Crop Insurance Considerations for 2019

And Related Topics in the New Farm Bill

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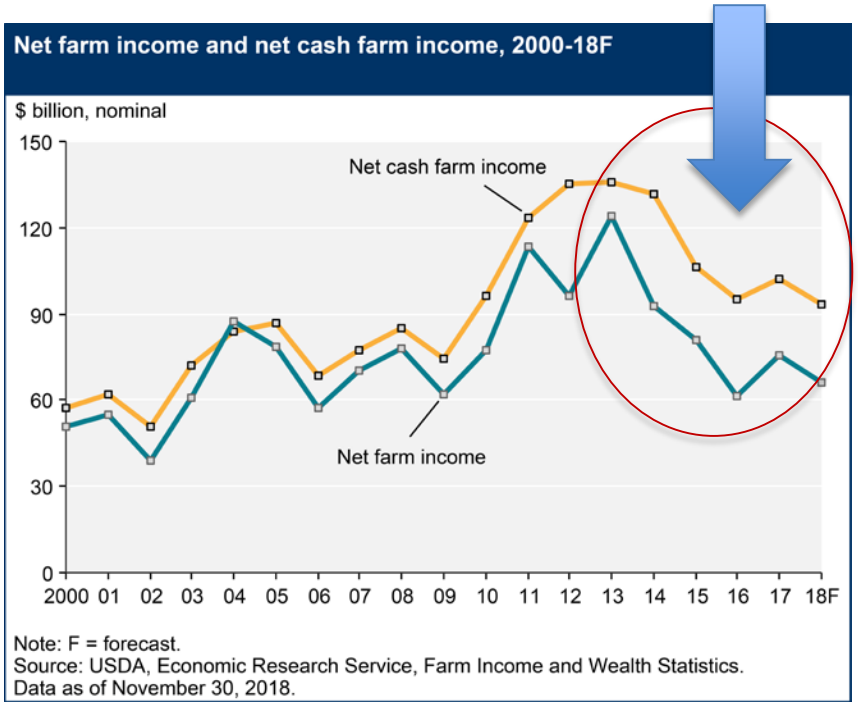
Goals for Today

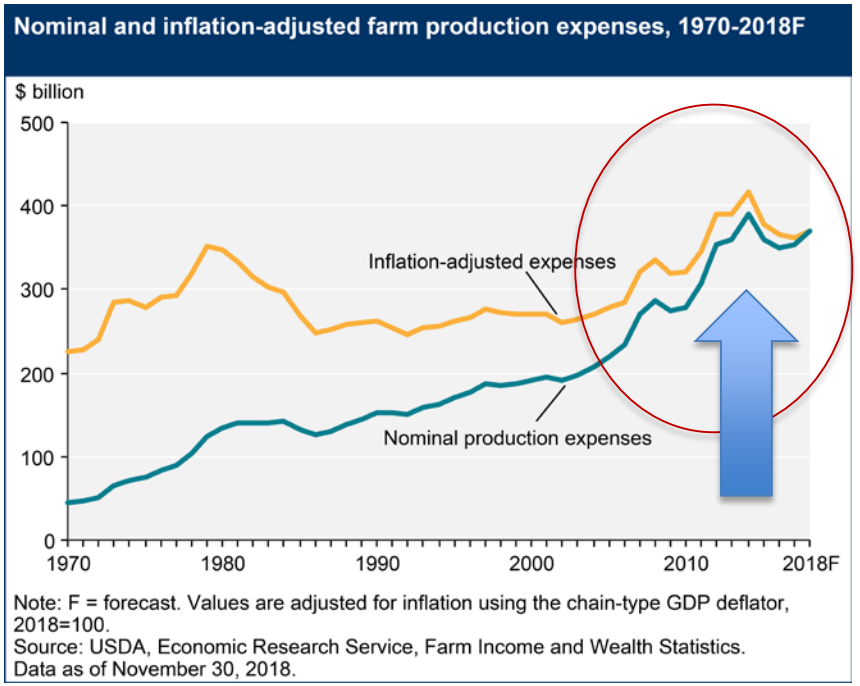
- Crop insurance considerations
  - Implications of expected tighter profit margins in 2019 (i.e., lower commodity prices)
  - Product choices, coverage levels, insured units
  - SCO & STAX
- Crop insurance changes in the New Farm Bill
  - Enterprise Units across counties
  - Cover crops

