



Understanding the Farm Program and the Farm Income Safety Net

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Farm Bill Directions

- ◆ Farm income safety net has evolved over time
 - Price support and supply control
 - Income support tied to price and revenue
 - Risk management
- ◆ Future program components
 - Crop insurance as the foundation
 - Revenue safety net or price safety net
 - Underlying marketing loan
 - Supplemental crop insurance
 - Disaster assistance
 - No direct payments

Farm Program Sign-Up Results By Crop Base Acreage in Nebraska

State	PLC	ARC-CO	ARC-IC
Barley	72%	28%	0%
Corn	4	96	0
Grain Sorghum	43	57	0
Oats	20	79	0
Soybeans	2	97	1
Sunflowers	65	34	1
Wheat	55	44	1

Source: USDA-FSA

Farm Bill Safety Net Price Safety Net

- ◆ Price Loss Coverage – PLC
 - Following House PLC proposal
 - Adaptation of current CCP program
 - Protects deep (and shallow?) losses below legislated reference (target) prices
 - Parameters
 - Corn = \$3.70/bushel
 - Soybeans = \$6.40/bushel
 - Sorghum = \$3.95/bushel
 - Wheat = \$5.50/bushel
 - Payment yields equal to existing CCP yields or updated payment yields
 - Payment on 85% of existing or updated base acres
 - Impact
 - Provides income support and risk management when price is near or below reference price
 - Protection level set at fixed reference price, creating potential long-term distortion of production/marketing decisions

Calculating Program Payments Price Loss Coverage

Price Loss Coverage Payment Rate

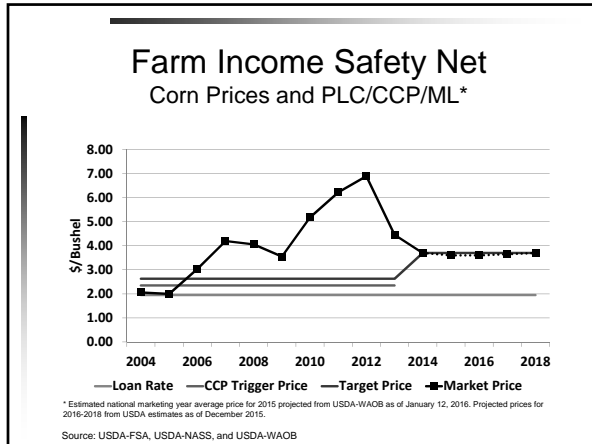
$$\text{MAX of } \left\{ \left(\frac{\text{reference price}}{\text{price}} - \text{MAX of } \left(\frac{\text{national marketing year}}{\text{average price}} \text{ or } \frac{\text{loan rate}}{\text{loan rate}} \right) \right) \text{ or } 0 \right\} = \text{PLC rate}$$

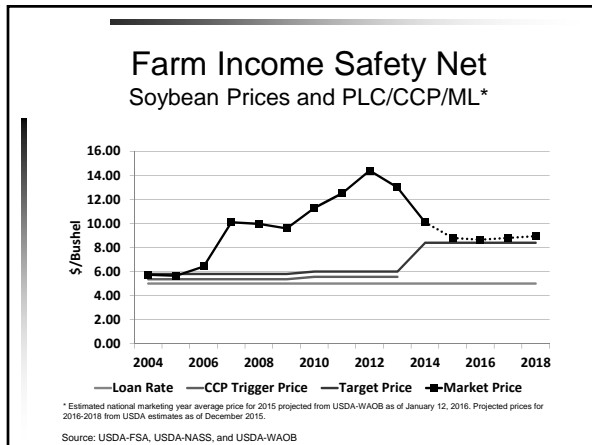
Price Loss Coverage Payment

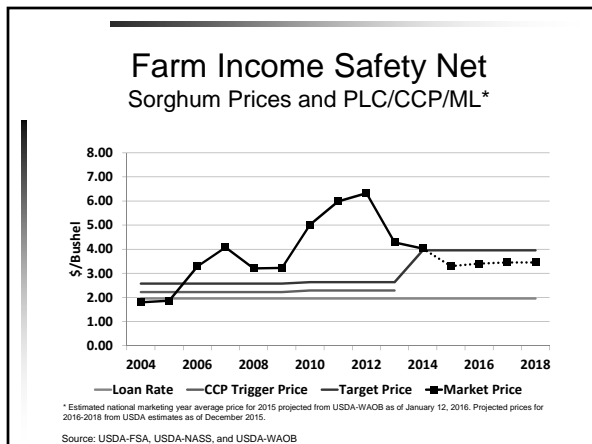
$$\text{PLC rate} \times \text{payment yield} \times \text{base acres} \times 85\% = \text{PLC payment}$$

