



2016 Crop Insurance Performance: A Very Low Loss Year

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Very low crop insurance payments were made in 2016, resulting in a .41 loss ratio for all policies in the Federal program. Summary of Business data is available from the Risk Management Agency (RMA) back to 1989. The 2016 loss ratio was the lowest loss ratio since 1989. Loss ratios are very low for corn and soybeans, and for most counties in the Midwest.

Loss Ratios

Data reported in this article comes from the Summary of Business which is available from the [Risk Management Agency \(RMA\) website](#). Data were downloaded in early May. Some changes to loss ratios will occur over time as more data becomes available. However, performance will not materially vary from loss ratios presented here.

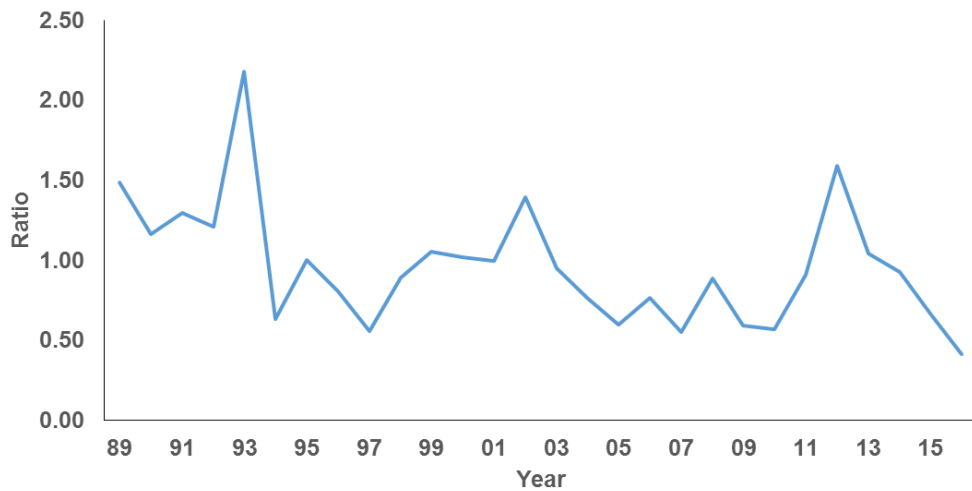
A loss ratio equals payments made on crop insurance policies divided by a total premium paid for crop insurance policies. A loss ratio of 1.0 means that crop insurance payments equal total premium. Ratios above 1.00 indicate that payments exceed premium, which occurs with some frequency. On the other hand, loss ratios below 1.00 indicate that payments are less than premium. Given the way RMA sets premiums, loss ratios should average slightly below 1.00 when over time. Given the high correlation of losses across crop insurance policies in a year, variability in aggregate loss ratios will occur from year to year.

During the last ten years, loss ratios averaged .81 for all crop insurance policies in the Federal crop insurance program (see Figure 1). Since 2007, the highest loss ratio of 1.59 occurred in the 2012 drought year. Since 2012, loss ratios declined: 1.04 in 2013, .92 in 2014, .67 in 2015, and .41 in 2016. The .41 loss ratio in 2016 was the lowest in the last ten years.

The 2016 loss ratio also is the lowest loss ratio since 1989. The next lowest after the .41 loss ratio for 2016 were .55 in 2007, .56 in 2008, and .68 in 2015. From 1989 onward, loss ratios averaged .96, higher than the loss ratio for the last ten years.

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Figure 1. Loss Ratios for All Federal Crop Insurance Policies, 1989 to 2016



Source: Summary of Business, Risk Management Agency

Loss Ratios by Crop

Given the low overall loss ratio, loss ratios for the crops with the most premium also were very low. Table 1 shows 2016 loss performance for the ten largest crops in terms of total premium. Corn with \$3,516 million in total premium had a .26 loss ratio. Soybeans with \$1,838 million in total premium had a .20 loss ratio. Wheat with \$1,104 million in total premium had a .45 loss ratio. These three crops had \$6,459 million in total premium, accounting for 71% of the total premium in the Federal crop insurance program. To a large extent, loss performance of these three crops determines the overall performance of the crop insurance program.

