A new role for federal crop insurance

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The federal crop insurance program has been revised under provisions of the Federal Crop Insurance Act that was signed in September 1980. The revisions represent an important change in policy and are intended to establish the Federal Crop Insurance Corporation (FCIC) as the primary institution offering farmers protection against low crop yields.

The partially subsidized FCIC program is designed to replace the fully subsidized disaster payment programs that have been the federal government's predominate form of disaster protection for producers of grains and cottons since the mid-1970s. The new legislation directs the FCIC to extend the crop insurance coverage to all agricultural counties and to consider underwriting insurance on additional agricultural commodities.

If the FCIC program expands as expected, agricultural lending may be affected in the process. Lenders may require farmers to purchase the insurance in order to reduce the risks associated with crop production and to make sure that farmers have funds available to repay operating loans in the event of low yields.

History of crop insurance programs

Federal crop insurance started in 1938.[1] The first act created the FCIC as a government-owned agency within the U.S. Department of Agriculture (USDA) and authorized insurance programs for unavoidable crop losses due to adverse weather, insect infestations, plant diseases, wildlife, and other risks. Losses due to neglect, poor farming practices, theft, or low prices were not included. Operating and administrative costs were covered by government appropriations, while premiums were designed to cover claims for losses and to build reserves. Payments for claims were limited to a portion of the value of the crop loss rather than the full value.

The first program was limited to wheat, although cotton was added after the second year. Heavy losses to wheat crops resulting in large indemnity (claim) payments in the first four years of the program prompted the Congress to suspend the program in 1943. New legislation in 1944 temporarily revived the insurance program for several crops, but the program was scaled back to an experimental basis following large cotton losses in 1945 and 1946.

Percent of FCIC indemnities paid by type of loss, 1939 to 1978

Drought	41.5
Freeze	13.9
Flood	2.2
Wind	6.7
Disease	2.8
Hail	10.8
Insects	4.6
Excess moisture	15.9
Other	1.6
Total	100.0

Federal crop insurance was restored in 1948 and since that time has been gradually expanded. Subsequent legislative changes have increased the number of insurable commodities from seven in 1948 to 28. The number of counties eligible for some coverage has expanded from about 400 in 1948 to 1,700.[2]

[1]Prior to the legislation most of the available crop insurance covered only fire and hail damage. Private companies, cooperatives, and even some state governments provided the insurance. Multiple peril or all-risk crop insurance was for the most part not available from private insurance firms.

[2]The number of different crops that are insurable in individual counties varies. In 1980 there were 4,629 crop programs, covering an average of about three different crops per county in over 1,600 counties.

Experience with crop insurance

On balance, FCIC indemnity payments have exceeded premiums. For the entire period 1948-80, indemnities have been about $1.6 billion, or 9 percent more than premiums. Ten of the 28 crops—including soybeans—had favorable overall indemnity-to-premium ratios during the period, while for 18 other crops, payments exceeded premiums. There has been a persistent tendency for indemnities to exceed premiums on cotton, citrus, potatoes, and forage seeding. In 1980—a year of large crop losses due to widespread drought—the indemnity-to-premium ratio was 2.2, the highest since 1945.

Despite the expanding coverage provided by the FCIC, farmer participation in the program has been low. The proportion of *eligible* acreage actually insured by the FCIC has averaged about 9 percent since 1948. The most acreage in any one year, 26.6 million acres, was insured in 1980. However, this represented only 12 percent of the 221.8 million insurable acres and only 7 percent of all the cropland in the United States.

Contributing to farmers' aversion to make greater use of the insurance have been the limited scope of the program, the low crop yield protection level, and, in recent years, the availability of competing disaster protection plans. Before 1980 federal crop insurance was offered on one or more of 27 different insurable crops in 1,526 counties. The remaining half of the agricultural counties in the United States and most of over 300 crops produced in the country were ineligible for FCIC insurance. While past legislation allowed expansion, limits on appropriations kept the expansion below the authorization. In addition, only one yield protection level, typically 60 percent, was allowed for a given crop. For many farmers this coverage was inadequate to cover the out-of-pocket expenses of producing a crop. The premiums, based on actuarial needs to meet losses and build reserves, were considered too high for the level of protection offered. During the last seven years, other disaster payment programs have been made available to producers of major crops.

