A STUDY OF INSURANCE AS A MEANS OF SHIFTING SOME TYPES OF FARMING RISKS IN PAYNE COUNTY, OKLAHOMA

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CHAPTER I

INTRODUCTION

Farming is subject to many kinds of uncertainty which may affect farmers' financial returns. When the farmer plants a crop or invests in livestock, buildings, or equipment, he cannot know with certainty the future conditions under which he will have to operate.

Results of Some Uncertainties May be Favorable or Unfavorable

Results from some of these uncertain conditions may either be favorable to the farmer or unfavorable. Selling prices may be higher than anticipated when the enterprise was planned and may result in higher net returns, or they may be lower and less favorable. Weather may result in high crop yields or low crop yields; in good grazing conditions or poor; and in favorable or unfavorable livestock gains. Dealing with these uncertainties is an everyday management problem for all farmers.

Results of Other Uncertain Conditions Can Only be Unfavorable

However, there are some uncertain conditions, sometimes called pure risks, which in themselves cannot result in a profit.[1] If a barn burns or a farm truck is wrecked, the result must be a loss. Among these pure risks, which cannot of themselves result in a business profit, are (1) loss of future income because of premature death,

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[1] Albert H. Mowbray and Ralph H. Blanchard, Insurance, (New York, Toronto and London, 1955), p. 7.

(2) decrease in future income or loss of assets because of impaired health or other physical disability, (3) loss of property from disasters such as fire, hail, or collision, and (4) loss of capital assets as a result of financial liability suits.

Some Risks May be Shifted by Insurance

Although these risks can result only in loss, it is often possible to shift all or part of the loss from the farmer to professional risk bearers through the medium of formal insurance. By insuring against the loss, the farmer substitutes a small, certain cost--the premium--for an uncertain but possibly very large loss.

The decision as to how much of this small, certain cost should be substituted on a particular farm for the possible, but not certain, large loss is also a management problem. What should the farmer insure, and in what amounts? Whereas a great deal of farm management research is directed toward problems arising from the broad area of uncertainty, the study which is reported here investigates the manner in which farmers are dealing with those "risks" which can only result in loss if they occur but which the farmer can "manage" through the medium of insurance.

Area Studied

The survey area for this study is limited to Payne County which is located in the north central section of Oklahoma (Figure 1). The general farm type encountered was small grains with dairy and/or other livestock enterprises. Because of differences in farming conditions in different parts of Oklahoma, it is not possible to draw

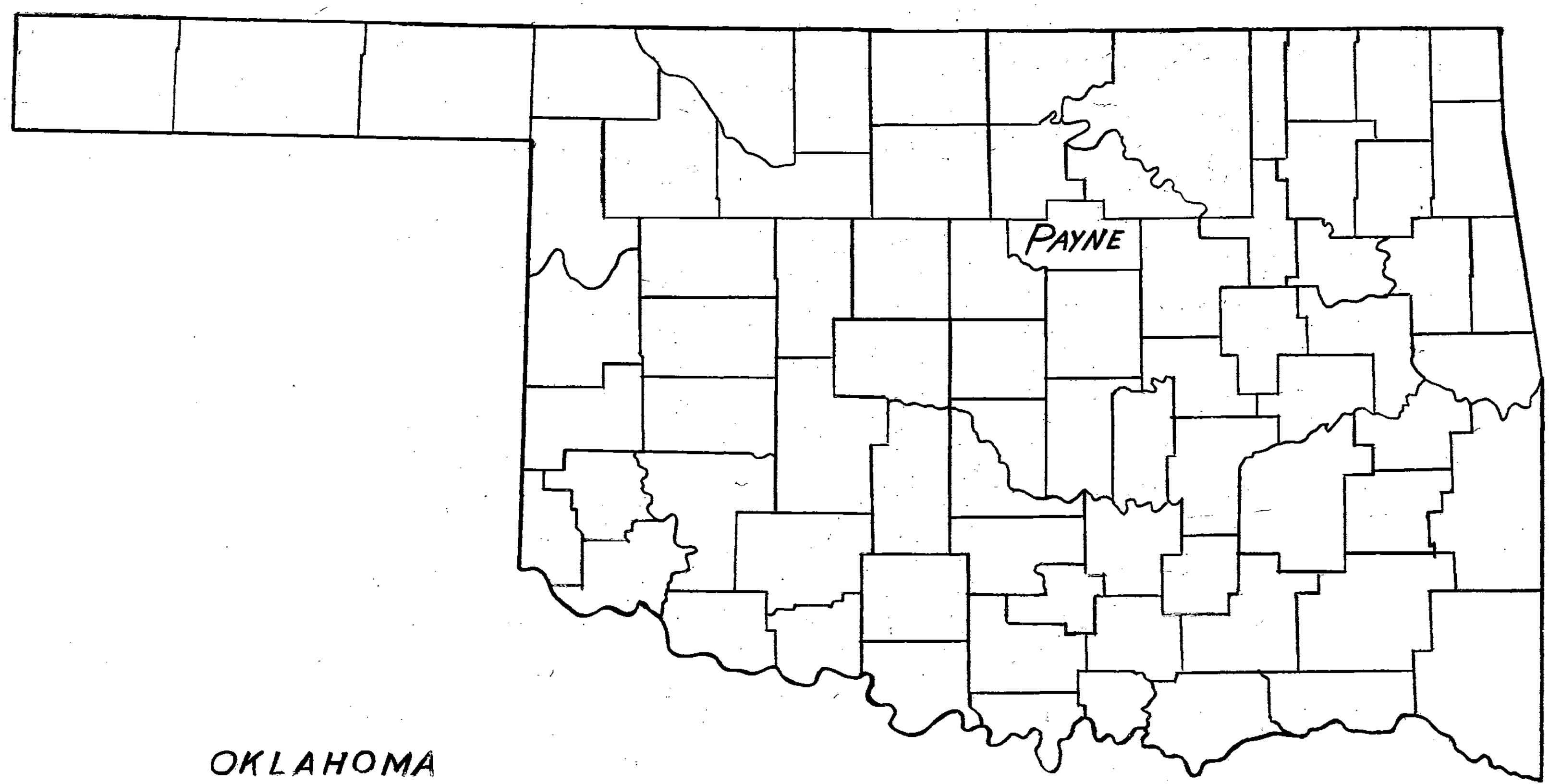

Figure 1. Location of Payne County

accurate conclusions about farm insurance practices for the entire state from the results of this limited study. However, the general principles which are illustrated are likely to be applicable to the entire state.

Purpose of the Study

The study was conducted to determine the types of risk against which Payne County farmers are insuring, to determine the types and amounts of insurance which they are now carrying, and to evaluate insurance programs in the light of their personal and economic characteristics. The study covered personal insurance such as life, disability, and medical expense as well as property and casualty insurance.

Method of Study

The 52 farmers interviewed were determined by a random sampling of all farms in Payne County. Each farmer whose name was drawn in the random sample was sent a personal letter explaining the purpose of the study and requesting his cooperation in making insurance policies and other information available. Schedules were taken by personal interview during the spring of 1957. Response from the farmers interviewed was excellent.

Two types of analysis of the data were made. The first dealt with the aggregate of all farmers interviewed and with the study of various breakdowns into groups. The second dealt with case studies of selected farmers through which it is more nearly possible to evaluate the effectiveness with which the premium dollar is being spent relative to the risk carried.

General Information

Table I shows that the average age of farmers interviewed was 52.9 years.[2] Average years of formal schooling was 9.0.[3] The average number of dependent children per family was 1.3, but half of the families had no dependent children.[4] The farmers interviewed owned an average of 195 acres, but were operating an average of 396 acres. The average net worth was almost $20,000. The average liability per farmer was under $4,000.

In addition to the over-all average values, Table I shows the contrast between the 25 percent of farmers having the highest values for each of the characteristics listed and the 25 percent having lowest values. This breakdown gives some indication of the variation in personal and economic characteristics of the farmers studies without the overemphasis of differences which would be suggested by individual values at the extremes of the range for each characteristic.

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[2] In age the mean, median, and mode were equal.

[3] The mean of years of schooling was 9, while both the median and mode were 8.

[4] A greater spread was experienced between the mean and median for number of dependent children than for the age of operator or his years of schooling. The mean of number of dependent children was 1.3; the median only 0.5.

TABLE I

PERSONAL AND ECONOMIC CHARACTERISTICS OF FARMERS INTERVIEWED: PAYNE COUNTY, OKLAHOMA, 1957

Characteristic	Average of Lowest 25% for Each Characteristic	Average of Highest 25% for Each Characteristic	Average of All Farmers
Age (Years)	35.7	68.6	52.9
Schooling (Years)	4.4	14.0	9.0
Dependent Children (Number)	0.0	3.5	1.3
Acres Owned	18	456	195
Acres Operated	117	805	396
Net Worth	$1,862	$45,777	$19,060
Liabilities	$ 0	$11,959	$ 3,749

Types of Insurance Carried

A wide variation in the types and amounts of insurance carried by the farmers surveyed was revealed by the study. With 84 percent of the farmers interviewed carrying some fire insurance on their homes, this type of coverage was the one most common to the farms in the study. Some automobile and truck liability was carried by 76 percent of the farmers owning vehicles. Thirty-eight percent of the operators were carrying life insurance on themselves, 30 percent of those with wives had some coverage on their wives, and 35 percent of those with dependent children had policies on some or all of their children. Forty-four percent of all farm families had some medical expense insurance. Only 10 percent carried disability income insurance. Farmer's Personal Comprehensive Liability was carried by 8 percent of the farmers interviewed.

The coverages shown by the data in Table II indicate, in a very general way, the reaction of the interviewed farmers toward insurance as a means of dealing with their risk problems. For example, in view of the certainty of eventual death with its accompanying financial adjustments for survivors, it is interesting to note that 62 percent of the farm operators had no insurance on their own lives as one means of meeting this adjustment problem. In view of the possibilities of crippling judgments arising from injuries to employees, it may be surprising that 92 percent of the farmers interviewed had no comprehensive or employer's liability insurance. As will be pointed out later, more than a third of the farmers were

TABLE II

TYPES OF INSURANCE COVERAGE BY FAMILIES WITH APPLICABLE RISKS: PAYNE COUNTY, OKLAHOMA, 1957

Type of Coverage	Families with Applicable Risk		
	Number	Number Covered by Insurance	Percent Covered by Insurance*
Life Insurance on Operator	52	20	38
Life Insurance on Wife	47	14	30
Life Insurance on Children	26	9	35
Disability Income Insurance	52	5	10
Medical Expense Insurance	52	23	44
Fire Insurance on House	45	38	84
Fire Insurance on Outbuildings	45	32	71
Fire Insurance on Household Goods	52	27	52
Hail Insurance on Wheat	40	12	30
Farmer's Comprehensive Liability Insurance	52	4	8
Automobile & Truck Liability Insurance	51	39	76
Automobile & Truck Medical Payments Insurance	51	25	49
Automobile & Truck Collision Insurance	51	22	43
Automobile & Truck Comprehensive Insurance	51	23	45

*Percentages are calculated on the basis of the number of families to whom the kind of risk applies rather than all families interviewed e.g., 35 percent of families having dependent children had life insurance coverage on children.

not aware that such protection was available. In other cases, farmers believed that their premium dollars could be spent to better advantage on other forms of insurance.

This study does not uncover all of the reasoning behind farmers' purchases of insurance--in fact, there is little evidence of careful insurance programming--but later discussion of each type of insurance will provide further indication of the attitudes of the surveyed farmers.

CHAPTER II

PERSONAL INSURANCE COVERAGES

The general category of personal insurance includes all coverages on the operator or his family. Such coverages found in the survey included life insurance on the operator or his family, disability income insurance, and medical expense insurance.

Life Insurance

Life insurance is designed to provide funds for survivors in case of the death of the insured. If death of a member of a family is likely to leave the survivors in serious financial difficulty, then life insurance may play a very important role in the general insurance program.

Characteristics of Different Kinds of Life Insurance

There are many kinds of life insurance which, because of differences in their characteristics, sell at different prices per dollar of face value. The price of each policy will vary according to the combination of two elements: the element of protection and the element of savings. The larger the amount of savings included in an insurance contract, the higher will be the premium cost per dollar of face value. The four general kinds of life insurance contracts are term insurance, ordinary life, limited payment life insurance, and endowment insurance. These general kinds may be modified by special contracts which will be discussed later. Before the particular coverages discovered in the survey are discussed it is desirable to indicate some of the more important characteristics of each of the general kinds of life insurance policies.