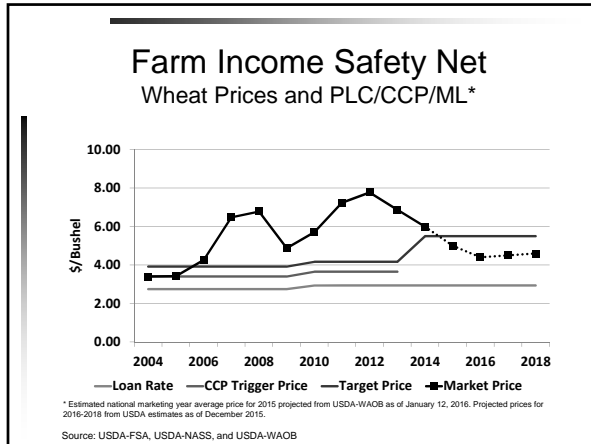
Farm Bill Safety Net Price Safety Net Outlook

- ◆ Price Loss Coverage – PLC
 - No payments in 2015 for the 2014 crop for major Nebraska crops
 - Weaker price projections through 2018
 - Projected PLC payments for 2015-2018
 - Small for corn
 - None for soybeans
 - Greater payments for grain sorghum and wheat
 - PLC provides downside price protection from current projected price levels
 - Few producers enrolled in PLC for corn and soybeans, more for grain sorghum and wheat









A Look Ahead to 2018 PLC Payment Rates*

Commodity	Reference Price	PLC Payment Rates				
		2014	2015	2016	2017	2018
Corn (\$/bus)	\$3.70	\$0.00	\$0.10	\$0.10	\$0.05	\$0.05
Grain Sorghum (\$/bus)	3.95	0.00	0.65	0.55	0.50	0.50
Soybeans (\$/bus)	8.40	0.00	0.00	0.00	0.00	0.00
Wheat (\$/bus)	5.50	0.00	0.50	1.10	1.00	0.90

* Estimated national marketing year average prices for 2015 and resulting PLC payment rates projected from USDA-WAOB as of January 12, 2016. Projected prices and resulting PLC payment rates for 2016-2018 from USDA estimates as of December 2015.

- ### Farm Bill Safety Net Revenue Safety Net
- ◆ Agriculture Risk Coverage - ARC
 - Following Senate ARC proposal
 - Adaptation of current ACRE program for ARC-IC
 - ARC-IC similar to AGR or Whole Farm Plan insurance
 - Protects shallow losses below average revenue at farm (ARC-IC) or county (ARC-CO) level
 - Parameters
 - Protect 86-76% of average revenue
 - ARC participants ineligible for SCO
 - ARC-CO
 - Crop guarantee
 - Average revenue = 5-year Olympic average price * 5-year Olympic average yield
 - Payments on 85% of base acres
 - ARC-IC
 - Whole farm guarantee
 - Average revenue = 5-year Olympic average revenue across all covered crops
 - Payments on 65% of base acres
 - Impact
 - Provides risk management when projected revenue is near or below average revenue
 - Protection level changes gradually with changes in revenue, reducing potential long-term distortion of production/marketing decisions

Calculating Program Payments

Agriculture Risk Coverage - County

ARC-CO Benchmark Revenue

$$\frac{\text{5-year Olympic average county yield}^*}{\text{5-year Olympic average national marketing year average price}^{**}} = \text{ARC-CO benchmark revenue}$$

ARC-CO Guarantee

$$\text{ARC-CO benchmark revenue} \times 86\% = \text{ARC-CO guarantee}$$

ARC-CO Actual Revenue

$$\text{county yield}^* \times \text{MAX of [national marketing year average price or loan rate]} = \text{ARC-CO actual revenue}$$

