

Economic losses from ARC/PLC election choices in the 2014 Farm Bill

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Introduction

2014 Farm Bill required that farmers elect between Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC)

Election was fixed for next 5 years

Uncertainty about prices and yields in the future made the decision difficult

We examine the loss in payments due to election choices



Background on 2014 Farm Bill

ARC payments trigger if county revenue falls below revenue guarantee

- Price in revenue guarantee is 5-year Olympic average

PLC payments trigger if price falls below reference price

Farmers had to make election decision between November 17, 2014 and March 31, 2015

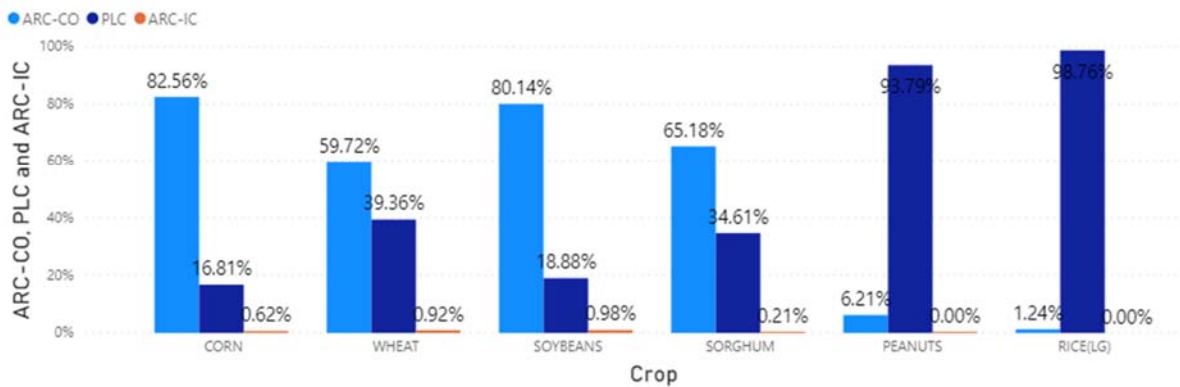
PLC was default



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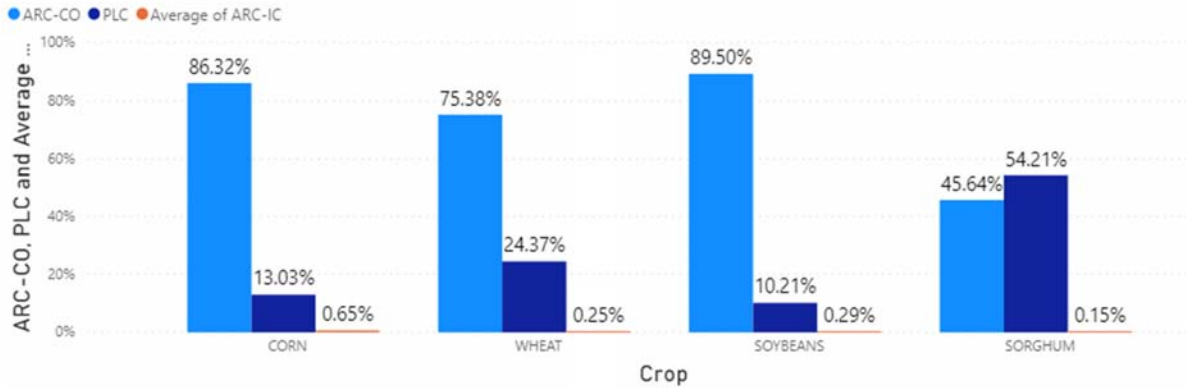
National Election Data by Commodity



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Kansas Election Data by Commodity



Kansas Losses



Average Corn Payment by Program in Kansas



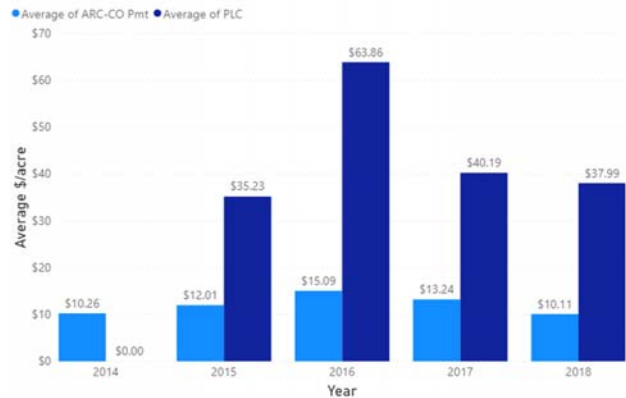
Average Wheat Payment by Program in Kansas