Term Insurance

Term insurance is pure protection with little or no cash or reserve value.[1] The policy is purchased for a specified term of years only. Some term insurance is renewable at the end of the term without a physical examination and, therefore, without reference to the physical condition of the insured at the time of renewal. This feature, in effect, allows the insured who is covered by the policy for a limited period of time, to assure his insurability for the same or smaller amount of insurance for the future. With term insurance, the premium is increased each time the insurance is renewed because, with the increased age of the applicant, greater risk is assumed by the insurance company. As will be pointed out later, this extra cost for the greater risk assumed by the company is reflected in all kinds of insurance even though the total premium itself does not increase from year to year.

It is usually possible to convert a term insurance policy to some form of <u>permanent</u>[2] insurance within a specified period of time

[1]On term insurance which extends over a long period of time, the premium is higher during the first few years than is necessary to cover the risk. In such cases, a small cash value may develop in the policy during the early years.

[2]Permanent life insurance includes all policies covering the insured in which the benefits will be paid to someone at some future date either during the life of the insured, as in the case of endowment policies, or at his death <u>regardless of when it occurs</u>.

without a new physical examination. The time during which such conversion is allowed, varies among companies and with different kinds of policy contracts. In general, when compared with other general kinds of life insurance, term insurance offers the greatest amount of protection per dollar of total premium.

Term insurance may be purchased having a relatively low level-premium for the whole period of coverage but decreasing in the protection offered from year to year. Such insurance is commonly referred to as decreasing term. Mortgage insurance, purchased by borrowers, is an example of decreasing term. It may also be combined with some forms of permanent life insurance to create a special policy which will be discussed later.

In appraising the different kinds of insurance policies it is well to remember that all kinds of policies contain the element of pure protection and therefore, that all permanent insurance contracts contain some form of term insurance. The different kinds of permanent insurance are all combinations of some form of savings with term insurance. The term insurance which is incorporated into permanent insurance contracts has essentially the same characteristics as term insurance which is sold in a separate contract even though these characteristics are obscured by "leveling" the premium payments so that the rate remains the same throughout the total payment period.

Ordinary Life Insurance

Ordinary life insurance is normally the lowest cost permanent insurance contract per dollar of face value. The premiums for ordinary life insurance are payable at a specified rate for the lifetime of the insured. The savings element under this kind of policy is small and the cash value does not equal the face value until the insured has reached an advanced age. The time required for such savings to equal the face amount is determined largely by the size of the premium per dollar of face value, and the amount of the dividends, if any, which are reinvested in the policy.

Limited Payment Life Insurance

Like ordinary life, limited payment life insurance affords protection for the entire life of the insured. It differs from ordinary life insurance in that the payments are concentrated into a limited period of years. Since the contract calls for fewer payments during the life of the insured, the annual payment per dollar of face value must necessarily be higher. The cash value under limited payment life contracts increases faster than under the ordinary life policy because of the higher premium per dollar of face value which, in effect, represents a building up of reserves by the process of prepayment. Although the payments for limited payment life insurance are made only for a specified period of time, the cash value of the policy does not equal the face value by the end of that specified payment period. The face value, of course, will be paid to the beneficiaries upon the death of the insured at any time. Common forms of limited payment life insurance contracts are the 20-year payment life and the 30-year payment life.

Endowment Life Insurance

In contrast with the ordinary life policy in which the element of protection is large and the element of saving is small, the endowment policy embodies relatively less protection and more savings per dollar of total premium. Unlike either the ordinary life policy or the limited payment life policy, the premium payments in endowment insurance are so arranged that the savings element is sufficient to allow the cash value of the policy to equal the face value at the end of the stated period of time during which the premiums are paid. This being the case, the contract specifies that the insured, if living, shall receive the face value of the policy at the end of the endowment period. On the other hand, the policy guarantees that, in the event of the death of the insured before the end of the endowment period, the face value of the policy will be paid to the beneficiary. Thus, with a 20-year endowment policy, if the insured should live for the entire 20-year period, he himself would receive the face amount of the policy; if he should die before that time his beneficiary would receive the same face value.

Because the endowment contract provides both protection and a higher rate of savings, the premium must be high enough to cover these savings in addition to covering the cost of protection which is essentially the same regardless of the kind of policy. Rates on endowment insurance vary with differences in the endowment time periods. The shorter the time period, the more rapidly must the savings be accumulated and, therefore, the higher must be the premium per dollar of face value. The longer the endowment period the more time there is for the accumulated savings to equal the face value and therefore the lower may be the premium per dollar of face value.

Endowment insurance can serve a useful purpose in providing a definite amount of money at some specified future date and may have a proper place in the insurance program of any individual for whom the element of savings in a particular policy is more important than the element of total protection. It is obvious, however, that the higher the premium per dollar of face value, the smaller must be the total amount of insurance which can be purchased for a given number of dollars. When protection rather than savings is the primary consideration this feature of cost may be important.

Special Forms of Life Insurance Policies

In addition to the four general kinds of policies, insurance companies commonly offer special forms of insurance contracts which may be incorporated into an insurance program to meet particular needs. Among the better known of these special forms are <u>family income</u>, <u>the family maintenance</u>, and <u>the family group</u> policies.

In order to understand these policies and put them into an insurance program, it is desirable to resolve them into their component parts since all of them are combinations of some term insurance and some permanent form of insurance.

<u>The family income policy</u>--The family income policy is a combination of ordinary life insurance and decreasing term insurance. Upon the death of the insured these policies provide for a monthly income in addition to the face value of the permanent insurance with the additional income continuing until the expiration of the specified period beginning with the date of issue of the contract. Thus, if the family income contract is for a period of 20 years and if the insured should die at the end of 15 years, the beneficiary

would receive the payments for all of the remaining 20 years. The longer the insured lives within the contract period the smaller will be the total amount of money that will have to be paid out to beneficiaries under the family income policy. This is why the term portion is written on a decreasing basis. The family income policy provides a large amount of protection at a rather low cost during the child bearing period or during any other period which carries special risks. After the family income contract period has passed the insured is still covered by the ordinary life portion of the contract which is normally the amount which is written into the face value. Thus, if the policy holder lives longer than the income period then only the face amount of the policy will have to be paid when he dies (Figure 2). In order to have the benefit of the family income feature it is not always necessary to buy the contract as a single policy. Quite frequently the family income provision can be added to an existing ordinary life policy.

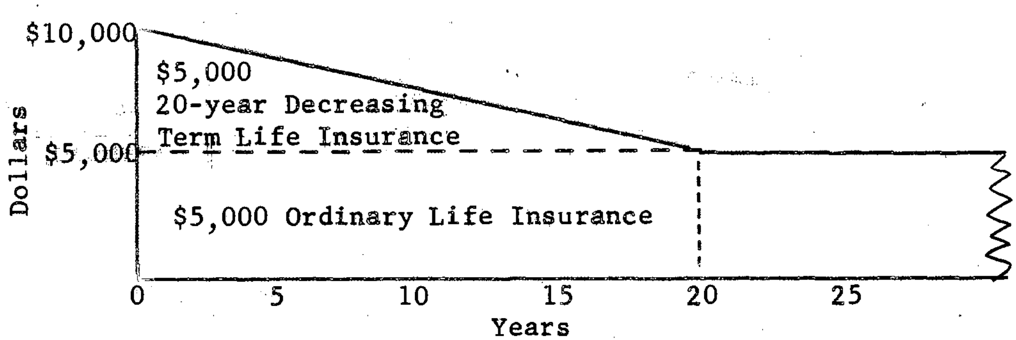

Figure 2. $10,000 Family Income Life Insurance Policy

The family-maintenance policy--The family-maintenance policy, like the family-income policy, is a combination of ordinary life and term insurance. The difference is that the term portion of the policy is not decreasing term but is written in a fixed amount (Figure 3). In the case of a 20-year family-maintenance policy the contract includes an ordinary life contract plus a 20-year term contract so that if the insured dies at any time within the 20-year period the family-maintenance payment is made for the ensuing 20 years. Thus, if the insured were to die at the beginning of the first year of the contract the beneficiaries would receive the family maintenance payment for the next 20 years as in the case of a 20-year family-income policy but, if the insured died at the beginning of the 15th year the beneficiaries would still receive the family maintenance payments for a total of 20 years rather than for a period of 5 years as under the family income policy. Logically, since a 20-year term insurance contract costs more than a 20-year decreasing term contract, the premium rate for family-maintenance policies must be higher than for the family-income policy under which the term insurance decreases annually.

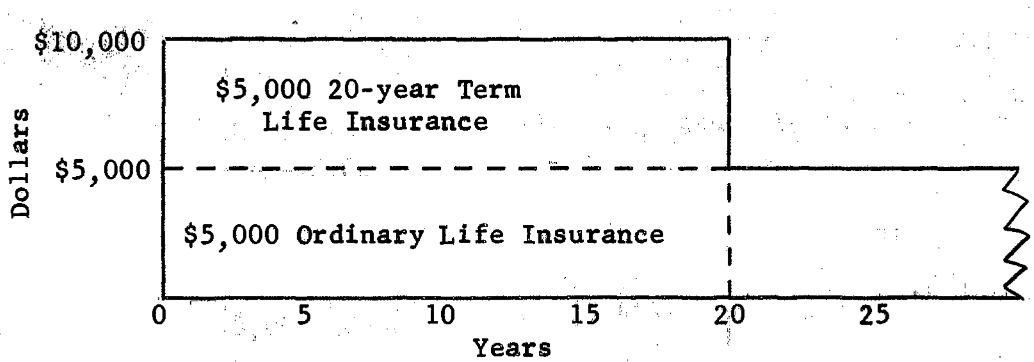

Figure 3. $10,000 Family Maintenance Life Insurance Policy

<u>The family group policy</u>--The family group policy combines term insurance for the spouse and children in the family with permanent insurance for the head of the household. The amount of coverage on each person in the family varies with the specific contract offered by the insurer. Usually such coverages under one policy will offer more total coverage for a given premium than if each person were covered under a separate policy.

Premium Costs and Reserves

Because of their differing kinds of benefits and different lengths of time required to pay up the policies, different kinds of life insurance policies have different premium rates.

Table III shows the comparative rates for non-participating life insurance policies of the various kinds per one thousand dollars of insurance.

TABLE III

COMPARATIVE RATES FOR NON-PARTICIPATING LIFE INSURANCE PER $1,000 OF INSURANCE BY KINDS OF POLICIES

	Kind of Policy				
Age When Insured	5-year Term	Ordinary Life	20-year Payment Life	Endowment at Age 65	20-year Endowment
	Premium Rates per $1,000 of Face Value (Dollars)				
Age 25	6.50	14.60	28.30	21.50	46.68
Age 30	6.80	17.22	30.89	25.32	46.96
Age 35	7.45	20.50	34.07	30.75	47.66
Age 40	9.15	24.65	38.35	39.19	49.29
Age 45	11.95	29.98	43.50	51.81	51.81
Age 50	17.30	36.90	49.84	72.97	55.67

Consistant with what has previously been indicated, the 5-year term insurance has the lowest premium of the kinds shown in the table. Decreasing 5-year term insurance would carry an even lower premium rate than the level 5-year term insurance--as would the single year term contract. A general rule is that the longer the contract period for term insurance, the higher would be the premium rate. Ordinary life insurance offers the lowest cost per dollar of face value of any of the permanent kinds of policies shown in the table. The higher premium rates for the other forms of permanent insurance reflect the fact that either the payments are concentrated into a shorter span time, or that the savings element is greater, or both.

Because of their different rates of payment and amounts of savings, different kinds of policies accumulate reserves at different rates. Table IV shows the relationship between premiums and reserves per one thousand dollars of face value under the various

TABLE IV

ACCUMULATED CASH RESERVE UNDER VARIOUS KINDS OF NON-PARTICIPATING LIFE INSURANCE POLICIES PER $1,000 OF INSURANCE WRITTEN AT AGE 35, BY YEARS IN FORCE

Kind of Policy	Premium Rate	Years in Force: 5	10	15	20	Age 60
		Accumulated Cash Reserve per $1,000 Face Value				
	(Dollars)	(Dollars)				
5-Year Term	7.45	-	-	-	-	-
Ordinary Life	20.50	65.00	154.00	258.00	362.00	456.00
20-Year Payment Life	34.07	95.00	243.00	411.00	605.00	661.00
20-Year Endowment	47.66	161.00	395.00	669.00	1,000.00	-

contracts for policies written on a man at age of 35 years. Ordinary life has the lowest premium and, at any one time, has the lowest cash value of any of the permanent forms of life insurance. Twenty-year endowment with the highest premium cost provides the highest reserves at any given time. In general, the higher the premium paid per dollar of insurance, the faster will the reserves develop. However, it is also true that the higher the premium per dollar of insurance, the smaller must be the total amount of insurance which can be purchased with a given number of dollars. The greater the element of saving per dollar of premium, the smaller must be the element of pure protection.

