

B3: Introduction to US multi peril crop insurance and reinsurance



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What we're going to cover.....

- A little bit of history
- What is multi-peril crop insurance?
- Causes of crop losses
- Crop prices, premiums and losses over time
- Sweet "15" Crop insurers
- Role of the US government
- 2011 SRA – include map of state groupings
- Reinsurance options
- 2011 Year

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History.....

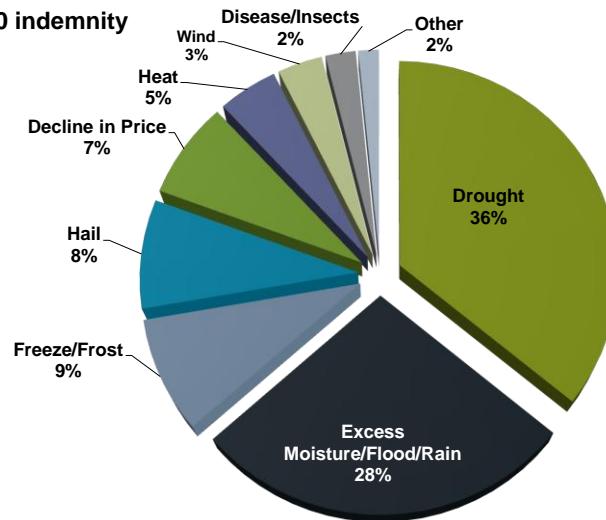
- Federal crop insurance began in 1938
- Prior to 1981 farmers protected their crops through various disaster relief programs and also crop hail insurance.
- The Crop insurance Act of 1980 introduced MPCl crop insurance.
- Take up rate low until after severe drought losses in 1988
- Under the 1996 Farm Bill, the delivery of from insurance by the US government began to be eliminated
- Only 15 crop insurers are approved to write MPCl crop insurance

What is Multi-peril crop insurance?.....

- MPCl (Multi Peril Crop Insurance) provides coverage to farmers against a loss due to any act of nature. They include perils such as drought, excess moisture, frost/freeze, excess heat, insects, hail, wind, disease, and some products also protect against a fall in crop price
- Major concerns to MPCl writers are drought, or excess moisture
- Insurance products available are either yield only or revenue based.
- Insurance premiums are set by the government

Causes of crop failure

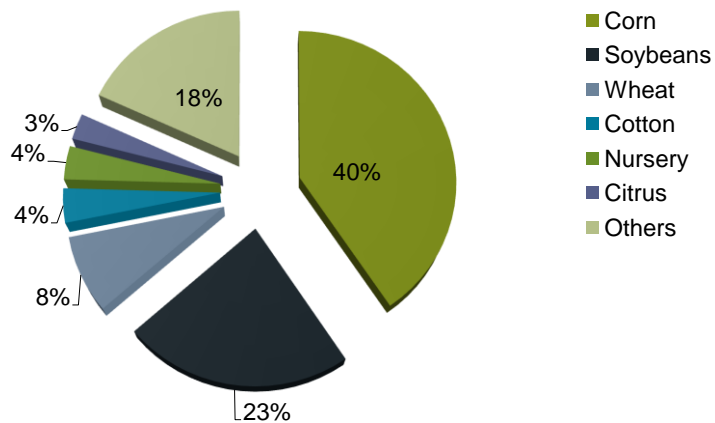
2011 to 2010 indemnity



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2010 Crop Liability US\$ millions



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Types of MPCl policies available:

Yield only products:

- covers farmers if there is a yield loss relative to the farmer's "normal" (historical) yield.
- Farmer can choose what proportion of their 'normal' yield to insure, and what proportion of the estimated market price to insure. Examples are:
 - APH (Actual production history) (up to 85% exp.. yield/100% exp price)
 - CAT coverage (50%/55%),.
 - Group Risk Plan

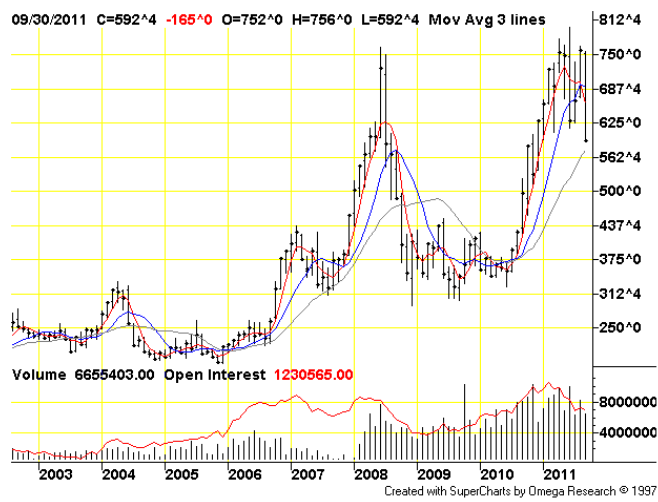
Revenue products:

