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Recap of the 2008 Crop Insurance Year: What Can We Learn from Models?

**Economics and Management of Risk in Agriculture
and Natural Resources Annual Meeting**

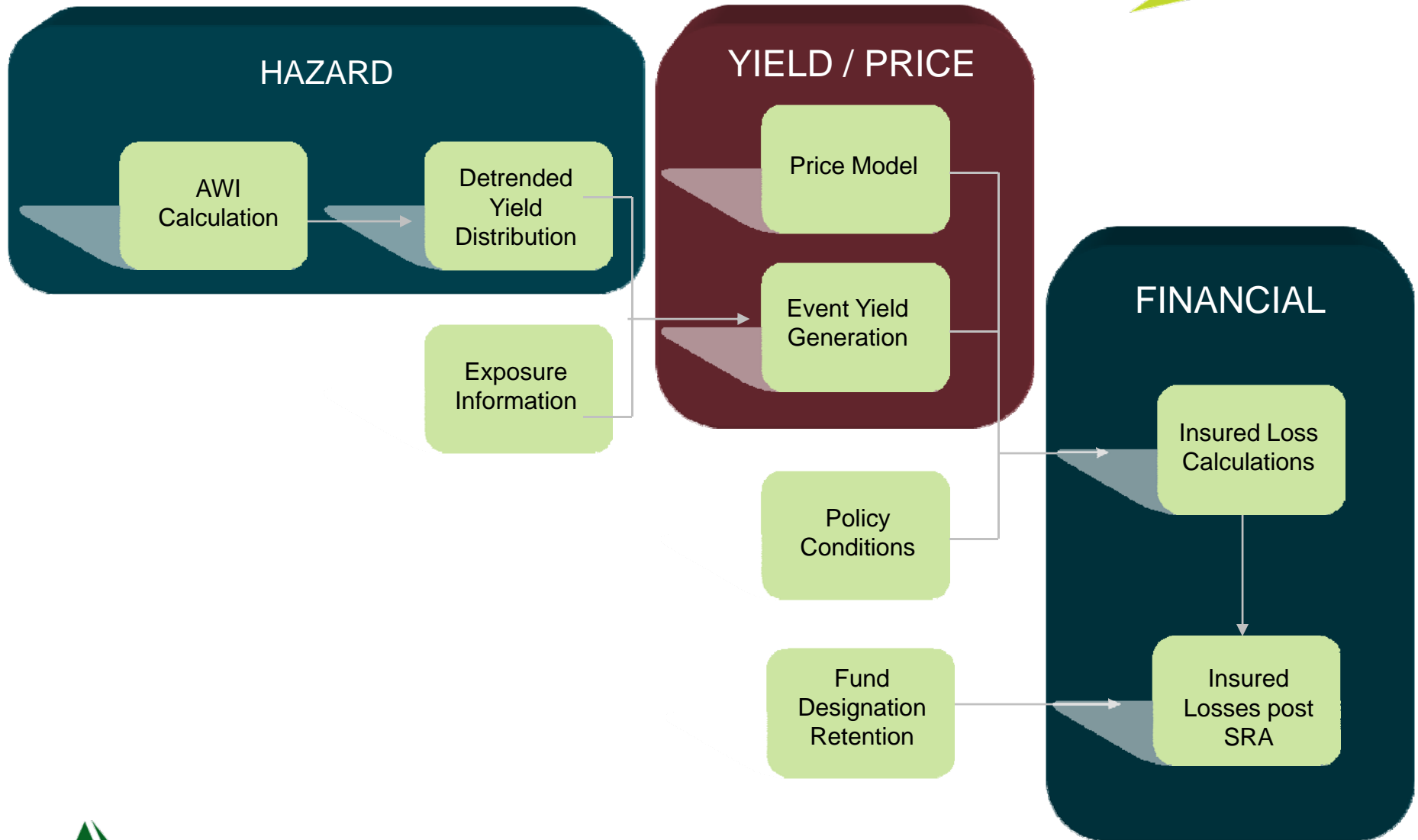
**Galveston, Texas
March 19-21, 2009**

About AIR Worldwide

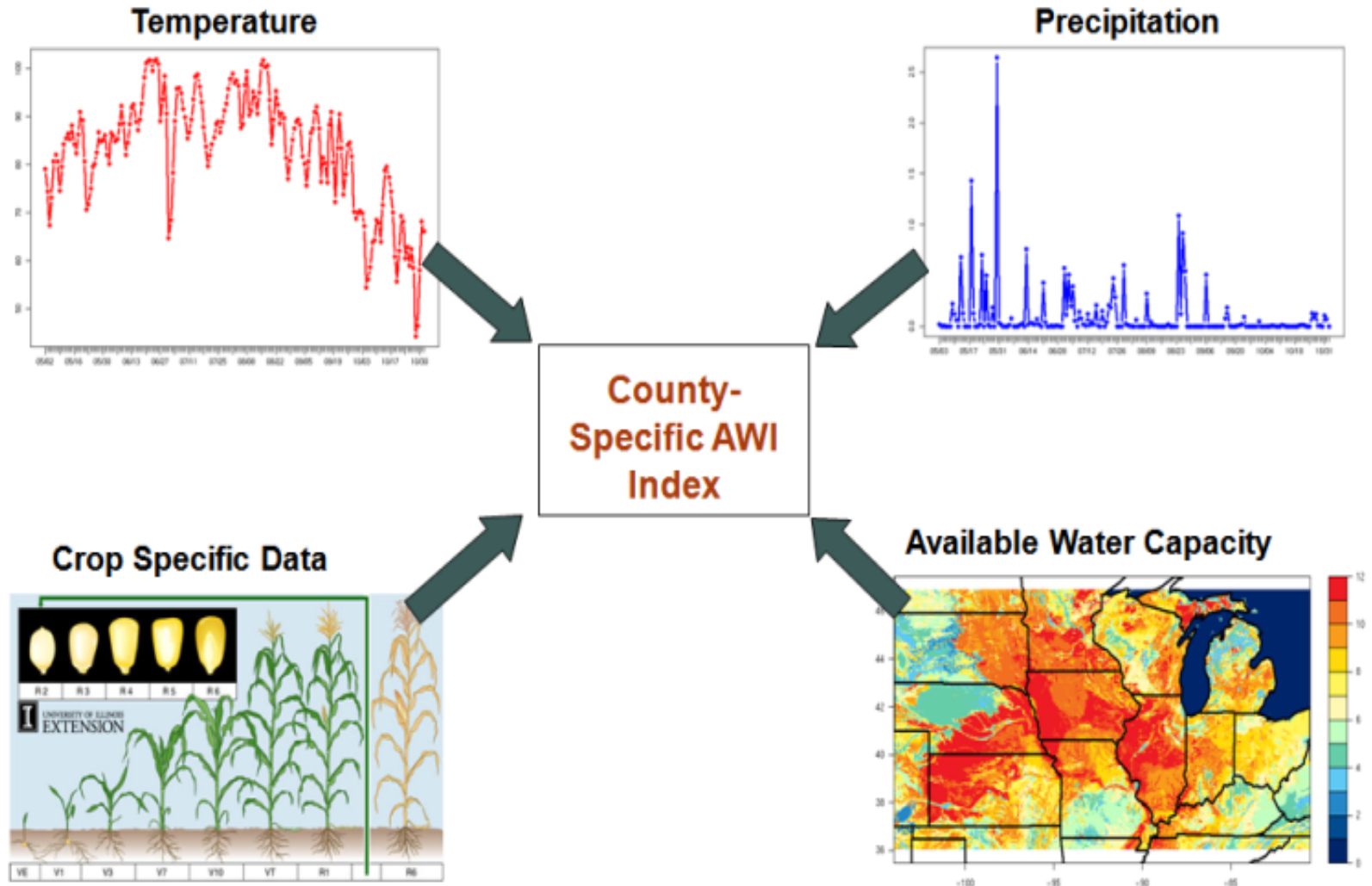
- AIR is the scientific leader and most respected provider of risk modeling software and consulting services
- AIR founded the catastrophe modeling industry in 1987 and today models the risk from natural catastrophes and terrorism in more than 50 countries
