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2014 Loss Experience for Revenue Protection on Corn, Soybeans, and Wheat

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Most of the 2014 insurance payments on COMBO products have been entered into Risk Management Agency's Summary of Business, allowing us to calculate loss performance for individual products accurately. This article describes loss performance for Revenue Protection (RP), a revenue insurance plan used to insure most acres in the United States. Corn, soybeans, and wheat had loss ratios of 1.04, .54, and 1.12, respectively. Loss ratios were above 1.0 in many counties of Iowa and Minnesota for corn and soybeans. Counties in the southern Great Plains had loss ratios above 1.0 for wheat. In Illinois, RP loss ratios were .40 for corn and .24 for soybeans.

Corn

In 2014, RP was used to insure 69.9 million acres of corn in the United States, representing 88% of total acres insured with crop insurance. Total premium on RP products was \$3,350 million and total crop insurance payments were \$3,484 million, giving a loss ratio of 1.04 (\$3,484 in losses divided by \$3,350 in total premium). A loss ratio above 1.0 means that insurance payments exceeded premiums. Over time, average loss ratios should equal near 1.0. On a per insured acre, insurance payments equaled \$49.86 per acre (see Table 1).

Loss experience varied tremendously across states. For the eleven states with the most insured acres, RP's loss rate was the highest for Minnesota at 3.01 and the lowest for Missouri at .11 (see Table 1). Iowa had a loss ratio of 2.21 while Illinois had a .40 loss ratio.

For Midwest states, the 2014 projected price was \$4.62 per bushel while the harvest price was \$3.49 per bushel. The harvest price was 75% of the projected price, meaning that coverage levels of 80% and 85% would have crop insurance prices if the actual yield did not exceed the guarantee yield. While much of the country had above average corn yields, there were areas of the country where yields were at or below guarantee yields. These areas included northern and central Iowa, Minnesota, and Wisconsin. As a result, RP products had high loss ratios in these areas, as illustrated in Figure 1 which shows RP loss ratio by county (see Figure 1). In most other areas of the country, loss ratios were well below 1.0. As one would expect, loss ratios were higher in areas with lower relative yields.

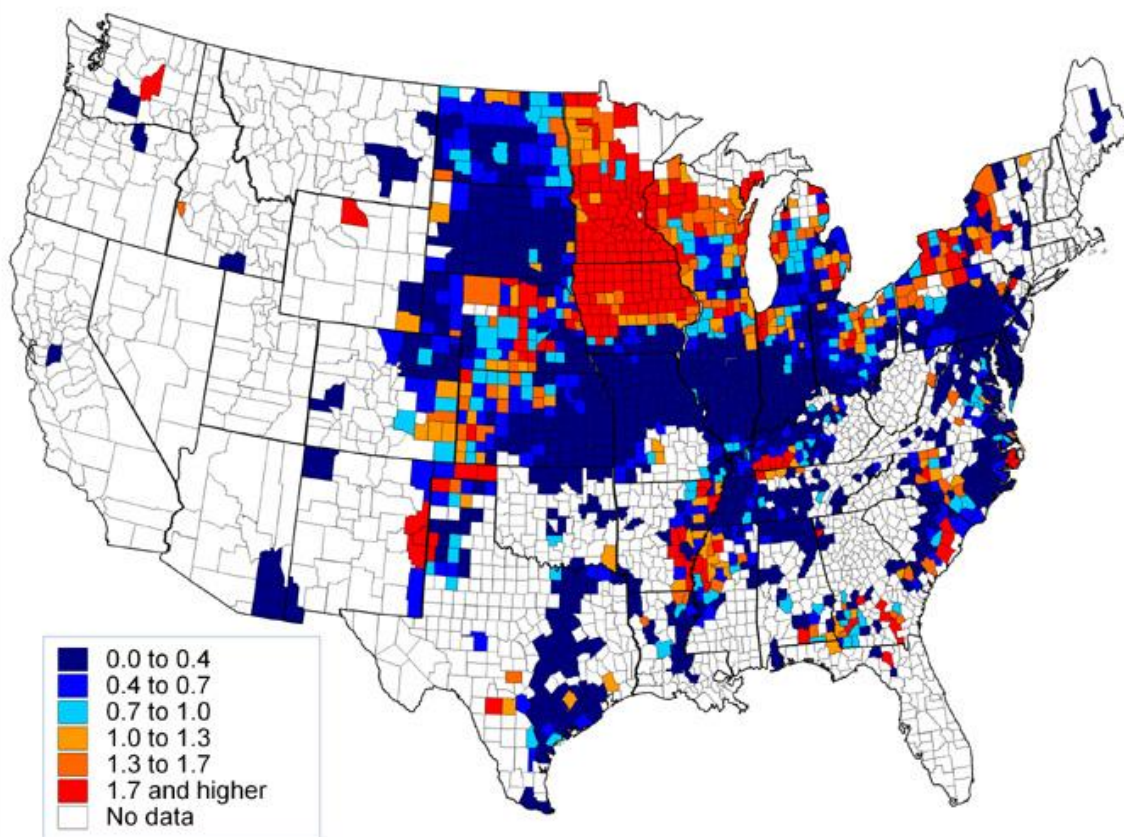
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Table 1. Loss Performance for Revenue Protection Policies on Corn, 2014 Crop Year.