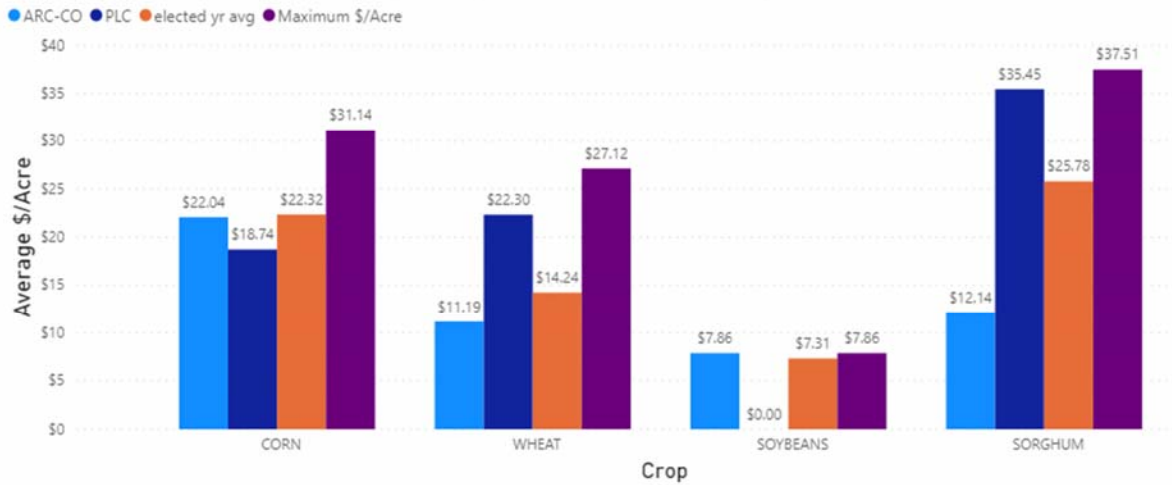
Average Soybean Payment by Program in Kansas



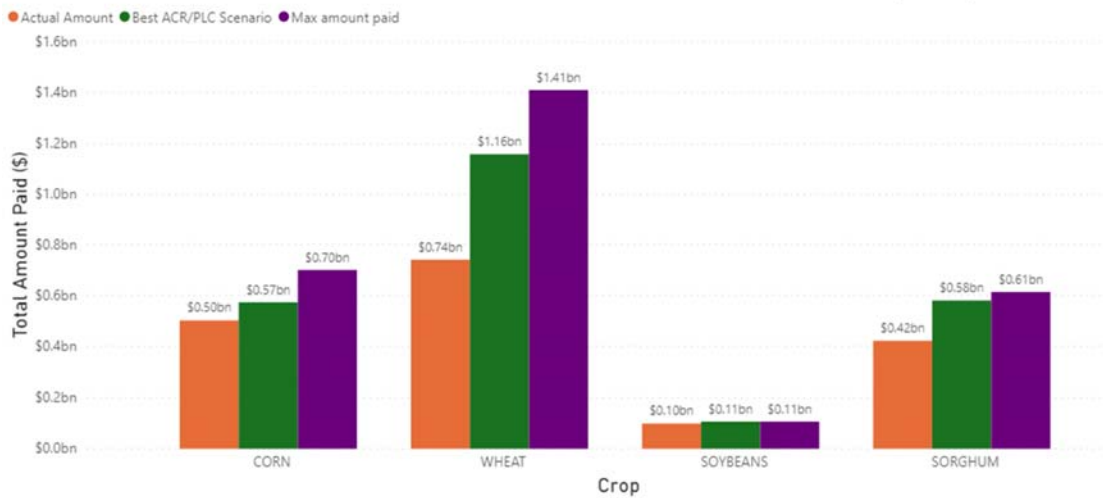
Average Sorghum Payment by Program in Kansas