* County yield per planted acre, minimum yield for each year at county T-yield x 70%
** National marketing year average price, minimum price for each year at reference price

Calculating Program Payments

Agriculture Risk Coverage - County

ARC-CO Payment Rate

$$\text{MAX of [0 or MIN of ((} \frac{\text{ARC-CO guarantee}}{\text{ARC-CO actual revenue}} - \frac{\text{ARC-CO benchmark revenue}}{\text{ARC-CO actual revenue}} \text{) or (} \frac{\text{ARC-CO benchmark revenue}}{\text{ARC-CO actual revenue}} \text{ x 10\%)]]} = \text{ARC-CO payment rate}$$

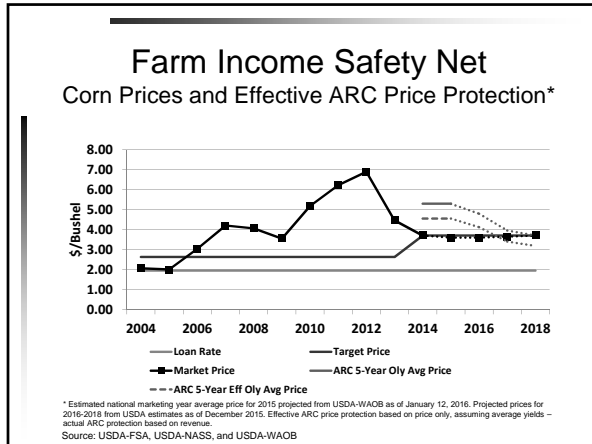
ARC-CO Payment

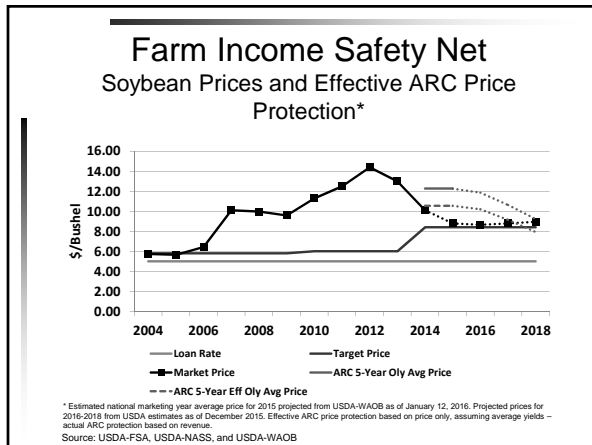
$$\text{ARC-CO payment rate} \times \text{base acres} \times 85\% = \text{ARC-CO payment}$$