Introduction

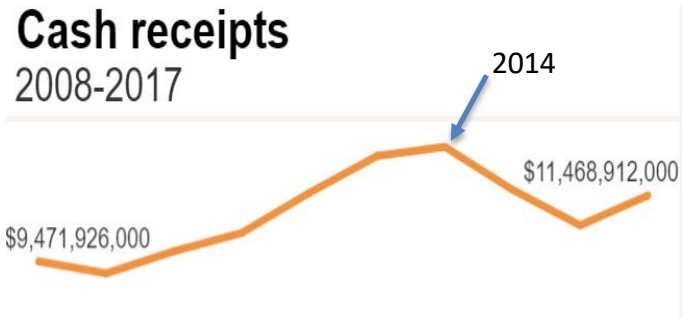
- Potentially tight profit margins in 2019
- Lower expected output prices due to a number of factors
  - Tariffs and trade war
  - High carryover stocks (i.e., especially for soybeans)
- Increasing cost of production

US Net Farm Income & Expenses





NC Farm Income & Expenses



NC COOPERATIVE EXTENSION

NC Farm Budgets

Corn, Coastal Plain-Conventional-2018

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ESTIMATED COSTS AND RETURNS PER ACRE, 2018
128 BUSHEL YIELD, AVERAGE

	UNIT	QUANTITY	PRICE OR COST/UNIT	TOTAL PER ACRE	YOUR FARM
1. GROSS RECEIPTS					
CORN	BU.	128.00	$4.41	$564.48	
TOTAL RECEIPTS:				**$564.48**	
2. VARIABLE COSTS					
SEED	THOU.	28.00	$2.656	$74.37	
FERTILIZER					
18-46-0	LBS	234.00	$0.24	$56.16	
NITROGEN (30% solution)	LBS	243.00	$0.12	$29.16	
PHOSPHATE (0-46-0)	LBS	0.00	$0.32	$0.00	
POTASH (0-0-60)	LBS	55.00	$0.20	$11.00	
LIME (PRORATED)	TON	0.33	$46.00	$15.18	
HERBICIDES	ACRE	1.00	$32.72	$32.72	
INSECTICIDES	ACRE	1.00	$0.00	$0.00	
FUNGICIDES	ACRE	1.00	$0.00	$0.00	
SURFACTANT	ACRE	1.00	$1.64	$1.64	
DRYING (3 POINTS)	BU.	128.00	$0.30	$38.40	
HAULING	BU.	128.00	$0.26	$33.28	
TRACTOR/MACHINERY	ACRE	1.00	$15.91	$15.91	
CUSTOM HARVEST	ACRE	1.00	$45.00	$45.00	
SCOUTING	ACRE	1.00	$12.00	$12.00	
LABOR	HRS	1.04	$11.27	$11.72	
INTEREST ON OP. CAP.	DOL.	$118.07	5.0%	$5.90	
TOTAL VARIABLE COSTS:				**$382.44**	
3. INCOME ABOVE VARIABLE COSTS:				**$182.04**	
4. FIXED COSTS					
TRACTOR/MACHINERY	ACRE	1.00	$21.98	$21.98	
TOTAL FIXED COSTS:				**$21.98**	
5. OTHER COSTS					
GENERAL OVERHEAD	DOL.	$382.44	7.0%	$26.77	
TOTAL OTHER COSTS:				**$26.77**	
6. TOTAL COSTS:				**$431.19**	
7. NET RETURNS TO LAND, RISK, AND MANAGEMENT:				**$133.29**	

BREAK-EVEN YIELD			***BREAK-EVEN PRICE***	
VARIABLE COSTS	87	BU.	VARIABLE COSTS	$2.99
TOTAL COSTS	98	BU.	TOTAL COSTS	$3.37

Soybean, Full Season-Coastal Plain-2018

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ESTIMATED COSTS AND RETURNS PER ACRE, 2018
35 BUSHEL ACTUAL YIELD.

