

MSU Extension Publication Archive

Archive copy of publication, do not use for current recommendations. Up-to-date information about many topics can be obtained from your local Extension office.

Federal Crop Insurance Programs
Michigan State University Extension Service
Vernon L. Sorenson, Department of Agricultural Economics
Issued October 1982
6 pages

The PDF file was provided courtesy of the Michigan State University Library

Scroll down to view the publication.

FEDERAL CROP INSURANCE PROGRAMS

by Vernon L. Sorenson

Extension Specialist, Department of Agricultural Economics

Background

Farmers are faced with a major shift in government policy dealing with crop losses due to natural causes. Current policy calls for replacing the disaster payments program with an all risk crop insurance program. This bulletin explains in some detail what the all risk crop insurance program is and how it operates.

Federal all-risk crop insurance has developed over time with gradual expansion to new areas and additional crops. Significant amendments in 1980 to previous legislation provided the basis for the current program which seeks accelerated expansion of self-help crop insurance as a replacement for ASCS disaster payments.

Current objectives of the Federal Crop Insurance Corporation (FCIC) call for insuring 60 percent of all eligible acreage by 1984. Since disaster payments will not automatically be available for crops (in cases where crop insurance is available), farmers may want to consider the insurance alternative.¹

Insurance is available in all Michigan counties for corn, grain sorghum, wheat and barley. Insurance is available in selected counties for soybeans, oats, dry beans and sugar beets (Figure 1). In a few counties, farmers may be able to cover corn for silage. The national program provides for coverage on a wide range of crops, and it can be expected that additional crops will be added in Michigan as the actuarial base is established.

The new program is administered by the Secretary of Agriculture through the FCIC. All sales are handled through private insurance outlets. At present, there are some 650 sales representatives in Michigan. The names of these sales outlets are available in county ASCS offices.

How the Program Works

Insurance is available through two channels. The FCIC utilizes independent insurance agents through

¹The Food and Agriculture Act of 1981 authorizes the Secretary of Agriculture to make disaster payments available even where insurance is available under specified conditions.

Figure 1. 1982 Michigan FCIC Insurable Crops.
(Crop and County)



which producers enter into contracts directly with the FCIC. Alternatively, coverage can be obtained through insurance companies who in turn have reinsurance agreements with the FCIC. Both provide the same coverages and rates, but insurance companies have chosen to call their policy multi-risk rather than all-risk.

In either case, crops are insured against essentially all unavoidable hazards such as drought, freeze, hail, excess moisture, wind damage, insects and disease. Coverage is not provided against losses due to theft, neglect or failure to follow recognized good farming practices.

Premiums in each county are based on actuarial data to reflect differences in soil types, historical patterns of crop loss due to covered insurance factors and crops yields. Land in each county is classified into several categories to establish expected normal yields. The normal yield as established by the FCIC reflects yield records for designated areas over the most recent 10 years on which records have been assembled.² It is **not** the farm

²A lag of 1 or 2 years may exist because of time needed to assemble yield data.

“normal” yield used in government price support and acreage reduction programs.

Producers can purchase insurance with widely different yield and price provisions. Yields may be guaranteed at 50, 65, or 75 percent of the established normal yield. The producer also can choose from three price levels established each year by the U.S. Department of Agriculture to provide different levels of return if a loss occurs. These prices as established in Michigan for 1982 insurable crops are shown in Table 1.

Table 1. Michigan: Price Options for FCIC Insurance, 1982 Crop.

Item	OPTIONS		
	1	2	3
Corn (grain) bu.	\$ 2.00	\$ 2.70	\$ 3.00
Corn (silage) ton	14.00	18.00	20.00
Grain sorghum bu.	2.00	2.40	2.80
Barley bu.	2.00	2.25	2.60
Wheat bu. ¹	2.50	3.50	4.00
Beans (edible) lb. ²	.15	.20	.25
Oats bu.	1.20	1.40	1.70
Soybeans bu.	4.50	6.00	7.00
Sugar beets ton	15.00	20.00	35.00

¹ Price options for 1982 fall planted wheat.

