CROP-HAIL INSURANCE 1966

VOLUME
COST
INDEMNITIES

ERS-369
U.S. DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE

PREFACE

This report updates ERS-342, Crop-Hail Insurance, 1965: Volume, Cost, Indemnities. A detailed discussion of crop-hail insurance and its historical development appears in Crop-Hail Insurance in the United States, by Leon B. Perkinson (U.S. Dept. Agr. ERS-249, 1965).

PROGRESS IN HAIL SUPPRESSION

"There is a wide range of opinion on whether or not hail can be effectively suppressed or its damage mitigated. The most prevalent premise is that producing many more hailstone embryos by silver iodide seeding will yield smaller hailstones, which would be less damaging and more likely to melt before reaching the ground. The U.S. experiments using ground generators or aircraft generators have been inconlusive. Major long-term experiments in Switzerland and France have been similarly inconclusive. Experiments in Argentina, however, show positive results for one type of storm and negative results for others. The Russians are far more optimistic. They claim significant success from introducing the silver iodide directly into this supercooled high-liquid-water-content portion of the cloud by means of antiaircraft shells and rockets. . . . Because hailfall is even more variable than rainfall, a definite proof of success is all the more difficult to obtain. On physical reasoning, for example, we cannot exclude the possibility that seeding may sometimes even increase hail damage." From: Weather and Climate Modification Problems and Prospects, Volume 1, Publication No. 1350, pages 6-7, National Academy of Sciences and National Research Council, Washington, D.C., 1966.

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CROP-HAIL INSURANCE, 1966: VOLUME, COST, INDEMNITIES

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VOLUME OF COVERAGE

Crops on some 500,000 farms are estimated to be insured each year against damage from hailstorms. The number of hail insurance policies is larger than the number of farms, because more than one policy per farm is often written where landlords and others have financial interests in the crop along with the operator. In States like Illinois, North Carolina, and North Dakota, where important cash crops are subject to hail damage, more than half of the growers use hail insurance.

Hail insurance on growing crops in 1966 was $3,132 million, about 2 percent more than in 1965 and another record high (table 1). 1/ The use of hail insurance has expanded greatly since the 1930's. It is now $1.0 billion larger than in 1956 and nearly $2.2 billion larger than in 1946.

Farmers have been buying more and more hail insurance, mainly to protect the rising costs of growing crops and the higher values of many of their crop harvests.

Total farm production expenses reached an all-time high of $33 billion in 1966, about 139 percent above the 1946 level. Cash expenditures for fertilizer rose 210 percent; gasoline and oil, 143 percent; and operation of tractors and other motor vehicles, 162 percent. The great investment in tractors and mechanization is reflected by an increase of more than 450 percent in depreciation between 1946 and 1966.

Cash receipts from the sale of crops rose from $11.0 billion in 1946 to $18.4 billion in 1966, an increase of 67 percent. Increases in receipts for crops frequently insured against hail were: cotton, 7 percent; tobacco, 25 percent; food grains, 33 percent; feed crops, 147 percent; and oil-bearing crops, 300 percent. The 1966 corn and soybean crops were valued at $5.3 billion and $2.6 billion, respectively.

The increases in both costs and receipts were even greater for individual farm operators because of the trend toward fewer and larger farms. In many instances

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1/ Excludes all-risk insurance of the Federal Crop Insurance Corporation which protects against hail as well as most other hazards. Federal crop insurance totaled $636 million in 1966. Of the $25.4 million paid in indemnities, about $4.6 million was for hail damage.

the margin between costs and receipts was much smaller in 1966 than 2 decades ago. For example, typical cash grain farms in the Corn Belt increased in size from 221 to 308 acres with substantial expansion in both corn and soybeans. 2/ Cash receipts per farm about doubled between 1946 and 1966 but cash expenditures tripled in amount. Thus farmers, especially those specializing in production of crops, now have much more to lose if crops are destroyed or damaged by hailstorms.