	UNIT	QUANTITY	PRICE OR COST/UNIT	TOTAL PER ACRE	YOUR FARM
1. GROSS RECEIPTS					
SOYBEANS	BU.	35.00	$9.98	$349.30	
TOTAL RECEIPTS:				**$349.30**	
2. VARIABLE COSTS					
SEED (CERTIFIED)	THOU.	100.00	$0.40	$40.00	
FERTILIZER					
PHOSPHATE (0-46-0)	LBS	60.00	$0.32	$19.20	
POTASH (0-0-60)	LBS	82.00	$0.20	$16.40	
LIME (PRORATED)	TON	0.33	$46.00	$15.18	
HERBICIDES	ACRE	1.00	$31.59	$31.59	
INSECTICIDES	ACRE	1.00	$0.00	$0.00	
FUNGICIDES	ACRE	1.00	$0.00	$0.00	
SURFACTANT	ACRE	1.00	$1.58	$1.58	
AERIAL APPLICATION	APPL	0.00	$0.00	$0.00	
HAULING	BU.	35.00	$0.26	$9.10	
TRACTOR/MACHINERY	ACRE	1.00	$14.46	$14.46	
CUSTOM HARVEST	ACRE	1.00	$35.00	$35.00	
LABOR	HRS	0.95	$11.27	$10.71	
SCOUT	ACRE	1.00	$12.00	$12.00	
INTEREST ON OP. CAP.	DOL.	$69.21	5.0%	$3.46	
TOTAL VARIABLE COSTS:				**$208.68**	
3. INCOME ABOVE VARIABLE COSTS:				**$140.62**	
4. FIXED COSTS					
TRACTOR/MACHINERY	ACRE	1.00	$21.52	$21.52	
TOTAL FIXED COSTS:				**$21.52**	
5. OTHER COSTS					
GENERAL OVERHEAD	DOL.	$208.68	7.0%	$14.61	
TOTAL OTHER COSTS:				**$14.61**	
6. TOTAL COSTS:				**$244.81**	
7. NET RETURNS TO LAND, RISK, AND MANAGEMENT:				**$104.49**	

BREAK-EVEN YIELD			***BREAK-EVEN PRICE***	
VARIABLE COSTS	21	BU.	VARIABLE COSTS	$5.96
TOTAL COSTS	25	BU.	TOTAL COSTS	$6.99

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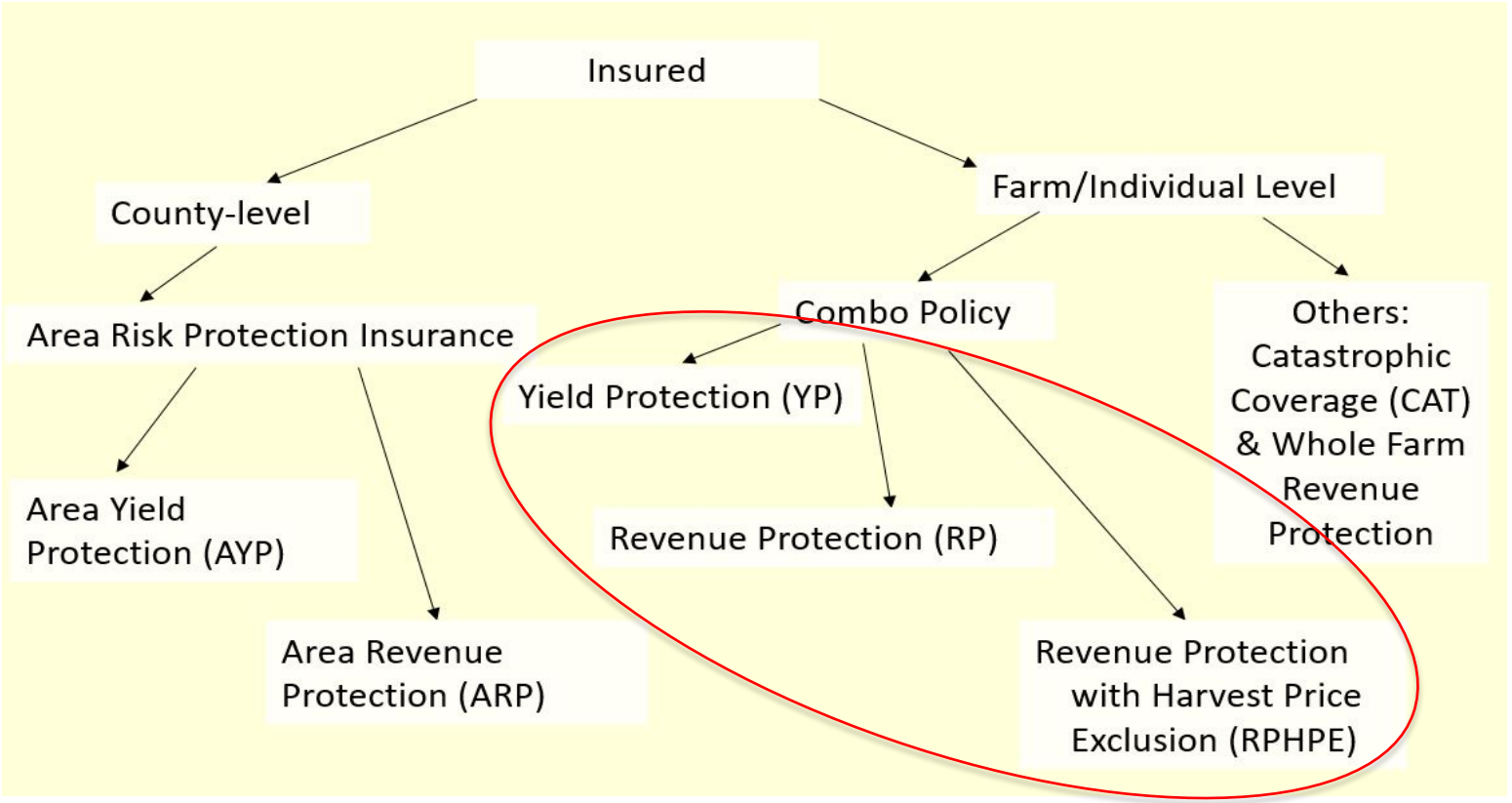
Implications for Crop Insurance