Average Payments Per Year by Commodity



Total Amount Paid VS. Max Amount Paid in Kansas by Crop

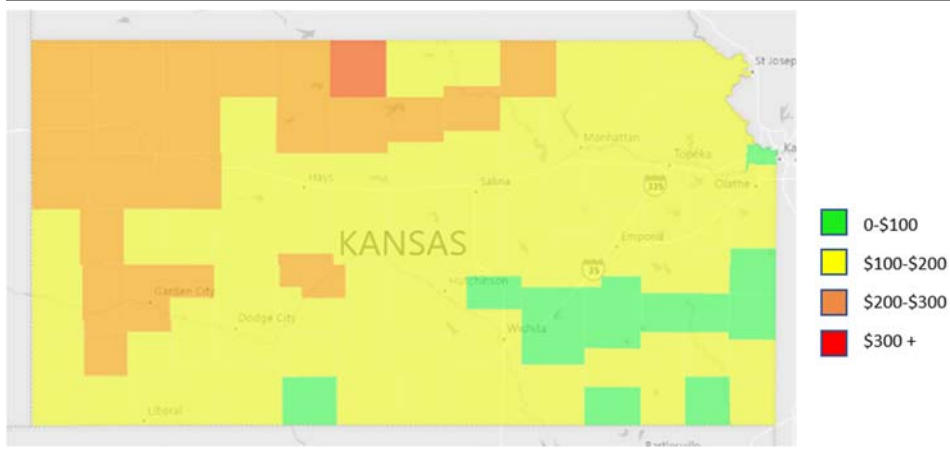


- 1 May want some data labels on this but it goes from about \$200 to close to \$600 over all crops for all 5 years.
Mary Kurzweil, 7/22/2020
- 1 I suggest the following labels for the bars: "Actual Payments Received" and "Maximum Payments Scenario". I also suggest adding another scenario called "Best ARC/PLC Scenario" that is the scenario of payment where everyone would have chosen the better option between ARC-CO and PLC but still had to keep the one program over the entire 5 years.

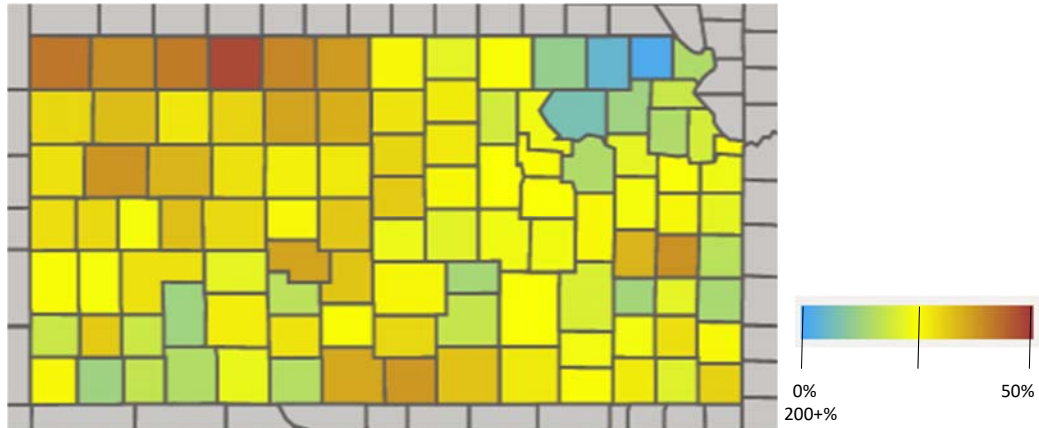
I kind of like keeping the bar graph on this slide as the sum across 5 years since it is total dollars rather than \$/acre. But want to make that clear in the figure title.