- More than 400 insurance, reinsurance, financial, corporate and government clients rely on AIR software and services for catastrophe risk management, insurance-linked securities, detailed site-specific wind and seismic engineering analyses, and property replacement cost valuation
- AIR staff includes more than 200 technical professionals, including more than 30 Ph.D.s
- AIR offices are located in Boston, San Francisco, London, Hyderabad, Munich, Beijing and Tokyo
- Wholly-owned subsidiary of Insurance Services Office (ISO)



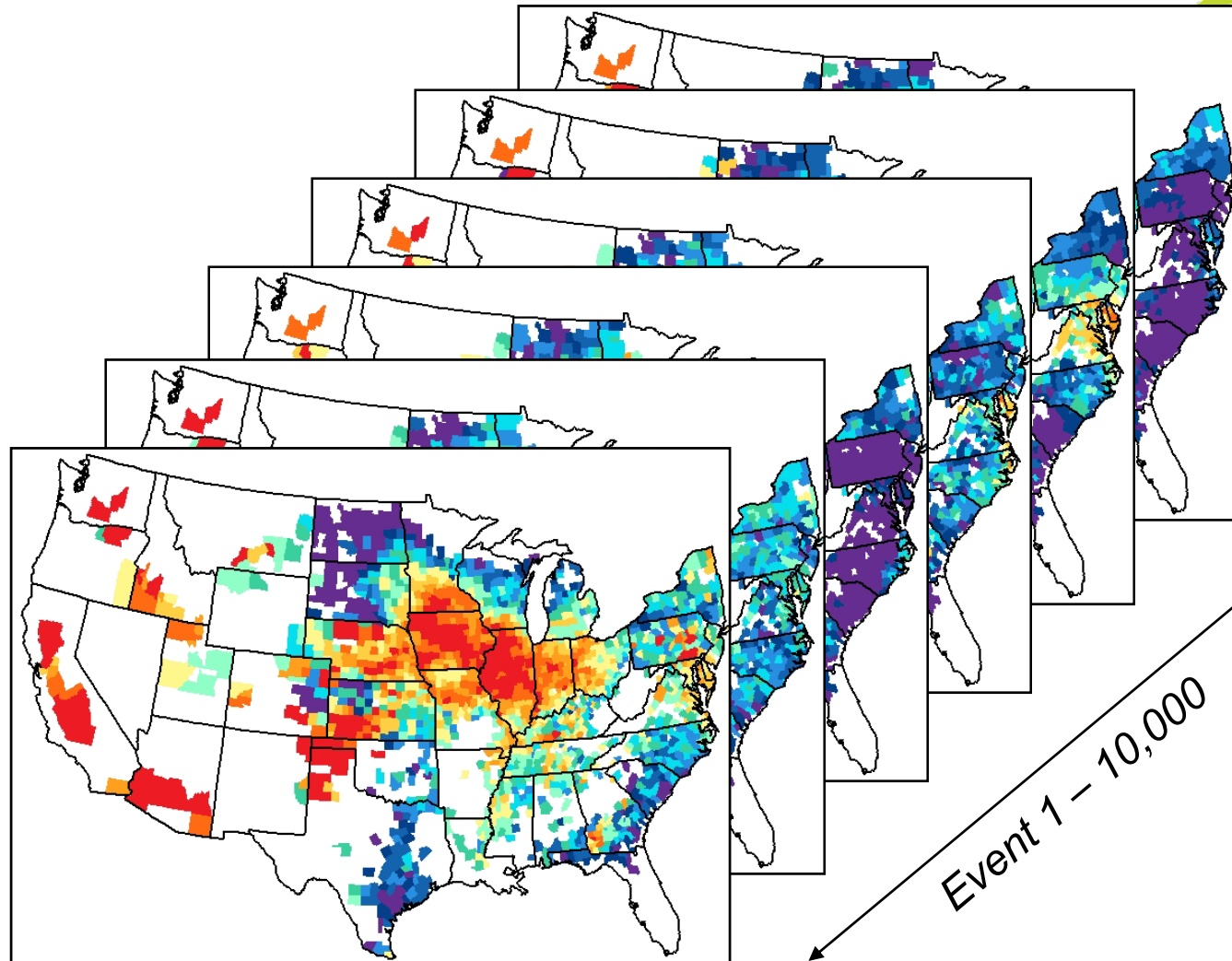
Probabilistic Agricultural Model Components