² Includes cranberry, black turtle soup, dark red kidney, light red kidney, pinto, pea and medium white.

Producers may choose to insure with the FCIC with or without fire and hail coverage, and this in turn is reflected in the premium. However, if fire and hail insurance are not purchased through FCIC, proof must be submitted that an equivalent amount of coverage is being carried with another insurance company.

The conditions and options available to individual producers in purchasing insurance are indicated in county actuarial tables. An example for corn in a Michigan county is shown in Table 2. A similar table exists for each county and each eligible crop.

Table 2 contains 18 different insurance options for each land classification. Corn producers can insure to cover a price of \$2.00, \$2.70 or \$3.00 per bushel at three yield levels and with or without hail and fire protection. In the example, four land classifications are used to indicate average yield levels on different quality land in the county. These classes reflect average corn yield expectations from land classification categories 1 through 4 of 64, 76, 90 and 100 bushels per acre respectively. If, for example, the corn crop is insured at level 1 (50 percent of yield) farmers with Class 1 land will be assured a return either from crop sales or insurance payments of 32 bushels per acre. With insurance at level two (65 percent of normal yield) this will in-

crease to 42 bushels per acre and at level three (75 percent of normal yield) will be 48 bushels per acre for Class 1 land.

The program is designed to guarantee a return from a given amount of production. If production is less than the guarantee, the producer is paid for the shortfall at a price and a level of production guarantee determined before the crop is planted.

The level of guarantee for a production unit can be illustrated through an example. Assume a farmer in this county plants 100 acres of Class 2 land and chooses to insure at 65 percent of his normal yield, using the price option of \$2.70 per bushel. Protection as derived from Table 2 will be as follows:

	Bushels
Guaranteed production	
@ 65 percent of	
normal yield	5,000
Assumed actual harvest	
@ 20 percent of	
normal yield	1,520
Covered loss (5000-1520)	3,480
Insurance payment at	
\$2.70 per bushel	\$9,396

Total return would amount to \$9,396 plus the market value of 1,520 bushels that were harvested. The cost of insurance in this case is \$7.85 per acre (Table 2) or a total of \$785.

If a crop is damaged to the extent that it is left unharvested, the indemnity payment is based on the total production guarantee (5,000 bushels in this example) but is reduced by whichever is the lesser of 6 bushels per acre or 20 percent of the production guarantee to offset the lack of harvesting costs.

Individual Farm Plans

Provisions exist for farmers to develop individual insurance plans provided they can demonstrate yields significantly above those that represent the locality in which they live. The individual farm yield data must cover a period of three years. The average for these three years will, in turn, be averaged with the FCIC established yields for the previous seven years to obtain the initial adjusted farm yield base. In each succeeding year, the yield base will rise by incorporating an additional year of the farm's actual yield until a new base derived entirely from the individual farm's record is established. Premiums will be adjusted to reflect the higher level of possible loss if an individual farm plan with higher yields is arranged.

Premium Adjustment

Over the long run, premiums will be adjusted for all insured farmers in relation to their loss experi-

Table 2. Example County Actuarial Table, Corn, Michigan.