Yes, a legend on the map would be good.
Nathan Hendricks, 7/22/2020

Increase in Payments if Received Maximum of ARC or PLC



Percent Increase in Payments if Received Maximum of ARC or PLC



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Kansas Payments by Scenario

\$1.762 B	\$2.419 B	\$2.830 B
Actual Amount Received	Best ARC or PLC Scenario	Maximum Amount Paid



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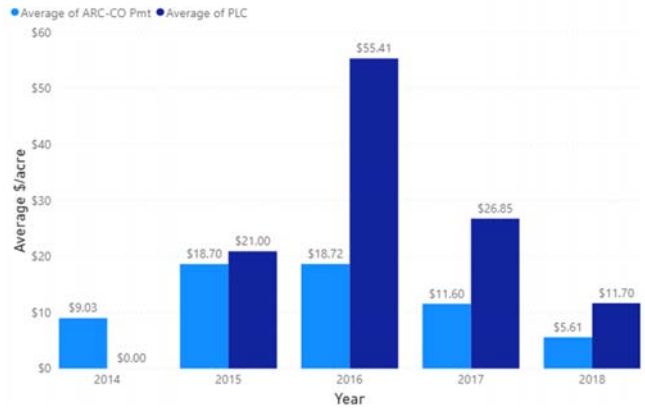
- 2 Are you sure that the reported amount received is only ARC and PLC payments and that the timeframe matches your calculation? For the 2014 crop year, farmers would have received payments in 2015.
Nathan Hendricks, 7/22/2020

National Losses

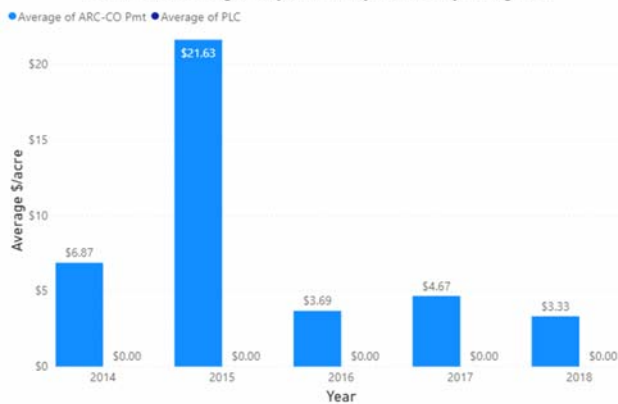
National Average Corn Payments by Program



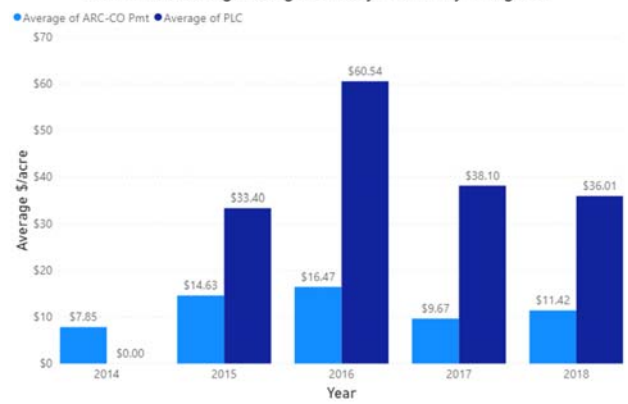
National Average Wheat Payments by Program



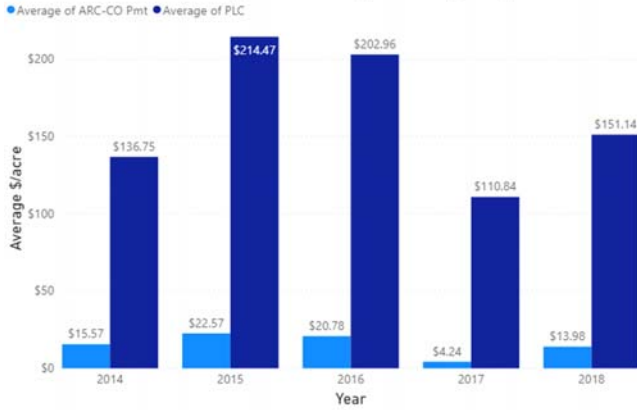
National Average Soybean Payments by Program



