From Catastrophic to Shallow Loss Coverage: An Economist's Perspective of U.S. Crop Insurance Program and Implications for Developing Countries

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What's the "Good"?

- Insurance coverage:
  - Guarantees based on historical yields and market price expectations
  - Crop-by-crop policies, available for more than 100 crops
  - Producers choose among insurance plans, units and coverage levels:
    - Yield or revenue
    - Individual (farm unit) or group (county average)
    - Percent of expected yield or revenue: 50 , 55, 60, 65, 70, 75, 80 or 85
- To insure, a producer pays a share of the insurance premium
- An insured producer receives an indemnity:
  - Difference, if positive, between guaranteed and realized yield or revenue

Multiple Perils Are Covered

Clipping from *Conrad News* (Montana), August 27, 1942

Supply of Federal Crop Insurance

Federal multiple-peril crop insurance began in 1930s. It was an "experimental" program, available directly from USDA for a few crops in few areas.
Also, there was, and still is, hail insurance available from private companies.

- In the 1980s: Federal crop insurance program rapidly expanded; private insurance companies given a role in delivering Federal program
- Since the 1990s: private companies exclusively deliver Federal crop insurance
  - Administrative and Operating (A & O) expense reimbursement/subsidy paid to companies
- Since 2000: private entities exclusively develop new products
  - Development costs reimbursed
  - Products need to be approved by FCIC* Board
  - All companies can sell any approved new product

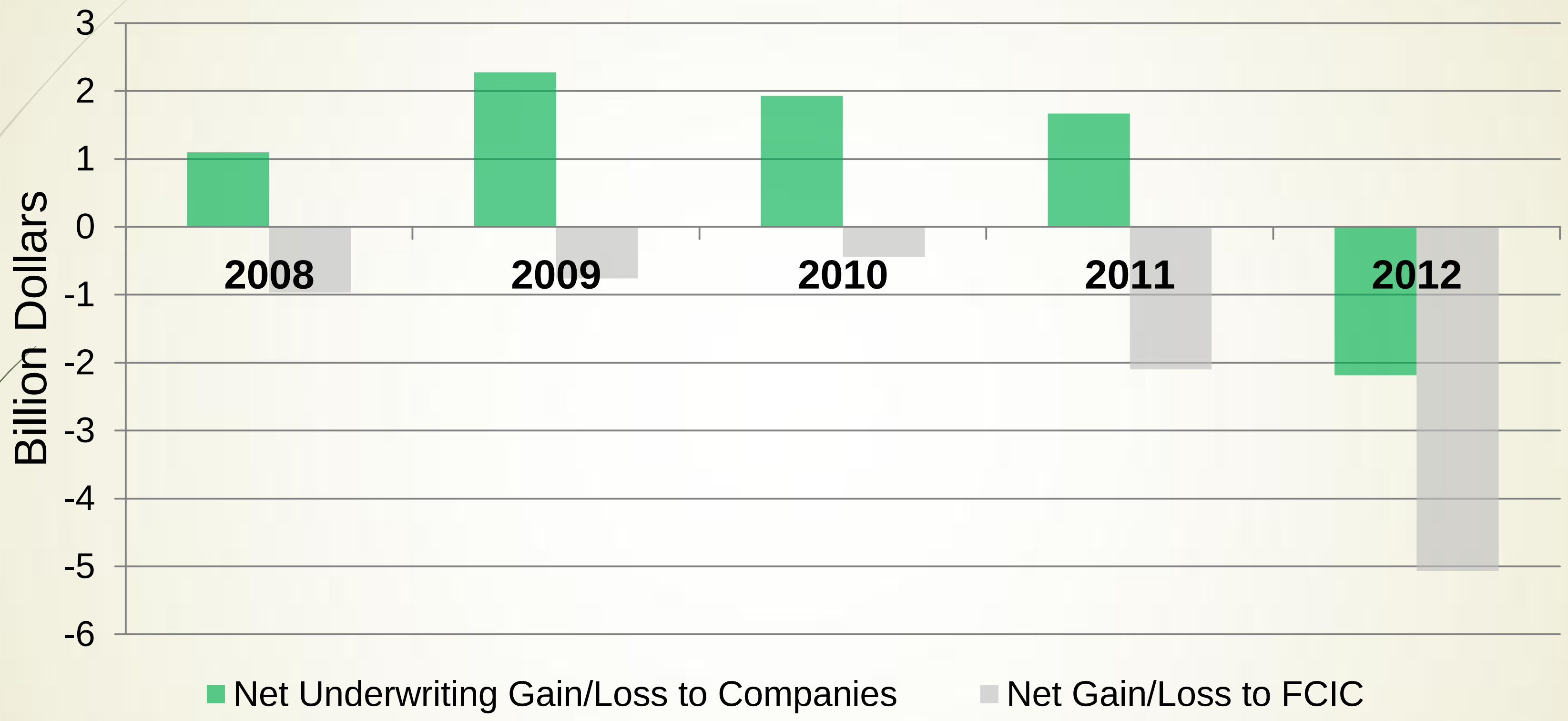
* FCIC = Federal Crop Insurance Corporation

Supply of Federal Crop Insurance

- Premium rates set and revised by FCIC*—Risk Management Agency: no price competition among companies
- Insurance company must take any eligible producer
- FCIC and companies share gains/losses:
  - Company retains/cedes premiums and potential indemnities of policies
  - FCIC also provides loss protection to insurance companies on company retained policies
  - Companies can also reinsure through private markets

* FCIC = Federal Crop Insurance Corporation

Recent Private-Public Underwriting Gains and Losses



Net underwriting gain by companies is based on premium and indemnities retained by companies.

Net gain to FCIC is share of premium and indemnities ceded by companies.

Source: Compilation of Risk Management Agency, USDA data.