State	Acres Insured	Total Premium	Subsidy	Total Payments	Loss Ratio	Total Premium	Farmer-Paid Premium	Farmer-Paid Payments
	acres	Dollars				\$ per acre		
Iowa	12,242,248	482,128,883	251,658,983	1,064,519,702	2.21	39.38	18.83	86.95
Illinois	8,990,970	375,668,193	207,746,580	151,901,330	0.40	41.78	18.68	16.89
Nebraska	7,857,130	336,146,439	184,722,152	310,596,308	0.92	42.78	19.27	39.53
Minnesota	7,528,317	334,869,249	197,545,654	1,009,576,243	3.01	44.48	18.24	134.10
South Dakota	5,344,036	373,474,803	257,745,935	98,752,793	0.26	69.89	21.66	18.48
Indiana	3,846,508	177,589,230	99,904,003	70,588,291	0.40	46.17	20.20	18.35
Kansas	3,517,211	165,507,882	100,010,477	85,095,927	0.51	47.06	18.62	24.19
North Dakota	2,873,972	226,452,306	158,602,892	159,025,062	0.70	78.79	23.61	55.33
Missouri	2,803,803	174,172,575	110,856,226	18,505,352	0.11	62.12	22.58	6.60
Wisconsin	2,641,223	142,323,459	93,055,783	179,435,363	1.26	53.89	18.65	67.94
Ohio	2,625,403	118,860,431	71,318,774	72,843,217	0.61	45.27	18.11	27.75
U.S.	69,883,019	3,350,373,055	2,023,840,741	3,484,369,504	1.04	47.94	18.98	49.86

Source: Summary of Business, Risk Management Agency, Data downloaded on April 10, 2015.

Figure 1. Loss Ratios for Revenue Protection on Corn, 2014



Soybeans

In 2014, RP was used to insure 65.2 million acres of soybeans in the United States, representing 88% of total acres insured with crop insurance. Total premiums were \$2,092 million and total payments were \$1,126 million (see Table 2). Total payments were far less than total premiums resulting in a loss ratio of .54. Since 2008, loss ratios for soybeans across all policies have not exceeded 1.00. On a per insured acre basis, insurance payments equaled \$17.27 per acre.

Table 2. Loss Performance for Revenue Protection Policies on Soybeans, 2014 Crop Year.

State	Acres Insured	Total Premium	Subsidy	Total Loss Payments	Loss Ratio	Total Premium	Farmer-Paid Premium	Payments
	Acres	Dollars				\$ per acre		
Iowa	8,852,528	222,791,941	116,631,078	238,485,671	1.07	25.17	11.99	26.94
Illinois	7,173,992	172,387,860	98,702,658	40,730,481	0.24	24.03	10.27	5.68
Minnesota	7,009,349	218,994,930	130,661,080	273,169,915	1.25	31.24	12.60	38.97
North Dakota	5,776,472	224,162,807	145,550,353	100,390,865	0.45	38.81	13.61	17.38
South Dakota	4,937,038	186,192,946	125,349,371	34,176,090	0.18	37.71	12.32	6.92
Nebraska	4,587,463	136,774,413	75,244,457	87,634,559	0.64	29.81	13.41	19.10
Missouri	4,194,047	150,284,252	95,823,677	44,820,036	0.30	35.83	12.99	10.69
Indiana	3,669,890	111,352,938	63,558,465	29,268,076	0.26	30.34	13.02	7.98
Ohio	3,381,393	110,813,557	67,879,214	38,969,553	0.35	32.77	12.70	11.52
Kansas	2,971,742	105,618,971	66,552,856	43,189,596	0.41	35.54	13.15	14.53
Mississippi	1,562,352	56,336,286	40,121,072	17,626,344	0.31	36.06	10.38	11.28
U.S.	65,163,668	2,091,589,597	1,290,571,579	1,125,614,797	0.54	32.10	12.29	17.27