CHAPTER III

CHARACTERISTICS OF LIFE INSURANCE CARRIED BY PAYNE COUNTY FARMERS

Having in mind the characteristics of the various kinds of life insurance which are available, it is possible to make some appraisal of the insurance programs of the farmers interviewed in the study.

Members of the Farm Families Carrying Insurance

Sixty per cent of the farm families interviewed had no life insurance of any kind. Of the 40 per cent which had some life insurance coverage, 13 per cent had insurance on the operator only, 8 per cent had some coverage on both the operator and wife, and 17 per cent had coverage on the operator, wife, and at least some of the children. Only one case was found in which insurance was carried on the wife only with none on the operator. This latter was an isolated case in which the wife was working in a government agency and her insurance was obtained in connection with her position.

None of the families interviewed had insurance on the children alone or on only the wife and children.[1] This distribution of life

[1] Simple regression between the amount of insurance carried on the children and the amount of insurance carried on the operator was determined. The same calculation was made using the amount of insurance on the wife as the independent variable, and the amount of insurance on the operator as the dependent variable. In neither case were the findings significant, but in both cases the b value was positive.

insurance coverage within the interviewed families may indicate some recognition of the fact that death of the operator, who normally contributes the bulk of the family income, would usually create a greater financial problem for the family than would the death of any other member and, also, of the fact that the loss of a wife has significant financial implications especially when there are dependent children in the family. On the other hand, as will be shown later, the smallness of the coverage on the operator and the number of policies on children of fathers whose own insurance would be insufficient to provide enough income to meet the family needs during the period of dependency suggests that the recognition may not be complete.

Kinds and Amounts of Life Insurance Coverage

The generalized attitudes of Payne County farmers toward their life insurance coverage is further clarified by findings on the dollar distribution of insurance within the interviewed farm families and by the kinds of policies carried.

With the exception of one family, all those interviewed who carried life insurance, had some insurance on the operator. This coverage on the 20 insured farm operators accounted for 71 per cent of the total face value of all the life insurance carried by the families in the survey. The 14 wives who had some life insurance coverage carried 13 percent of the dollar value of the coverage and the insured children had 16 per cent of the coverage (Table V).

The total amount of coverage per dollar of premium cost is related to the kinds of insurance carried. Table V shows that 19

TABLE V

TOTAL DOLLARS OF COVERAGE FOR EACH KIND OF POLICY BY INSURED: PAYNE COUNTY, OKLAHOMA, 1957

	Operator		Wife		Children		Total Coverage; All Insureds	
Kind of Policy	Dollars	Percent Of All Kinds	Dollars	Percent Of All Kinds	Dollars	Percent Of All Kinds	Dollars	Percent Of All Kinds
Term	22,900	17	4,900	19	8,400	27	36,200	19
Ordinary Life	68,500	50	9,000	35	7,000	22	84,500	43
Limited Pay	26,750	19	5,500	22	16,000	51	48,250	25
Endowment	20,000	14	6,000	24	-	-	26,000	13
TOTAL	138,150	100	25,400	100	31,400	100	194,950	100
Coverage on each type of insured as percent of total coverage		71		13		16		100

percent of the total amount of life insurance coverage on all insured persons in the study was in the form of term insurance, 43 percent in ordinary life, 25 percent in limited payment life insurance and 13 percent in endowment policies. This distribution of total coverage closely approximates that on the operator (with which, of course, it is heavily weighted). Seventeen percent of the amount of insurance carried by operators was term insurance, 50 percent ordinary life, 19 percent limited payment life, and 14 percent endowment insurance. This suggests that the Payne County farmers in this sample are more conscious of the need for maximizing the element of protection in farm financial management than they are interested in life insurance as a form of investment of savings. Implicit, also, is the suggestion that these farmers believe that they can invest surplus funds to better advantage in their own businesses. This is borne out by supplementary comments by the farmers.

By comparison with this Payne County coverage, studies in Pennsylvania, Indiana, and New York show a distribution of kinds of insurance which gives less emphasis to pure protection and more to the savings element. In the Indiana study, 70 percent of the total coverage was in the forms of limited payment life and endowment insurance.[2]

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[2]H. G. Diesslin and G. A. Quivey, _The Insurance Program of Indiana Farmers_. Indiana Agricultural Experiment Station Bulletin No. 609 (Lafayette, 1954), p. 13.

The New York study[3] shows over 60 percent in these kinds of insurance while the Pennsylvania study[4] reveals 52 percent in limited payment life and endowment policies. It cannot be concluded that this distribution of policies in other states is either less desirable or more desirable than that in Payne County, Oklahoma. Appropriateness of kinds of insurance is determined by the situation of the particular insured persons. However, since most of the surveyed farms in the Payne County study do not suffer from a surfeit of capital investments in the farm, it is probable that the emphasis on protection rather than non-farm savings in the form of insurance is desirable. Information is inadequate to explain the high percentage of coverage on children in the form of term insurance and endowment policies, or the higher percentage of endowment insurance carried by wives.

Amount of Coverage per Insured Person

The distribution of kinds of life insurance coverage on the basis of all insured persons as between term, ordinary life, limited payment and endowment policies seems reasonably consistent with the objective of protection from potentially disastrous risk (Table VI). This is also true of the kinds of insurance carried by the operators. Later, however, when insured persons are broken down into economic groups, it will be shown that for some economic

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[3] John R. Tabb, Insurance Programs on 587 New York Farms, Cornell University Agricultural Experiment Station Bulletin No. 953 (Ithaca, 1954), p. 11.

[4] L. F. Miller and L. V. Rubright, Insurance Carried by Pennsylvania Farmers, Pennsylvania Agricultural Experiment Station Bulletin No. 519 (State College, 1949), p. 5.

groups the distribution by kinds of policies is not consistent with the above objective.

TABLE VI

AVERAGE AMOUNT OF COVERAGE PER PERSON BY KINDS OF POLICY AND TYPE OF INSURED: PAYNE COUNTY, OKLAHOMA, 1957

Policy	Average Coverage: Operator	Wife	Children
Term	$3,271.00	$ 980.00	$ 933.00
Ordinary Life	8,563.00	2,250.00	3,500.00
Limited Pay	2,058.00	786.00	842.00
Endowment	4,000.00	3,000.00	0

In the majority of cases the amount of insurance protection per insured operator appears inadequate to meet the long time needs of survivors. The range of coverage on farm operators was from zero to $39,000 but even with this somewhat high coverage at the top of the range, the average coverage on operators who were insured was only $6,908. The average coverage on insured wives was $1,814 (Table VII).

TABLE VII

AVERAGE AMOUNT OF COVERAGE PER INSURED PERSON: PAYNE COUNTY, OKLAHOMA, 1957

Person Insured	Average Coverage
Operator	$6,908
Wife	1,814
Child	1,570

Since the average existing indebtedness of insured operators was \$6,664.00 and the average insurance coverage \$6,908.00, it is evident that after debts were paid upon the death of the operator there would be little left, on the basis of these averages, for the maintenance of survivors except that which could be realized from the assets of the farm itself. The average net worth of the surveyed farms was \$19,060. If this amount could all be recovered--which, in the case of a forced sale, is not always possible--and if it were invested in low risk investments such as government bonds at 3 1/4 percent return, this average amount would return to the survivors \$619.45 per year. Even if an average of 5 percent return could be obtained either by renting the farm or through other investments the return would only be \$953.00. Whether this would be adequate would depend upon the age and number of dependents and their particular needs.

Relationship of Life Insurance Coverage to Net Worth

Among the 52 farmers interviewed, 21 had a net worth of less than \$10,000; 14 had net worth between \$10,000 and \$20,000; 9 between \$20,001 and \$30,000; and 8 over \$30,000 (Table VIII). The average of those factors which might be classed as personal characteristics did not differ greatly among the four net worth groups. The lowest net worth group showed the average age of operator to be 51 years, having 9 years of formal schooling, and one dependent child. The second group having net worth between \$10,001 and \$20,000 averaged 54 years in age, 8 years of schooling, and 1.5 dependent children. The group with net worth ranging

TABLE VIII

AMOUNTS AND KINDS OF LIFE INSURANCE CARRIED IN RELATION TO NET WORTH, 52 FARM FAMILIES: PAYNE COUNTY, OKLAHOMA, 1957

Characteristics	Net Worth				Total or Average
	Group I	Group II	Group III	Group IV	
	0-10,000	10,001-20,000	20,001-30,000	Over 30,000	
Average Net Worth	4,024	15,755	23,875	58,883	19,060
Number of Families	21	14	9	8	52
Percent of Families	40%	27%	17%	16%	100%
Personal Characteristics					
Average Age of Operator	51	54	51	58	53
Average Years of Schooling of Operator	9	8	11	9	9
Average Number of Dependent Children	1	1.5	1	1	1.3
Economic Characteristics					
Average Liabilities	3,405	1,885	3,012	8,738	3,748
Average Size of Farm	377	297	358	661	396
Average Acres Owned	88	157	229	504	195
Percent of All Families Carrying Life Insurance	43%	30%	33%	50%	40%
Percent of Life Insurance on Operator	62%	40%	64%	95%	71%
Kind of Life Insurance Carried on Operator					
Term, Percent of Total Value of Coverage	22%	4%	23%	14%	17%
Ordinary Life, Percent of Total Value of Coverage	42%	28%	17%	71%	50%
Limited Pay Life, Percent of Total Value of Coverage	26%	29%	26%	12%	19%
Endowment, Percent of Total Value of Coverage	10%	39%	34%	3%	14%

TABLE VIII (Continued)

Characteristics	Net Worth: Group I 0-10,000	Group II 10,001-20,000	Group III 20,001-30,000	Group IV Over 30,000	Total or Average
Percent of Life Insurance Carried on Wife	20%	21%	18%	2%	13%
Kind of Life Insurance Carried on Wife					
Term, Percent of Total Value of Coverage	46%	8%	1%	0	19%
Ordinary Life, Percent of Total Value of Coverage	38%	0	62%	33%	35%
Limited Pay Life, Percent of Total Value of Coverage	5%	15%	37%	67%	22%
Endowment, Percent of Total Value of Coverage	11%	77%	0	0	24%
Percent of Life Insurance Carried on Children	18%	39%	18%	3%	16%
Kind of Life Insurance Carried on Children					
Term, Percent of Total Value of Coverage	7%	60%	4%	0	27%
Ordinary Life, Percent of Total Value of Coverage	0	0	60%	100%	22%
Limited Pay Life, Percent of Total Value of Coverage	93%	40%	36%	0	51%
Endowment, Percent of Total Value of Coverage	0	0	0	0	0
Amount of Life Insurance Carried					
Per Insured Family, Average	$5,189.00	$7,937.50	$11,375.00	$17,750.00	$9,283.00
Per Insured Operator, Average	3,600.00	3,187.50	7,275.00	16,875.00	6,908.00
Per Insured Wife, Average	1,860.00	1,625.00	2,700.00	750.00	1,814.00
Per Insured Child, Average	956.00	2,083.00	2,075.00	2,000.00	1,570.00

from $20,001 to $30,000 averaged 51 years of age, had an average of 11 years of schooling, and one dependent child. These compare with an average age of 58 years for operators having the highest average net worth--over $30,000--who also averaged 9 years of formal schooling, and one dependent child.

These differences in personal characteristics are not sufficient to account for any differences between the four groups in the amount of life insurance carried. There is, however, a very apparent relationship between the economic characteristic of net worth and the amount of life insurance carried by the farm family. Table VIII shows that the higher the net worth, the larger the total amount of life insurance carried on the farm family. Families with less than $10,000 of net worth carried an average of $5,189 of life insurance; those from $10,001 to $20,000 carried $7,937.50 average coverage; those within the $20,001 to $30,000 net worth bracket averaged $11,375 coverage; and those with more than $30,000 net worth had $17,750. The amount of insurance carried on the life of the operator showed the same general relationship to net worth as that on the family as a whole with the exception that there was little difference between the "under $10,000" net worth group whose operators averaged $3,600 of life insurance coverage and the "$10,001--$20,000" net worth group which averaged $3,187. For the other two groups, however, increased net worth was accompanied by larger insurance coverage on the operator. The study shows no consistent relationship between net worth of the farmer and the amount of life insurance coverage on the wives, and shows little direct relationship between net worth and the amount of coverage on children. The average coverage per insured child was approximately $2,000 for each of the groups whose net worth exceeded $10,000 while the group with less than $10,000 net worth had an average per insured child of $956 (Table VIII).