- Desire to improve cash flow in 2019 by lowering premium costs, while still having adequate risk protection
- Consider:
  - Change to lower cost insurance products
    - RP to RP-HPE or YP
  - Lowering coverage levels
  - Change insured unit to enterprise units
  - Combine above with commodity programs or SCO
    - ARC or PLC or SCO

Crop Insurance Refresher



Plus: Whole Farm Revenue Protection (WFRP)

How does it work? YP

- Yield Protection (YP)
  - Based on “proven” yield (Actual Production History (APH)) and price established by RMA
  - Individual yield insurance plan that protects against yield shortfalls if the actual yield falls below a guaranteed yield level
    - Yield Guarantee: chose Coverage Level as % of your APH
    - Coverage Level: % APH chosen as guarantee, from 50% to 85% in 5% intervals
    - Price Election: Choose price paid for each bushel below your yield guarantee, from 100% to 55% of established RMA price

How does it work? YP

- YP Example: (corn)
  - APH Yield = 140 bu/ac (average yield over 5 years)
  - Coverage level = 70%
  - Yield Guarantee = 98 bu/ac = 140 x 70%
  - Price election (100%) = $4.0/bu
- If actual yield at harvest = 88 bu/ac (<98)
  - Indemnity = (98-88) x $4 = $40/ac
  - If insured unit is 100ac, then Total Indemnity = $4000

How does it work? YP

- Premium subsidies decrease as coverage level increase
- Larger subsidies for enterprise units
- Special YP case: Catastrophic (CAT) coverage
  - 50% yield at 55% of market price
  - $300 admin. fee per crop in each county (fully subsidized premiums) (↑ $655 in new farm bill)

How does it work? RP

- Revenue Protection (RP)
  - Pays for revenue losses below a revenue guarantee, at the higher of the pre-season "base" price or the harvest price (established by RMA)
- RP Example:
  - APH Yield = 140 bu/ac
  - Coverage level = 70%
  - Base price = $4.0
  - Revenue Guarantee = $392/ac (140x0.7x4)

How does it work? RP

- RP Example (continued)
  - Actual Yield at Harvest = 88bu/ac
  - Case 1: Harvest Price = $3 (HP < Base)
    - Actual Revenue = $264/ac (88 x 3)
    - RP Indemnity = (392-264) = $128
  - Case 2: Harvest Price = $5 (HP > Base)
    - Actual Revenue = $440 (88 x 5)
    - New Revenue Guarantee = $490 (140x0.7x5)
    - Indemnity = 490-440 = $50/ac

How does it work? RPHPE

- Revenue Protection with Harvest Price Exclusion (RPHPE)
  - Pays for revenue losses below a revenue guarantee at the pre-season "base" price (regardless if harvest price is higher than base or not)
- Following previous RP Example:
  - Case 1: same as in RP
  - Case 2: No indemnity (Rev guarantee < Actual Rev)

NC Crop Insurance Experience

- 2018 liabilities ($) by insurance plan

Ins. Plan	Corn		Soybeans	
	Liabilities ($)	% of Total	Liabilities ($)	% of Total
RP	238,499,621	89.56%	310,224,144	89.85%
RPHPE	214,457	0.08%	826,055	0.24%
YP	27,590,906	10.36%	34,223,575	9.91%
TOTAL	266,304,984	100.00%	345,273,774	100.00%