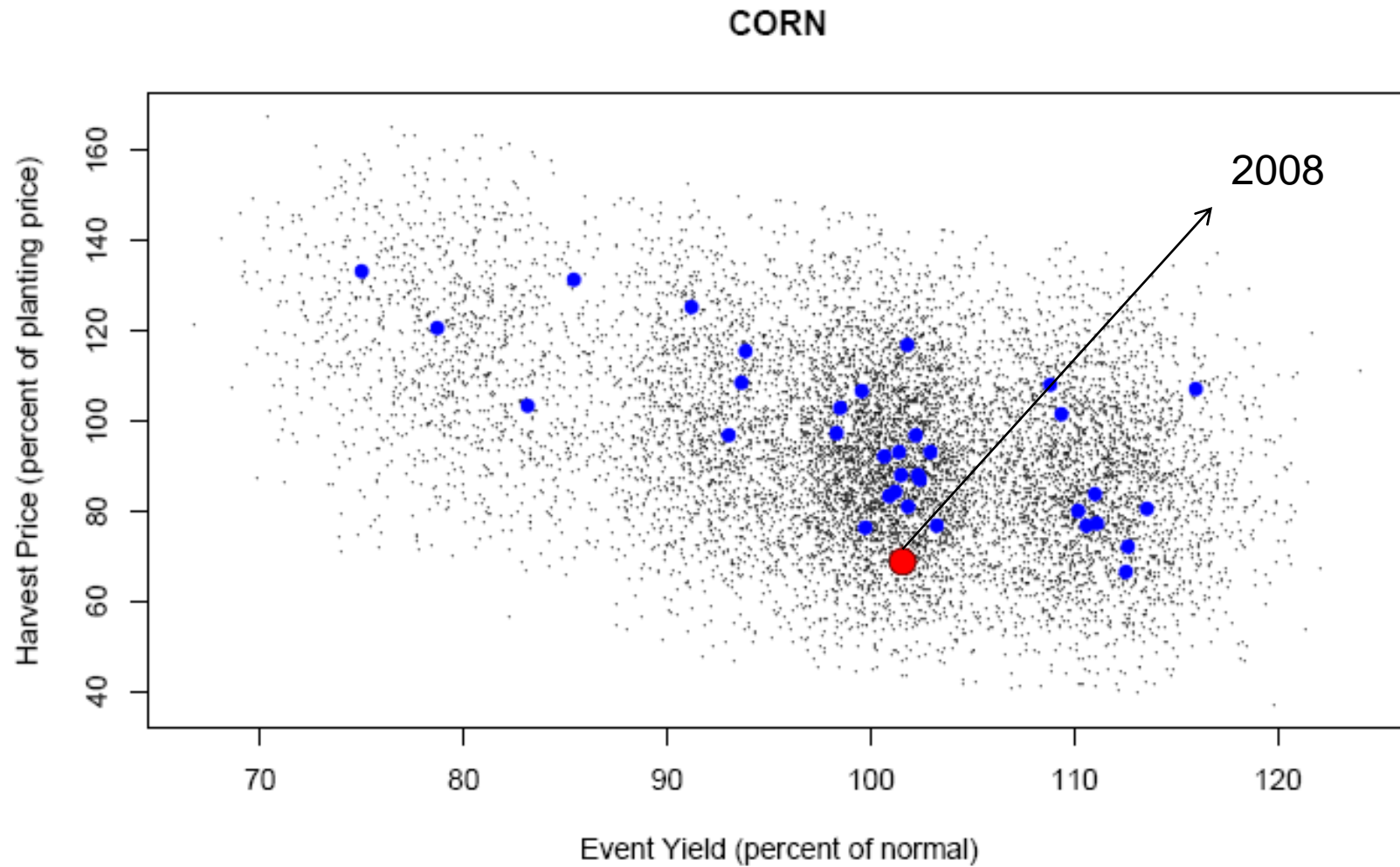
AIR Weather-Based Crop Yield Model



County Yield Distributions form Basis of Event Catalog

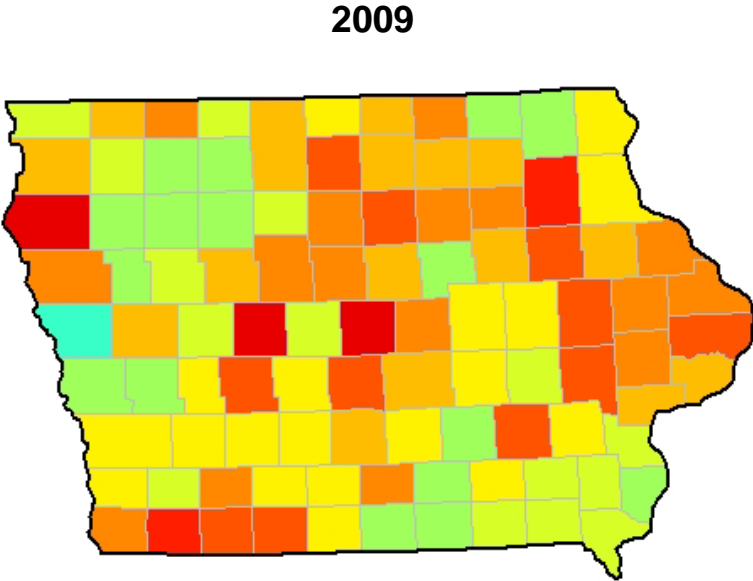