The principles of sound insurance programming would call into question the distribution of insurance as between operator, wife, and children in the two groups having less than $20,001 net worth. Table VIII shows that in both of these groups the coverage on the operator, who is normally the major income producer, was only moderately above $3,000. In most situations premiums spent on insurance for wives and children can be used to good advantage to add to the coverage on the chief income producer of the family when his insurance and other net assets are inadequate to meet the critical needs of survivors in the event of his death.

The soundness of the distribution of life insurance coverage in these two groups having less than $20,001 net worth is brought further into question by the kinds of insurance carried on wives and children in these two groups. In the group having less than $10,000 net worth, 93 percent of the face value of all policies on children were for limited payment life insurance for which the amount of insurance per dollar of premium is less than for ordinary life or term insurance. Sixteen percent of the value of insurance on wives in this net worth group was either limited payment life or endowment insurance. For the group having from $10,001 to $20,000 net worth, Table VIII shows 40 percent of the amount of insurance on children to be limited payment life while

77 percent of the face value on the wives was endowment insurance and 15 percent was limited payment life--a total of 92 percent of the amount of insurance on wives being in kinds which yield less protection per dollar of total premium.

The distribution of coverage on the operator by kinds of policies may also be questioned for the groups with lower net worth. For those in the lowest net worth bracket, 64 percent of the face value of coverage is either term insurance or ordinary life but premiums on the 26 percent of limited payment life and the 10 percent of endowment insurance would have provided a greater total amount of coverage if they had been spent for ordinary life or renewable term insurance. With an average operator coverage of only $3,600 life insurance and an average net worth of $4,024 (some of which may or may not be realizable), the risk position of families in the lower net worth group is such as to suggest the need for maximum protection per dollar of premium expended.

Relationship of Life Insurance Coverage to Number of Dependent Children

Twenty-six (one-half) of the farmers interviewed had no dependent children, five had one dependent child, six had two dependent children, nine had three, and six farmers had four dependent children. None of the farmers interviewed had over four dependent children.

The farmers with no dependent children averaged 61 years in age, had 8 years of formal schooling, and had an average net worth of $19,307. The operator with one dependent child averaged 47 years in age, 9 years of schooling, and a net worth of $9,142. The ones with two dependent children averaged 45 years in age, 9 years of schooling, and a net worth of $40,278. The operator with three dependent children averaged 46 years in age, 11 years of schooling, and a net worth of $16,234. Farmers with four dependent children averaged 39 years in age, 10 years of formal schooling, and averaged a $8,334 net worth.

TABLE IX

RELATIONSHIP OF LIFE INSURANCE CARRIED TO NUMBER OF DEPENDENT CHILDREN: PAYNE COUNTY, OKLAHOMA, 1957

Characteristics	Number of Dependent Children					Total or Average
	None	One	Two	Three	Four	
Average Number of Dependent Children Per Family	0	1	2	3	4	1.3
Number of Families	26	5	6	9	6	52
Average Age of Operator	61	47	45	46	39	53
Average Years of Schooling of Operator	8	9	9	11	10	9
Average Net Worth	19,307	9,142	40,278	16,234	8,334	19,060
Percent of Families Carrying Life Insurance	27	60	50	46	30	40
Amount of Life Insurance Carried						
Average Per Insured Family	8,900	4,500	10,000	8,650	14,000	9,283
Average Per Insured Operator	9,143	3,000	8,333	3,610	10,750	6,908
Average Per Insured Wife	1,650	3,250	667	1,950	2,500	1,814
Average Per Insured Child	0	3,500	1,000	1,582	1,000	1,570

Life insurance was carried by 27 percent of the families with no dependent children. Sixty percent of the families with one dependent child had some life insurance. Fifty, 56, and 30 percent of the families with two, three, and four dependent children respectively were carrying life insurance. The average amount of life insurance per insured family in each group varied with the highest average being among the families with four dependent children, and the lowest among the families with one dependent child.

Relationship of Life Insurance Carried to Years of Schooling of Operator

Over one-half of the farmers interviewed (29) had less than nine years of formal schooling. This group averaged 59 years in age, 1.2 dependent children, and a net worth of $19,509. Thirty-four percent of these families had some life insurance with an average of $3,295 per insured family.

Fourteen of the 52 operators had completed 9 to 12 years of schooling. Forty-three was the average age of these operators. They had 1.5 dependent children per family, and a net worth of $16,209. One half of these families had life insurance for an average of $14,286 per insured family.

The average net worth of the operators having 13 to 16 years of formal schooling was higher than the other two groups. These nine operators had an average net worth of $23,269. These operators also averaged 50 years in age, and having 1.6 dependent children per family. Forty-four percent of these families had some life insurance. The average life insurance coverage per insured family for this group was $15,500.

TABLE X

RELATIONSHIP OF LIFE INSURANCE CARRIED TO YEARS OF SCHOOLING OF OPERATOR: PAYNE COUNTY, OKLAHOMA, 1957

Characteristics	Years of Schooling 0-8	9-12	13-16	Total or Average
Average Years of Schooling of Operator	6	11	15	9
Number of families	29	14	9	52
Average Age of Operator (Years)	59	43	50	53
Average Number of Dependent Children	1.2	1.5	1.6	1.3
Average Net Worth	$19,509	$16,209	$23,269	$19,060
Percent of Families Carrying Life Insurance	34	50	44	40
Amount of Life Insurance Carried				
Average Per Insured Family	$ 3,295	$14,286	$15,500	$ 9,283
Average Per Insured Operator	$ 2,105	$12,833	$10,025	$ 6,908
Average Per Insured Wife	$ 717	$ 2,300	$ 3,200	$ 1,814
Average Per Insured Child	$ 1,086	$ 2,300	$ 1,538	$ 1,570

Relationship of Life Insurance Carried to Age of Operator

A decrease in the percent of families carrying life insurance and the amount of life insurance per insured family occurred as the age of the operator increased. The nine operators under 40 years of age had an average net worth of $8,584. Fifty-six percent of the families of this group were carrying some life insurance. They had an average coverage of $13,800 per insured family.

One-half of the farmers interviewed were between 40 and 50 years of age. They had an average net worth of $22,311. Forty-two percent of these families were carrying life insurance with an average of $9,295 per insured family.

TABLE XI

RELATIONSHIP OF LIFE INSURANCE CARRIED TO AGE OF OPERATOR: PAYNE COUNTY, OKLAHOMA, 1957

Characteristics	Age of Operator 0-39	40-59	60 & Over	Total or Average
Average Age of Operator	33	49	67	53
Number of Families	9	26	17	52
Average Number of Dependent Children	2.6	1.6	.2	1.3
Average Years of Schooling of Operator	13	9	7	9
Average Net Worth	$ 8,584	$22,311	$19,636	$19,060
Percent of Families Carrying Life Insurance	56	42	29	40
Amount of Life Insurance Carried				
Average Per Insured Family	$13,800	$ 9,295	$ 4,740	$ 9,283
Average Per Insured Operator	$ 8,900	$ 6,868	$ 4,525	$ 6,908
Average Per Insured Wife	$ 2,250	$ 1,542	$ 1,867	$ 1,814
Average Per Insured Child	$ 1,922	$ 1,590	$ 0	$ 1,570

The 17 farmers aged 60 years and over had an average net worth of $19,636. Only 29 percent of this group had any life insurance. They also were the lowest in coverage per insured family with $4,740 coverage.

CHAPTER IV

CHARACTERISTICS OF OTHER PERSONAL INSURANCE COVERAGES CARRIED BY PAYNE COUNTY FARMERS

Personal insurance coverages other than life insurance found in the study were disability income insurance and medical expense insurance.

Disability Income Insurance

Disability income insurance is designed to pay the insured a monthly income if he were to become totally disabled due to accident or sickness. This coverage may be sold as separate contracts, or may be combined with a life insurance contract. For more than a decade before the late 1930's these provisions attached to life insurance policies were very popular. However, because of the omission, in the contracts, of any limit to the maximum total disability benefits and because of the misuse of the benefits during the 1930's, companies lost heavily on the contracts and such provisions are difficult to obtain today.

Five of the farmers interviewed had some disability income insurance. One policy, issued to cover disability due only to automobile accidents, covered both the operator and his wife. All other policies covered the operator only. The benefits ranged from $12.50 per month to $150.00 per month (Table XII). The one policy with varying benefits was a workmen's compensation policy carried on the farmer by his employer for a non-farm job which he held.

TABLE XII

COSTS AND BENEFITS FROM DISABILITY INCOME INSURANCE:
PAYNE COUNTY, OKLAHOMA, 1957

Policies	Dollars Per Month	Time Limit	Restrictions	In Connection With L. I. Policy
1	12.50	None	None	Yes
1	30.00	24 mo.	None	No
1	100.00	None	None	Yes
1	150.00	Unknown	Automobile Accidents Only	No
1	Variable	Unknown	None	No

Two farmers interviewed had disability income provisions included with their life insurance. The dates of purchase ranged from 1928 to 1941.

Medical Expense Insurance

Medical expenses are a potential threat to an operator and his business. Such expenses may be "hedged" to varying extents with commercial insurance. Two general kinds of medical expense insurance are available: insurance to cover the "first" costs, and deductible insurance under which the insurance provides payment only above a specified amount of medical expense. The rates for a given maximum coverage are usually lower for the deductible policies, but the insured must pay a certain sum before any expenses are paid by the insurer. Policies are issued with varying deductible amounts but they commonly are found with either the first $300 or $500 to be paid by the insured without reimbursement by the company. The deductible policy is useful in guarding against a large and possibly disastrous financial loss resulting from medical expenses to the operator or his family but leaves the insured to carry the risk of smaller losses.

Use of Medical Expense Insurance by Payne County Farmers

Forty-four percent of the operators interviewed had some type of medical expense insurance either on themselves or on some member of their family. In only two cases was less than the entire family insured. One family had only the operator covered, and another family had only the wife and child insured. All the policies except two covered expenses from both illness and accident. One policy covered medical expenses from automobile accidents only, and the other policy covered only expenses from polio.

Type of Company Utilized

Fifteen of the 23 families with medical coverage had their insurance with stock companies (Table XIII). Four families were carrying Blue Cross and Blue Shield coverage; three families were covered by mutual companies; and one family had policies with both a stock and a mutual company.

TABLE XIII

TYPE OF COMPANY USED BY PAYNE COUNTY FARMERS FOR MEDICAL EXPENSE INSURANCE, 1957

Type of Company	No. of Insured Farmers	Percent of Insured Farmers
Blue Cross & Blue Shield	4	17
Stock	15	65
Mutual	3	13
Stock and Mutual	1	5
	23	100

CHAPTER V

PROPERTY INSURANCE

Physical property on a farm may represent a large or critical investment to the farmer. A particular building may be essential to the successful continuance of operations. For example, a grade A dairy barn on a dairy farm, if destroyed, must be replaced if the business is to continue. A farmer may have such a large investment in his house and household goods that a loss would seriously impair his financial position. Valuable livestock and stored commodities may amount to a large portion of the assets of the operator. Money invested in machinery and vehicles may represent an investment equivalent to the profits the farmer would receive in several years. Crops that are ready for harvest represent a year's labor and financial outlay that could be destroyed in one storm. The farmer, because of his heavy investments in physical property that may be destroyed, may feel it is advisable to cover such hazards with commercial insurance. This section is devoted to insurance coverages to protect against financial losses to all such properties except motor vehicles which, due to the unique characteristics of the policies which combine both property and casualty insurance, will be discussed in a later chapter.

Fire Insurance

Fire insurance coverage on houses was more common than any other type of insurance carried by the interviewed farmers. Eighty-four percent of the operators who owned buildings had some fire insurance protection (Table XIV). A smaller proportion, 71 percent, had fire insurance coverage on their outbuildings. All 52 farmers had household goods, but only 52 percent had protected their value with fire insurance. Out of the 52 farmers interviewed, 77 percent had fire insurance of some kind.

TABLE XIV

FIRE INSURANCE COVERAGE BY TYPE OF PROPERTY INSURED: PAYNE COUNTY, OKLAHOMA, 1957

Property	Number With Property to Insure	Number Carrying Fire Insurance	Percent Carrying Fire Insurance
House	45	38	84
Outbuildings	45	32	71
Household Goods	42	27	52

Combinations of Property Insured

Twenty-two out of the 40 farmers who carried fire insurance had house, household goods, and outbuildings all insured (Table XV). Ten of them had only their houses and outbuildings insured. Three farmers had fire insurance on the house and household goods and none on outbuildings, while three had only their houses insured. In two cases only the household goods were insured. In both cases the farmers were renting and did not own any buildings.