The heaviest concentration of crop-hail insurance--55 percent of the U.S. total--is in the Corn Belt States of Ohio, Indiana, Illinois, Iowa, and Missouri (tables 2 and 3). The growing importance of hail insurance in that region is largely related to the increased value of corn and soybeans. The 10-percent rise in coverage in 1966 may have been partly due to relatively large hail losses in 1965. However, the wide year-to-year fluctations in insured losses, compared with the steady upward trend in coverage, suggest that factors other than losses in a particular year are more important in determining the amount of protection bought. Apparently many Corn Belt farmers buy hail insurance on their crops continuously, much as they buy fire and windstorm insurance on their buildings.

The Northern Plains region, accounting for 12 percent of the national total, ranked next to the Corn Belt in the use of crop-hail insurance. Hailstorms are relatively frequent in that region and do much damage to wheat and other small grains. Wheat and small grains also are responsible for much of the hail coverage in the Southern Plains and Mountain regions. Crop-hail insurance decreased between 1965 and 1966 in each of these three regions. One factor in some sections that reduced the need for protection in 1966 was the poor crop caused by drought. In southern parts of the Southern Plains and Mountain regions, acreage retired under the cotton program also reduced the need for coverage.

Crop-hail insurance in the Appalachian region--10 percent of the U.S. total--rose about 1 percent in 1966. Acreage and prospects for the tobacco crop, especially in North Carolina and Kentucky, usually determine the region's volume of hail insurance. Insurance in the Lake States, amounting to 7 percent of the total, is mainly written on corn, small grain, and soybean crops. In the Northeast, Southeast, Delta States, and Pacific regions there are few hailstorms and few crops subject to hail damage and the volume of coverage is small.

PREMIUM COST

Hail insurance premiums for the country as a whole declined from $116.4 million in 1965 to $113.7 million in 1966, or about 2 percent, despite a slight increase in coverage. Premium cost per $100 of coverage mainly depends on the probability of hailstorms in the area, the susceptibility of different crops to hail damage, and the extent of deductible or other features of each policy. This results in wide variation in premium rates, both among areas and among crops. However, rates for a particular crop in a particular area change slowly from year to year.

2/ 1966 data from Edwin G. Strand. Costs and Returns, Commercial Corn Belt Farms, 1966. U.S. Dept. Agr., Econ. Res. Serv. FCR-52. 10 pp. Sept. 1967

The decrease in total 1966 premiums does not reflect any important overall change in rates but is mainly the result of increased coverage in the Corn Belt where premiums are low, and decreased coverage in the high-rate Great Plains and Mountain regions (table 4). The 1966 average premium rate per $100 of insurance in the Corn Belt was only $2.19, compared with average rates of $5.80, $6.89, and $7.10 in the Mountain, Northern Plains, and Southern Plains, respectively. Total hail premiums in the Corn Belt in 1966 amounted to $37.5 million, followed by the Northern Plains and Appalachian regions with $25.6 million and $16.1 million. These three regions accounted for 70 percent of all expenditures for specialized crop-hail insurance in the United States.

The cost of hail insurance per policy depends not only on the premium rate but also on the number of crop acres insured on each farm. Policies with premiums of $100 or less are frequent in the Appalachian and Southeast regions where there are many small farms. In the Corn Belt the premium for many policies ranges from $100 to $150. The average cost per policy for much of the Northern Plains is about $200. Larger farms in Texas and the Mountain region have hail insurance premiums averaging $400-$500. The cost of insuring cigar tobacco in Connecticut and Massachusetts, where production costs are large, frequently amounts to several thousand dollars per policy.

INDEMNITIES

Payments to indemnify growers for hail damage to insured crops in 1966 totaled $54.6 million, 25 percent less than in 1965 (table 5). Loss payments declined to 48 percent of premium cost, the lowest loss ratio since 1959 when it was 46 percent. All regions except the Appalachian, Northeast, Northern Plains, and Pacific had lower indemnity payments. In the Corn Belt, they fell to $12.3 million, less than half the 1965 losses. Loss payments of $16.8 million in the Northern Plains were 14 percent above 1965 and the largest for any region. North Dakota losses were 60 percent of the regional total and far exceeded losses in any other State in the Nation.

Indemnities per $100 of insurance vary much among States, depending upon the incidence of hailstorms and upon the damage done. Largest losses per $100 of coverage for 1957-66 were in Colorado, Wyoming, and Montana, where they averaged $7.68, $6.23, $6.12 (table 6). Losses were also relatively high in all of the Northern and Southern Plains States, ranging from $3.67 to $5.66 per $100 of insurance. The eastern Corn Belt States of Ohio, Indiana, and Illinois had low loss rates of $0.76, $0.74, and $0.83, respectively.