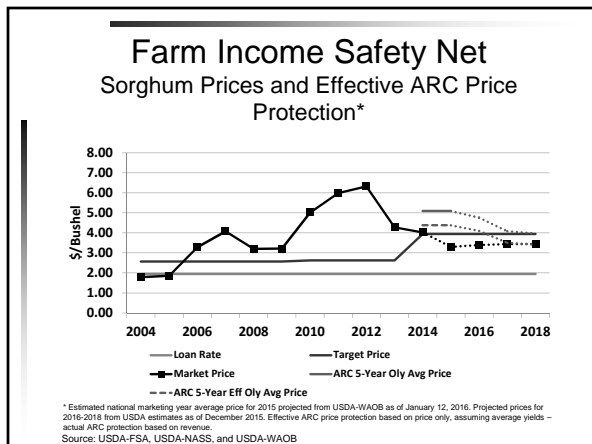
Farm Bill Safety Net

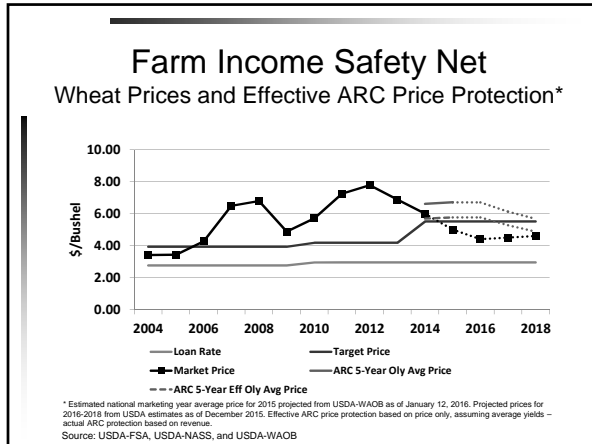
Revenue Safety Net Outlook

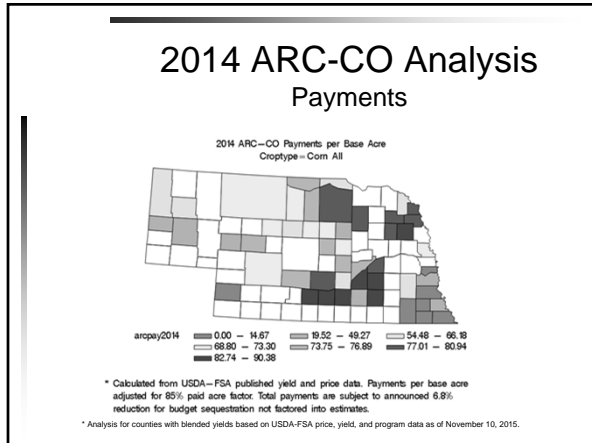
- ◆ Agriculture Risk Coverage – ARC
 - ARC-CO payments in 2015 for the 2014 crop were large but variable across counties, crops, and practices
 - General price losses versus varied yield results
 - Similar large ARC-CO payments in 2016 for the 2015 crop are expected with similar variability across counties, crops, and practices
 - Outlook for 2016 ARC-CO payments remains large
 - Price protection drops, but an assumed return to average yields reduces revenue and keeps potential payments large
 - Outlook for 2017-2018 ARC-CO payments is quickly diminishing support from ARC-CO as 5-year Olympic average price begins to falls sharply
 - ARC-IC results and protection would mirror ARC-CO, but are dependent on individual farm-level yields and results
 - Very few farms enrolled in ARC-IC

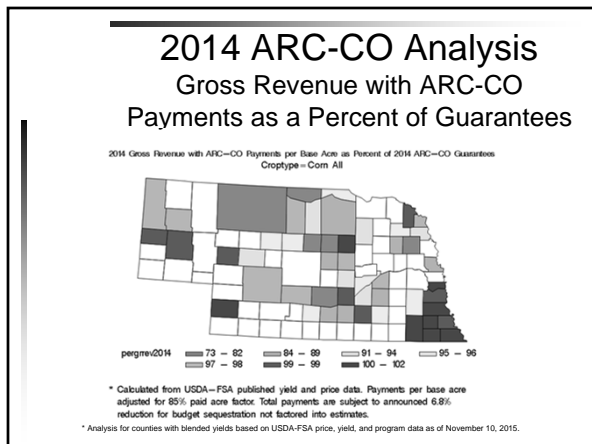


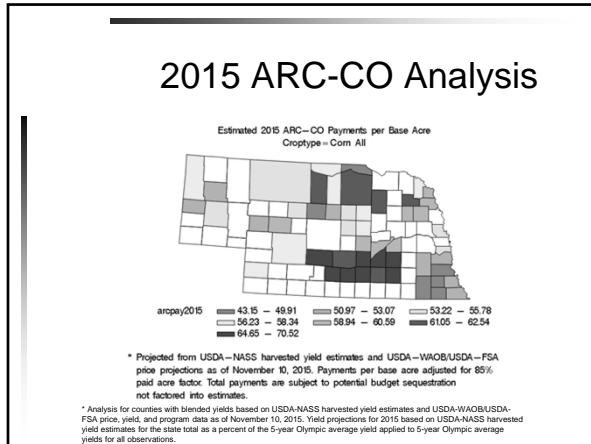












A Look Ahead to 2018 ARC-CO Payment Comparison in Nebraska*

Commodity	County/ Practice Combinations	Average ARC-CO Payments				
		2014	2015	2016	2017	2018
Corn (\$/base acre)	131	\$52.87	\$58.18	\$54.06	\$0.00	\$0.00
Grain Sorghum (\$/base acre)	103	18.59	28.48	29.43	4.90	0.00
Soybeans (\$/base acre)	112	15.47	42.21	44.89	15.49	0.00
Wheat (\$/base acre)	113	9.11	22.06	21.32	19.28	9.64