NC Crop Insurance Experience

- 2018 liabilities ($) by coverage level

Cov. Level	Corn		Soybeans	
	Liabilities ($)	% of Total	Liabilities ($)	% of Total
50%	11,743,699	4.30%	19,183,778	5.41%
55%	889,117	0.33%	1,329,208	0.37%
60%	6,991,976	2.56%	12,955,221	3.65%
65%	24,284,919	8.89%	33,692,964	9.50%
70%	66,942,920	24.49%	89,282,436	25.17%
75%	131,129,218	47.98%	164,092,325	46.26%
80%	28,233,794	10.33%	33,134,478	9.34%
85%	3,095,794	1.13%	1,082,852	0.31%

For all insurance plans in NC

Switching to RPHPE or YP?

- Est. 2018 corn premium/ac (Washington County, NC)

Coverage level	RP	RPHPE	YP
50%	$5	$5	$5
55%	$7	$7	$6
60%	$9	$8	$8
65%	$12	$11	$11
70%	$15	$13	$13
75%	$20	$18	$17
80%	$27	$24	$23
85%	$40	$35	$33

Optional unit Producer-paid premium, APH Yield = 132 bu/ac, non-irrigated,, $3.91/bu proj. price, 0.14 Volatility

Optional to Enterprise Unit

- Est. 2018 corn premium/ac (Washington County, NC)

Coverage level	RP	RPHPE	YP
50%	$2	$2	$2
55%	$3	$2	$2
60%	$3	$3	$3
65%	$4	$4	$4
70%	$5	$4	$5
75%	$7	$6	$6
80%	$12	$11	$11
85%	$22	$19	$19

Enterprise unit Producer-paid premium, APH Yield = 132 bu/ac, non-irrigated, $3.91/bu proj. price, 0.14 Volatility

Estimated Net Indemnity

- Est. 2018 net indemnity if actual yield = 75 bu/ac

Coverage level	RP	RPHPE	YP
50%	-$5	-$5	-$5
55%	$8.50	$19	$20
60%	$32.50	$44	$44
65%	$54.50	$66	$66
70%	$77.50	$90	$90
75%	$98.50	$111	$112
80%	$117.50	$131	$132
85%	$130.50	$146	$148

Optional unit, APH Yield = 132 bu/ac, non-irr., $3.91/bu proj. & $3.58 harv price
Net Indemnity = Indemnity – producer paid premium

NC Historical Loss Ratio

- Historical loss ratio for corn, by insurance plan

Year	RP	RPHPE	YP
2011	6.36	4.06	5.02
2012	1.27	0.05	1.08
2013	0.77	0.45	0.72
2014	1.83	0.74	0.73
2015	3.43	0.58	2.16
2016	1.89	0.00	0.99
2017	1.08	0.16	0.65
2018	3.45	0.00	1.46

Loss ratio = Indemnity/Producer paid Premium;
where: Producer paid premium = total premium - subsidy

Things to think about

- Change to lower cost insurance products
  - YP & RPHPE less expensive than RP, but lose some risk protection (esp. if price increase)
  - In NC, YP tend to perform better than RPHPE
  - Consider whether harvest price < projected price
- Lowering coverage levels
  - Less expensive at lower premiums, but lose risk protection (need larger losses to trigger payment)
  - Weigh likelihood of larger losses versus reduction in premiums

Things to think about

- Change insured unit to enterprise units
  - Enterprise units tend to be less expensive (since lower premiums and higher subsidy amounts)
  - But payments trigger less often
    - “Portfolio effect” of combining more fields to insure (less risky)
- Combine strategies above with commodity programs or SCO
  - Sign-up for ARC or PLC [and MFP as well]
  - May consider SCO for additional protection(but not free)

SCO & STAX

- Supplemental Coverage Option (SCO) & Stacked Income Protection Plan (STAX) are “shallow-loss” programs
  - Designed to cover part of the deductible of the producer’s underlying individual policy
  - STAX – only for cotton; SCO – cotton + other crops
- STAX developed for cotton in 2014 Farm Bill since not part of Title I
  - Cotton seed now covered under Bipartisan Budget Act

SCO & Stax

USDA United States Department of Agriculture
Risk Management Agency

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MANAGERS BULLETIN: MGR–18-016

DATE November 30, 2018

TO: All Approved Insurance Providers
All Risk Management Agency Field Offices
All Other Interested Parties