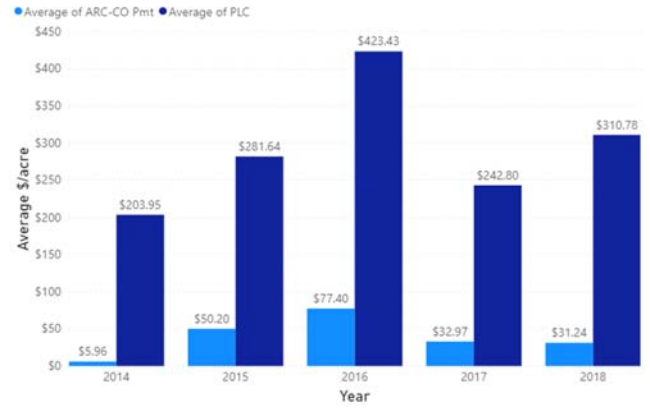
National Average Sorghum Payments by Program



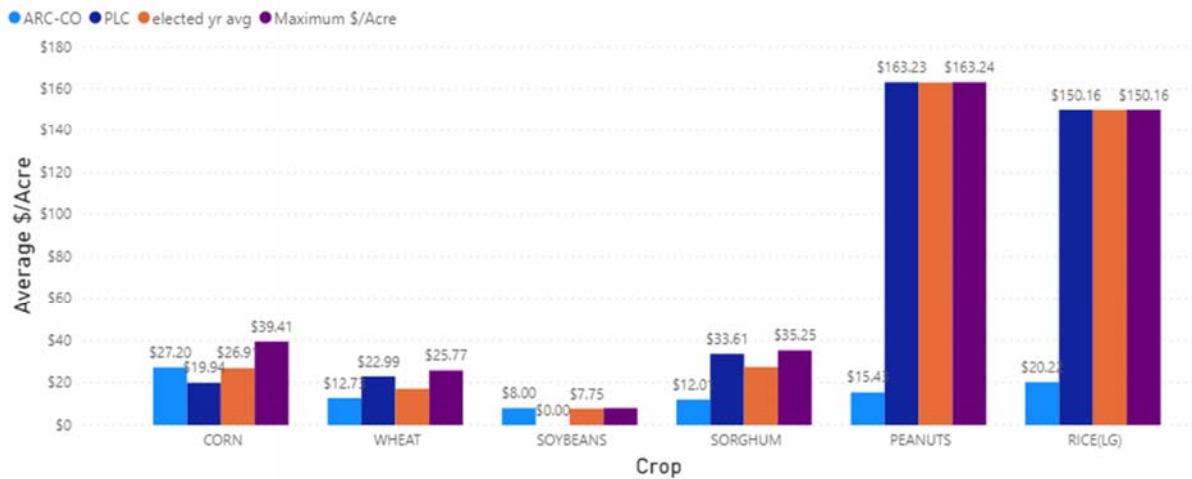
National Average Peanut Payments by Program



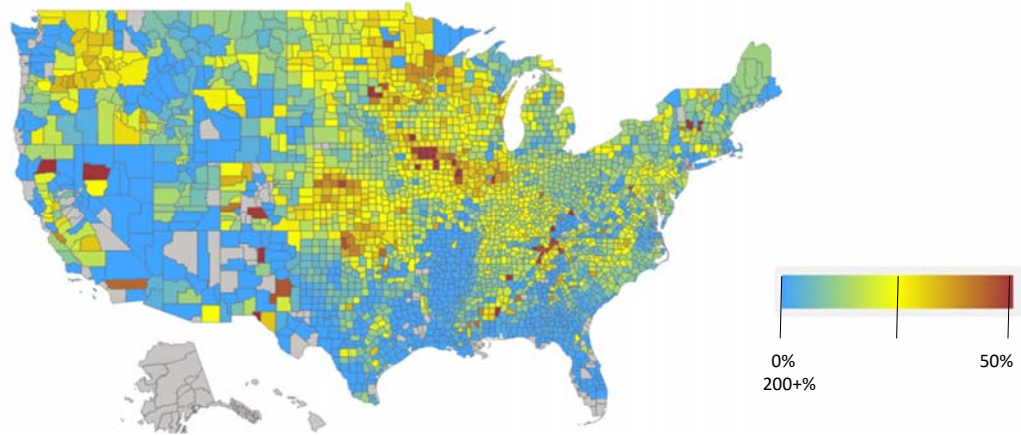
National Average Rice Payments by Program