Classification of land	Production Guarantee Per Acre (Bu.)	Premium — With Hail & Fire Protection			Premium — Without Hail & Fire Protection		
		\$2.00	\$2.70	Price Election Per Bu. \$3.00	\$2.00	\$2.70	\$3.00
Base Premium in Dollars Per Acre*							
Level 1 — 50 Percent of Normal Yield							
1	32.0	5.10	6.90	7.70	4.35	5.85	6.55
2	38.0	5.10	6.90	7.70	4.35	5.85	6.55
3	45.0	5.10	6.90	7.70	4.35	5.85	6.55
4	50.0	5.10	6.90	7.70	4.35	5.85	6.55
Level 2 — 65 Percent of Normal Yield							
1	42.0	8.30	11.20	12.40	7.05	9.50	10.55
2	50.0	8.30	11.20	12.40	7.05	9.50	10.55
3	59.0	8.30	11.20	12.40	7.05	9.50	10.55
4	65.0	8.30	11.20	12.40	7.05	9.50	10.55
Level 3 — 75 Percent of Normal Yield							
1	48.0	11.40	15.30	17.00	9.70	13.00	14.45
2	58.0	11.40	15.30	17.00	9.70	13.00	14.45
3	68.0	11.40	15.30	17.00	9.70	13.00	14.45
4	75.0	11.40	15.30	17.00	9.70	13.00	14.45
Base Premium Reduced for Government Subsidy in Dollars Per Acre*							
Level 1 — 50 Percent of Normal Yield							
1	32.0	3.55	4.85	5.40	3.05	4.10	4.60
2	38.0	3.55	4.85	5.40	3.05	4.10	4.60
3	45.0	3.55	4.85	5.40	3.05	4.10	4.60
4	50.0	3.55	4.85	5.40	3.05	4.10	4.60
Level 2 — 65 Percent of Normal Yield							
1	42.0	5.80	7.85	8.70	4.95	6.65	7.40
2	50.0	5.80	7.85	8.70	4.95	6.65	7.40
3	59.0	5.80	7.85	8.70	4.95	6.65	7.40
4	65.0	5.80	7.85	8.70	4.95	6.65	7.40
Level 3 — 75 Percent of Normal Yield							
1	48.0	8.90	11.95	13.30	7.60	10.15	11.30
2	58.0	8.90	11.95	13.30	7.60	10.15	11.30
3	68.0	8.90	11.95	13.30	7.60	10.15	11.30
4	75.0	8.90	11.95	13.30	7.60	10.15	11.30

* The "Base Premium" is the total cost of insurance to government and producers. The "Base Premium Reduced for Government Subsidy" is the amount that will be paid by the producer. The bottom half of the table contains the relevant data for farmers to use in making decisions on insurance purchases.

ence (Table 3). Farmers with a loss ratio of less than 1 (ratio of indemnities paid to premiums) can achieve up to a 50 percent reduction in premiums over a 15-year period. Those with a loss ratio above 1 will face an increasing premium. In the extreme, with a loss ratio of 3.25 to 1 and above, premiums will triple over a 15 year period.

The Insurance Unit

Insurance is available on a "per unit" basis. A unit is defined in terms of the farm accounting sys-

tem used and the county of location. A single farm is the clearest definition of a unit. A producer operating two farms in the same county may include both in a single unit if the normal farm record-keeping practices treat them as a single operation. They may also be treated as separate units and insured separately. Or, one may be insured and not the other. To do this, separate records must be kept for each farm.

Rental practices also may affect the definition of a unit. If a farmer cash rents a second farm, it can be part of a single unit with the home farm, or it can be

treated as a second unit with separate records. If a farm is rented on a crop share basis, the rented farm must be treated as a unit and separate records kept.

If insurance is purchased, all production of an insured crop on a given unit must be included. Production on a part of the unit that is more susceptible to damage (e.g. from excess water) cannot be separated out for coverage. Each crop is insured separately, and farmers may insure one crop without insuring others or choose any combination of crops to insure among those produced.

The Crucial Dates

Several dates need to be kept in mind. These are shown in Table 4.

Column 1, "Sales Closing" is the last date that insurance can be purchased for each crop. Sales closing may occur earlier, based on weather and/or crop

conditions. Changes in previous contracts normally will be accepted until sales are closed.

Column 2, "Final Planting" is the date at which planting must be completed.

Column 3, "Acreage Report" is the date by which a final planted acreage report must be submitted to the FCIC.