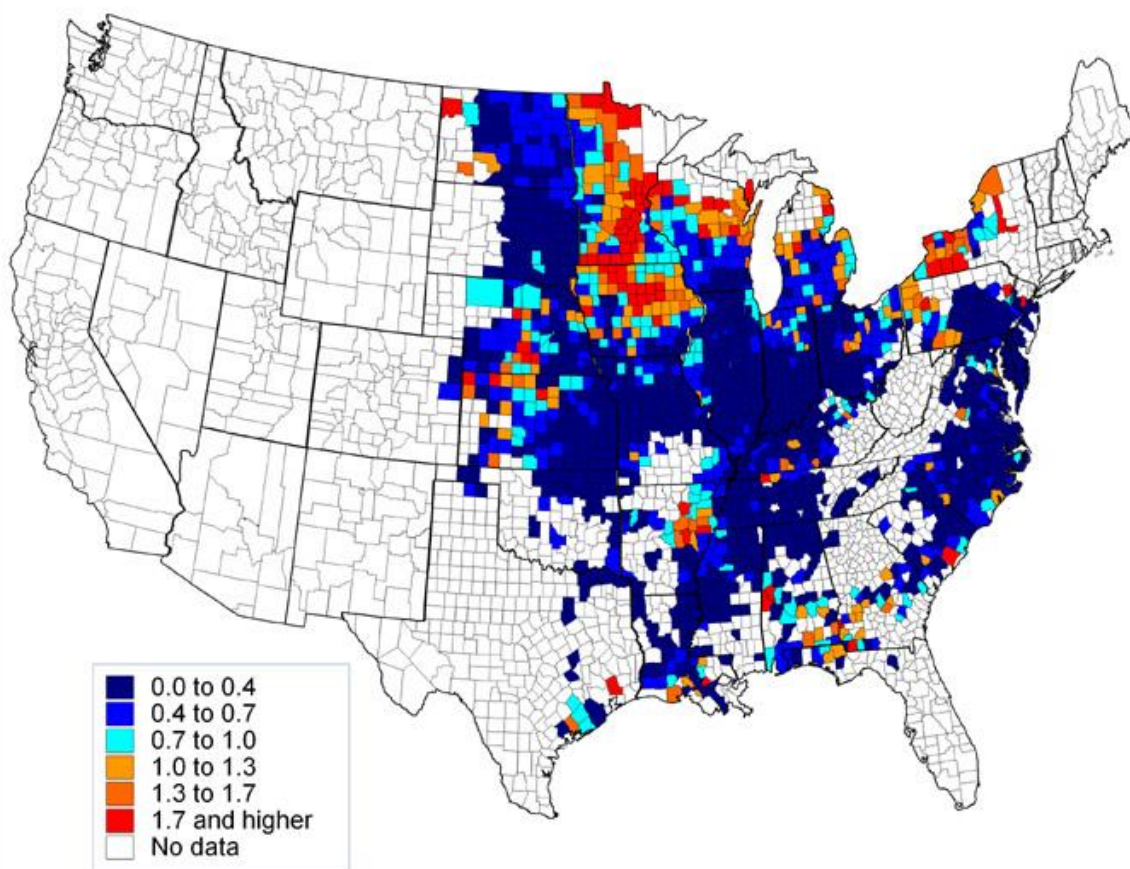
Source: Summary of Business, Risk Management Agency, Data downloaded on April 10, 2015.

Loss experience for soybeans had less range than those for corn. For the eleven states with the most insured acres, RP's loss ratio was the highest for Minnesota at 1.25 and the lowest for South Dakota at .18. Iowa had a loss ratio of 1.07 while Illinois has a .24 loss ratio.

For Midwest states, the 2014 projected price was \$11.36 per bushel while the harvest price was \$9.65 per bushel. The harvest price was 85% of the projected price. Even at an 85% coverage level, farmers had to have actual yields below guarantee yields before insurance payments were made.

Most counties across the United States had loss ratios well below 1 (see Figure 2). Areas with loss ratios above 1.00 included counties in northern and central Iowa, Minnesota, northern Wisconsin, and some counties in Michigan, and New York.

Figure 2. Loss Ratios for Revenue Protection on Soybeans, 2014.



Wheat

In 2014, RP was used to insure 40.8 million acres of wheat, representing 85% of total acres insured with crop insurance. Total premiums were \$1,330 million and total payments were \$1,490. The loss ratio was 1.12 and payments averaged \$36.60 per insured acre.