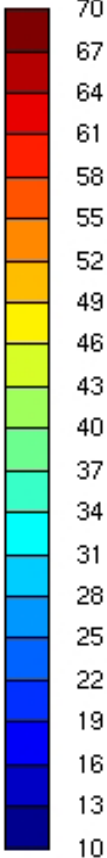
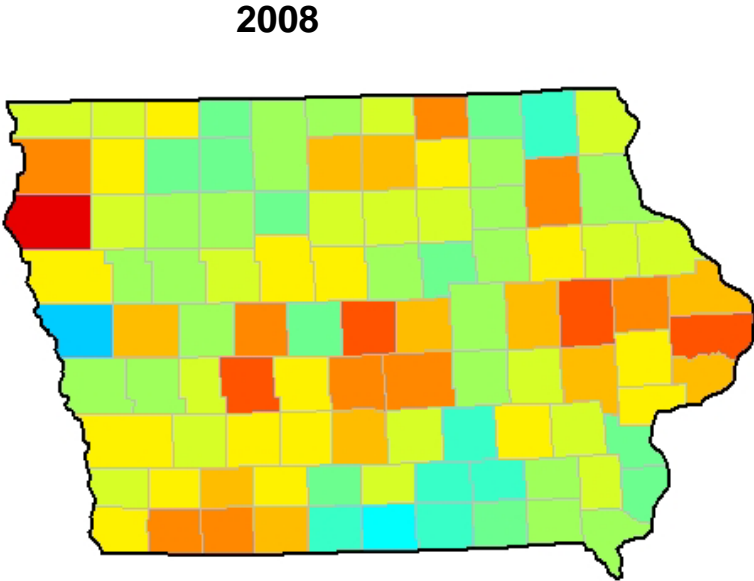


Corn Price Model



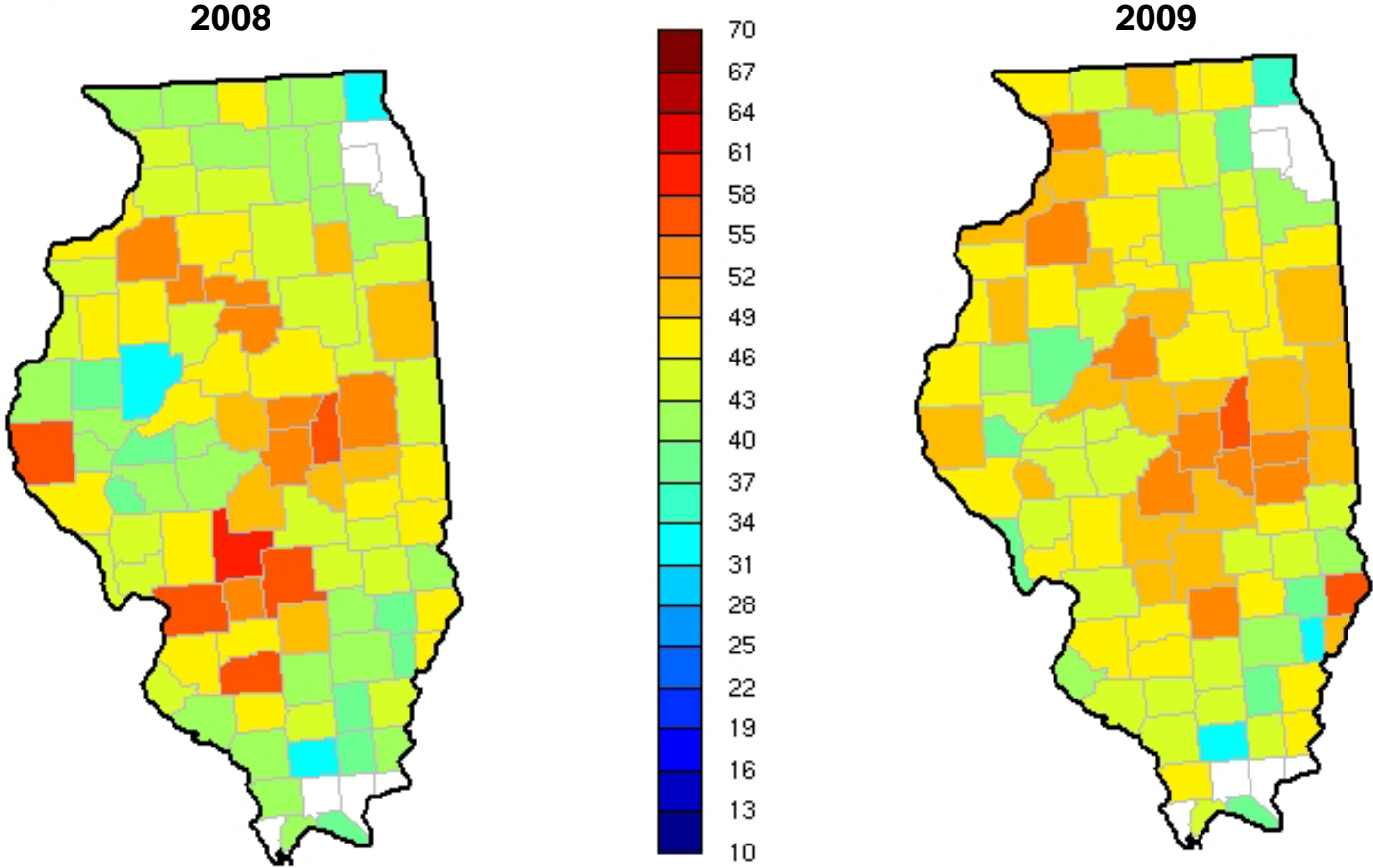
Iowa Corn GRIP (Harvest Revenue Option) 90% Coverage