Demand for Crop Insurance

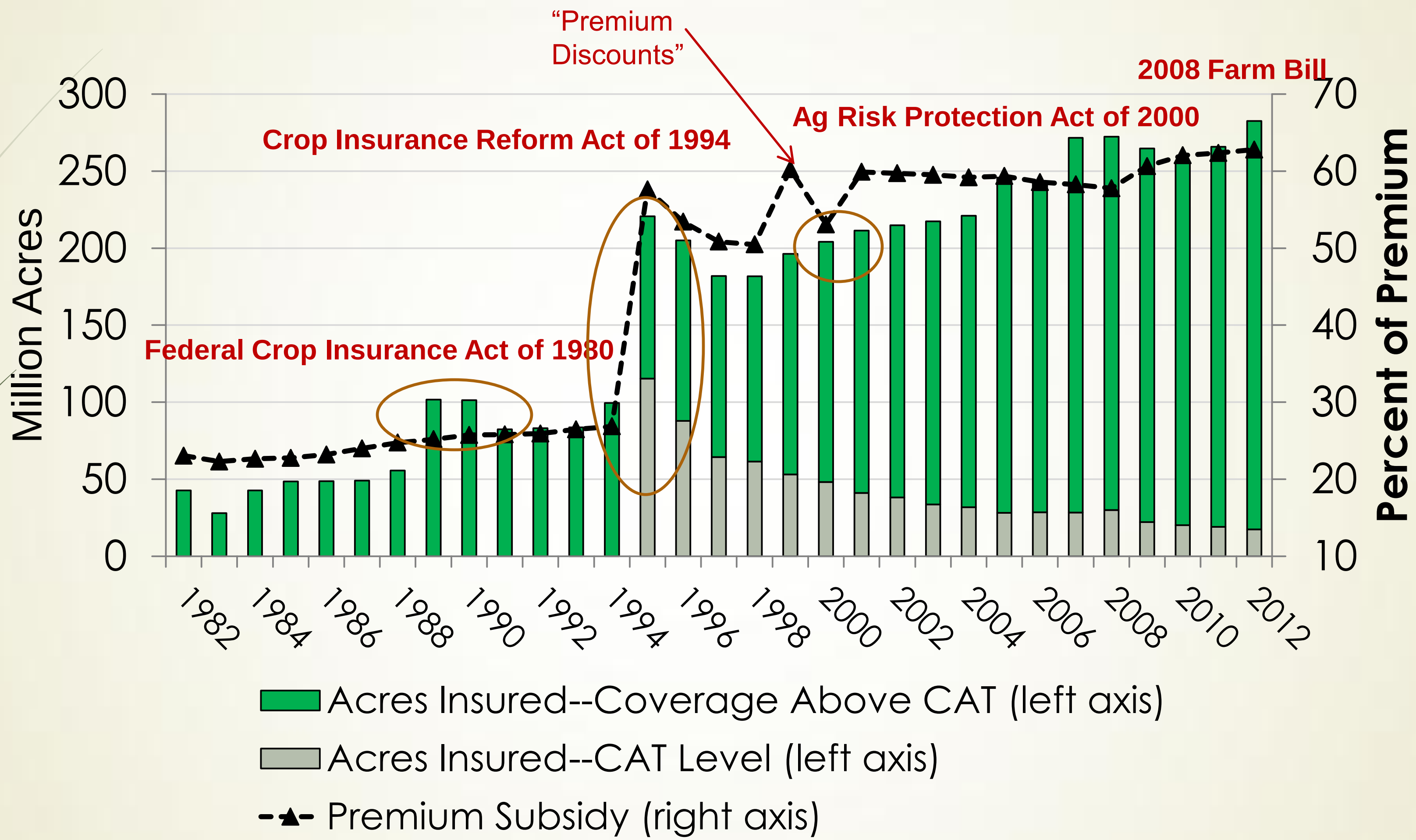
FCIC poster, 1940

Public Policy Goal: Everyone in the Pool!

- Said to eliminate the need for ad-hoc disaster assistance
- Said to reduce “adverse selection”
  - But adverse selection is an information and insurance rating problem; participation distortion is a result

Subsidies Drive Participation

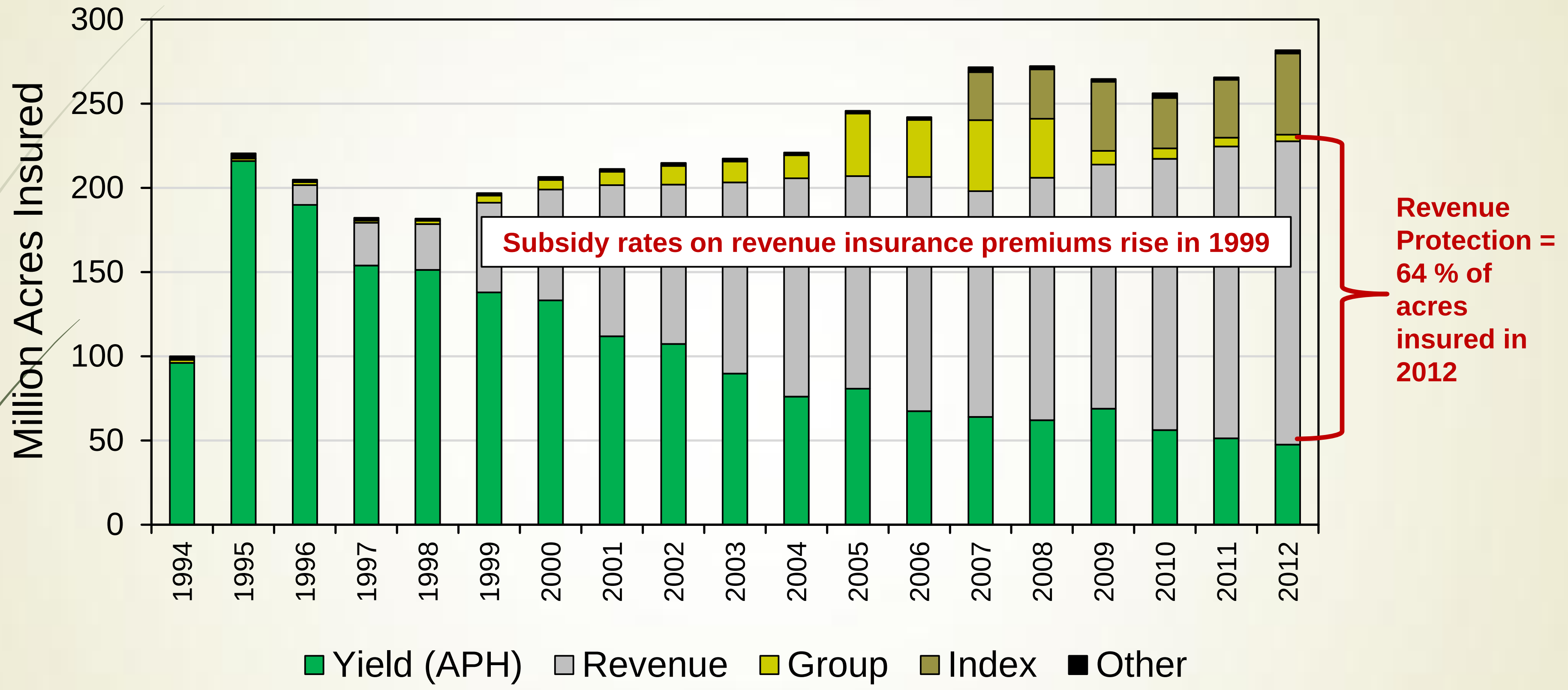
and linkages to other program benefits



CAT = catastrophic coverage (low level); premium entirely subsidized; first available in 1995.