Table 1. Loss Performance of Federal Crop Insurance by Crop, 2016

Crop	Acres Insured	Total Premium	Insurance Payments	Loss Ratio
Corn	81,790,677	3,516,020,201	930,228,226	0.26
Soybeans	72,917,285	1,838,251,362	373,642,640	0.20
Wheat	43,083,446	1,104,433,506	491,806,748	0.45
Cotton	9,344,400	646,221,859	302,319,791	0.47
Pasture, Rangeland, Forage	43,015,003	237,688,015	143,886,214	0.61
Grain Sorghum	5,396,225	189,286,229	49,510,813	0.26
Almonds	751,022	135,483,446	39,368,220	0.29
Apples	209,035	100,332,370	79,353,011	0.79
Rice	2,793,196	87,004,184	98,916,309	1.14
Whole Farm Revenue Protection	NA	85,421,161	26,240,427	0.31

Source: Summary of Business, Risk Management Agency.

All the ten largest crops had loss ratios below 1.00, except for rice. Rice had a 1.14 loss ratio. Beside rice, only apples and pasture, rangeland, forage had loss ratios above .5. Apples' loss ratio was .79 while pasture, rangeland, forage's loss ratio was .61. The remaining ten largest crops had loss ratios below .50, very low loss ratios.

Loss Ratios by State and by Crop

Table 2 shows loss performance for corn for those states with over \$100 million in total premium. All states within the Corn-Belt had low loss ratios: .15 for Illinois, .10 for Iowa, .23 for Nebraska, .10 for

Minnesota, .28 for Indiana, and .53 for Ohio. Of the states with over \$100 million in total premium for corn, only Texas had a loss ratio above 1.00. Texas' loss ratio was 1.08.

Table 2. Loss Performance for Corn, 2016

State	Acres Insured	Total Premium	Insurance Payments	Loss Ratio
Illinois	10,154,974	439,329,726	64,434,296	0.15
Iowa	12,874,539	415,097,088	39,538,093	0.10
South Dakota	5,468,155	385,173,952	92,079,469	0.24
Nebraska	9,123,874	341,345,373	77,714,548	0.23
Minnesota	7,929,812	292,600,283	29,895,034	0.10
North Dakota	3,316,404	231,804,230	16,571,717	0.07
Indiana	4,584,250	212,463,476	60,306,293	0.28
Kansas	4,712,507	197,256,375	23,651,133	0.12
Missouri	3,301,464	191,389,512	28,673,224	0.15
Wisconsin	2,993,238	139,950,440	11,201,763	0.08
Ohio	2,832,777	120,992,006	64,242,182	0.53
Texas	2,523,782	102,150,334	110,584,948	1.08

Source: Summary of Business, Risk Management Agency.

Table 3 shows loss performance for soybeans for the ten states with the most total premium. All state in the top ten had loss ratios below .20. Similar to corn, loss ratios were very low across Corn-belt state: .17 for Minnesota, .07 for Iowa, .13 for Illinois, .11 for Indiana, and .12 for Ohio.

Table 3. Loss Performance for Soybeans, 2016

State	Acres Insured	Total Premium	Insurance Payments	Loss Ratio
North Dakota	5,864,699	193,948,570	33,868,017	0.1746
Minnesota	7,178,007	178,638,205	29,991,811	0.1679
Iowa	8,884,041	174,551,474	12,136,885	0.0695
South Dakota	5,076,805	165,407,371	26,069,318	0.1576
Illinois	8,558,116	163,409,757	21,176,932	0.1296
Missouri	4,812,294	129,713,132	26,291,693	0.2027
Indiana	4,570,431	111,334,419	11,761,283	0.1056
Ohio	3,808,033	102,461,722	12,012,582	0.1172
Nebraska	4,814,198	102,258,701	10,569,487	0.1034
Kansas	3,250,822	91,161,395	11,135,537	0.1222

Source: Summary of Business, Risk Management Agency.

Table 4 shows loss performance for wheat for the ten states with the most total premium. Wheat's loss ratio of .45 was not as low as corn (.26) and soybeans (.20). Never the less, wheat had what would be considered a low loss ratio in most years. All of the ten largest premium states had loss ratios considerably below 1.00, with the lowest loss ratio being .10 for Kansas. The highest loss ratio of the top ten wheat premium states was Texas, with a .52 loss ratio.