Probability of Loss



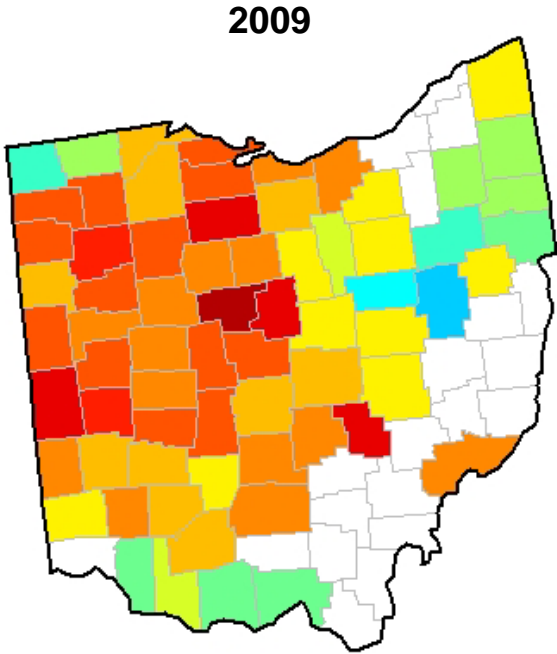
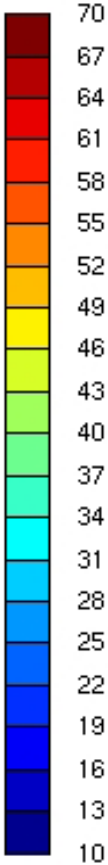
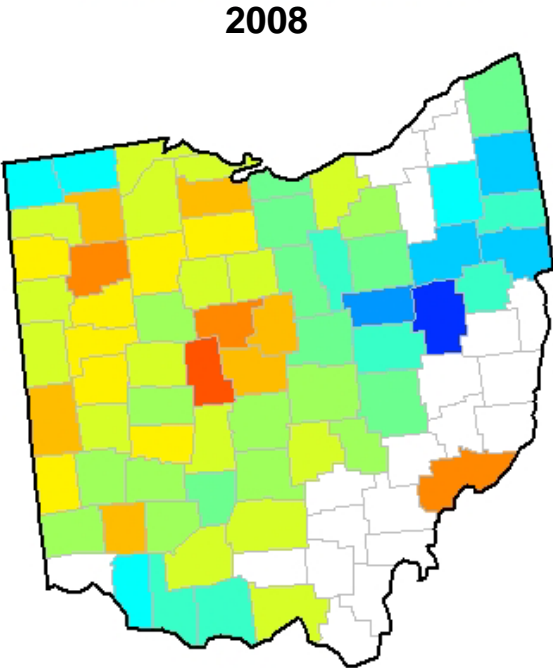
Illinois Corn GRIP (Harvest Revenue Option) 90% Coverage