* Simple average ARC-CO payment per base acre across all available ARC-CO practices (blended, irrigated, and nonirrigated). Analysis based on USDA-WAOB/USDA-FSA prices and program data as of January 12, 2016. Estimated ARC-CO payments for 2015 based on state-level yield estimates extrapolated to county and practice level and national marketing year average price for 2015 projected from USDA-WAOB as of January 12, 2016. Estimated ARC-CO payments for 2016-2018 based on Olympic-average yield assumptions and USDA price estimates as of January 2015 (no yield losses for 2016-2018 - revenue losses from price only).

- ### Federal Crop Insurance and Disaster Assistance Programs
- ◆ Yield-based insurance
 - Yield Protection (YP)
 - Area Yield Protection (AYP)
 - Rainfall Index (RI) or Vegetation Index (VI)
 - Catastrophic Coverage (CAT)
 - ◆ Revenue-based Insurance
 - Revenue Protection (RP and RP/HPE)
 - Area Revenue Protection (ARP and ARP/HPE)
 - Whole Farm Revenue Protection (WFRP)
 - ◆ Supplemental Coverage Option (SCO)
 - ◆ Noninsured Crop Disaster Assistance Program (NAP)

Crop Insurance Program
Yield Protection

Yield Guarantee

$$\frac{\text{farm APH}}{\text{ins. yield election}} = \frac{\text{ins. yield guarantee}}{\text{ins. yield election}}$$

Insurance Indemnity

$$\text{MAX of [0 or } \left(\frac{\text{ins. yield guarantee}}{\text{ins. yield election}} - \frac{\text{actual farm yield}}{\text{ins. yield election}} \right) \times \left(\frac{\text{established price}}{\text{price election}} \right)] = \frac{\text{ins. indemnity}}{\text{ins. yield election}}$$

Crop Insurance Program
Revenue Protection

Revenue Guarantee

$$\frac{\text{farm APH}}{\text{ins. revenue election}} \times \text{MAX} \left(\frac{\text{base futures price}}{\text{harvest futures price}} - \frac{\text{actual farm yield}}{\text{ins. revenue election}} \right) = \frac{\text{ins. revenue guarantee}}{\text{ins. revenue election}}$$

Insurance Indemnity

$$\text{MAX of [0 or } \left(\frac{\text{ins. revenue guarantee}}{\text{ins. revenue election}} - \left(\frac{\text{actual farm yield}}{\text{ins. revenue election}} \times \frac{\text{harvest futures price}}{\text{ins. revenue election}} \right) \right)] = \frac{\text{ins. indemnity}}{\text{ins. revenue election}}$$

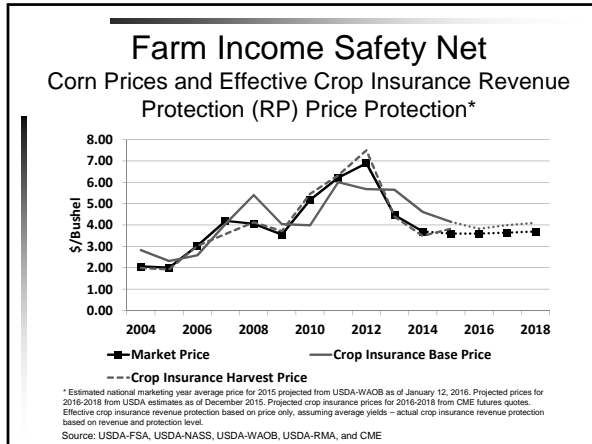
Crop Insurance Program
Revenue Protection with Harvest Price Exclusion