Source: Compilation of Risk Management Agency, RMA data.

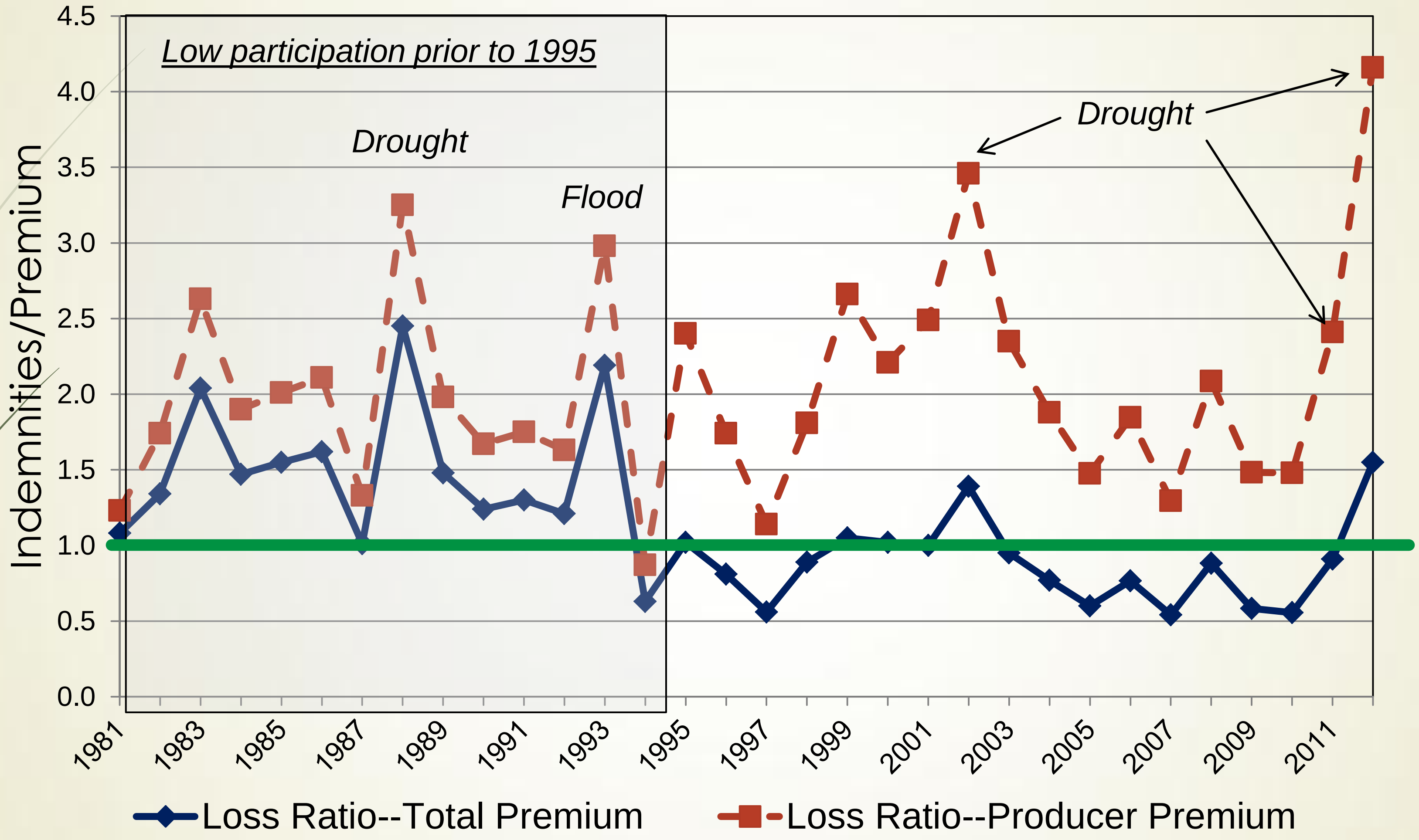
Producers Have Moved from Yield to Revenue Protection



APH = Actual Production History (farm or sub-farm unit level)
Revenue = APH yield x national price (farm or sub-farm unit level)
Group = County yield (GRP) or county revenue (GRIP)
Index = Rainfall or Vegetation (Pasture, Rangeland and Forage)

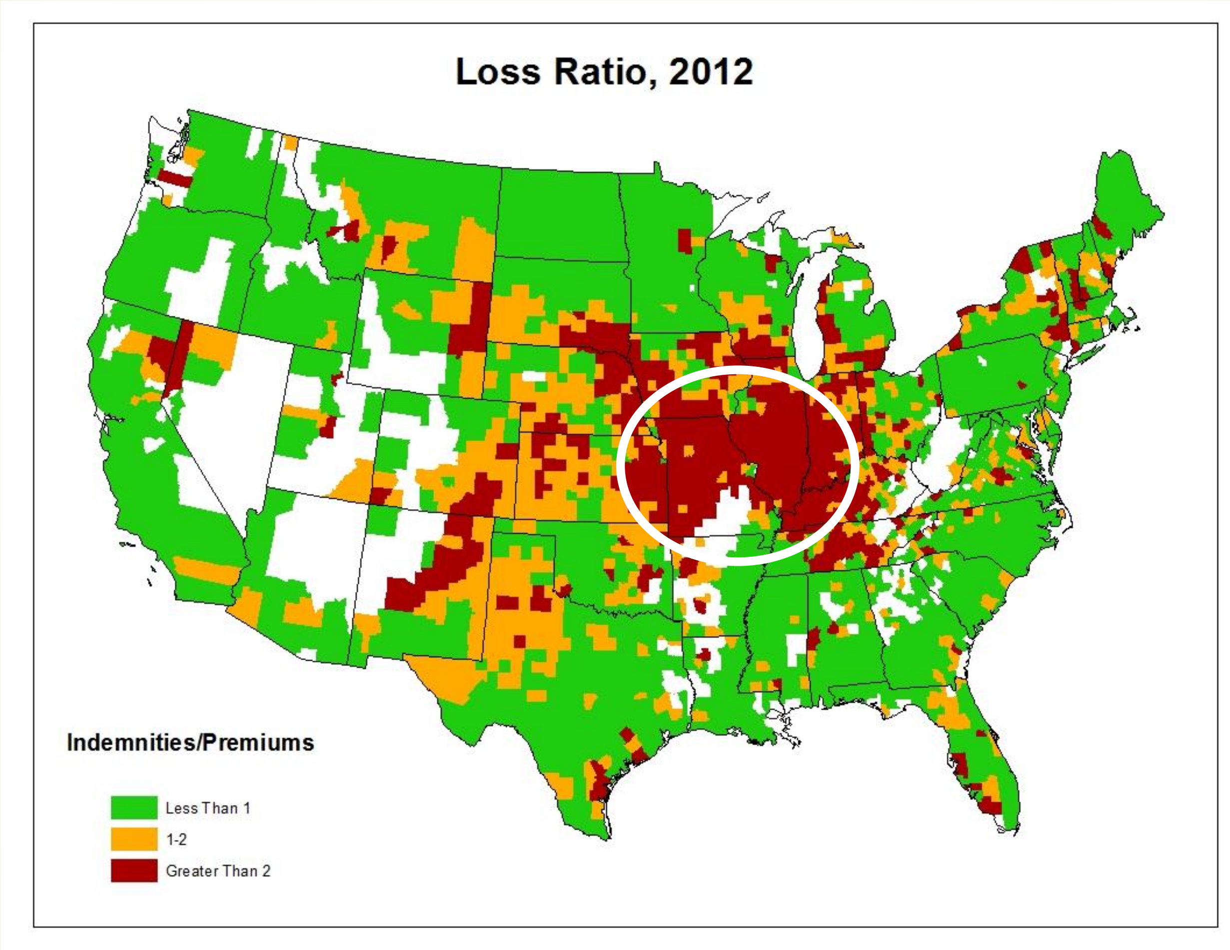
Source: Calculated from Risk Management Agency, USDA data.