Amount of Fire Insurance Coverage

Six farmers out of the group interviewed had over $10,000 total fire insurance coverage on their property (Table XVI). Eighteen

TABLE XV

COMBINATIONS OF PROPERTY COVERED WITH FIRE INSURANCE: PAYNE COUNTY, OKLAHOMA, 1957

Property	Number of Farmers	Percent of Farmers
House Only	3	7.5
Outbuildings Only*	0	0
Household Goods	2	5.0
House and Outbuildings	10	25.0
House and Household Goods	3	7.5
House, Household Goods, & Outbuildings	22	55.0
TOTAL	40	100.0

*Tenant houses counted with outbuildings.

farmers had coverage of $2,501 to $5,000. Forty out of the 52 operators had under $5,001 of total fire insurance. In view of present day building costs and appraised value of the buildings on the surveyed farms, these coverages in most cases would not yield a high proportion of replacement costs.

Although property insurance was carried by a large number of farmers, there was little evident relationship between coverage and replacement costs. Total fire insurance coverage carried by 10 of the 40 farmers with fire insurance was under $2,501. An additional 18 farmers had total fire insurance coverage under $5,001. Only 11 farmers had coverages totaling over $5,000. The protection carried by one farmer was unknown. In view of present building costs it is doubtful that these coverages would provide suitable replacement of their buildings.

TABLE XVI

FREQUENCY DISTRIBUTION OF TOTAL FIRE INSURANCE COVERAGE PER FARM BY AMOUNT OF COVERAGE: PAYNE COUNTY, OKLAHOMA, 1957

Total Fire Insurance Coverage (Dollars)	Number of Farms
None	12
1- 1,000	0
1,001- 2,500	10
2,501- 5,000	18
5,001-10,000	5
10,001-15,000	3
15,001-20,000	2
Over 20,000	1
Unknown	1
TOTAL	52

Additional Coverages

Additional coverages against hazards other than fire may be included in a fire insurance contract. The fire insurance by itself covers damage from fire and lightning only. These additional coverages may be purchased separately or combined into what is called extended coverage. Extended coverage includes direct loss by windstorm, hail, explosion, riot, riot attending a strike, civil commotion, aircraft, vehicles, and smoke.

The survey showed that most of the farmers purchased fire insurance with the additional coverages of wind and hail only. Twenty-nine of the farmers interviewed had such coverages (Table XVII). Seven others had fire and extended coverage protection on their property. One farmer had fire insurance with wind, hail, explosion, and aircraft coverages. Three operators had fire and lightning coverages only.

TABLE XVII

COMBINATIONS OF INSURANCE COVERAGES ON BUILDINGS AND HOUSEHOLD GOODS: PAYNE COUNTY, OKLAHOMA, 1957

Coverages	Number of Farmers	Percent of Farmers
None	12	23
Fire Only	3	6
Fire, Wind, and Hail	29	56
Fire, Wind, Hail, Explosion and Aircraft	1	2
Fire and Extended Coverage	7	13
TOTAL	52	100

Insurance on Farm Machinery

Three of the farmers interviewed carried protection against financial loss to farm machinery from physical means. One had his combine covered for loss from fire, tornado, and hail. One had provided fire, theft, and wind damage coverage on his tractor, ensilage cutter, combine, and baler. The other farmer had fire and extended coverage on his tractor, combine, and baler.

Wheat Hail Insurance

For many farms in Payne County a wheat crop is a significant source of income. The possibilities that such a crop might be destroyed by hail was considered sufficiently important by 12 farmers of the 40 interviewed who raised wheat, to cause them to insure against such loss.

Hail insurance is purchased by dollars of coverage per acre. If only a partial loss occurs, an adjuster determines the loss and the farmer is paid accordingly.

The farmers with hail insurance had coverages from $20.00 to $58.33 per acre. The unweighted average was $30.63 per acre. The premium rate in Payne County was $3.50 per $100 of insurance. At this rate for the average coverage of $30.63, the average premium cost per acre was $1.07.

Decisions on Risk Shifting

Even though total coverages are low on physical property, this does not imply, of course, that farmers should insure their property at full replacement. The farmer must decide how much of the risk he will carry and how much he will shift. It is necessary to consider the insurance program in its entirety. Only eight percent of the farmers had provided protection for financial liability suits, 38 percent of the operators carried life insurance, 44 percent had medical expense insurance, and 10 percent had disability insurance. Perhaps an overall appraisal of the use of the premium funds would suggest wider protection against the "disaster" losses in many cases rather than the purchase of more property insurance. Property insurance was the most widely used by farmers, but losses to property may not carry as disastrous financial consequences as some other risks.

CHAPTER VI

LIABILITY INSURANCE

Farmers, as private business men and as property owners, are faced with the potential threat of financial liability suits. Such suits could arise from injuries to visitors on the farm, to employees, or to persons passing the farm who might be injured by livestock, dogs, or other property of the farmer or by actions of members of his family. No individual farmer can know in advance whether he will ever have to face such a suit and none of the farmers interviewed had been sued, but the consequences from one adverse judgment could impair, if not completely destroy, the financial position of the farmer.

Farmer's Comprehensive Personal Liability

Four of the farmers interviewed had farmer's comprehensive personal liability policies. This policy covers liability suits involving the operator, his family, and his farm arising from almost all causes except motor vehicles from which a suit could develop. Motor vehicles have a separate liability coverage which will be discussed later.

A farmer may be sued for some act even though he may not be at fault. The farmer's comprehensive liability policy, as is typical of most liability policies, will pay all court expenses regardless of the successfulness of the suit. These costs are paid by the insurer even if the total amount exceeds the face of the policy.

The face amounts of the policies found in the survey varied from $20,000 to $50,000 limits. Each policy also carried medical benefits that are payable regardless of who is at fault if someone is injured on the farm or through actions by the insured, his dependents, or property. The range of premiums paid by these farmers for the above policies was $21.25 to $74.00.

Employer's Liability

Insurance may be purchased separately to cover financial liability suits arising from injury to employees. This coverage provides protection for the farmer only against suits brought by employees. It is not as inclusive as the farmer's comprehensive liability insurance. Three of the farmers who had comprehensive liability policies also had separate employer's liability policies. The other farmer, carrying a farmer's comprehensive personal liability policy, stated he was covered from judgments arising from suits of the employees with his comprehensive policy. This policy, according to the farmer, included 185 days of hired labor a year if one man were employed, or coverage for 45 days a year if two or more men were employed. He stated these limited provisions covered the amount of hired help which he hired through the year.

The protection benefits under each of the three employer's liability policies covered up to $10,000 damages to any one employee or $20,000 total for any one accident, and $45,000 damage to property. The premiums varied from $12.00 to $15.25.

Other Liability Coverages

One farmer carried protection against losses to a maximum of $10,000 for bodily injury for each person, $20,000 total bodily injury, and $5,000 property damage for each accident on his combine. This coverage was purchased for an annual premium of $45.50.

Because of the low incidence of claims, premiums on farmer's comprehensive personal liability insurance are very low in relation to the coverage provided. A policy with coverages with maximums of $5,000 per person and $10,000 per accident on bodily injury; and $5,000 property damage per accident may be obtained for less than $15.00 premium per year. In spite of this low cost of covering possible large losses, risks of financial liability suits were not considered very significant by the farmers interviewed since only four had provided coverage against the consequences of such claims.

CHAPTER VII

MOTOR VEHICLE INSURANCE

Motor vehicle insurance is unique in that it may combine liability, personal, and property coverages into one policy. The most common coverages found in a motor vehicle insurance policy are: bodily injury liability, property damage liability, medical payments, comprehensive loss of or to the vehicle, and collision.

Liability Coverages Found in Motor Vehicle Insurance Policies

The possibility of injury to a person or damage to others' property is a risk to the owner or driver of a motor vehicle. If an owner or driver is found to be legally at fault in an accident which causes bodily injury to other persons or property damage, the judgment could have serious financial consequences. Protection from having to pay such judgments personally may be purchased from commercial insurance companies. Liability insurance of this type is usually designated as bodily injury liability or property damage liability and sold under such description. Such coverages will also pay all defense costs, as is typical of liability insurances, even though these costs exceed the face of the policy.

Bodily injury liability insurance will pay, for the insured, all legal obligations--not exceeding the maximum designated in the policy--arising from bodily injury, sickness, disease, or death caused by an accident which originated from the use or ownership of the insured motor vehicle. Such insurance is normally sold with a limit per person and a limit per accident. For example, bodily injury liability insurance in the amount of \$10,000-\$20,000, provides limits of \$10,000 payable per person, and a maximum of \$20,000 payable by the company for the total number of persons having claims in any one accident. Various combinations of such coverage may be purchased.

Property damage liability will pay all legal judgments, within the limits of the policy, against the insured on property which is damaged from the use or ownership of the motor vehicle. Such coverage is designated in terms of the maximum liability of the insurance company per accident.

The coverage under motor vehicle liability insurance is often designated by three numbers such as, 10-20-5. The 10 and 20 represent the amount of bodily injury liability insurance: \$10,000 maximum for each person; \$20,000 maximum for each accident. The 5 indicates that coverage for property damage carries a \$5,000 limit for each accident. Similar abbreviations will be used in the following discussion.

Personal Coverage Found in Motor Vehicle Insurance Policies

Personal insurance in the form of medical payments protection may be combined with liability and property coverage in a motor vehicle insurance policy. Such coverage will pay all reasonable medical expenses, up to the limit of the policy, incurred by the insured or his passengers while they are in, entering, or alighting from the insured vehicle. These payments differ from the liability in that the insured does not have to be found to be legally at fault before payment will be made.

Property Coverages Found in Motor Vehicle Insurance Policies

The property insurance element in motor vehicle insurance is to cover damage to the motor vehicle itself. The benefits under liability insurance are paid only to claimants other than the insured, benefits under personal sections may be paid to a third person, but payments under the property coverage are made to the insured. The maximum claim under the property coverage is the current value of the vehicle. The two most common property coverages are for "comprehensive" loss and for collision.

Comprehensive loss of, or to, the vehicle covers all losses except ones caused by collision or upset. Perhaps the most common collections under comprehensive stem from losses due to windstorm, hail, glass breakage, fire, or theft. Individual coverages such as fire or hail may be purchased separately, but the majority of the farmers interviewed preferred the inclusive comprehensive coverage.

Collision insurance covers only damage to the insured vehicle due to collision or upset. Collision insurance often carries a deductible clause which states the insured must assume a specified amount of the loss and that the insurance will pay the remainder of the legal claim. The amount of deduction which can be made part of the contract varies among companies. As a rule, the larger the deductible amount, the lower the premium cost for any given vehicle.

Extra minor coverages, such as towing charges may be included in a motor vehicle policy.

Types of Motor Vehicle Coverages Carried by Payne County Farmers

Insurance protection against judgments arising from liability suits from motor vehicles was carried on 79 percent of the vehicles (Table XVIII). Seventy-six percent of the farmers had one or more of their vehicles covered with liability insurance (Table II). These percentages show the actions of farmers are close to their expressed opinions on liability coverage. Motor vehicle liability insurance was rated as essential by 75 percent of the farmers having motor vehicles.

Liability suits arising from personal injury or property damage are more likely to result in large, and perhaps financially crippling loss than any other type of risk incurred on account of motor vehicles. Consistent with the principle of insuring against potentially disastrous losses, it was found as indicated above, that a larger proportion of vehicles carried liability insurance than any other kind.

Insurance for medical payments was carried on 43 percent of the vehicles. This coverage was rated as essential by only 28 percent of the farmers interviewed but, 49 percent of them had one or more of their vehicles covered with medical payment insurance.

Collision insurance was carried on 33 percent, and comprehensive insurance on 43 percent of the motor vehicles although collision and comprehensive insurance were rated as essential by only 21 percent and 24 percent respectively of the farmers interviewed.

Six percent of the vehicles had other miscellaneous property coverages. Nineteen percent of the vehicles were not covered with any insurance.