Average Payments Per Year by Commodity

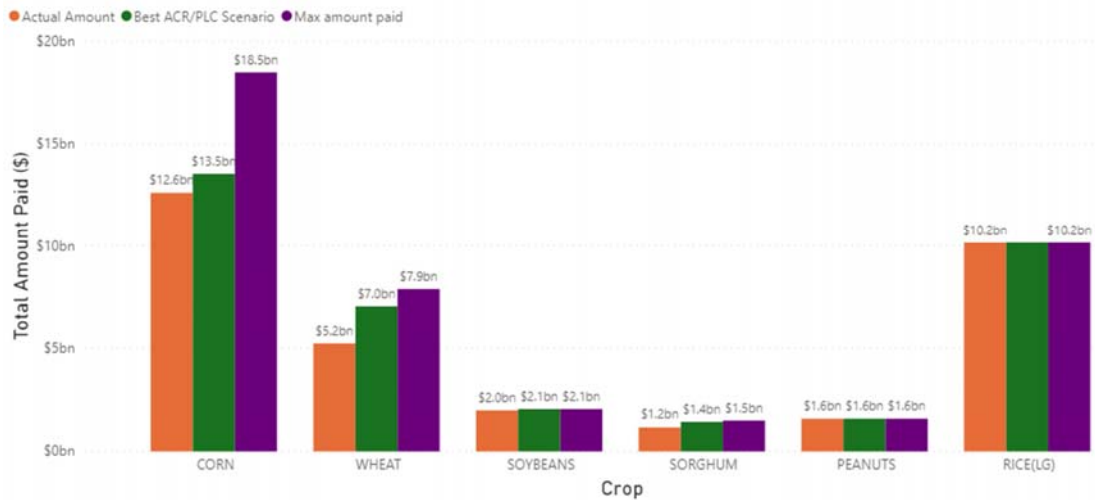


Percent Increase in Payments if Received Maximum of ARC or PLC



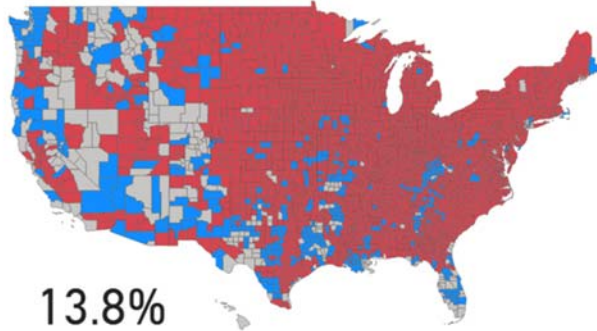
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Total Amount Paid VS. Max Amount Paid by Crop



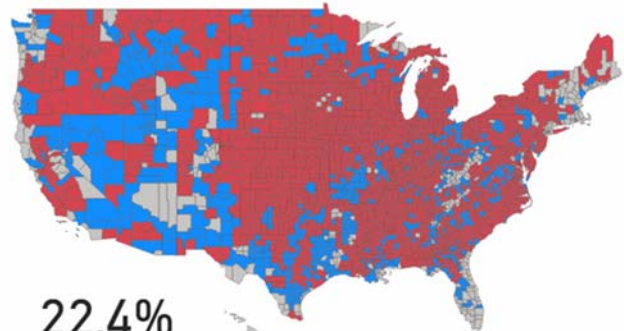
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Counties Where One Program is Best for Corn



13.8%
One program is the best option

Counties Where One Program is Best for Wheat

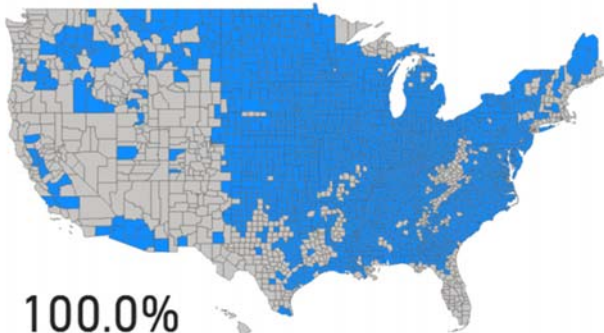


22.4%
One program is the best option



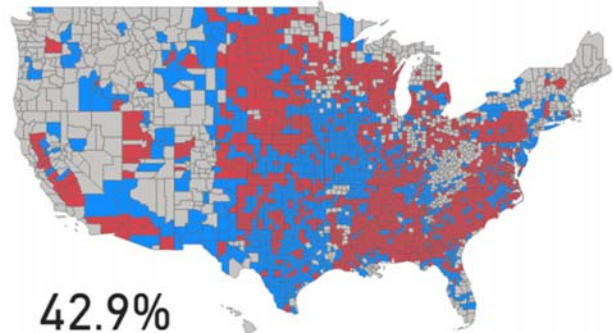
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Counties Where One Program is Best for Soybeans