Probability of Loss



Ohio Corn GRIP (Harvest Revenue Option) 90% Coverage

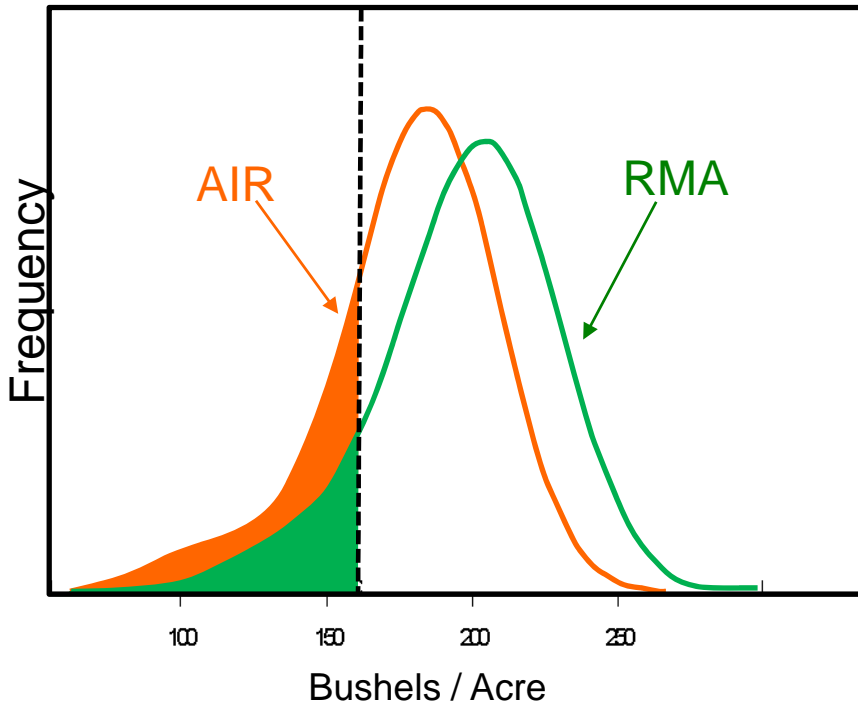
Probability of Loss



The Profitability of the Book of Business Depends on the Right Policy Allocation-Retention Decisions