- Protects farmers against a revenue loss due to falls in crop prices, yield losses or both. Two products available:
 1. Revenue Protection
 2. Revenue Protection with Harvest price exclusion

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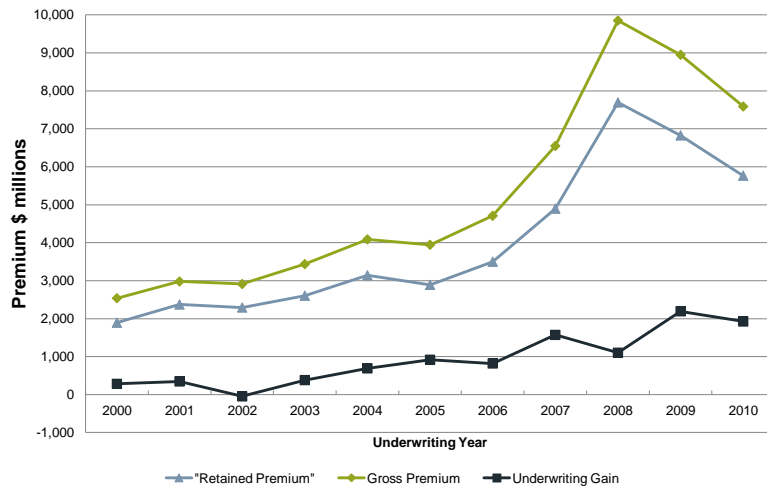
Historic price volatility of Corn....



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US MPCI Premiums & Underwriting Gain



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Revenue Protection Examples

Example 1: 30% drop in yield reduces supply but no price changes

Average Yield	Actual Yield	CBOT Base Price	Harvest Price	Coverage Level	Gross Cover Per Acre	Minimum Guarantee	Harvest Guarantee	Final Guarantee	Calculated Revenue	Losses/Acre
150	105	\$5.00	\$5.00	75%	\$750.00	\$562.50	\$562.50	\$562.50	\$525.00	\$37.50

Example 2: 30% drop in yield reduces supply and so Harvest price goes up (bigger pay out as higher Harvest Guarantee)

Average Yield	Actual Yield	CBOT Base Price	Harvest Price	Coverage Level	Gross Cover Per Acre	Minimum Guarantee	Harvest Guarantee	Final Guarantee	Calculated Revenue	Losses/Acre
150	105	\$5.00	\$6.00	75%	\$750.00	\$562.50	\$675.00	\$675.00	\$630.00	\$45.00

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Revenue Protection Examples

Example 3: over-supply and so Harvest price goes down 30%

Average Yield	Actual Yield	CBOT Base Price	Harvest Price	Coverage Level	Gross Cover Per Acre	Minimum Guarantee	Harvest Guarantee	Final Guarantee	Calculated Revenue	Losses/Acre
150	200	\$5.00	\$3.50	75%	\$750.00	\$562.50	\$393.75	\$562.50	\$700.00	\$0.00

Example 4: extraneous factor causes Harvest price to go down 30%

Average Yield	Actual Yield	CBOT Base Price	Harvest Price	Coverage Level	Gross Cover Per Acre	Minimum Guarantee	Harvest Guarantee	Final Guarantee	Calculated Revenue	Losses/Acre
150	150	\$5.00	\$3.50	75%	\$750.00	\$562.50	\$393.75	\$562.50	\$525.00	\$37.50

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“Sweet 15” Approved Crop Insurers