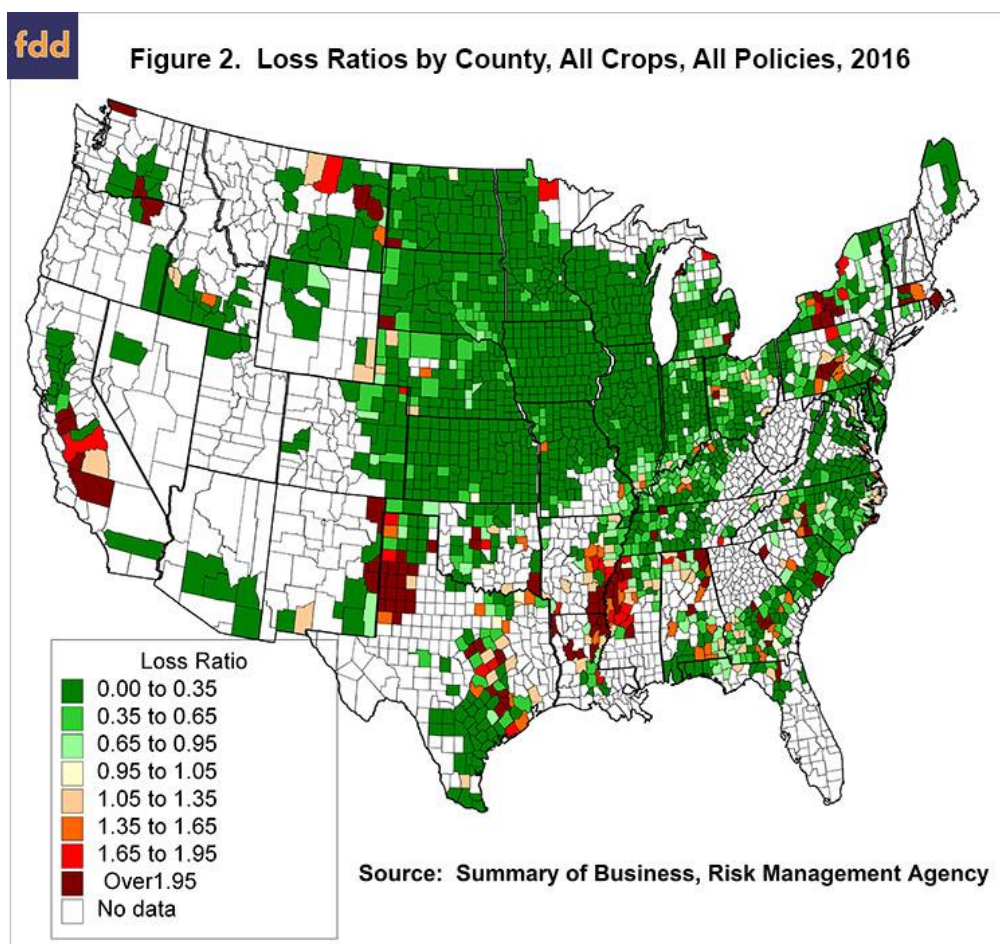
Table 4. Loss Performance for Wheat, 2016

State	Acres Insured	Total Premium	Insurance Payments	Loss Ratio
North Dakota	7,312,176	214,870,432	103,821,265	0.48
Kansas	7,686,447	199,769,205	19,878,637	0.10
Texas	3,985,685	111,822,905	58,397,626	0.52
Oklahoma	3,727,431	97,654,643	30,463,249	0.31
Montana	4,638,622	77,890,291	34,143,392	0.44
South Dakota	2,109,341	65,056,884	12,431,729	0.19
Colorado	2,103,475	55,896,045	21,813,486	0.39
Washington	2,034,689	41,560,988	17,884,254	0.43
Nebraska	1,258,519	30,024,220	12,788,164	0.43
Minnesota	1,217,430	29,372,022	9,922,380	0.34

Source: Summary of Business, Risk Management Agency.

Loss Performance by County

Figure 2 shows a map giving loss ratios by county. These loss ratios are for all crops in each county. The vast majority of counties within the greater corn belt had loss ratios below .35. Other areas of very low loss ratios include Kentucky and Tennessee, the Great Plains from Kansas north, and the eastern seaboard below Pennsylvania.



While low losses predominated, there were areas where high loss ratios occurred. Areas of loss ratios above 1.95 include counties in western Texas, counties along the lower Mississippi River in Mississippi and Louisiana, and some counties in New York and Pennsylvania.

Summary

Relative to total premium, few crop insurance losses occurred across the United States. Yields were above average in most areas, and crop prices did not fall enough to cause payments. In addition, prevented planting did not occur on a large scale. Overall, 2016 was an exceptional year of low losses.