TABLE XVIII

NUMBER AND PERCENT OF 96 MOTOR VEHICLES COVERED BY EACH TYPE OF MOTOR VEHICLE INSURANCE: PAYNE COUNTY, OKLAHOMA, 1957

Coverage	Number of Vehicles	Percent of Vehicles
None	18	19
Bodily Injury Liability	76	79
Property Damage Liability	76	79
Medical Payments	41	43
Collision	32	33
Comprehensive	40	42
Other	6	6
TOTAL	289	301

Combinations of Coverages

Except for two vehicles, all those with any insurance had some liability coverages (Table XIX). Perhaps the financial responsibility law in the state has brought the risk covered by the liability insurance to the attention of the farmers. Under the state financial responsibility law, in the case of any accident involving bodily injury or $50 of property damage, the driver and the owner of the vehicle (if different persons) must show, either through insurance or by other means, evidence of financial responsibility sufficient to cover damages from which judgments might arise. If such evidence is not shown, the license of the operator and the registration of the vehicle may be suspended.

TABLE XIX

COMBINATIONS OF MOTOR VEHICLE INSURANCE CARRIED: PAYNE COUNTY, OKLAHOMA, 1957

Coverages	Number of Vehicles	Percent of Vehicles
None	18	19
Liability Only	20	21
Liability and Medical Payments	13	14
Liability and Comprehensive	9	9
Liability and Collision	1	1
Liability, Collision, and Comprehensive	5	5
Liability, Medical Payments, and Collision	2	2
Liability, Medical Payments, and Comprehensive	3	3
Liability, Medical Payments, Collision and Comprehensive	23	24
Collision and Other*	1	1
Other*	1	1
TOTAL	96	100

*Miscellaneous property coverages.

Regardless of prime reason why such motor vehicle insurance was purchased, the data seem to indicate that possibilities of disastrous consequences from liability suits were recognized by a large proportion of the farmers interviewed.

Seventy-six of the 96 vehicles owned by the interviewed farmers had bodily injury and property damage liability. Twenty vehicles were covered with liability insurance only. Twenty-three other vehicles had liability combined with one other coverage. Thirteen of these 23 had liability with medical payments, nine had liability and comprehensive, and one had liability and collision. Five motor vehicles had policies containing liability, collision, and comprehensive coverages. Liability, medical payments, and collision were carried on two vehicles, while three vehicles had liability coverages combined with medical payments and comprehensive. Twenty-three of the 96 motor vehicles had wider coverage with liability, medical payments, collision and comprehensive coverages. One vehicle was covered for collision, fire, and theft only; while another vehicle had only miscellaneous property coverages.

Bodily Injury Liability

Judgments, resulting from bodily injury, may vary in size. Recognition of this fact is reflected in the variation in size of bodily injury liability coverage shown in Table XX. The limits varied from 5-10 to 50-100. The lower limits of 5-10 were carried on 23 vehicles, while the higher limits of 50-100 were carried on 13 vehicles. The limits of coverage on the rest of the vehicles varied between these two amounts with 10-20 limits on 22 vehicles being next to the 5-10 limits in frequency. Limits of 15-30 and 20-40 were carried on one vehicle each. Three vehicles had limits of 25-50. Twenty of the 96 vehicles carried no liability insurance, and coverages were not available on 13 vehicles.

TABLE XX

MOTOR VEHICLES WITH BODILY INJURY LIABILITY COVERAGE BY SIZE OF COVERAGE: PAYNE COUNTY, OKLAHOMA, 1957

Coverage	Number of Vehicles	Percent of Vehicles
None	20	20.8
5-10	23	24.0
10-20	22	22.9
15-30	1	1.0
20-40	1	1.0
25-50	3	3.1
50-100	13	13.6
100-200	0	
Coverage Not Available	13	13.6
TOTAL	96	100.0

Amount of Bodily Injury Liability Carried in Relation to Net Worth

The larger amounts of bodily injury liability were carried by the farmers with the higher net worth[1] (Table XXI). The majority of the vehicles covered with bodily injury liability in the amount of 5-10 were owned by farmers with a net worth of $20,000 or less.

[1]Simple correlation was calculated between the average net worth of each group and the average size of bodily injury liability insurance carried per insured vehicle. The coefficient of correlation was 0.91 and the coefficient of determination was 0.83.

TABLE XXI

AMOUNT OF BODILY INJURY LIABILITY CARRIED ON MOTOR VEHICLES IN RELATION TO NET WORTH OF OPERATORS: PAYNE COUNTY, OKLAHOMA, 1957

Net Worth (Dollars)	Number of Vehicles	Number of Farmers	Percent of All Farmers Interviewed	None	5-10	10-20	15-30	20-40	25-50	50-100	Data Not Available
0-10,000	31	21	40	9	8	5	0	0	3	0	6
10,001-20,000	25	14	27	4	9	4	1	0	0	0	7
20,001-30,000	19	9	17	4	5	5	0	0	0	5	0
Over 30,000	21	8	16	3	1	8	0	1	0	8	0
TOTAL	96	52	100	20	23	22	1	1	3	13	13

All of the 50-100 bodily injury liability coverage was carried on vehicles owned by farmers with a net worth of over $20,000. These data may indicate that farmers with a higher net worth are more conscious of the need for long-range financial management or simply feel that they have a larger amount to lose if a judgment is made against them. Fewer of the vehicles owned by farmers in the higher net worth group were left unprotected from the financial consequences of a judgment, as compared with farmers with a lower net worth.

Size of Property Damage Liability

Amounts of property damage liability insurance on motor vehicles varied from $5,000 on 43 vehicles constituting 44.8 percent of the total to $50,000 coverage on 11 vehicles constituting 11.5 percent (Table XXII). Ten thousand dollars coverage was carried on seven percent of the vehicles while $15,000 and $20,000 coverages were carried on one vehicle each. Almost 21 percent of the vehicles had no property insurance coverage. For 13 vehicles data were not available. It is apparent that the 20 farmers who carried larger amounts of property damage liability insurance than is necessary under the Oklahoma financial responsibility law recognized that one adverse judgment could seriously affect the financial stability of the farm business unless the risk were shifted.

Size of Medical Payment Coverage

Two different amounts of medical payment insurance on motor vehicles were found in the study (Table XXIII). Five hundred dollars of medical payment coverage was carried on 18.7 percent of the 96 vehicles in the study. The larger amount of $1,000 was carried on 11.5 percent of the vehicles. Fifty-five vehicles constituting 57.3 percent of the total carried no medical expense coverage and data were not available for 12 vehicles or 12.5 percent.

TABLE XXII

SIZE OF PROPERTY DAMAGE LIABILITY COVERAGE ON MOTOR VEHICLES: PAYNE COUNTY, OKLAHOMA, 1957

Coverage Maximum Limits	Number of Vehicles	Percent of Vehicles
None	20	20.8
$ 5,000	43	44.8
10,000	7	7.3
15,000	1	1.0
20,000	1	1.0
50,000	11	11.5
Not Available	13	13.6
TOTAL	96	100.0

TABLE XXIII

SIZE OF MEDICAL PAYMENTS COVERAGE CARRIED ON MOTOR VEHICLES: PAYNE COUNTY, OKLAHOMA, 1957

Coverage Maximum Limits	Number of Vehicles	Percent of Vehicles
None	55	57.3
$ 500	18	18.7
1,000	11	11.5
Data Not Available	12	12.5
TOTAL	96	100.0

Size of Deduction on Collision Insurance

Only one third of the automobiles in the study carried collision insurance. Recognizing that collision insurance covers only loss to the insured vehicle, this moderately low incidence of coverage indicates that the farmers either tended to use their insurance dollars for coverages protecting them against liability to other people (which might amount to a greater loss financially) or to use their funds for purposes other than vehicle insurance.

Of the 32 vehicles with collision insurance, 14 vehicles had deduction on their collision insurance in the amount of $10, 13 vehicles had $50 deductible clauses, and two vehicles had deductible clauses of $100 (Table XXIV). Data were not available on three vehicles. Those farmers who carried a higher proportion of the initial collision risk themselves through the higher deductible amount had protection against a possible large collision loss at a lower rate, in any given insurance company, than those farmers who paid the company to carry the smaller losses as well as the large.

TABLE XXIV

SIZE OF DEDUCTION IN COLLISION INSURANCE POLICIES CARRIED ON MOTOR VEHICLES: PAYNE COUNTY, OKLAHOMA, 1957

Size of Deduction (Dollars)	Number of Vehicles With Collision Insurance	Percent of Vehicles With Collision Insurance
$ 10	14	43.8
50	13	40.6
100	2	6.2
Data Not Available	3	9.4
TOTAL	32	100.0

Summary Statement on Motor Vehicle Insurance

Automobile insurance is unique in that it may combine personal, property, and liability coverages in the same policy. The majority of the vehicles belonging to the farmers interviewed had combinations of more than one coverage per policy.

The personal coverage in an automobile policy provides protection for medical expenses to the driver and passengers injured while in, entering, or alighting from the insured vehicle. Property insurance covers the automobile itself. Liability coverages provide protection for financial liability suits arising from the use of the vehicle.

The study indicates that farmers have tended to place greatest emphasis on protection on those losses from motor vehicles which would proportionally be the most disastrous to their financial position. At the same time a significant proportion have given thought to other types of loss. Individual farmers in some cases had protection limits for the proportionally large loss which were small relative to the possible hazard. In some cases there is a question whether long run financial position might more fully be safeguarded with greater emphasis on wider coverages on bodily injury and property damage even at the expense of some reduction of protection in the coverages on risks potentially less disastrous.

CHAPTER VIII

CASE STUDIES

The foregoing analysis gives a composite view of the general facts with regard to the different types and kinds of insurance carried by the Payne County farmers interviewed. The operation of some of the principles of insurance and deviations from them have been observed. More specific illustration of the principles and problems involved in shifting risk by means of insurance may be made by shifting from the analysis of insurance programs of farmers in the aggregate to analysis of the insurance practices of particular individuals. The following section therefore, is devoted to studies of two individual farmers, their personal and economic characteristics, risks, and insurance programs.

The Case of Farmer "A"

Personal and Economic Characteristics of Case Study "A"

Farmer "A" is 33 years old, married, and the father of two pre-school children. He is living on a 600 acre farm which is owned jointly by him and his brothers and sisters. He owns an additional 280 acres by himself. His total farming operation is 880 acres. He has 300 acres of the farm under cultivation, of which 80 acres are in wheat, and 30 acres in alfalfa. The only labor he hires is a little to fill in at haying and harvest time. In off seasons, farmer "A" does some dirt and gravel hauling.

Farmer "A" has assets totaling $30,490 (Table XXV). His liabilities are $7,672, leaving a net worth of $22,818. All but $420 of the gross value is tied up in non-liquid assets which, if he were forced to sell in a short time, might have to be liquidated at less than full value. The 280 acres owned by farmer "A" has a mortgage of $5,000 outstanding. In addition to the real estate mortgage, he has chattel mortgages on his livestock and machinery totaling $2,672.

TABLE XXV

BALANCE SHEET - FARMER "A": PAYNE COUNTY, OKLAHOMA, 1957

Assets*		Liabilities	
Real Estate	$17,000	Real Estate Mortgage	$ 5,000
Power Machinery	1,920	Chattel Mortgage	2,672
Other Machinery	1,000		
Livestock	6,170	TOTAL LIABILITIES	7,672
Motor Vehicles	3,980		
Securities	420	NET WORTH	22,818
TOTAL	$30,490		$30,490

*Household goods are not included in the balance sheet because of the difficulty in correctly evaluating goods whose appraisal by their owners is so influenced by personal considerations. The error is small because on farms they constitute only a small proportion of total assets.

Risk Areas of Farmer "A"

Farmer "A" has a total of $7,672 of liabilities. Both his real estate and chattel mortgages are carried by a commercial bank, without a long term repayment plan or any guarantee of renewal privileges in the notes. The real estate mortgage becomes due in 1958, and the chattel mortgage, written for one year, was due July, 1957. In case of the death of the operator, there is a chance that payment of these debts would be requested at the end of these periods. A hurried sale of the property to liquidate these debts, could result in less than the anticipated value being received.

If farmer "A" were to pass away at this time or in the near future, the living expenses of his family would constitute a definite risk for the farmer to evaluate. On the other hand, if his wife should die, provisions for caring for the young children and the home generally, could involve costs well above those which would obtain for the family as it is now constituted. The death of other members of the family, while perhaps not yielding as serious financial consequences as the death of the operator or his wife would involve some expense. All or part of the financial risk inherent in each of these possibilities may be shifted by means of life insurance.

The health of the farmer and his family also present a definite risk area. Large medical expenses could seriously restrict the operations of the farmer and hinder the farm business if money now being used as operating capital had to be taken for medical bills. Farmer "A" with a family of four has this risk to investigate in determining his insurance program.