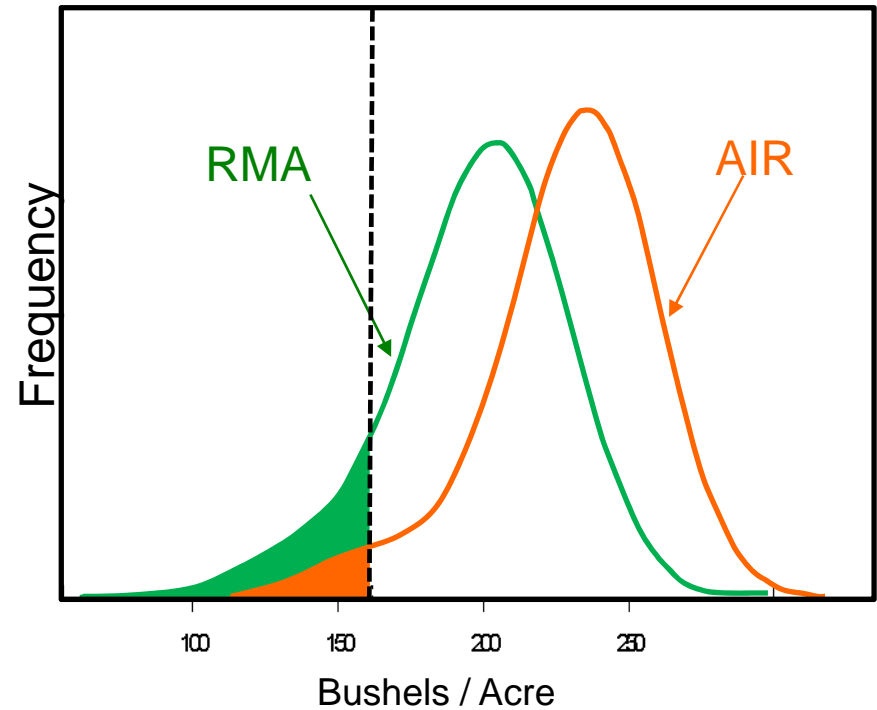
CEDE

Yield Guarantee



RETAIN

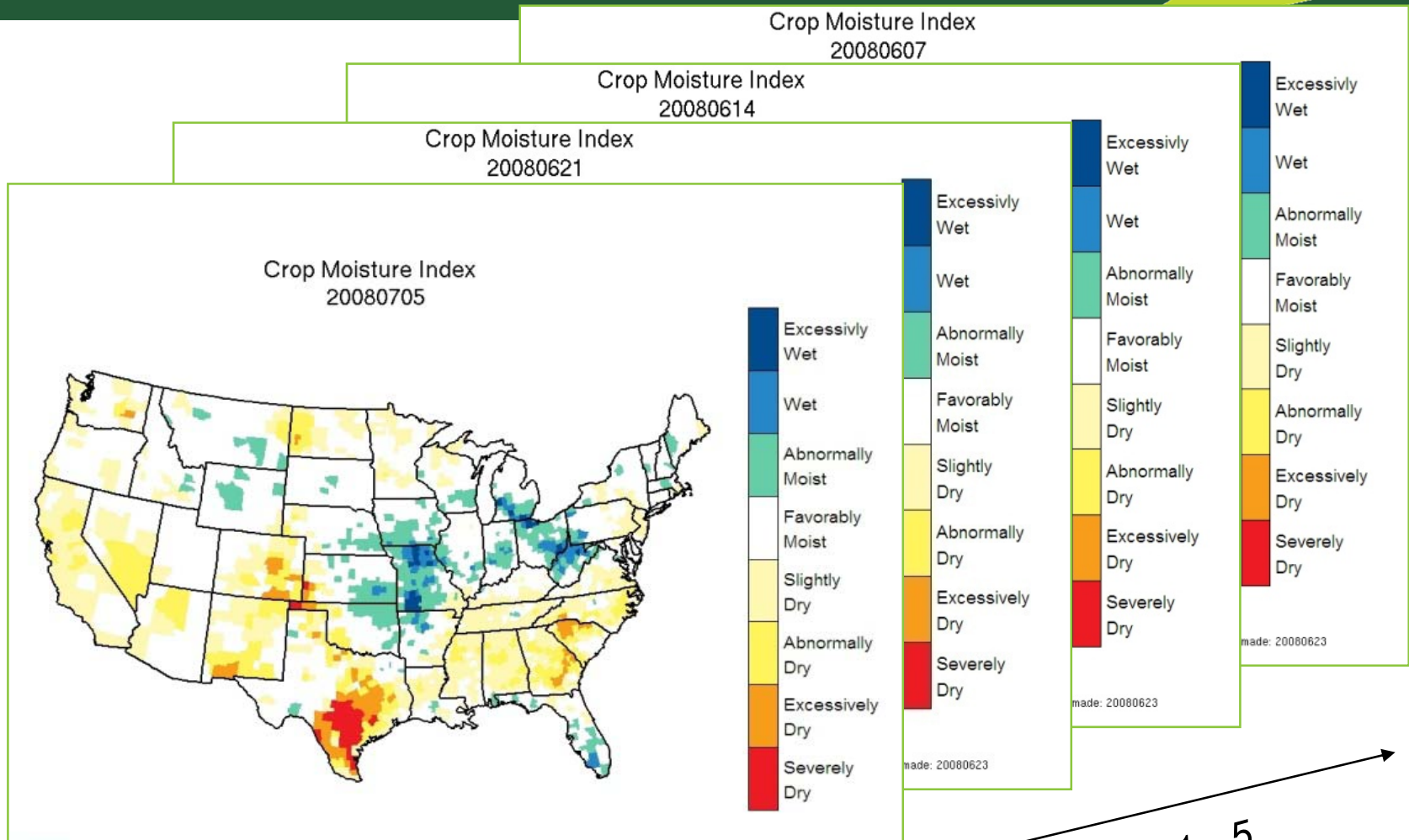
Yield Guarantee



The Iowa Flood Event



Weekly Changes in Crop Moisture Index



CropAlert Crop Growing Conditions Report

July 26

August 23

September 13

October 21

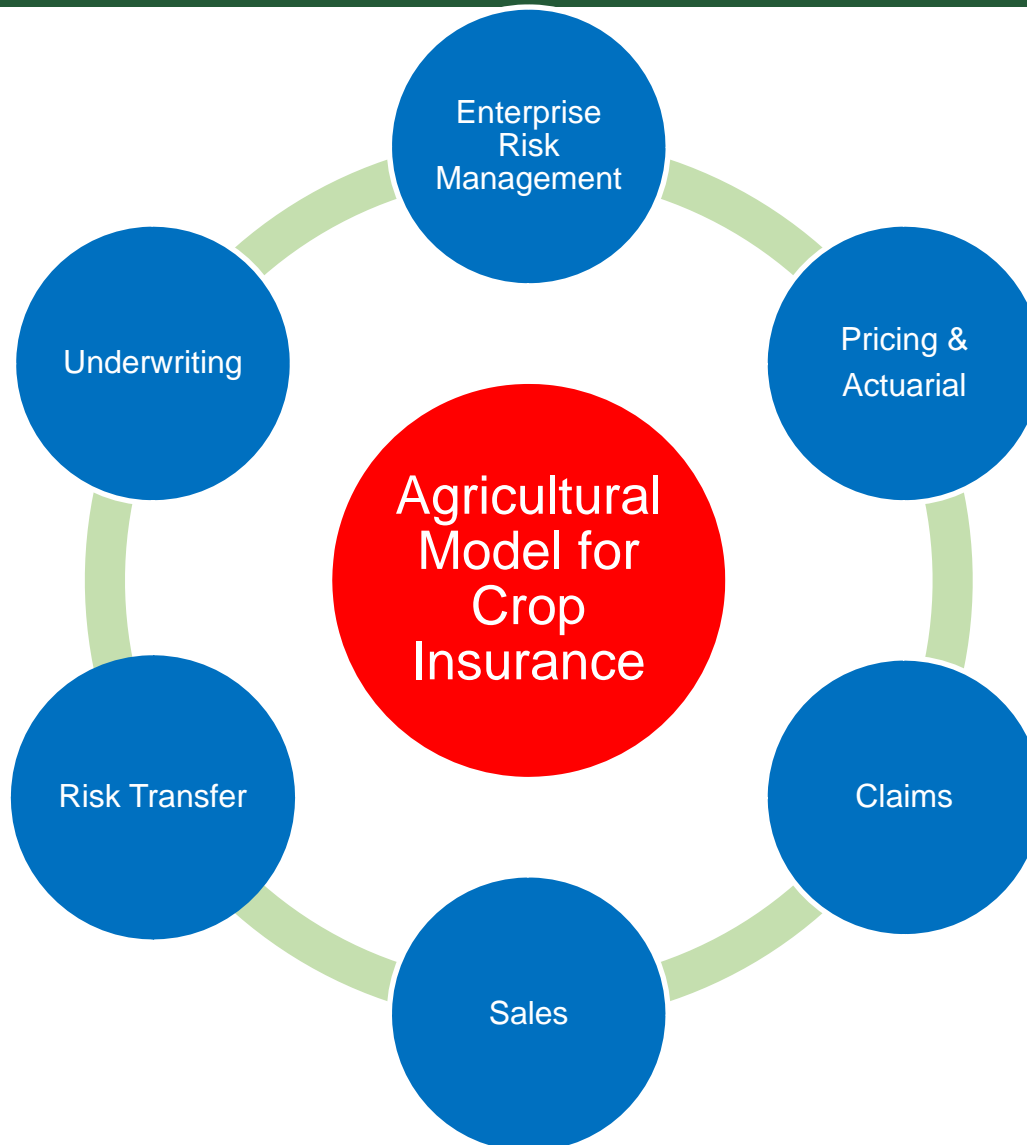
WASDE - NASS

State	AIR	AIR	AIR	AIR	AIR	AIR	AIR	WASDE	NASS	NASS	NASS	
	Current yield forecast* 26-Jul	Percent of normal yield	Current yield forecast* 23-Aug	Percent of normal yield	Current yield forecast* 13-Sep	Percent of normal yield	Current yield forecast* 18-Oct	Yield forecast: July	Yield forecast: 12-Aug	Yield forecast: 12-Sep	Yield forecast: 10-Oct	
IA	148.8	87.9%	158.3	93.5%	161.0	95.1%	161.6	95.5%	-	171.0	168.0	172.0
IL	164.3	100.7%	174.6	107.0%	174.3	106.8%	165.5	101.4%	-	172.0	172.0	177.0
MN	167.0	103.1%	166.7	102.9%	164.3	101.4%	163.9	101.2%	-	165.0	163.0	167.0
IN	164.3	104.3%	167.1	106.0%	168.6	107.0%	167.8	106.5%	-	164.0	162.0	160.0
OH	173.3	113.6%	173.9	114.0%	167.6	109.8%	166.8	109.3%	-	160.0	152.0	147.0
MO	127.5	95.9%	123.2	92.7%	125.2	94.2%	122.5	92.2%	-	146.0	142.0	140.0
WI	123.6	86.1%	130.7	91.1%	130.6	91.0%	130.2	90.7%	-	141.0	137.0	139.0
NE	151.5	97.7%	158.7	102.3%	160.9	103.7%	162.9	105.0%	-	163.0	157.0	161.0
US	149.4	99.1%	154.3	102.4%	154.6	102.7%	153.6	102.0%	148.4	155.0	152.3	154.0

State	AIR	AIR	AIR	AIR	AIR	AIR	AIR	WASDE	NASS	NASS	NASS	
	Current yield forecast* 26-Jul	Percent of normal yield	Current yield forecast* 23-Aug	Percent of normal yield	Current yield forecast* 13-Sep	Percent of normal yield	Current yield forecast* 18-Oct	Yield forecast: July	Yield forecast: 12-Aug	Yield forecast: 12-Sep	Yield forecast: 10-Oct	
IA	47.6	97.3%	49.1	100.4%	49.7	101.6%	49.9	102.0%	-	47.0	47.0	46.0
IL	47.3	102.4%	47.7	103.2%	48.2	104.3%	48.1	104.1%	-	42.0	42.0	45.0
MN	43.5	105.3%	44.1	106.8%	44.1	106.8%	44.4	107.5%	-	40.0	40.0	40.0
IN	48.8	100.4%	49.9	102.7%	49.5	101.9%	49.3	101.4%	-	46.0	43.0	42.0
OH	45.6	101.8%	47.3	105.6%	46.0	102.7%	46.4	103.6%	-	45.0	42.0	38.0