Has Crop Insurance Paid?



Source: Calculated from Risk Management Agency, USDA data.

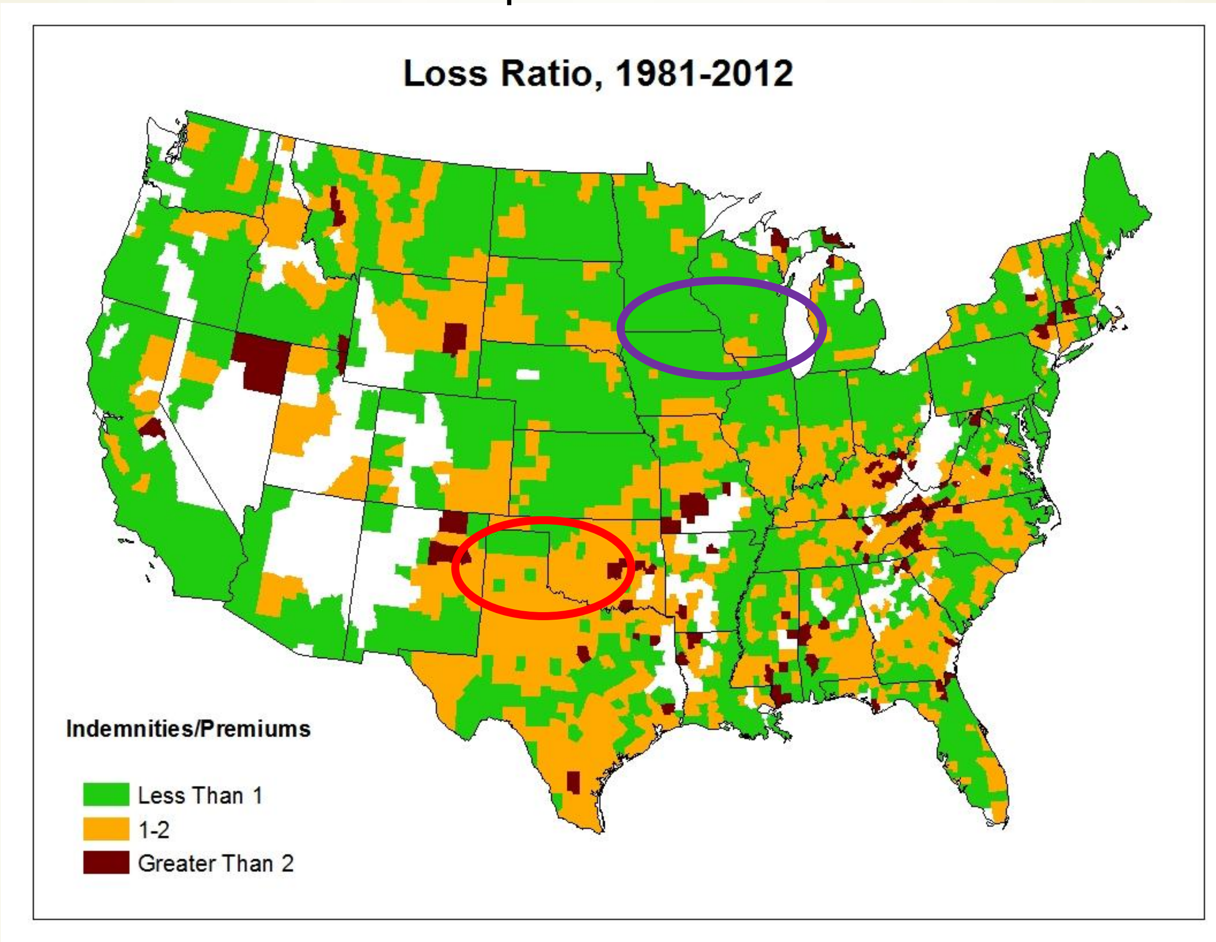
Crop Insurance Paid in 2012 Drought Areas



Counties with less than $10,000 in premium excluded.
Source: Calculated from Risk Management Agency, USDA data.