The disaster payment provisions in the government's programs for wheat, feed grains, rice, and cotton have provided the bulk of the protection against low crop yields since 1973. These provisions partially compensate farmers who suffer losses due to inability to plant, or subnormal yields resulting from flood, drought, or natural disaster. To be eligible for payments, farmers have to set aside land—if such requirements are imposed—and operate within their normal crop acreage base. The payments are made to participants whose yields drop below 60 percent of the participant's average yield. The payment rate per bushel is tied to a "target price" determined by the Secretary of Agriculture. Total disaster payments from federal monies for the years 1974-80 were over $3.4 billion. About one-fourth of the total payments made under the program, over $900 million, was distributed in 1980.

Another program that has played a substantial role in providing assistance to farmers who suffer losses is the Emergency (Disaster) Loan Program of the Farmers Home Administration. Under this program loans are made in counties designated as disaster counties to farmers who suffer a loss of 20 percent or more in a major farm commodity enterprise. (In late spring the requirements were changed such that a loss of 30 percent or more in certain specified enterprise categories is required for eligibility.) Interest rates as low as 5 percent are available to borrowers who do not qualify for credit from commercial lenders. Such disaster declarations are often widespread. Over 2,300 counties were eligible in 1980.

The new FCIC program

Last year's legislation is designed to expand the coverage of the federal crop insurance program to all 2,740 agricultural counties. The number of crops eligible for coverage will also be increased as sufficient actuarial data—the history of losses in an area—are established. It was the intent of the legislation that the FCIC's program would become the primary form of protection against production risks for farmers. Unless extended in some form by the Congress, the disaster payments provisions for grains and cotton will expire this year. The FmHA emergency loan program will remain in operation unless altered by budgetary cutbacks or changes made in the major farm legislation this year.

The new insurance act incorporates several major provisions. Participants can elect one of three levels of yield protection and one of three levels of price protection. The options on yield protection are 50, 65, or 75 percent of the historical average yield in the participant's county or risk area within a county. The options on price protection are determined annually by the FCIC and apply to all areas. The highest price option is at least 90 percent of the annual price projected by the FCIC, based on trends, forward contracts, and judgmental factors. For 1981, price options are $1.70, $2.00, and $2.70 for corn and $4.50, $6.00, and $7.00 for soybeans. Options for the

Ratio of indemnities to premiums by crop, 1948-80

Program	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Wheat	.58	1.43	.52	1.06	.85	1.25	1.42	1.26	1.09	.60	.16	.68	.23	1.09	.38
Cotton	.43	1.97	2.81	.82	.44	1.05	.56	.84	.67	.54	.25	.45	.52	1.38	1.24
Combined crop	.06	16	.94	1.65	2.33	.91	1.50	1.42	1.28	.83	.36	1.70	.27	1.23	.76
Tobacco	.43	.66	.61	.49	.79	1.90	.89	.40	.28	.34	.19	.38	.35	.29	.79
Corn	17	16	1.26	2.38	.25	17	.56	1.47	3.35	.46	.56	.87	1.45	.23	1.52
Flax	.51	.62	.42	.49	.79	.95	.77	.77	.54	2.46	.45	1.64	.47	1.27	.65
Bean	.29	.64	1.84	3.14	.55	.62	1.60	.66	.96	1.03	.32	.91	.59	.54	2.03
Citrus**				0	.04	0	0	.03	.22	7.25	15	.24	2.11	2.36	9.25
Soybean								.73	.74	.65	.36	.44	.56	.54	.67
Barley									.39	.35	.39	1.08	.69	1.53	.81
Peach										.50	.77	1.13	.76	.63	1.81
Grain sorghum												.27	.28	.70	.39
Oat												.99	.65	1.26	.47
Rice													.58	1.03	.64
Raisin														.01	0
Pea															3.08
Peanut															.35
Apple															
Tomato															
Sugar beet															
Grape															
Sugarcane															
Sunflower															
Sweet corn															
Forage seeding															
Potato															2.17
Forage															
Rye															
All Programs*	.53	1.31	.91	1.12	.97	1.15	1.24	1.14	1.26	.69	.26	.77	.58	.89	1.10

*Includes cherry and safflower programs discontinued after the 1966 crop year and tung nuts discontinued after the 1970 crop year.

The 1980 crop year ratios are based on preliminary estimates.

SOURCE: Federal Crop Insurance Corporation.

1982 wheat crop are $2.50, $3.50, and $4.50.

The premium paid by a participant will depend on the combination of yield and price protection (coverage) that is selected. The premium schedule is based on the loss experience in the participant's county or risk area. A premium subsidy of 30 percent is available for those who select the 50 percent or 65 percent yield coverage. The subsidy for those selecting the 75 percent yield coverage has a maximum limit equal to 30 percent of the premium applicable to the 65 percent yield coverage. Participants who purchase hail and fire coverage from a private insurance firm will lower their FCIC premium costs by up to 30 percent. The act also permits a state government or an agency of the state to pay other premium subsidies so as to reduce further the farmer's share.