100.0%
One program is the best option

Counties Where One Program is Best for Sorghum

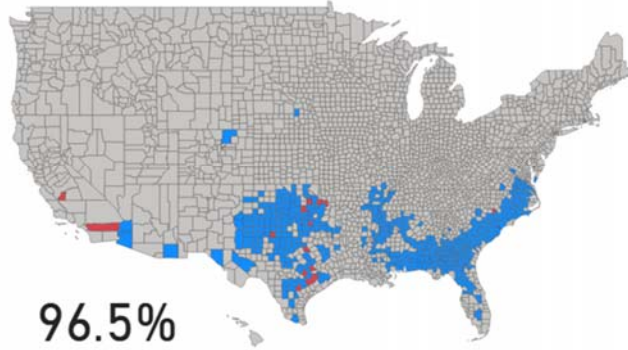


42.9%
One program is the best option



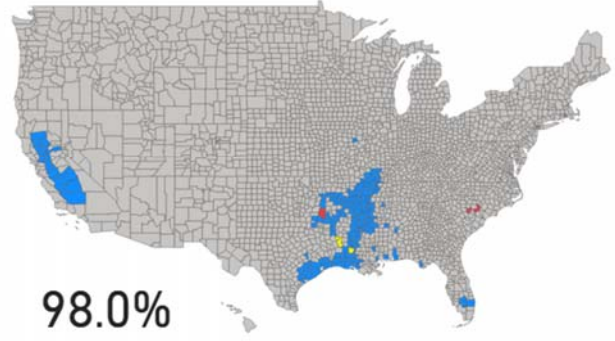
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Counties Where One Program is Best for Peanuts



One program is the best option

Counties Where One Program is Best for Peanuts



One program is the best option



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National Payments by Scenario

\$32.78 B

Actual Amount Received

\$35.84 B

Best ARC or PLC Scenario

\$41.70 B

Maximum Amount Paid



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Percent increase in payments if receiving maximum payments

Crop	Percent Loss
Corn	44.47%
Wheat	50.63%
Soybeans	3.27%
Sorghum	28.59%
Peanuts	0.09%
Rice (Long Grain)	0.06%



Main Takeaways

Largest losses for corn and wheat

PLC was clear choice for rice and peanuts

If farmers could have received the maximum of ARC/PLC, they could have obtained 61% more payments in Kansas and 27% more nationally

Largest losses in Kansas from election were in NW and SC

Kansas had particularly large losses nationally



An Alternative Approach

ARC Payment = $W \times (\text{base acres}) \times (\text{ARC payment rate})$

PLC Payment = $Z \times (\text{base acres}) \times (\text{program yield}) \times (\text{PLC payment rate})$

2014 and 2018 Farm Bills set $W=Z=0.85$

Alternatively, could pay maximum of ARC or PLC payment but W and Z that give the same budget expenditures



Percent of Base Acres for Payment

Examples that give same expenditures as 2014 Farm Bill

ARC: pay 60% of base acres

PLC: pay 71% of base acres

ARC: pay 77% of base acres

PLC: pay 60% of base acres

Both ARC and PLC pay of 68% of base acres

Note: These would NOT give the same CBO projected payments.



The CBO Score Game

Actual expenditures don't matter, the CBO score matters

CBO assumes some farmers will make wrong election

Explains why there is 2 year election and then annual election in 2018 Farm Bill

Possible that legislators know how to write bill so actual payments are greater than CBO projections



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Moving Forward

2018 Farm Bill required election for 2019 and 2020 in March 2020

Hereafter, farmer will elect annually by March 15

Need to reevaluate election decision each year

Losses from election will likely decrease

Commodities with easier ARC/PLC election prefer electing a program

Providing same payments without program election is mathematically easy, but politically difficult



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