Long-term Actuarial Balance* Has Varied by Region

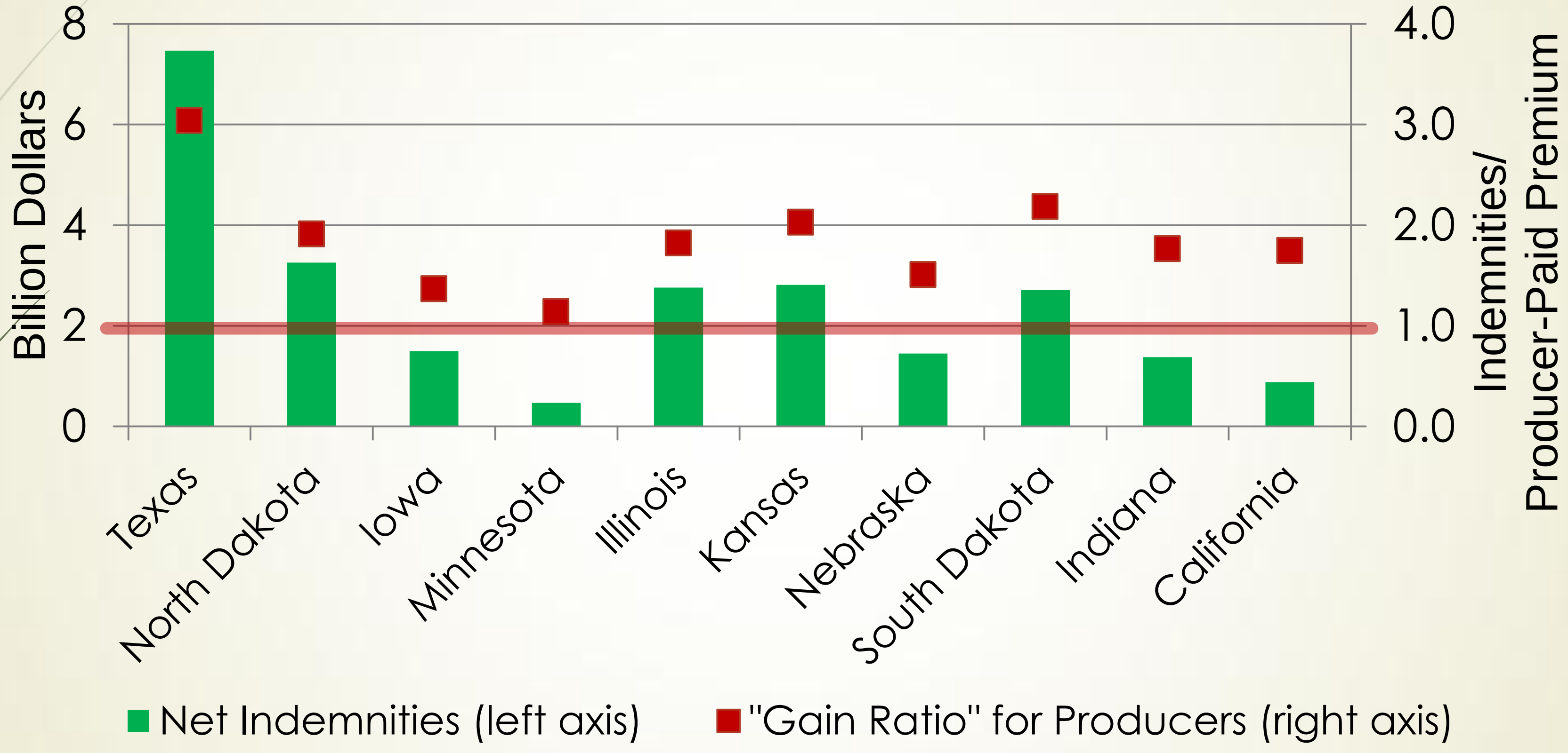
* indemnities relative to premiums



Counties with less than $100,000 in premium excluded.
Source: Calculated from Risk Management Agency, USDA data.

Producer Gains from Crop Insurance

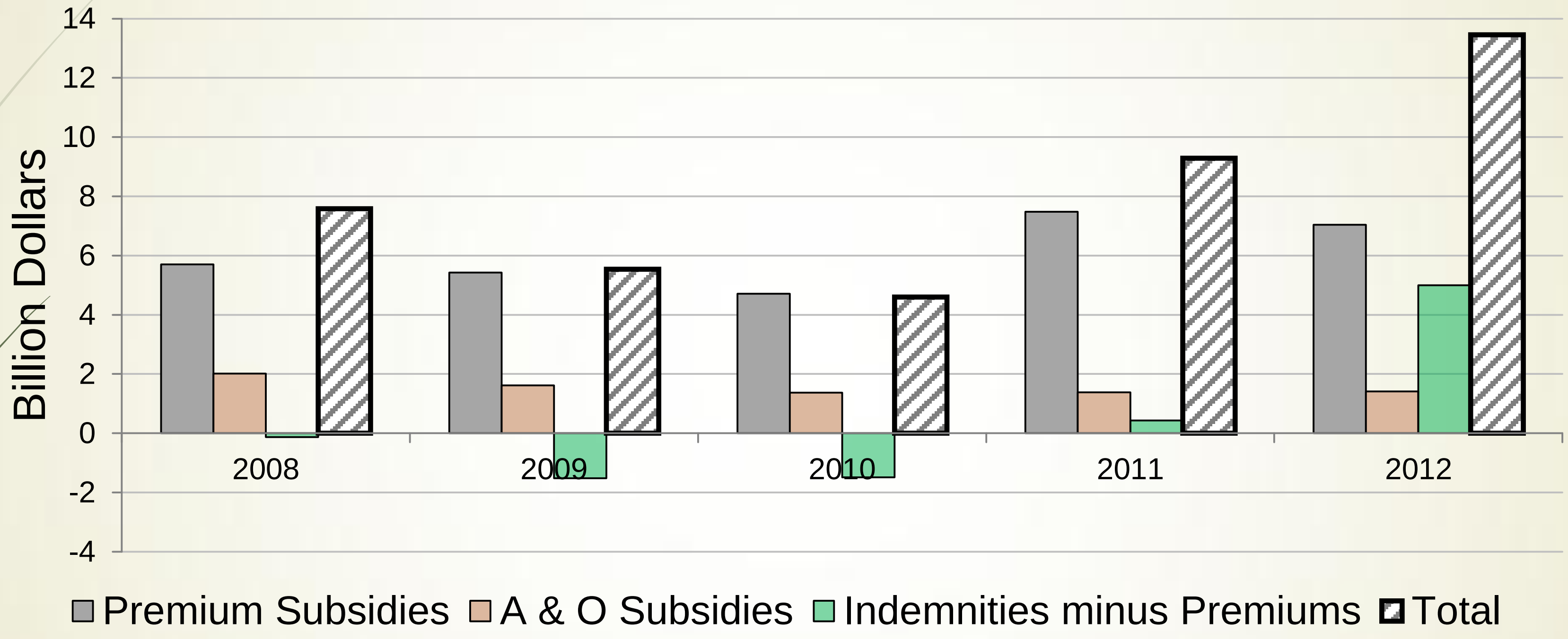
Totals, 1981-2012
Top 10 States in Total Premium



Top 10 States accounted for 67 percent of total premium.
Net indemnities = indemnities minus producer-paid premium.