The FCIC, to the maximum extent feasible, is to use the delivery system of the private insurance industry to market and service federal crop insurance. Farmers may apply for policies at designated local insurance agen-

1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1948-80
.95	.57	1.24	.54	1.14	1.01	.74	.46	.42	.42	.83	.97	.51	.94	1.47	.48	.98	2.70	1.04
.70	.46	.84	2.29	3.85	1.92	2.61	1.33	1.67	.97	.46	2.24	3.22	3.57	.47	1.13	1.48	1.62	1.55
.45	.45	.07	.41	2.12	.10	.06	.21	.14	.29	1.02	1.06	.61	.46	1.06	.08	.07	5.81	1.16
.62	.31	.53	.59	.38	.54	1.06	.58	.39	.36	.67	.29	1.06	.91	2.98	.42	1.11	2.53	1.04
.41	1.67	2.04	.45	.94	.66	.57	1.17	.37	.25	.25	2.30	1.16	2.40	1.86	.20	.15	1.58	1.12
.79	1.41	.40	.96	.79	.36	.27	.93	.69	.70	1.24	1.94	.98	2.53	1.44	.65	.53	1.81	.89
.61	1.58	2.29	1.03	.64	1.35	.82	1.18	.67	.52	.91	.13	.82	.68	1.01	.90	.34	1.02	.96
.03	.45	1.11	.29	2.75	2.21	1.75	3.11	.63	1.23	.44	.42	.37	2.66	.28	1.01	.50	1.18	1.35
.98	1.02	.95	.58	1.27	.78	.89	.59	.72	.79	.31	1.01	.39	1.11	.39	.35	.38	1.78	.84
1.05	.53	.24	.42	.62	.43	.31	.66	.30	.61	.86	1.53	1.07	1.31	.99	.40	.56	2.29	.93
1.03	3.50	.53	.95	2.29	.24	.41	1.19	1.77	2.18	2.41	1.14	1.42	.46	.50	2.17	.15	.61	1.25
.75	1.03	.50	.42	.76	1.01	.41	.96	.58	.87	.23	1.63	.52	.91	.47	1.47	.62	2.80	1.04
.60	.69	.22	.60	.48	.39	.43	.47	.25	1.23	1.03	1.05	.53	2.99	.56	.53	.60	2.48	.85
0	.68	.43	.34	.31	.77	.44	.07	.51	.57	.63	.41	.23	.54	.72	.76	1.58	3.36	1.22
3.64	.02	.07	.07	.06	.03	.30	0	0	.01	.02	0	.20	11.66	.02	12.13	0	0	1.03
.53	2.64	.87	2.69	.76	2.77	.72	.98	.59	.52	1.54	.78	.83	.80	2.93	.84	.63	.58	1.28
.77	1.31	.26	.25	.55	.53	.63	.22	2.16	.53	.21	.32	.32	.49	.57	.28	.67	8.91	1.42
.35	.92	.37	1.91	.91	3.33	.24	1.65	1.06	3.25	1.31	1.48	.18	1.38	1.93	1.07	.80	.67	1.25
.41	.25	.27	1.81	.64	.97	1.79	.30	.40	.84	.97	2.38	1.93	.19	.79	.29	1.44	.29	.76
		.29	.58	.60	.64	1.82	1.32	.56	1.01	.77	1.13	1.90	.59	.33	.20	.39	.72	.78
				1.02	1.25	2.59	.77	0	4.10	1.55	.11	.10	.25	3.85	.20	.22	.27	1.01
				.07	.20	.08	.22	.89	.94	2.79	.50	.46	.64	.84	1.57	.70	1.49	.88
													.35	.12	.12	.43	1.51	.87
															.57	.54	.62	.57
															2.39	4.57	5.87	4.60
2.21	3.98	1.08	2.27	1.05	1.38	1.54									0	.14	0	2.06
																.68	3.41	1.99
																	1.90	1.90
.77	.90	1.13	.68	1.27	1.05	1.09	.94	.60	.60	.60	1.17	.86	1.57	1.46	.50	.65	2.20	1.09

Federal crop insurance availability on 1981 crops in District states

Crop	IL	IN	IO	MI	WI
	Number of county programs*				
Corn	101	87	99	38	57
Grain sorghum	5				
Oats	6		97	13	56
Soybeans	101	87	99	25	18
Wheat	72	82	8	30	1
Tobacco		11			10
Barley				1	
Beans				17	
Sugar beets				6	
Sweet corn					20
Peas					25
Forage production					1
Forage seeding					1

*Illinois has 102 counties; Indiana, 92; Iowa, 99; Michigan, 83; and Wisconsin, 72.

cies, FCIC offices, or other government agencies. Private insurance companies may even provide an all-risk crop insurance plan to farmers and, if the plan meets certain standards, reinsure it with the FCIC.