Insurance Company	2010 WPI (\$m)	Mkt Share %
Rural Community Insurance Co	1,774,996	23.0%
Ace Property and Casualty Insurance Co	1,635,912	21.2%
NAU Country Insurance Co (QBE)	1,134,944	14.7%
Great American Insurance Co	676,164	8.7%
American Agri-Business Insurance Co (Endurance)	516,904	6.7%
Producers Agriculture Insurance Co	496,634	6.4%
Farmers Mutual Hail Insurance Co of Iowa	315,874	4.1%
John Deere Insurance Co	263,009	3.4%
American Agricultural Insurance Co	238,680	3.1%
Everest Reinsurance Co	232,074	3.0%
Austin Mutual Insurance Co	159,068	2.1%
Agrinational Insurance Co	110,016	1.4%
Hudson Insurance Co	91,066	1.2%
Country Mutual Insurance Co	74,071	1.0%
Occidental Fire and Casualty	10,689	0.1%

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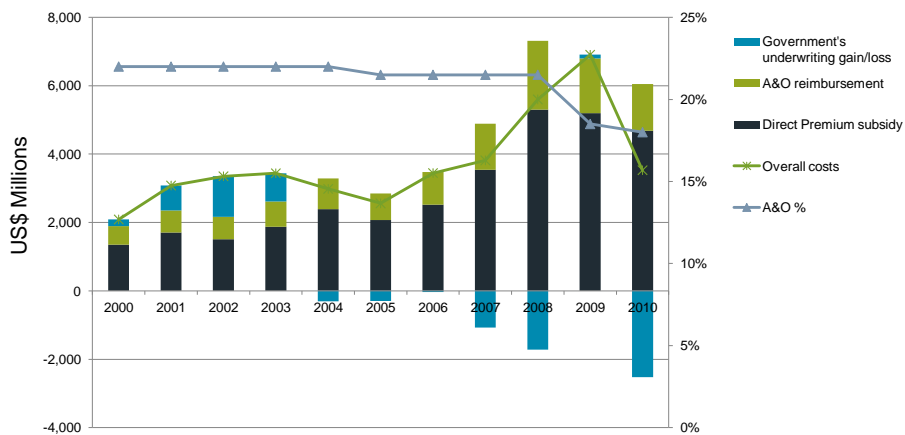
Role of the US government.....

1. Direct subsidy – on average 60% of the premium for the primary crop insurance policies is paid by the government (FCIC). This ranges from 38% to 80%.
2. Subsidies to crop insurers:
 - Administrative & Operating Subsidy (A&O) expense reimbursement
 - Profit and loss sharing

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Cost to the US Government over time:



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2011 Standard Reinsurance Agreement (SRA)

Aims:

- Reduce overall cost to the government without increasing cost to producers
- Create “level playing field” (availability & cost of insurance)
- Align A&O subsidy to insurers actual delivery costs
- Simply the profit and loss sharing element
- Maintain reasonable rates of return for insurance companies

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2011 Standard Reinsurance Agreement (SRA)

Actions:

- Reduced A&O subsidy
- Profit and loss sharing terms changed
- Quota share by the government increased from 5% to 6.5%
- *Reduced government payments over 10 years by \$6bn*

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Administrative and Operating expenses

- Max hard cap of \$1.3bn
- Min of \$1.1bn
- Percentage varies by policy type (12%-21.9%)
- Delay in the payment of A&O subsidy to fall of crop season
- Cap on the commission that can be paid to insurance agents:
 - Basic commission capped at 80% of A&O for each state
 - Total commission including PC to be capped at 100% of A&O

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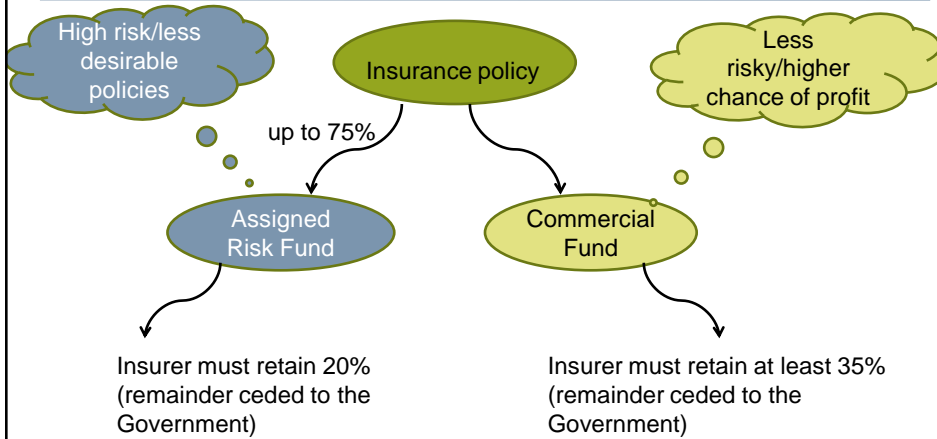
Profit and loss sharing