The year-to-year variability of hail loss payments is usually greatest in the Northeast, Pacific, and Delta regions where little insurance is written and where losses are relatively small on the average (table 6). In the Northern Plains and several States in the Mountain and Southern Plains regions, losses as a whole are quite stable from year to year. They may vary considerably, however, among individual farms.

The variability coefficients in table 6 illustrate the increased stability that usually may be attained when an insurer broadens his area of coverage. If, for example, a company were to sell crop-hail insurance only in Massachusetts, losses per $100 of coverage could be expected to range up to about 2-1/2 times the average

loss in two-thirds of the years. The variation would be even greater in the remaining years. For the Northeast region as a whole the variation would be expected to be within 78 percent of the average in two-thirds of the years. More of the sporadic high and low losses in different localities would offset each other as the area and volume of insurance expands. The need for smaller reserves in relation to average losses is one of the advantages of a wider distribution of crop-hail coverage.

For 1957-66, the ratio of losses to premiums averaged 60 percent for the United States. This 10-year average loss ratio ranged from about 36 percent in the Delta region to nearly 72 percent in the Mountain region. In the Corn Belt and Northern Plains regions losses were 53 percent and 66 percent, respectively, of premiums.

FEDERAL CROP INSURANCE

In addition to the operations of the specialized hail insurers described above, the Federal Crop Insurance Corporation also includes hail as one of the hazards it insures against in its all-risk insurance. The Federal insurance provides financial protection against most causes of crop damage not resulting from the negligence of the grower. The amount of Federal crop insurance (FCI) that may be obtained, however, is limited to average costs of production. Specialized hail insurance sometimes includes deductible options, but usually the total expected harvest value of the crop may be covered. Other differences are that FCI must be taken before the crop is planted and all acres of the unit must be insured; regular hail insurance frequently may be bought after planting time and all acres of the unit need not be insured. Because of the extra hazards, FCI premium rates usually are higher than hail insurance rates.

Indemnities paid by the Federal Crop Insurance Corporation for hail damage to crops in 1966 were estimated at $4.6 million, down from $5.2 million in 1965. However, other causes of loss such as excess moisture, freezing, and drought also were lower in 1966, resulting in an increase in the relative importance of hail payments, from about 13 percent to 19 percent of all FCI indemnities. For the entire period 1939-66, hail losses were estimated at 10 percent of total loss payments by FCIC.

Hail was responsible for 29 to 40 percent of all FCI loss payments in 1966 on wheat, oats, barley, dry peas, safflower, apples, and peaches. It caused 18 and 19 percent of the insured losses to tobacco and soybeans, and 8 and 9 percent of the losses to corn and cotton, respectively.

In dollar amounts, wheat accounted for 49 percent of all Federal crop insurance hail payments in 1966. Of course, all-risk coverage on wheat is larger than for any other crop and much wheat is grown in the Plains and Mountain regions where the incidence of hail is relatively high. Cotton, soybeans, and tobacco accounted for 11, 9, and 9 percent, respectively, of all FCI payments for hail damage. About 6 percent of all hail indemnities was paid on corn. Hail losses vary widely from year to year among crops but hail damage to wheat is usually relatively large. It accounted for 49 percent of all FCI hail payments in 1962-66. The proportions of total hail indemnities paid on corn and cotton during that 5-year period were 11 and 10 percent, respectively. Soybeans and tobacco each accounted for about 7.5 percent.