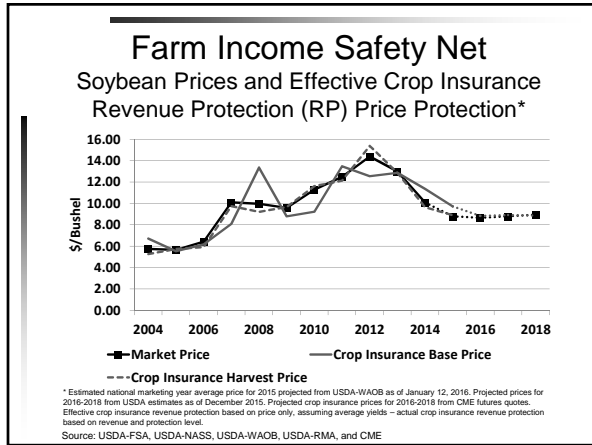
Revenue Guarantee

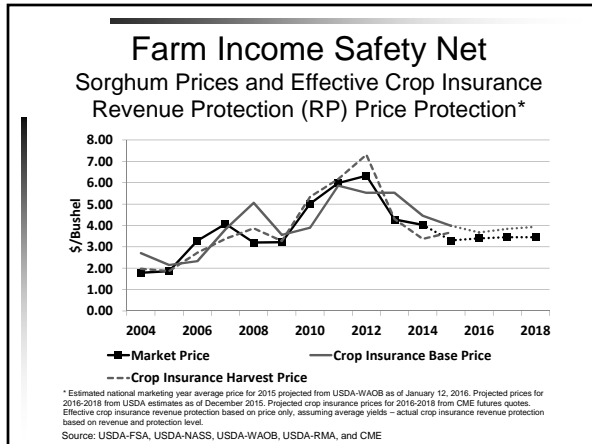
$$\frac{\text{farm APH}}{\text{ins. revenue election}} \times \frac{\text{base futures price}}{\text{ins. revenue election}} = \frac{\text{ins. revenue guarantee}}{\text{ins. revenue election}}$$

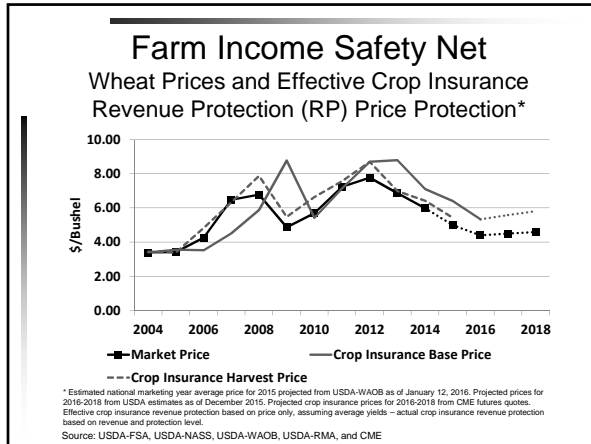
Insurance Indemnity

$$\text{MAX of [0 or } \left(\frac{\text{ins. revenue guarantee}}{\text{ins. revenue election}} - \left(\frac{\text{actual farm yield}}{\text{ins. revenue election}} \times \frac{\text{harvest futures price}}{\text{ins. revenue election}} \right) \right)] = \frac{\text{ins. indemnity}}{\text{ins. revenue election}}$$









- ### Farm Income Safety Net
- ◆ Farm bill programs
 - PLC
 - Not projected to provide large payments in Nebraska over 2014-2018 period
 - Large per bushel payments for grain sorghum and wheat, but small relative to ARC-CO totals
 - Will provide downside price risk from current projected price levels for participants
 - ARC
 - Provided substantial payments in Nebraska for 2014 and should again for 2015
 - Nearly \$600 million in farm program payments for the 2014 crop paid in October 2015
 - Similar projected payments for the 2015 crop to be paid in October 2016
 - Protection for 2016 should be similar to 2015 (to be paid in October 2016)
 - Lower 5-year Olympic average price, but an assumed return to average yields
 - Protection for 2017 and 2018 diminishes or disappears quickly with lower 5-year Olympic average price
 - ◆ Crop insurance
 - Effective price protection for intra-year price risk based on protection level
 - No protection for year-over-year or multi-year price risk
 - ◆ Managing crop yield, price, and revenue risk
 - Utilize farm programs and crop insurance tools as available – both will help with short-term price risk, but neither ARC nor crop insurance will provide price protection over the long run
 - Analyze production and marketing decisions and manage for the price outlook ahead

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