max Available Coverage Level,
Rice 2015



Wheat by Plan and Coverage- 2015

Acres Insured with SCO by Plan and Max Available Coverage Level,
Wheat 2015



Conclusions

- Patterns in use by crop follows commodity program choice and resulting eligibility
- More intensive use in counties with lower available coverage levels
- No significant evidence of a “buydown” effect
- Potential additional subsidy cost is significant, but program use remains relatively small
- Bigger question – 2018 Farm Bill, impact on CBO baseline of shifts in program choice?