Table 1.--Hail insurance on growing crops: Amount of insurance, net premiums, and losses paid, United States, 1934-66 1/

Year	Amount of insurance	Net premium 2/	Losses paid	Loss ratio 3/
	Million dollars	1,000 dollars	1,000 dollars	Percent
1934	87	3,117	1,777	57
1935	206	9,224	5,726	62
1936	167	5,969	2,780	47
1937	300	10,871	5,150	47
1938	318	13,357	9,602	72
1939	252	9,709	4,838	50
1940	243	9,170	3,573	39
1941	340	14,859	9,290	63
1942	476	20,694	13,018	63
1943	622	26,929	19,443	72
1944	805	34,898	21,893	63
1945	938	42,100	24,245	58
1946	973	42,502	16,990	40
1947	1,199	58,442	27,702	47
1948	1,288	53,732	28,511	53
1949	1,240	55,186	26,823	49
1950	1,057	40,057	16,710	42
1951	1,371	53,874	36,151	67
1952	1,589	65,539	34,927	53
1953	1,776	69,389	49,807	72
1954	1,897	72,575	54,485	75
1955	2,067	77,242	44,701	58
1956	2,117	78,095	73,130	94
1957	2,410	95,368	57,856	61
1958	2,452	103,815	54,655	53
1959	2,461	98,727	45,350	46
1960	2,495	103,022	59,945	58
1961	2,420	96,738	66,772	69
1962	2,653	108,863	81,220	75
1963 4/	2,822	110,976	72,546	65
1964 4/	2,887	112,180	71,903	64
1965 4/	3,071	116,395	72,392	62
1966 5/	3,132	113,706	54,557	48

1/ By mutual and stock insurance companies, and State hail departments. Includes only amounts directly written by insurers.
2/ After cash discounts and dividends.
3/ Losses as a percentage of net premium.
4/ Revised.
5/ Preliminary.

Table 2.--Amount of crop-hail insurance coverage, by region, United States, 1952-66

Year	Northeast 1/	Lake States 2/	Corn Belt 3/	Northern Plains 4/	Appalachian 5/	Southeast 6/	Delta States 7/	Southern Plains 8/	Mountain 9/	Pacific 10/	Total, U.S. 11/
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
1952	14,267	117,636	681,472	274,662	200,111	61,509	2,350	90,417	103,617	43,243	1,589,284
1953	20,295	141,263	816,220	271,690	203,565	62,391	4,122	73,003	126,408	56,771	1,775,728
1954	22,504	153,722	934,240	281,375	219,451	59,330	5,622	75,819	104,692	40,014	1,896,769
1955	27,052	162,523	1,018,926	263,333	253,261	67,602	7,630	81,566	129,521	56,039	2,067,453
1956	21,613	173,345	1,025,432	277,179	243,656	67,028	9,505	101,752	120,461	76,973	2,116,944
1957	17,893	193,371	1,087,633	366,706	230,021	59,749	11,965	159,093	159,728	123,972	2,410,131
1958	17,534	188,789	1,076,992	398,102	231,595	56,851	7,141	178,307	173,340	123,733	2,452,384
1959	15,409	193,434	1,138,856	375,488	248,099	66,853	8,272	153,333	159,917	101,084	2,460,745
1960	15,579	181,293	1,147,389	388,457	253,222	69,088	7,781	170,661	163,632	98,303	2,495,405
1961	14,839	163,177	1,128,504	322,945	289,409	75,953	8,418	170,082	146,785	100,319	2,420,431
1962	15,734	158,712	1,194,272	366,447	359,172	101,608	19,815	159,716	185,584	91,742	2,652,802
1963	16,885	179,337	1,329,044	370,122	370,189	113,782	19,109	141,503	188,385	93,209	2,821,565
1964 12/	20,037	188,724	1,417,887	363,602	352,515	112,901	24,311	142,136	187,383	77,998	2,887,494
1965 12/	22,356	199,343	1,560,943	396,780	323,396	101,731	23,984	152,466	210,230	79,725	3,070,954
1966 13/	19,273	209,447	1,716,679	371,900	327,273	96,862	18,234	113,798	174,305	84,567	3,132,338

1/ Maine, N.H., Vt., Mass., R.I., Conn., N.Y., N.J., Pa., Del., Md. 2/ Mich., Minn., Wis. 3/ Ohio, Ind., Ill., Iowa, Mo. 4/ N. Dak., S. Dak., Nebr., Kans. 5/ Ky., N.C., Tenn., Va., W. Va. 6/ Ala., Fla., Ga., S.C. 7/ Ark., La., Miss. 8/ Okla., Tex. 9/ Colo., Idaho, Ariz., Mont., Nev., N. Mex., Utah Wyo. 10/ Calif., Oreg., Wash. 11/ Detail may not add to total because of rounding. 12/ Revised. 13/ Preliminary.