FROM: Martin R. Barbre, Administrator */s/ Martin R. Barbre 11/30/2018*

SUBJECT: Stacked Income Protection Plan (STAX) Policy Changes – 2019 and Succeeding Crop Years

Background

The STAX policy was developed at a time when producers could not enroll seed cotton in the Agriculture Risk Protection (ARC) and Price Loss Coverage (PLC) programs administered by the Farm Service Agency (FSA). In February of 2018, the Bipartisan Budget Act of 2018 was signed into law, which included provisions to allow producers of seed cotton to participate in ARC and PLC. In addition, the provisions included modifications to the Federal Crop Insurance Act (Act) stating that acreage enrolled in these programs would be ineligible for coverage under STAX. To comply with the modification to the Act, RMA is updating the STAX policy.

Action

Beginning with the 2019 crop year, seed cotton acreage enrolled in the ARC or PLC programs administered by FSA will be ineligible for STAX coverage. Producers must report acres enrolled in ARC or PLC on their acreage report. If acres are enrolled in ARC or PLC after the acreage reporting date, the producer is required to revise their acreage report with the correct information by the premium billing date.

RMA will place, by close of business today, the STAX Crop Provisions for the 2019 crop year on the RMA website.

- Cotton under PLC or ARC not eligible for STAX (and vice-versa)
- Cotton under PLC still eligible for SCO

Crop Insurance and the 2018 Farm Bill

- Multi-county enterprise units now allowed
  - Can insure a single crop planted across county lines
    - Where before, it could only be one enterprise unit for one county and a basic or optional or another enterprise unit in another county
- Cover crops
  - Clarifying cover crop termination rules in a way that would reduce risk of losing insurance coverage of subsequently planted commercial crop
- CAT fee – Increase to $655 flat fee per crop per county

Crop Insurance in the New Farm Bill

- Related PLC and ARC updates of interest
  - One-time PLC or ARC election for 2019 and 2020, then annual election starting in 2021 (PLC still default)
  - Option to update PLC payment yields & mechanism to increase PLC reference price (if prices improve)
- Improvements in Non-Insured Crop Disaster Assistance Program (NAP)
  - Increased payout limit to $300k (from $125k)

Take Home Messages

- Those wishing to lower premiums:
  - Consider YP or RPHPE, if not expect prices to ↑
  - Consider lowering coverage levels (5%-10%)
  - Consider insuring at the enterprise unit
  - Sign-up for ARC or PLC (its free) [and MFP as well]
  - Talk to your crop insurance agent!
- Farm Bill changes to note
  - One time PLC/ARC sign-up for 2019 & 2020, annual sign-up afterwards

Thank you!

- **Questions?**
  - **Contact: *Rod M. Rejesus, NC State University***

    Tel No. (919)513-4605

    Email: rod_rejesus@ncsu.edu
- **Website:**
  - Agricultural Policy and Farm Bill Extension Website at NC Dept. of Ag. & Resource Economics:
    - https://cals.ncsu.edu/are-extension/policy-and-regulation/agricultural-policy-and-farm-bill/

NC Historical Loss Ratio

- Historical loss ratio by coverage level

	50%	55%	60%	65%	70%	75%	80%	85%
2011	5.52	1.98	4.59	5.79	5.29	7.15	8.64	0.53
2012	1.16	0.25	1.08	1.09	1.22	1.28	1.38	1.73
2013	1.37	0.11	0.59	0.71	0.69	0.84	0.95	0.34
2014	2.59	0.05	1.01	0.78	1.40	2.24	1.56	1.86
2015	1.16	1.84	1.28	2.22	3.51	3.54	3.83	5.29
2016	0.99	0.26	1.03	1.03	1.37	2.20	2.33	1.36
2017	1.77	6.75	0.72	0.98	0.85	1.13	1.01	0.22
2018	2.41	6.13	1.90	2.54	2.74	3.75	3.48	1.32

For all insurance plans; all units

NC COOPERATIVE EXTENSION

Subsidy Levels

Table 2. Subsidy levels for alternative unit structures and products.

Coverage Level (%)	Basic & Optional (%)	Enterprise Unit (%)	SCO Subsidy (%)	STAX Subsidy (%)
50	67	80	65	n/a
55	64	80	65	n/a
60	64	80	65	n/a
65	59	80	65	n/a
70	59	80	65	80
75	55	77	65	80
80	48	68	65	80
85	38	53	65	80
86	n/a	n/a	65	80
90	n/a	n/a	n/a	80

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