# **Changes to Crop Insurance**

#### Keith Coble



#### Crop Insurance had grown by five-fold --- apparently supplanted Ad hoc programs --- Insured price risk --- Insured area yield and revenue



#### **Current Rice Coverage Levels**

2013 Rice Average Coverage Level



### **Current Corn Coverage Levels**

2013 Com Average Coverage Level



## **Current Soybean Coverage Levels**

2013 Soybean Average Coverage Level



## **Current Wheat Coverage Levels**



#### **Title XI Crop Insurance**

- Creates two new shallow loss county triggered programs
  - Supplemental Coverage Option (SCO)
  - Stacked Income Protection Program (STAX) for cotton
- Conservation Compliance for crop insurance

#### Agricultural Act of 2014 Budget Implications (Total Savings of \$23,008 million)



Change in Baseline Funding (Millions)

#### **Title XI Crop Insurance**

- Traditional crop insurance changes
  - Enterprise units by dryland/irrigated practice
  - Separate coverage level by practice
  - Beginning farmers (provides 10 percentage point discount for all crop insurance premiums)
  - Authority to do peanut revenue insurance
  - Establishes fund to combat crop insurance fraud
  - Crop margin coverage & peanut revenue coverage

### **Title XI Crop Insurance**

- Adjustment in APH insurable yields
  - Producer may opt to exclude any year from APH if yield in county in that year is less than 50% of ten-year county average; Also applies to contiguous counties and allows for the separation of irrigated and non-irrigated acres
- Studies or policies are also required on insuring:
  - Specialty crop producers for food safety and contamination-related losses,
  - Swine producers for a catastrophic disease event,
  - Producers of catfish against reduction in the margin between the market prices and production costs,
  - Commercial poultry production against business disruptions caused by integrator bankruptcy,
  - poultry producers for a catastrophic event,
  - Producers of biomass sorghum or sweet sorghum grown as feedstock for renewable energy,
  - Alfalfa crop insurance.
  - Whole farm diversified risk management insurance plan

## **Supplemental Coverage Option (SCO)**

- RMA delivered beginning in 2015.
- 65% premium subsidy.
- No payment limit.
- Top coverage of 86% coverage
- County-level optional endorsement for crop insurance policies.
  - "Tops up" crop insurance to cover deductible.
  - Yield or revenue triggered depending on underlying crop insurance policy.
  - Expected county yield = GRP trend yield. Expected revenue = GRP trend yield x crop insurance base price.
  - Actual county yield = County yield. Actual revenue = county yield x crop insurance harvest price.
  - Coverage ceases at coverage level for underlying insurance policy.
- May purchase STAX and SCO, but not on same acres.
- Must purchase underlying insurance policy

# Example of SCO with underlying RP insurance

Payment per Acre  

$$= \left(\frac{(86\% - county revenue \% of expected)}{86\% - Crop Insurance Coverage level}\right) \times Liability per Acre$$

$$((86\% - 78\%))$$

$$= \left(\frac{(86\% - 78\%)}{86\% - 70\%}\right) \times Liability \ per \ Acre = \left(\frac{(8\%)}{16\%}\right) \times Liability \ per \ Acre$$

Note: the term in the bracket is bounded between 0 and 1.

where

```
Liability per Acre =
Farm APH yield × max(Planting time Price, Harvest Price) ×
(86% – CI Coverage Level%).
```

### SCO Worksheet

Row	Calculation/value	1	2	4	5
1	Projected price (1/15-2/14 average for Dec corn contract)	\$3.92	\$3.92	\$3.92	\$3.92
2	APH yield	160	160	160	160
3	Crop insurance coverage level	70%	70%	70%	70%
4	Expected farm revenue (Row 1 x Row 2)	\$627.20	\$627.20	\$627.20	\$627.20
5	SCO coverage (86% – Row 3) × Row 4	\$100.35	\$100.35	\$100.35	\$100.35
6	Expected area-wide yield (bu.)per planted acre (higher of trend yield or 5-year moving average)	140.0	140.0	140.0	140.0
7	Area-wide projected income (Row 1 × Row 6)	\$548.80	\$548.80	\$548.80	\$548.80
8	SCO coverage level	0.86	0.86	0.86	0.86
9	November average of December corn futures price	\$3.40	\$3.40	\$3.40	\$3.40
10	Actual area-wide yield per planted acre (bu.)	140.0	130.0	110.0	100.0
11	Area-wide realized income (Row 9 × Row 10)	\$476.00	\$442.00	\$374.00	\$340.00
12	Revenue ÷ expected revenue (Row 11 ÷ Row 7)	87%	81%	68%	62%
13	Percent shortfall as a percent of deductible % [Row 13 ÷ (Row 8 – Row 3) Bounded at 100%]	0%	34%	100%	100%
14	Indemnity (Row 5 × Row 14)	\$0.00	\$34.25	\$100.35	\$100.35

#### **Crop Insurance Choices**

Coverage Level	Basic & Optional Enterprise Unit Subsidy % Subsidy %		SCO Subsidy	STAX Subsidy %	
50%	67%	80%	65%	80%	
55%	64%	80%	65%	80%	
60%	64%	80%	65%	80%	
65%	59%	80%	65%	80%	
70%	59%	80%	65%	80%	
75%	55%	77%	65%	80%	
80%	48%	68%	65%	80%	
85%	38%	53%	65%	80%	

#### Area Products – SCO & STAX - a shallow loss version of area insurance

**Example County Yield Trend** 

![](_page_14_Figure_2.jpeg)

## From the history one must predict expected yield two years out

Example County Yield Trend

![](_page_15_Figure_2.jpeg)

# Now for the hard part- Using Historic Deviations from trend to assess the odds of deviation from trend next year

![](_page_16_Figure_1.jpeg)

## Now for the hard part- Using historic deviations from trend to assess the odds of deviation from trend next year

![](_page_17_Figure_1.jpeg)

Actual Yield — predicted yield — 2015 Pred

#### Many counties lack long series - How to augment rating short series? - How to accommodate missing series?

Example Short County Yield Trend

![](_page_18_Figure_2.jpeg)

## Final thoughts

- Crop risk management portfolio
  - Commodity programs
  - Crop Insurance
  - Input cost
  - Finances
- Learn about crop insurance
  - Ask about enterprise units and SCO

![](_page_20_Picture_0.jpeg)

- <u>Coble@agecon.msstate.edu</u>
- @DrKeithHCoble