Table 3.--Distribution of crop-hail insurance, by region, United States, 1952-66 1/

Year	Northeast	Lake States	Corn Belt	Northern Plains	Appa-lachian	South-east	Delta States	Southern Plains	Mountain	Pacific	Total U.S. 2/
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1952	0.9	7.4	42.9	17.3	12.6	3.9	0.1	5.7	6.5	2.7	100
1953	1.1	8.0	46.0	15.3	11.5	3.5	.2	4.1	7.1	3.2	100
1954	1.2	8.1	49.3	14.8	11.6	3.1	.3	4.0	5.5	2.1	100
1955	1.3	7.9	49.3	12.7	12.2	3.3	.4	3.9	6.3	2.7	100
1956	1.0	8.2	48.4	13.1	11.5	3.2	.4	4.8	5.7	3.6	100
1957	.7	8.2	45.1	15.2	9.5	2.5	.5	6.6	6.6	5.1	100
1958	.7	7.7	43.9	16.2	9.4	2.3	.3	7.3	7.1	5.0	100
1959	.6	7.9	46.3	15.3	10.1	2.7	.3	6.2	6.5	4.1	100
1960	.6	7.3	46.0	15.6	10.1	2.8	.3	6.8	6.6	3.9	100
1961	.6	6.7	46.6	13.3	12.0	3.1	.3	7.0	6.1	4.1	100
1962	.6	6.0	45.0	13.8	13.5	3.8	.8	6.0	7.0	3.5	100
1963	.6	6.4	47.1	13.1	13.1	4.0	.7	5.0	6.7	3.3	100
1964	.7	6.6	49.1	12.6	12.2	3.9	.8	4.9	6.5	2.7	100
1965 3/	.7	6.5	50.8	12.9	10.6	3.3	.8	5.0	6.8	2.6	100
1966 4/	.6	6.7	54.8	11.9	10.4	3.1	.6	3.6	5.6	2.7	100

1/ For States within a region, see footnotes, table 2. 2/ Detail may not add to total because of rounding.
3/ Revised. 4/ Preliminary.

Table 4.--Net premiums paid for crop-hail insurance, by region, United States, 1952-66 1/

Year	Northeast	Lake States	Corn Belt	Northern Plains	Appa-lachian	South-east	Delta States	Southern Plains	Mountain	Pacific	Total, U.S. 2/
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
1952	814	4,169	13,134	20,539	9,178	2,617	69	7,215	7,007	796	65,538
1953	1,037	5,158	17,659	17,382	10,007	2,776	114	5,355	8,893	1,009	69,390
1954	1,175	5,488	20,733	17,915	11,024	2,708	147	5,424	7,038	924	72,576
1955	1,411	5,715	21,701	16,414	13,674	3,045	193	5,289	8,682	1,116	77,240
1956	966	6,219	22,958	16,415	13,204	3,014	265	6,739	6,807	1,507	78,094
1957	825	7,507	24,362	23,784	12,157	2,705	310	11,033	10,220	2,466	95,369
1958	797	7,780	23,931	28,995	12,083	2,643	186	13,298	11,471	2,631	103,815
1959	692	7,921	24,470	25,789	12,719	2,873	207	11,331	10,605	2,189	98,796
1960	623	7,899	25,238	28,404	12,431	2,969	191	13,055	9,992	2,221	103,023
1961	601	7,306	24,382	22,642	13,594	3,238	179	13,769	8,873	2,154	96,738
1962	641	7,170	27,496	26,599	16,897	3,903	405	12,595	11,144	2,012	108,863
1963	697	8,042	30,002	25,364	17,628	4,547	391	11,234	11,092	1,979	110,976
1964 3/	847	8,656	30,820	25,301	17,223	5,125	468	11,103	10,922	1,716	112,180
1965 3/	859	8,959	34,128	27,405	15,804	4,497	459	11,336	11,374	1,573	116,395
1966 4/	669	9,261	37,458	25,591	16,117	4,415	343	8,070	10,110	1,672	113,706

1/ Net premiums are premiums after dividends. For States within a region, see footnotes, table 2. 2/ Detail may not add to total because of rounding. 3/ Revised. 4/ Preliminary.