Column 4, "End of Insurance Period" is the final date at which harvest must be completed to qualify for indemnity if a loss is incurred.

Column 5, "Indebtedness Termination" is the final date at which premiums must be paid. Individual agents or insurance companies may follow varying practices concerning premium payments, including partial or even full payment when the insurance contract is signed. Premiums owed after the indebtedness termination date incur a 9 percent surcharge.

Column 6, "Cancellation" is the final date for

Table 3. Premium Adjustment With Favorable and Unfavorable Loss Ratios.

% Adjustments for Favorable Continuous Insurance Experience																
	Numbers of Years Continuous Experience Through Previous Year															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 or more
Loss Ratio ¹ Through Previous Crop Year	Percentage Adjustment Factor For Current Crop Year															
.00-.20	100	95	95	90	90	85	80	75	70	70	65	65	60	60	55	50
.21-.40	100	100	95	95	90	90	90	85	80	80	75	75	70	70	65	60
.41-.60	100	100	95	95	95	95	95	90	90	90	85	85	80	80	75	70
.61-.80	100	100	95	95	95	95	95	95	90	90	90	90	85	85	85	80
.81-1.09	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
% Adjustments for Unfavorable Insurance Experience																
	Number of Loss Years Through Previous Year ²															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Loss Ratio ¹ Through Previous Crop Year	Percentage Adjustment Factor For Current Crop Year															
1.10-1.19	100	100	100	102	104	106	108	110	112	114	116	118	120	122	124	126
1.20-1.39	100	100	100	104	108	112	116	120	124	128	132	136	140	144	148	152
1.40-1.69	100	100	100	108	116	124	132	140	148	156	164	172	180	188	196	204
1.70-1.99	100	100	100	112	122	132	142	152	162	172	182	192	202	212	222	232
2.00-2.49	100	100	100	116	128	140	152	164	176	188	200	212	224	236	248	260
2.50-3.24	100	100	100	120	134	148	162	176	190	204	218	232	246	260	274	288
3.25-3.99	100	100	105	124	140	156	172	188	204	220	236	252	268	284	300	300
4.00-4.99	100	100	110	128	146	164	182	200	218	236	254	272	290	300	300	300
5.00-5.99	100	100	115	132	152	172	192	212	232	252	272	292	300	300	300	300
6.00-Up	100	100	120	136	158	180	202	224	246	268	290	300	300	300	300	300

¹ Loss Ratio means the ratio of indemnity(ies) paid to premium(s) earned.

² Only the most recent 15 crop years will be used to determine the number of "Loss Years." (A crop year is determined to be a "Loss Year" when the amount of indemnity for the year exceeds the premium for the year.)

Table 4. Important Dates Related to Federal Crop Insurance in Michigan for 1982 Crops.

Commodity	1 Sales Closing	2 Final Planting	3 Acreage Report	4 End of Insurance Period	5 Indebtedness Termination ¹	6 Cancellation
1982 SPRING CROPS:						
Barley	4/15	5/25	5/30	10/31	3/31	12/31
Corn (Grain)	4/30	6/10	6/30	12/10	3/31	12/31
Corn (Silage)	4/30	6/10	6/30	9/30	3/31	12/31
Grain Sorghum	4/30	6/30	6/30	12/31	3/31	12/31
Oats	4/15	5/25	5/30	10/31	3/31	12/31
PMW Beans	5/25	6/30	7/10	11/15	3/31	12/31
Soybeans	4/30	6/20	6/30	12/10	3/31	12/31
Sugar Beets	4/15	5/20	6/01	11/15	3/31	12/31
1982 WINTER CROP:						
Wheat	9/30	10/20	11/05	10/31	10/10	6/30 ¹

¹ 1983

cancellation of the contract if a producer does not wish to continue the insurance the following year. This date is established because the FCIC assumes all insurance contracts to be continuous, thereby avoiding the need for a producer to reapply or the agent to resell insurance each year. Cancellation must be in writing.