Farmer "A" stated that even though the property on which he is living is owned jointly with his brothers and sisters, it is his duty to see that the buildings are maintained. Due to such an arrangement, perhaps at least part of his interest in the buildings and household goods should be insured against loss by fire or storm. Farmer "A" has properties in the form of farm machinery, livestock, and motor vehicles with a value of $13,070. Although loss of these properties might not cause financial failure of the farmer, it would represent a serious financial problem.

No farmer in the survey had ever been sued for damages although some had had claims against them which had been paid by their insurance companies without the necessity of a suit. A financial liability suit could result in a judgment large enough to ruin the farmer and his business financially. Suits may arise not only from motor vehicle accidents, but also from personal and farm-connected causes. The risk involved in such judgments may be covered by automobile liability and personal liability insurance. Usually the rates on liability insurance are relatively low in comparison with the cost of a lawsuit to the operator without such coverage.

Farmer "A" has risk areas. He also has attempted to protect himself against some of these risks. He is spending $260.72 a year for life insurance protection on himself. For this amount he is receiving policies with a total face value of $11,000. The wife has a $1,000 life insurance policy, costing $22.99 per year. No life insurance is being carried on the children. All life insurance policies being carried are the kind with higher cost per dollar of face value such as limited payment life and endowments.

Medical expense is recognized by farmer "A" as a risk. He is carrying three medical expense insurance policies. One policy provides for payments on room and board at the hospital only, one provides for payment of physician fees only, and one provides for both hospital and physician fees. The first hospital policy pays for room and board up to a maximum of $750. The other two policies cover "first" costs, but have maximum amounts payable which vary depending upon the type of illness. Farmer "A" also has policies on the automobile and one truck which include coverage for medical payments up to $1,000 for accidents occurring while in the automobile or truck.

Farmer "A" has no personal property insurance except that on the four motor vehicles. All four vehicles are covered by collision insurance, three by comprehensive insurance, and one by insurance against financial losses from fire and theft.

Coverage against financial liability suits has been purchased by farmer "A" against suits that might arise from only three of his four motor vehicles. No protection has been provided for suits arising from hazards to other persons resulting from his farm or personal property or from actions by his family.

The total annual cost to farmer "A" for all this insurance is $780.46. The details of cost and coverage are shown in Table XXVI.

If farmer "A" could pay unlimited premiums, an "optimum" combination of insurance coverages could probably be worked out to his satisfaction. However, given the total premium payments of $780.46, are there combinations of insurance coverage which would give farmer "A" more adequate protection against his complex of risks than the existing combination provides? In the attempt to probe this question, an optional plan for the distribution of farmer "A's" total premium payment is presented. Since there must always be subjective elements in the appraisal of risks and the means of meeting them, this optional plan is not presented as the ideal but

TABLE XXVI

PRESENT INSURANCE PROGRAM - FARMER "A"

Type of Insurance	Kind of Insurance	Insured	Coverage (Dollars)		Premium (Dollars)	
Life	41 Year Endowment	Operator	$5,777.00		$142.58	
	Double Indemnity				5.78	
	Disability Waiver of Premium				4.91	
	42 Year Endowment	Operator	4,223.00		96.92	
	Double Indemnity				4.73	
	Disability Waiver of Premium				3.13	
	20 Payment Life	Operator	1,000.00		21.22	
	Total Life Insurance on Operator			$11,000.00		
	20 Payment Life	Wife	1,000.00		22.99	
	Total Life Insurance on Wife			1,000.00		
	Total Life Insurance Premiums					$302.26
Medical Expense	Basic Hospital	Operator, Wife & One Child	750.00		34.10	
	Basic Physician	Operator, Wife & One Child	*		45.00	
	Basic Hospital & Physician	Operator, Wife & One Child	*		67.20	
	Total Medical Expense Premiums					146.30

TABLE XXVI (Continued)

Type of Insurance	Kind of Insurance	Insured	Coverage (Dollars)	Premium (Dollars)
Motor Vehicle	Liability	Auto	50-100-10	$ 24.30
	Liability	Truck	10- 20-10	20.60
	Liability	Truck	50-100-20	53.00
	Medical Payment	Auto	$1,000.00	9.00
	Medical Payment	Truck	$1,000.00	8.20
	Collision	Auto	$50 Deductible	36.90
	Collision	Truck	$10 Deductible	36.40
	Collision	Truck	$50 Deductible	48.00
	Collision	Truck	$100 Deductible	19.60
	Comprehensive	Auto	Actual Cash Value	16.00
	Comprehensive	Truck	Actual Cash Value	18.80
	Comprehensive	Truck	Actual Cash Value	30.00
	Fire & Theft	Truck	Actual Cash Value	11.10
		Total Vehicle Insurance Premiums		$331.90
		Total of All Premiums Per Year		$780.46

*No maximum coverage is listed because it varies for each type of illness.

only as a demonstration of the fact that careful, deliberate insurance programming is likely to provide improved coverage of risks per insurance dollar than less carefully planned purchases will provide.

The optional plan is developed in two steps. The first optional plan includes the life insurance policies as they are now being carried. A second optional plan indicates possible benefits arising from revision of the life insurance program as well.

Optional Plan for Coverage Other Than Life Insurance

The following optional plan covers medical expense insurance, automobile and personal liability insurance, and fire insurance. Life insurance changes will be discussed later.

Medical expense insurance--Farmer "A" now has three basic medical expense policies on himself, his wife, and one child. These three policies carry the following benefits:

1. The hospital expense policy provides for the payment for room and board of the insured up to $7.50 per day for a maximum of 100 days or $750.
2. The physician fees policy pays up to a stated amount which varies according to the illness.
3. The basic hospital and physician fees policy pays up to $6.00 per day for hospital room and board for not more than 120 days but not to exceed $720. It pays for services such as blood and oxygen, and pays a portion of the physician fees depending upon the type of illness.

Under the optional plan, the third medical payment insurance policy is retained and broadened to cover the second child. The first two are dropped but a new $500 deductible medical expense policy is added with a maximum limit of $5,000. The one retained will pay a share of the "first" costs of any hospitalization and related expenses. The added deductible policy will pay all medical expenses up to $5,000, except the first $500. This combination will offer greater protection against the larger bills if they occur. Carrying the three policies which pay "first" costs offers greater chance of having most of the smaller bills paid, but all of the policies lack the protection for the larger expenses. From the point of view of protection against disaster, the optional plan is preferrable. The optional plan also presents a savings of $26.06 a year on the medical expense insurance compared with the ones now being carried.

Automobile and personal liability insurance--Farmer "A" has not provided protection against the financial consequence of suits arising from personal and business causes. The optional plan lists a farmer's comprehensive personal liability policy with coverage for suits in the amount of $50,000 per person, $100,000 per accident, and $5,000 property damage. This policy also covers suits within the same limits arising from claims of employees. The cost is $35.40 per year.

Three motor vehicles are currently covered with liability insurance. The optional plan extends both bodily and property damage for all four vehicles. The amounts have been raised to 50-100-20. Collision insurance, for which premium rates are relatively higher, is not included in the optional plan. The value at stake in the event of collision of any one of the vehicles is not great due to the age of the automobile and the physical characteristics of the trucks. Farmer "A" could probably carry the risk of such loss without undermining his financial position. Medical expense coverage in the automobile insurance in not continued. The operator and his family are covered with the other medical expense policies and the added cost of medical coverage in the vehicle insurance might better be used to provide other insurance against potentially disastrous risks. Comprehensive property damage insurance was continued on all four vehicles because it offers such wide coverage against common losses for a relatively small premium.

Fire insurance--Farmer "A" is not carrying any fire insurance on the buildings or on his personal property other than motor vehicles. He owns a fourth interest in the buildings, but in case they were to be destroyed he probably would have to replace them himself. A $1,500 fire and extended coverage insurance policy is therefore included on the house in the alternative plan. The outbuildings on the farm consist of a small two-story barn, two steel granaries, and other small and older buildings. Because none of these outbuildings are essential to any of the present farm enterprises, and because of their age and condition, no fire insurance is included on the outbuildings in the new plan. However, in this alternative plan, personal household goods are insured with a fire and extended coverage policy for $1,000. The cost of all these coverages amounts to $15.75.

Total Premiums Under the Two Plans

The total premium on the optional plan is $49.44 less than for the original insurance plan. This amount is earmarked to be put into a five-year renewable term life insurance policy to provide an added

$6,963.38 of protection on the operator in the revised life insurance coverage discussed in the next section. It could so be used even if no other change were made in the life insurance program.

<u>Differences in coverages between actual and optional plans</u>--The optional plan offers the opportunity for $6,963 more life insurance on the operator than the plan now being carried. It also increases his protection from large medical expenses. Under the optional plan the farmer has wider and increased amounts of liability insurance. His approximate share of the house, and his household goods are covered, at least partly, against fire damage.

To obtain these changes and additions without increasing the total annual premium, it appears logical to drop two basic medical expense policies, drop the medical payment coverages on the automobile and one truck, drop the collision insurance on all four vehicles, and drop the fire and theft coverage on one truck. This latter coverage is dropped in exchange for a comprehensive coverage which gives wider protection.

Optional Plan for Life Insurance[1]

Farmer "A" has a $1,000, 20-payment life insurance policy on himself that he has carried for 16 years. His wife is also carrying a $1,000, 20-payment life policy. She has had her policy for 12 years. These insurance policies cannot simply be converted to lower rate ordinary life or term insurance. To change them, they would have to be dropped and then replaced with other insurance at rates

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[1]The following section is written under the assumption that both farmer "A" and his wife are still insurable.

applying to the increased age of the operator and his wife. After 20 years of payments on a 20-payment life policy the insured has life insurance protection in the amount of the face value paid up for life. It would not be economically sound for farmer "A" and his wife to drop their 20-payment life policies on which they have paid, and accumulated equities, for 16 years and 12 years respectively. At their now attained age the net cost of ordinary life would be higher than the net cost of the 20-payment life policy.

Farmer "A" would now receive about $300 if he were to cash his 20-payment life policy on which the premium is $21.22 per year. The annual premium for $1,000 of ordinary life at his present age would be around $30. The interest from the $300, deposited at 2.5 percent, would be $7.50 per year. The interest from this investment plus the premium he is now paying would not pay the premium on a $1,000 ordinary life policy. As his policy now stands he will pay the $21.22 for four more years, then receive a paid up policy for life. Also the cash value under a new ordinary life policy would build much slower than if the 20-payment life policy is continued. This reasoning would also apply to the 20-payment life policy on the wife. Because of the above reasons these two policies will remain in the optional life insurance program.

If farmer "A" continues to pay on the two endowment policies he is now carrying, he will continue to have $10,000 protection from them in the event of his death before the endowment date or he will receive $10,000 in cash at age 65. The problem is to try to develop a new program giving more protection without sacrificing cash value at age 65.

Farmer "A" is now spending $258.05 for his two endowment policies with double indemnity and disability waiver of premiums. The optional plan would involve the following actions:

1. Take the cash value of the two endowment policies, amounting to $1,379.32, and deposit it in a bank at 2.5 percent interest.

2. Use the $258.05 premium money and purchase $12,260.34 of ordinary life with $10,000 of double indemnity and disability waiver of premiums included.

These changes would provide farmer "A" with $2,260.34 more life insurance, plus a bank account of $1,379.32 left at interest. At age 65 the ordinary life policy would have a cash value of $6,927.09. The bank account over the 32 years would have increased to $3,124.80. These two funds together equal $10,051.89. Although this alternative plan has a higher guaranteed cash value than farmer "A's" current plan at age 65, consideration must be given to the dividends which would accrue to the endowment policies. During the next 32 years the dividends from the endowment policies could equal $2,000 or more at age 65 if left at interest. Expectations of this added amount must be weighed by the individual concerned against the added protection offered by the optional plan for the years until he reaches age 65.

For the same amount of money he has received added protection, and added slightly to his guaranteed retirement fund. If he were to die at age 50 his widow would receive $12,260.34 from the ordinary life insurance, $1,000 from the 20-payment life insurance, plus a bank account of $2,100, or a total of $15,360.34.

A further increase in life insurance coverage is made possible by the purchase of $6,963.38 of 5-year term insurance with the $49.44

saving in premiums on the medical, liability, automobile, and fire insurance in the first part of the optional plan. This would give an increase of $6,963.38 plus $2,260.34 in insurance or $9,223.72 plus the principal sum in the bank account of $1,379.32 for a total of $10,603.05 (plus whatever interest had accrued on the bank account), over the money now available to the survivors in case of the death of the operator. Each year the fund in the bank will increase by some $35 or more if the interest is redeposited. This amount would increase the funds available at the death of the operator. The total given above would be effective for only the first five years. If the amount of $49.44 is put into term insurance after that time it would purchase less protection due to the increased age of the operator. For example, after the first five years the $49.44 would purchase $5,920.96 of term life insurance. After 10 years it would purchase $4,642.25 of term insurance. The amount of protection from this given amount of premium would decrease each five years until at age 58 it would purchase only $1,557.17 of 5-year term insurance.