Table 5.--Crop-hail insurance payments to farmers, by region, United States, 1952-66 1/

Year	Northeast	Lake States	Corn Belt	Northern Plains	Appa-lachian	South-east	Delta States	Southern Plains	Mountain	Pacific	Total, U.S. 2/
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
1952	345	3,296	6,621	10,447	8,243	1,435	24	1,516	2,854	146	34,927
1953	660	3,255	21,138	11,049	5,528	987	66	1,871	5,129	125	49,808
1954	1,974	2,752	17,743	10,707	12,975	1,307	74	3,204	4,522	227	54,485
1955	1,811	3,392	7,225	12,113	8,230	1,806	118	4,526	4,617	863	44,701
1956	379	8,049	28,496	16,281	8,828	2,038	88	3,504	4,509	956	73,128
1957	491	7,158	7,344	18,599	3,736	1,024	111	11,020	6,057	2,317	57,857
1958	166	4,294	9,839	18,271	2,772	619	8	6,610	9,113	2,961	54,653
1959	133	7,198	6,304	14,734	3,917	1,279	45	7,638	3,960	151	45,359
1960	176	4,253	14,660	18,050	6,188	1,402	16	9,221	5,724	254	59,944
1961	755	6,768	17,460	12,474	8,958	2,857	166	10,379	6,302	655	66,774
1962	633	4,752	18,763	20,200	10,630	4,016	212	10,220	11,180	614	81,220
1963 3/	288	6,008	12,982	18,642	10,896	5,093	150	6,643	10,948	896	72,546
1964 3/	126	3,283	23,866	18,887	8,096	2,303	118	6,837	8,035	352	71,903
1965 3/	197	4,209	26,070	14,687	8,619	2,028	186	7,124	9,047	226	72,392
1966 4/	283	3,602	12,334	16,753	9,370	1,658	113	4,120	5,329	995	54,557

1/ For States within a region, see footnotes, table 2. 2/ Detail may not add to total because of rounding. 3/ Revised. 4/ Preliminary.

Table 6.--Crop-hail insurance payments to farmers per $100 coverage, average amount and year-to-year variability, by States and regions, 1957-66

State and region	Average amount	Year-to-year variability 1/	State and region	Average amount	Year-to-year variability 1/
	Dollars	Percent		Dollars	Percent
Maine	1.29	73	South Carolina	2.60	47
New Hampshire	1.01	73	Georgia	2.63	51
Vermont	3.32	120	Florida	1.39	54
Massachusetts	3.05	258	Alabama	.60	155
Rhode Island	2/	2/	Southeast	2.47	46
Connecticut	1.32	126			
New York	2.58	51			
New Jersey	1.40	91	Mississippi	.48	68
Pennsylvania	3.90	94	Arkansas	.84	84
Delaware	.93	114	Louisiana	2/	2/
Maryland	.50	116	Delta States	.75	70
Northeast	1.95	78			
			Oklahoma	4.52	71
Michigan	1.02	78	Texas	5.34	15
Wisconsin	1.41	42	Southern Plains	5.13	21
Minnesota	3.61	36			
Lake States	2.81	32			
			Montana	6.12	40
Ohio	.76	34	Idaho	1.84	55
Indiana	.74	36	Wyoming	6.23	83
Illinois	.83	64	Colorado	7.68	38
Iowa	1.78	35	New Mexico	5.11	22
Missouri	1.21	27	Arizona	1.19	48
Corn Belt	1.15	38	Utah	1.90	70
			Nevada	2/	2/
North Dakota	5.66	27	Mountain	4.28	27
South Dakota	4.30	22			
Nebraska	4.13	32			
Kansas	3.67	32	Washington	.68	90
Northern Plains	4.60	13	Oregon	1.39	91
			California	1.37	74
Virginia	2.40	60	Pacific	89	83
West Virginia	2.51	83			
North Carolina	2.26	32			
Kentucky	2.79	36	United States	2.38	16
Tennessee	2.04	42			
Appalachian	2.37	28			

1/ Coefficient of variation. The smaller the figure the smaller the variability. The 27-percent figure for North Dakota means that in approximately two-thirds of the years one might expect losses per $100 of insurance to be within 27 percent of the $5.66 average.

2/ Inadequate data.