- The SRA defines the risk-sharing between the government and insurance companies
- Insurance companies are able to transfer some liability associated with risky policies and retain the liability for less risky/profitable policies
- The 2011 SRA:
 - Policies are allocated to one of 2 funds: Assigned Risk and Commercial
 - Government will retain more of the losses but also more of the profit compared to previously
 - More generous terms for states outside the 'I' states which are relatively underserved.
 - Net affect is negative to the insurance company on an expected basis

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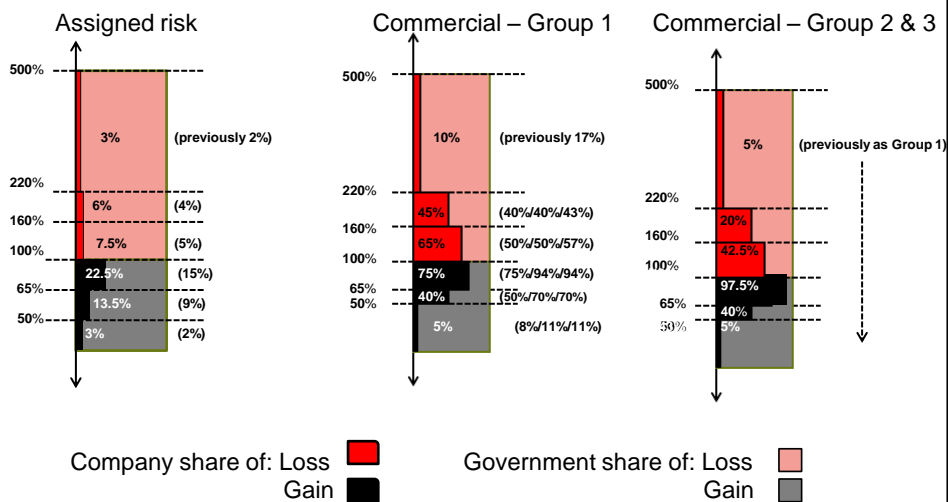
Profit and loss sharing....how it works in practice



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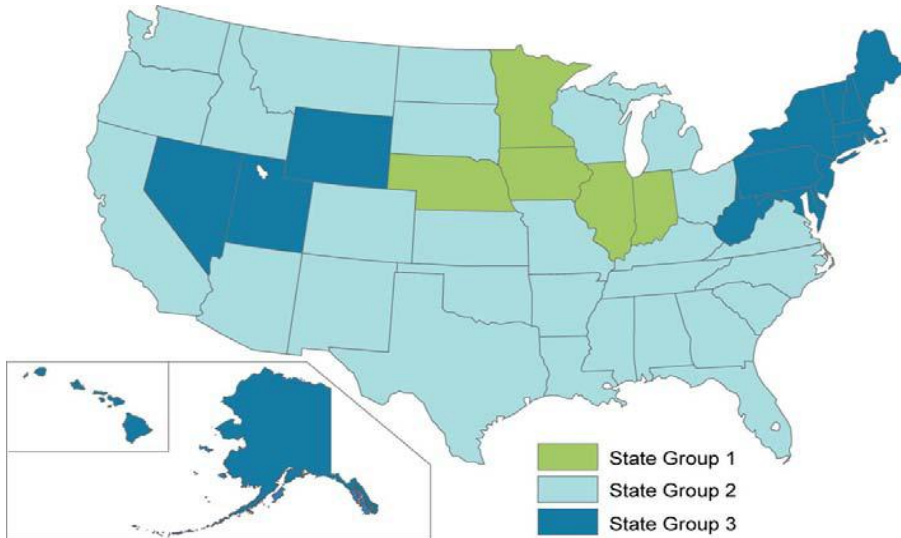
Insurers and Government share of Gains/Loses:



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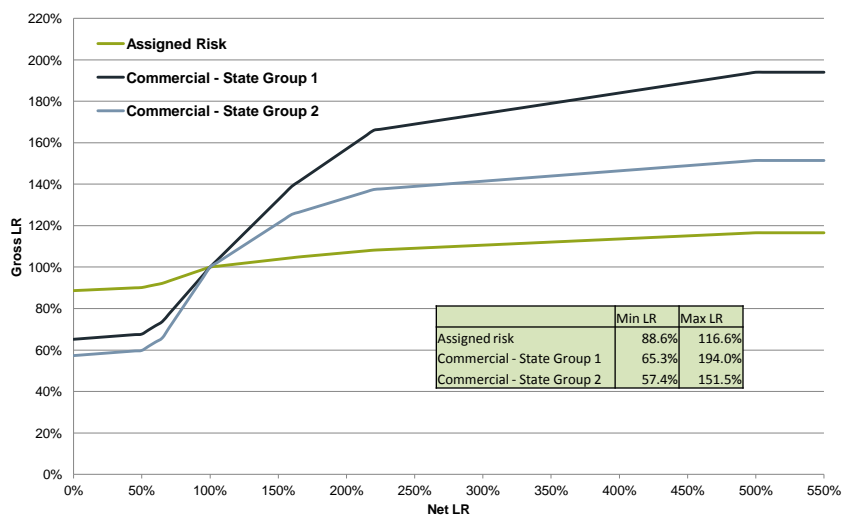
SRA State Groupings.....



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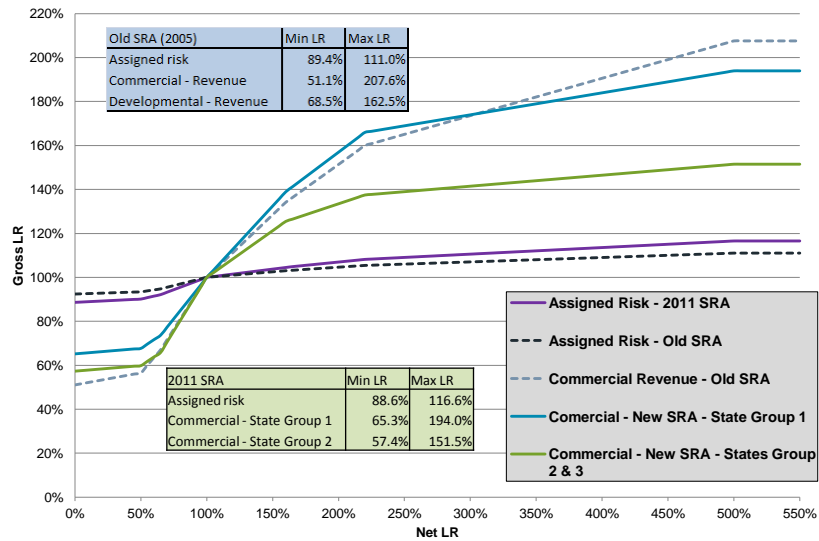
Profit and loss sharing by fund



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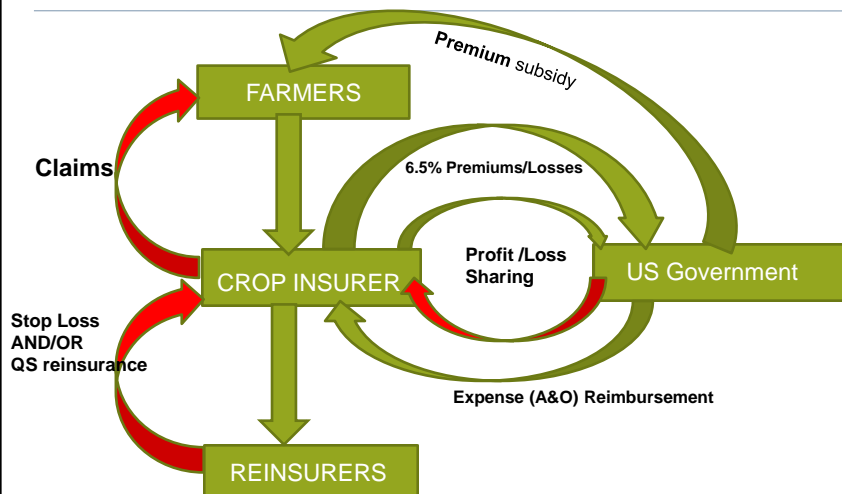
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Comparison to previous SRA:



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How it all fits together.....



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2011 Year to date.....

- Total Gross Written Premiums close to \$11bn
- Loss experience:
 - Droughts in Texas and Oklahoma
 - Flooding and Tornadoes in the Midwest – Kansas
 - Other states (particularly in the Corn Belt) are expected to achieve average yields
- Overall expect to make single digit profit margins assuming harvest continues as expected. No early frosts etc!

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Questions or comments?

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