Source: Calculated from Risk Management Agency, USDA data.

Costs of the Crop Insurance Program



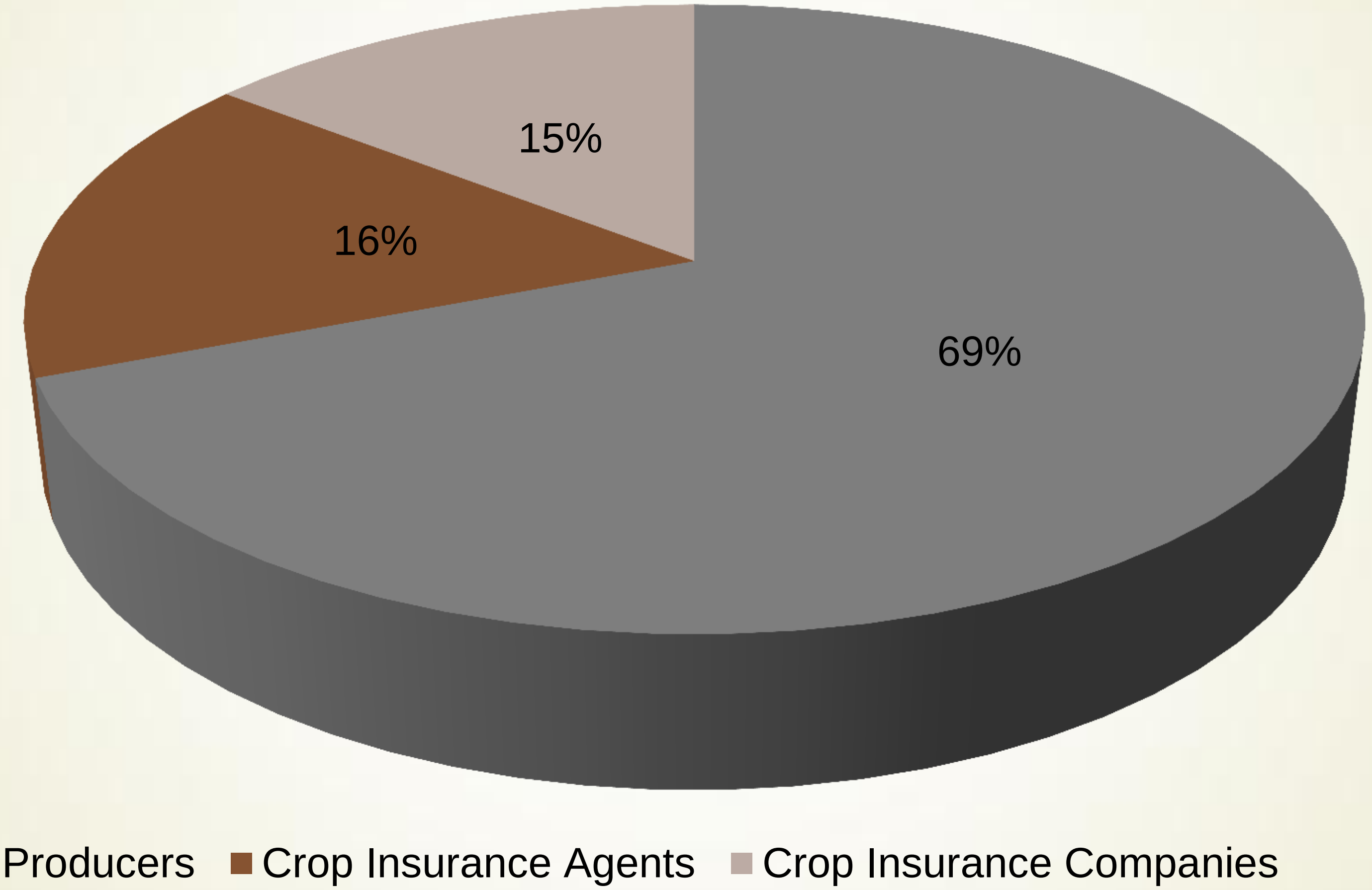
Costs are by crop year.

A & O Subsidies = Administrative and operating subsidies paid to insurance companies and agents.

2012 costs are estimates.

Source: Compilation of Risk Management Agency, USDA data.