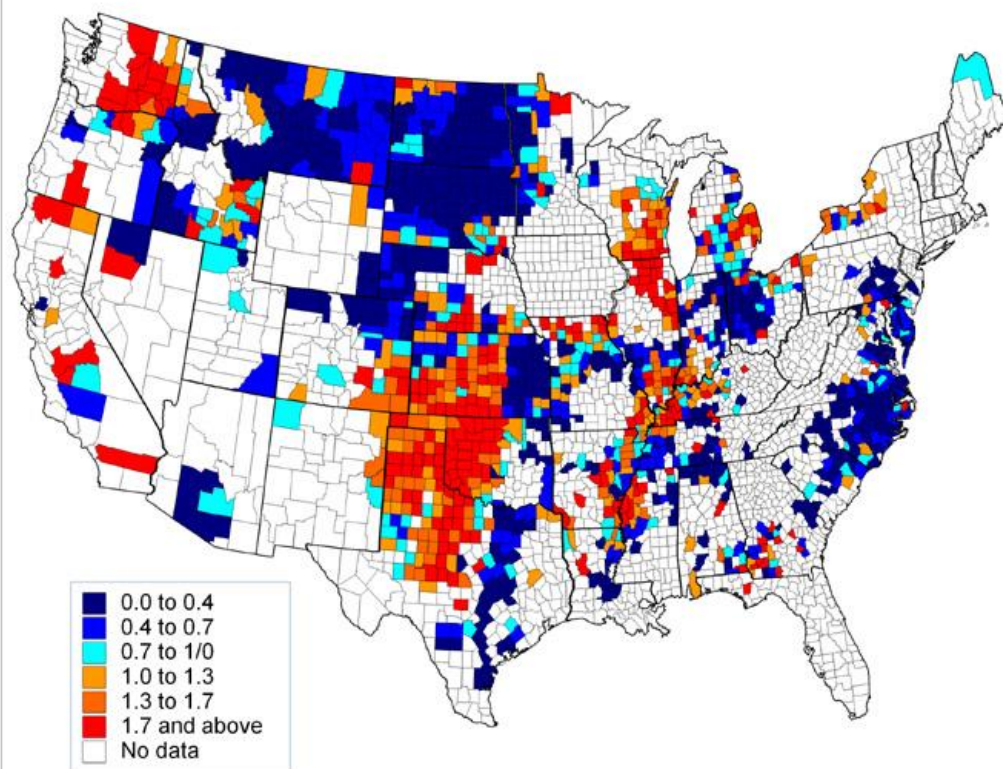
Figure 3 shows a map of county loss ratios for wheat RP policies. As can be seen, many counties in Texas, Oklahoma, and Kansas had loss ratios above 1.00. Many farms in this area had low yields. Other areas of payments occurred in Washington, Wisconsin, Illinois, and along the Mississippi Delta. Large areas with low loss ratios include Montana, North Dakota, South Dakota, Virginia, North Carolina, and South Carolina.

Table 3. Loss Performance for Revenue Protection Policies on Wheat, 2014 Crop Year.

State	Acres Insured	Total Premium	Subsidy	Total Payments	Loss Ratio	Total Premium	Farmer-Paid Premium	Payments
	Acres	Dollars				\$ per acre		
KS	7,720,471	255,150,091	152,052,740	373,544,851	1.46	33.05	13.35	48.38
ND	7,351,127	246,867,610	160,023,535	132,735,915	0.54	33.58	11.81	18.06
MT	3,773,596	86,560,657	52,205,086	41,789,514	0.48	22.94	9.10	11.07
TX	3,725,082	141,973,548	99,005,959	222,363,878	1.57	38.11	11.53	59.69
OK	3,671,455	121,806,499	77,595,070	275,426,295	2.26	33.18	12.04	75.02
CO	2,210,163	74,585,295	46,327,905	77,698,812	1.04	33.75	12.79	35.16
SD	2,154,205	81,202,028	54,140,938	17,250,048	0.21	37.69	12.56	8.01
WA	1,756,623	42,015,229	18,797,328	93,095,296	2.22	23.92	13.22	53.00
NE	1,331,213	39,447,600	22,355,426	34,754,379	0.88	29.63	12.84	26.11
MN	1,107,399	32,423,173	21,938,473	15,525,107	0.48	29.28	9.47	14.02
ID	658,180	23,962,858	11,689,089	21,189,563	0.88	36.41	18.65	32.19
U.S.	40,717,046	1,329,604,762	836,030,558	1,490,361,466	1.12	32.65	12.12	36.60

Source: Summary of Business, Risk Management Agency, Data downloaded on April 10, 2015.

Figure 3. Loss Ratios for Revenue Protection on Wheat, 2014.



Summary

Lower prices for corn and soybeans resulted in RP payments for corn and soybeans. These payments were made in northern and central Iowa and Minnesota. Because of above average yields, loss ratios were low in most of Illinois, Indiana, and Ohio.

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http://farmdoc.illinois.edu/manage/newsletters/fefo15_07/fefo_15_07.html