MO	37.7	99.5%	38.5	101.6%	39.4	104.0%	39.2	103.4%	-	37.0	37.0	37.0
WI	42.3	100.7%	46.0	109.5%	45.4	108.1%	45.3	107.9%	-	42.0	38.0	36.0
NE	47.4	100.4%	48.3	102.3%	48.2	102.1%	48.5	102.8%	-	50.0	48.0	47.0
US	42.1	100.5%	43.0	102.6%	42.8	102.6%	42.7	102.4%	41.6	40.5	40.0	39.5



Different Applications of the Agricultural Models



Industry Average Gains and Losses – 2008 Premium

SRA Fund	Allocation (percent)	Retention (percent)	Gross Premium (millions)	Retained Premium (millions)	Loss Ratios Post-SRA (percent)	Losses Post-SRA (millions)
Assigned Risk Fund	19	18	1,864.3	339.3	103	349.4
Developmental Buy Up	2	81	177.1	143.9	93	134.1
Developmental CAT	< 1	95	9.3	8.8	108	9.7
Developmental Revenue	9	85	918.4	778.5	96	745.6
Commercial Buy Up	10	99	935.3	926	74	686.3
Commercial CAT	3	100	312.7	312.7	79	248
Commercial Revenue	57	100	5,620.7	5,593.2	78	4,355.6
Total	100	82	9,837.9	8,102.6	81	6,562.6



Industry Exceedance Probability Curve

Exceedance Probability (Percent)	Return Period (years)	Gross Losses (millions)	Gross Loss Ratios (percent)	Losses Post-SRA (millions)	Loss Ratios Post-SRA (percent)
20	5	11,607.1	118	7,762.2	96
10	10	14,316.5	146	8,845.5	109
5	20	17,036.8	173	9,747.3	120
2	50	19,801.5	201	10,464.8	129
1	100	21,344.8	217	10,845.6	134
0.2	500	24,631.7	250	11,666.1	144
0.1	1,000	25,749.3	262	11,837.9	146

Summary

- The 2008 crop insurance year was characterized by major commodity price volatilities that resulted in additional risk to the crop insurance industry and the reinsurance sector
- Significant weather-related events (such as the Iowa flood and remnants of hurricane Ike affecting crop yields in Ohio) also contributed to the uncertainty around the expected crop insurance industry losses for 2008
- The crop insurance program is becoming more sophisticated. Also, the program is currently under significant government scrutiny. There is a need for improved models that can better quantify the potential portfolio risk under adverse weather, yield and price scenarios that will result in better fund allocation decisions