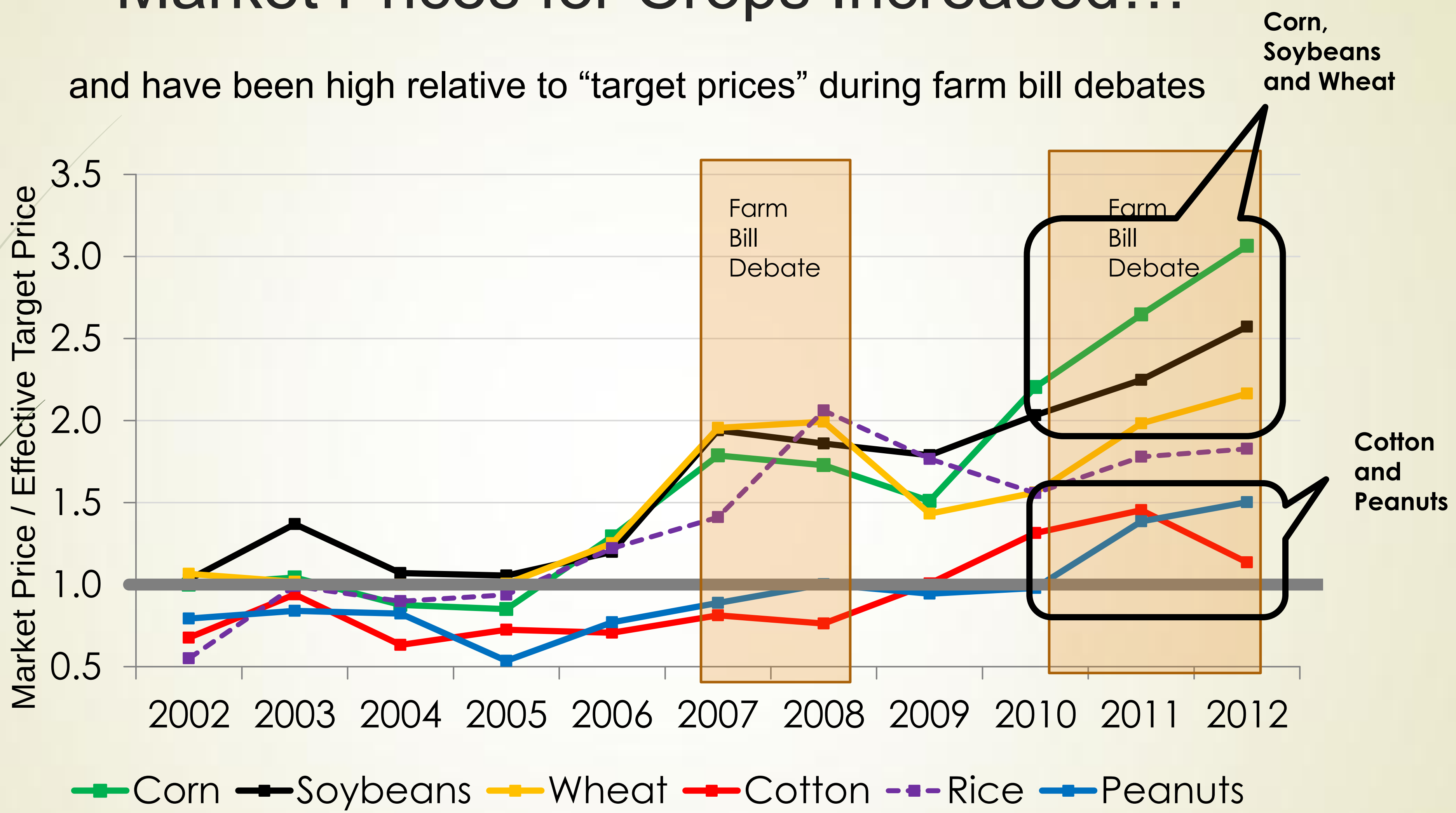
Where the Money Goes



Estimates based on Congressional Budget Office projections, 2011-20.
Average annual expenditure = $8.3 billion.

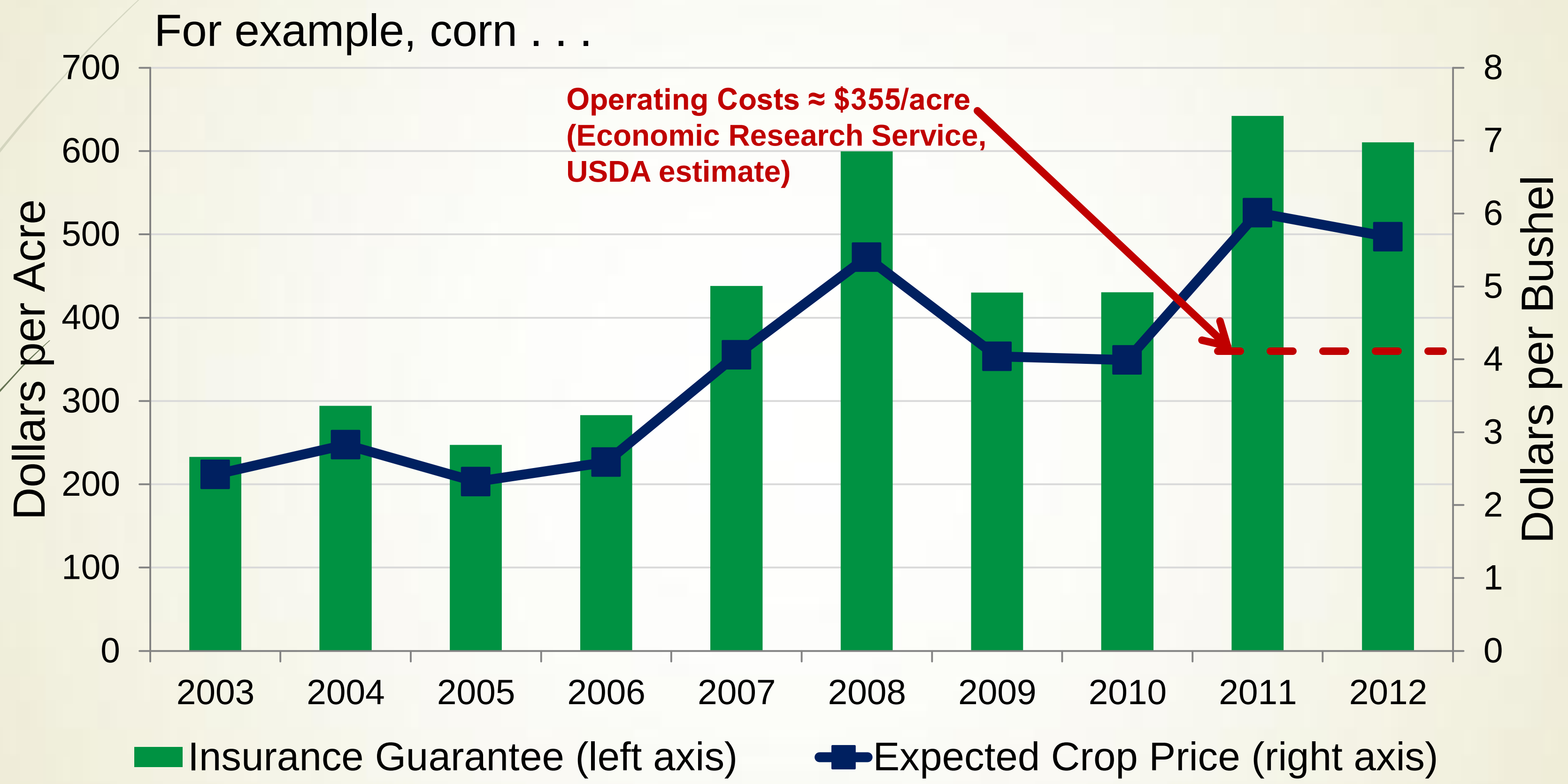
Market Prices for Crops Increased…

and have been high relative to "target prices" during farm bill debates



Market price = Marketing-Year Average price
Effective Target Price = Target Price minus Direct Payment rate; trigger price for Counter-Cyclical Payments
Target Prices and Direct Payment rates are as specified in 2008 Farm Bill

Insurance Guarantees Move with Prices



Insurance guarantee = liability per acre insured for revenue protection at 75 coverage level.

Expected crop price = Base Price for revenue protection from prices of futures contract

Source: Calculated from Risk Management Agency, USDA data.

I like crop insurance…but I'm not sure it gives me enough coverage.