In the event premiums and reserves available to the FCIC are inadequate to meet indemnities, emergency funding may be sought. Commodity Credit Corporation funds may be used for up to one year to supplement payments to farmers, or monies may be borrowed, if authorized, from the U.S. Treasury at prevailing interest rates.

These provisions of the new act differ somewhat from earlier acts and may overcome some of the difficulties experienced historically with crop insurance. In order to make the insurance coverage more attractive, protection levels in excess of the 50 to 68 percent level previously available on a crop are now offered for all crops. Also, an individual yield coverage plan, whereby individual farm yields are used in place of countywide or risk area yields, is available to producers of the six commodity program crops and soybeans if the participants can prove their yields are higher than the established yields for the area. In addition, the premium is now subsidized to reduce the cost of insurance to farmers and to encourage greater participation. This also functions to allow the federal government a mechanism for continued subsidization of disaster payments similar to that which has prevailed under the commodity programs.

The provision to market the insurance through private insurance firms is a concession to the insurance industry because of its expressed concern over the role of government in the insurance business. As a result, farmers are offered a much larger service network than was possible under the FCIC organization. The FCIC also gains a more substantial sales force for promoting the program. The provision for emergency funding provides a safeguard against deficits that is a prerequisite for duplication of the widespread coverage of land area that was pro-

How federal crop insurance works

A farmer wants to insure 100 acres of soybeans in Farmer County, USA. The FCIC has determined the average county soybean yield to be 40 bushels per acre. The farmer can choose one of three yield coverages:

50 percent or 20 bushels per acre;
65 percent or 26 bushels per acre;
75 percent or 30 bushels per acre.

He can also choose one of the three price level coverages offered by the FCIC: $4.50, $6.00, or $7.00 per bushel.

If he selects the 65 percent yield coverage and the $7.00 price protection, the premium according to a schedule of rates would amount to $4.70 per acre. However, since the FCIC will subsidize 30 percent, his net premium is $3.30 per acre for multiple risk crop insurance.

If drought conditions reduce his yield to 10 bushels per acre on the 100 acres, he would be eligible for an $11,200 payment (16 bushels loss per acre x $7.00 x 100 acres. His cost for this protection was $330 ($3.30 x 100 acres).

vided under the commodity program. In 1980 the six crops that were included in the commodity programs accounted for about half of the cropland harvested.

The future of crop insurance programs

The program may be broadened in the future as a result of research and pilot programs permitted by the act. Insurance on rangeland, livestock, bees, nuts, vegetables, aquaculture species, forest products, and other commodities could be added.

Expansion into the new commodities may come about slowly, though, since about four years are needed to study and test a program in an area. It is also uncertain whether or not insurance would be made available on a commodity that is not a major source of agricultural income in an area. For now, priority will be given first to duplicating coverage on the six major crops—corn, wheat, barley, rice, sorghum, and cotton—that were part of the commodity programs and then to other principal crops—especially soybeans.

Implications of the new program

Participation by farmers may not increase significantly until 1982 when the FCIC program is scheduled to take over as the primary form of protection against low crop yields. Preliminary estimates indicate that sales of crop insurance in 1981 have doubled from 1980's level. Whether the program ultimately assumes its anticipated new role, however, will not be resolved until the Congress completes action on major farm legislation this year. Other existing forms of crop disaster protection may be continued and new forms may be enacted. If that occurs, then federal crop insurance may retain the minor role in protecting farmers against low crop yields that it has played in the past. If other programs are dropped, then participation in the federal crop insurance program may climb as farmers choose, in response to the more liberal provisions of the new program, to accept a small additional expense, the insurance premium, in place of the possibility of large crop losses. As a result, the government's cost of providing disaster relief to farmers suffering low crop yields could diminish. Outlays by the government will be necessary, but the amount could decline substantially below the levels necessary to run fully subsidized, duplicate programs.

Higher farmer participation could benefit agricultural lenders, since farmers have the option of assigning FCIC claim payments to lenders. This would reduce the risks of lending, since repayment is protected by the assurance that cash inflows continue when there is a major loss. Lenders may serve as catalysts to the promotion of federal crop insurance as they seek to protect the funds they lend to a farming industry plagued by wide variability in production.