Loss Adjustment

An important issue is how loss adjustment will be handled. Farmers should report loss to the agent from whom they purchase insurance as soon as a loss is apparent. Do not wait until loss is proven at harvest time. The agent will, in turn, refer the report to a district FCIC director; there are three in Michigan. Loss adjustment will be handled by a "loss contractor". These persons are trained by the FCIC and located throughout Michigan. The loss contractor you deal with will be assigned by the District FCIC director and generally will be a person of local (at least within the county) origin. Losses are adjusted on a per unit basis.

Loss measurement as reflected in yield reduction should be relatively straightforward, though the question of whether a damaged crop should be harvested could occur. Loss in quality, however, may be somewhat more difficult to deal with. A recent statement by the FCIC concerning quality loss is as follows:

"The insured may suffer a loss in quality as well as a loss in quantity. A loss in quality will generally be reflected in the price at which the product can be sold on the market. There are a number of methods used, depending upon the

commodity, to reflect this type of loss. Essentially, these methods are to reduce the amount of damaged production to be counted against the production guarantee, thus increasing the indemnity payable.

"It should be noted that quality and quantity losses are not settled separately but are combined. High production may offset some or even all of the loss from poor quality. Loss in quality can hurt producers as much as loss in quantity of production. Its inclusion in the insurance protection is important. Quality protection was not given in the early years of federal crop insurance, but was added as workable methods were developed."

In any event, determination of indemnity involves dealing with an individual loss contractor designated by and directly representing the FCIC. Private sales agents or insurance companies are not involved in evaluating losses or determining indemnities.

Concluding Comments

The FCIC program has expanded gradually since the initial program was established for wheat in 1938. Since 1980, emphasis has been placed on crop insurance as the major tool available to farmers to cover losses due to natural conditions beyond their control. Current government policy is that disaster payments will not be available for crops and in counties where federal crop insurance is available.

At present, the program is limited but is expected

eventually to cover virtually all crops in all counties of the U.S. The program represents a basis for assuring a measure of cash flow from damaged crops for those farmers who participate. The law requires that premiums be set at a level adequate to cover losses and provide a reasonable reserve against unforeseen catastrophe. Premiums, in turn, are reduced by a direct government subsidy of 30 percent where the coverage option is 50 or 65 percent of normal yield and somewhat less with 75 percent. Government funds also are used to cover operating costs incurred by the FCIC.

Participation is open to all farmers for all designated crops in their county. There is no linkage to participation or non-participation in price support programs. The program is voluntary, hence, farmers can choose to assume all natural risk themselves.

The decision for each producer probably should reflect a number of considerations. Foremost is an assessment of the chances that losses will occur and the capacity to absorb a loss as reflected in the overall financial condition of the farm business.

Heavily in-debted farmers are more vulnerable than those with limited amounts of debt. Marketing considerations also may be relevant. If, for example, crops are forward contracted, insurance can help cover the additional cost incurred if crop losses prevent full delivery on the contract. Insurance becomes virtually compulsory if lenders require participation as a condition of granting credit. Except for this circumstance, farmers need to make their own evaluation of costs and benefits and buy insurance to a level where premium costs can be justified in view of the risk involved.

MICHIGAN STATE UNIVERSITY



MSU is an Affirmative Action/Equal Opportunity Institution. Cooperative Extension Service programs are open to all without regard to race, color, national origin, or sex.

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8, and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Gordon E. Guyer, Director, Cooperative Extension Service, Michigan State University, E. Lansing, MI 48824.

This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by the Cooperative Extension Service or bias against those not mentioned. This bulletin becomes public property upon publication and may be reprinted verbatim as a separate or within another publication with credit to MSU. Reprinting cannot be used to endorse or advertise a commercial product or company.

1P-3M-10:82-DP-KMF, Price 35¢