Shallow Loss Programs Emerge in the New Farm Bill

In addition to existing crop insurance:

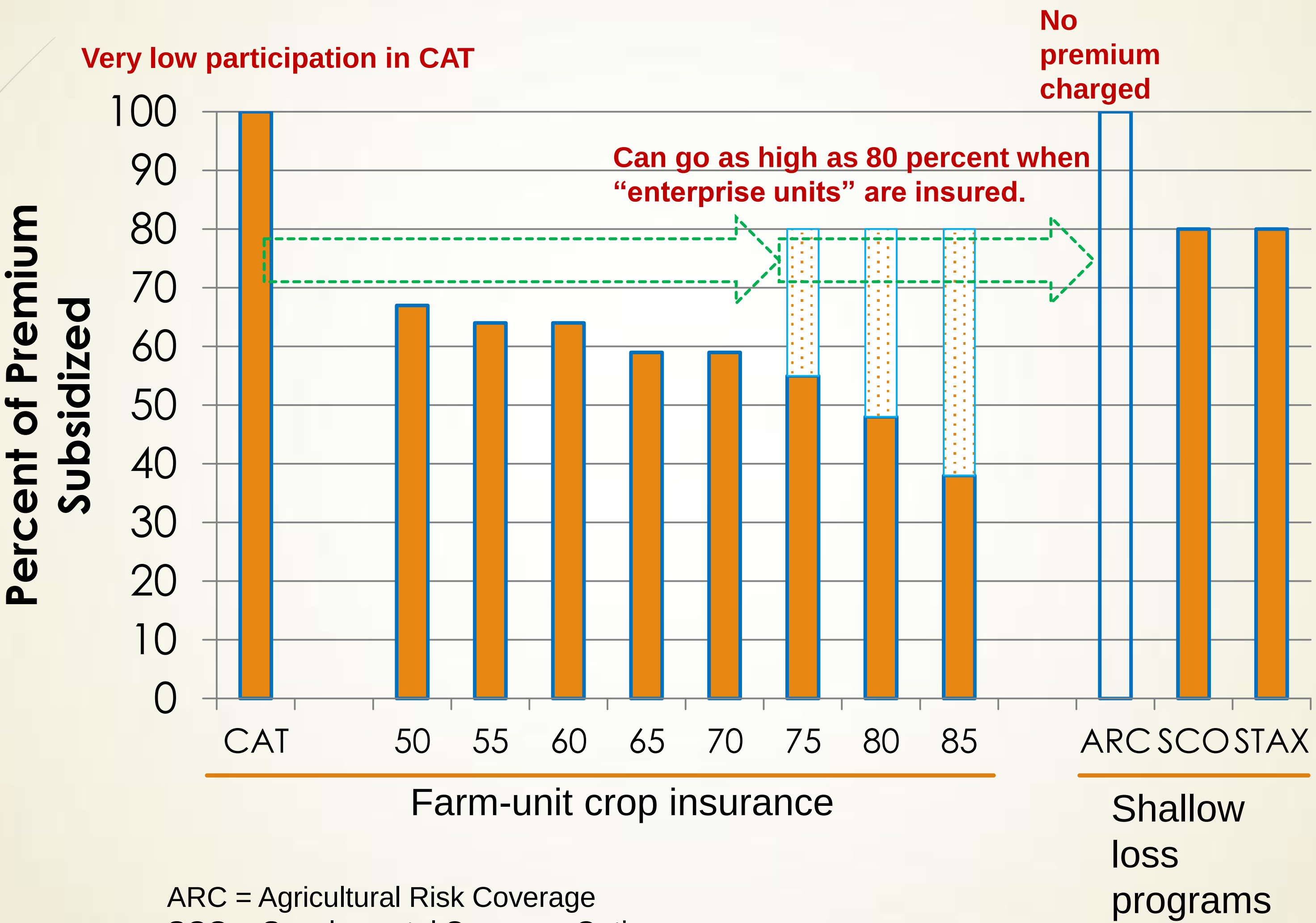
- Agricultural Risk Coverage (ARC)
  - County or farm-unit
  - Crop price: Olympic average over previous 5 years

Delivered by Farm Service Agency, USDA

- Supplemental Coverage Option (SCO)
  - County
  - Crop price: futures market
- Stacked Income Protection (STAX) for cotton only
  - County
  - Crop price: futures market ~~or reference price~~ ?

Delivered by insurance companies; subsidized by FCIC

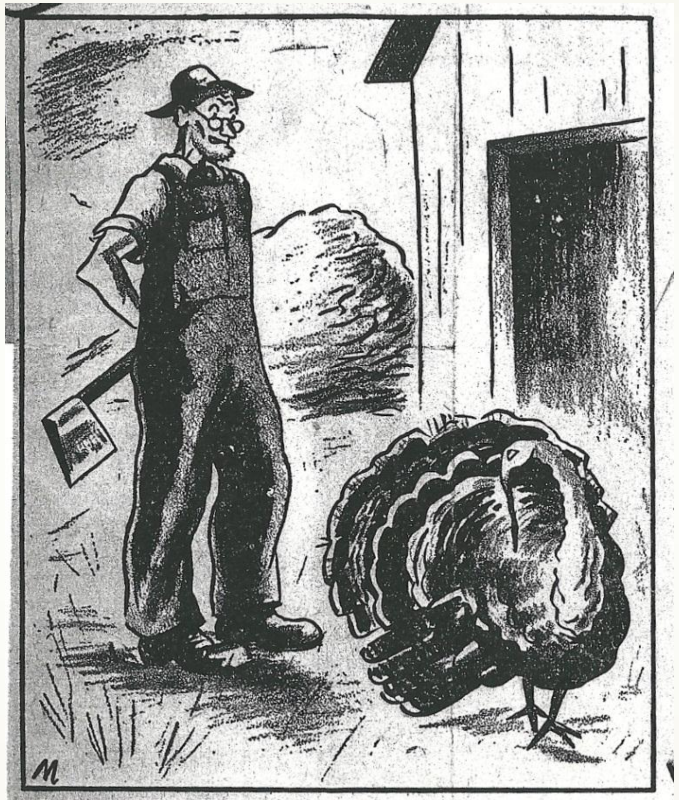
Portions of Risk Subsidized



ARC = Agricultural Risk Coverage
SCO = Supplemental Coverage Option
STAX = Stacked Income Protection

Is the Layer of Producer Risk Coverage Aided by Government Upside Down?

Everything's goin' t'be all right?



"Everything's goin' t'be all right. We're thankful, ain't we, that we live in a country at peace and that we had crop insurance on our wheat."
Donald E. Montgomery

Newspaper clipping from *East Wenatchee Journal* (Washington), November 21, 1948

- Data
- Costs
- Distribution of benefits of the subsidized program
- Interactions with credit, crop marketing and contracting
- Alternatives