Under the alternative plan if farmer "A" were to die within a five year period, he would have life insurance in the total face value amount of $1,000.00 of 20-payment life, $12,260.34 of ordinary life, and $6,963.38 of 5-year term for a total of $20,223.72 to be paid to his beneficiaries. However, on the 5-year term the premium rate will rise each time the policy is renewed. If the total premium of $49.44 on his term insurance is held constant then it follows that his total coverage would decrease. If farmer "A" were to die during the second five year term, his coverage would be reduced from $20,223.72 to $19,181.30. If he were to die after 10 years, but before 15, his beneficiaries would receive \$17,902.59 from his life insurance. This total amount would decrease until for the period from age 58 to 63 farmer "A" would have only \$14,817.51 of coverage. Thus this plan would provide significantly more protection during the critical years of family development and even at age 63 his face value of insurance would still exceed the \$11,000 of face value under his current plan. These figures are based upon the same \$49.44 being alloted each year for the term insurance.

Completed Optional Plan

Table XXVII lists the coverages possible using both the optional plan on life insurance and insurance other than life. This listing is not to be taken as a definite plan which farmer "A" should follow. He was not contacted and such changes were not discussed with him. If changes were actually made, it is improbable that he would insist on keeping the total premium cost completely unchanged. With some flexibility in the total amount of premiums, a better plan might be developed. The suggested revision illustrates some possibilities without changing total premium costs and, especially, it emphasizes the need for careful programming of insurance before purchase or for reappraisal of the insurance program when any significant changes in the personal and economic conditions of the farmer and his family bring changes in the risk situation. Different insurance counselors might offer different alternatives.

TABLE XXVII

OPTIONAL PLAN - FARMER "A"

Type of Insurance	Kind of Insurance	Insured	Coverage (Dollars)		Premium (Dollars)	
Life	20 Payment Life	Operator	$ 1,000.00		$ 21.22	
	Ordinary Life	Operator	10,000.00		190.90	
	Double Indemnity				15.00	
	Disability Waiver of Premium				9.00	
	Ordinary Life	Operator	2,260.34		43.15	
	5 Year Term	Operator	6,963.38		49.44	
	Total Life Insurance on Operator			$20,223.72		
	20 Payment Life	Wife	1,000.00		22.99	
	Total Life Insurance on Wife			1,000.00		
	Total Life Insurance Premiums					$351.70
Medical Expense	Basic Hospital & Physician	Family	*		81.60	
	$500 Deductible	Family	5,000.00		38.64	
	Total Medical Expense Premiums					120.24
Liability	Farmers Comprehensive Employees Coverage		50-100-5		35.40	
	Total Liability Premiums					35.40

TABLE XXVII (Continued)

Type of Insurance	Kind of Insurance	Insured	Coverage (Dollars)	Premium (Dollars)	
Motor Vehicle	Liability	Auto	50-100-20	$ 25.20	
	Liability	Truck	50-100-20	22.57	
	Liability	Truck	50-100-20	53.00	
	Liability	Truck	50-100-20	53.00	
	Comprehensive	Auto	Actual Cash Value	17.00	
	Comprehensive	Truck	Actual Cash Value	17.00	
	Comprehensive	Truck	Actual Cash Value	34.80	
	Comprehensive	Truck	Actual Cash Value	34.80	
		Total Motor Vehicle Premiums			$557.37
Fire	Fire and E.C.	House	$ 1,500.00	9.45	
	Fire and E.C.	H.H. Goods	1,000.00	6.30	
		Total Fire Premiums			15.75
			Total of All Premiums Per Year		$780.46

*No maximum coverage is listed because it varies for each type of illness.

The Case of Farmer "B"

Personal and Economic Characteristics of Farmer "B"

Farmer "B" is 40 years old, married, and the father of three children. The two older children are in high school, and the youngest is pre-school. He owns the quarter section on which he is living. Besides the 160 acres, he is renting 460 acres for a total farming operation of 720 acres. He has 250 acres under cultivation, 72 acres of which is in wheat and 50 acres in alfalfa. Farmer "B" stated he hired a little labor only at haying or harvest time. He does not work off the farm except for occasional custom work.

Farmer "B" has assets totaling $34,410 (Table XXVIII). Eighty-seven percent of his total assets is his own appraised value of his real estate holdings. Other than the $2,440 worth of livestock, farmer "B" has only a small holding of non-real estate assets. His liabilities are $3,500, leaving a net worth of $30,910. Here again, as in the case of farmer "A", his assets are highly nonliquid and if he were forced to sell in a short period of time, less than his full appraised value might be received. He does have a clear title to his farm. His liabilities consist of only one chattel mortgage.

Risk Areas of Farmer "B"

Farmer "B" has risk areas very similar to farmer "A". His chattel mortgage is made out to mature in a year. It has been his method to borrow, pay back, and renew as it was needed. If he were to die, the $3,500 would probably become due in a short time. Living expenses of his survivors must also be classed as a risk. Farmer "B" at this time has neither assets nor insurance to cover these risks.

TABLE XXVIII

BALANCE SHEET - FARMER "B": PAYNE COUNTY, OKLAHOMA, 1957

Assets		Liabilities	
Real Estate	$30,000	Chattel Mortgage	$ 3,500
Power Machinery	450		
Other Machinery	725	TOTAL LIABILITY	3,500
Livestock	2,440		
Motor Vehicles	295	NET WORTH	30,910
Securities	500		
TOTAL	$34,410	TOTAL	$34,410

No protection against the financial consequences of the death of another member of the family has been provided by insurance.

Farmer "B" does have a medical expense policy, but it covered expenses from polio only (Table XXIX). He stated the policy was purchased to "get rid of the agent."

TABLE XXIX

PRESENT INSURANCE PROGRAM - FARMER "B"

Type of Insurance	Kind of Policy	Insured	Face Value	Premium
Medical Expense	Polio	Family	-	$ 10.00
Fire	Fire, Tornado & Hail	House	2,000	29.90
	Fire, Tornado & Hail	Outbuildings	1,700	
	Fire Service		100	
Motor Vehicle	Liabiltiy	Auto	10-20-5	26.30
	Liability	Truck	10-20-10	26.00
	Liability	Truck	10-20-10	35.40
			TOTAL	$127.60

Farmer "B" has a total of $7,700 of fire insurance on his house and outbuildings. His improvements are in very good condition, and the house is in excellent shape. Although, in the event of total destruction of any of the buildings he would be under-insured, he does have protection against the smaller losses. No insurance is being carried on his household goods.

Protection has been provided against the financial consequences of liability suits, but only those arising from motor vehicles.

Optional Plan for Farmer "B"

Because of the financial consequences attached to a financial liability suit from a motor vehicle accident or destruction to his home or outbuildings, farmer "B's" program for these coverages probably should be continued. The $10.00 spent for a polio policy might be utilized more fully in dealing with his risk areas if it were used to purchase a farmer's personal comprehensive liability policy or term insurance on the operator. Farmer "B" could purchase a comprehensive liability policy with 5-10-5 limits for $14.10. He could purchase a 5-year term insurance at $9.97 per thousand dollars of face value.

Even with these changes farmer "B" lacks the protection shown in the case of farmer "A", but the change of only $10.00 could provide a fuller coverage against financial blows than he now has with his present insurance program.

In contrast with the case of farmer "A" in which there are even now possibilties for significantly enlarging the program, the case of farmer "B" is one in which a reasonable adequate program could be provided only with a greatly increased premium outlay even if assuming he is still insurable. Since farmer "B" is now 40 years of age the current annual cost of providing such reasonable adequate program would be much higher than would have been the case had he done a better job of programming for the meeting of risks at an earlier age.

This case is reasonably typical of many cases in which farmers are carrying a heavier portion of the risk load than they could well handle in the event of personal or physical disaster. It is therefore extremely important that a farmer should seek to classify his risk areas by importance and attempt, with the help of a professional insurance counselor, to program his total insurance program in view of total premium and importance of each coverage.

CHAPTER IX

SUMMARY AND CONCLUSIONS

Farming is subject to many kinds of uncertainty which may affect farmers' financial returns. Some uncertainties carry the possibility of either gain or loss. Other uncertainties such as loss of future income due to premature death, decrease in future income becuase of disability, cost of medical expenses, loss of property, or loss of assets due to financial liability suits carry only the possibility of loss if they occur. For many of the latter, the frequency of loss, given a sufficiently large number of cases, can be estimated with sufficient dependability that the risk may be hedged by the use of commercial insurance.

In common with other businessmen, farmers necessarily face these risks in the operation of their farms and they may either carry the risk in its entirety alone or they may shift part of the risk to others who are willing to assume it for a price. In either case, the cost of carrying risk is a necessary charge against the business. If the risks are shifted through insurance, good management would dictate that the coverage should be so selected as to give optimum protection against risks. This optimum will differ with differing economic characteristics of the insured. This study was conducted during 1957 among 52 farmers in Payne County, Oklahoma, to examine and evaluate the actual distribution of insurance coverages.

Forty percent of the families in the Payne County study carried some life insurance. The total amount of life insurance carried was

$194,950. Coverages on the operator totaled $138,150 (71 percent of the total), coverages on the wives were $25,400 (13 percent), while $31,400 (16 percent) of the life insurance was carried on children.

Of these totals, $36,200 or 19 percent was in the form of term insurance which is pure protection without any element of savings as such. Ordinary life insurance which represents mostly protection, but with some savings element, accounted for $84,500 or 43 percent. Limited payment life, which is whole life insurance with a large prepayment in the premium, amounted to $48,250 or 25 percent. Endowment life insurance, other than very long-term endowment, carries a lower amount of protection relative to savings than other policies. This kind of insurance accounted for $26,000 or 13 percent of the total coverage. The premium per dollar of face value is lowest for term insurance and becomes progressively higher through ordinary life, limited payment life and endowment insurance. Thus, with the exception that the amount of term insurance was less than that of ordinary life, these Payne County farmers have tended to emphasize the protection element rather than savings element in their aggregate insurance coverage.

This distribution by kinds of policies in the aggregate is roughly approximate to the distribution by kinds of policies on the farm operators who carried 17 percent of their insurance in term, 50 percent in ordinary life, 19 percent in limited payment life, and 14 percent in endowment policies. Distribution on wives and children was somewhat less consistent. Wives carried 19 percent of their insurance as term, 35 percent as ordinary life, 22 percent as limited payment life, and 24 percent as endowment. The distribution for children was 27 percent term, 22 percent ordinary life, 51 percent limited payment life, and no endowment insurance.

The average coverage per insured operator was $6,908. This figure may seem low when the financial needs in case of the death of the operator are realized. Case study analysis indicates that, in some cases at least, revision of the total insurance program could materially increase the amount of protection without increasing the total expenditure for insurance.

Average coverages per insured wife and child were $1,814 and $1,570 respectively. Total protection for wives and children per premium dollar could have been increased had greater emphasis been placed on ordinary life or term insurance rather than on the higher premium limited payment life and endowment insurance. This modification would have been in line with the expressed opinions of most of the interviewed farmers who said that their principal motive in buying insurance was protection rather than insurance as a form of savings.

The amount of life insurance per insured family tended to increase as the net worth of the farmer increased. The farmers with a net worth up to $10,000 averaged $5,189 per insured family, farmers with net worth of $10,001 to $20,000 averaged $7,937 per insured family, farmers with $20,001 to $30,000 net worth had $11,375 per insured family, and the farmers with over $30,000 net worth had an average life insurance coverage per insured family of $17,750.

No consistent relationship was found between the net worth of the farmer and the distribution of life insurance by kinds of policies.

Inconsistent with the stated objectives in the purchase of protection, farmers in the lower net worth groups carried higher proportions of endowment and limited payment life insurance than did operators in the higher net worth group. Greater protection could have been provided per premium dollar to these farmers with fewer net assets had more of their coverage been in those kinds with a lower cost per dollar of face value.

The relationship between number of dependent children and amount of life insurance carried was not consistent. Operators with no dependent children averaged $9,143 of life insurance per insured operator. Operators with one dependent child had the lowest coverage per insured operator. This group had $3,000 coverage per insured operator. The operators with two, three, or four dependent children were carrying $8,333, $3,610, and $10,750 of life insurance per insured operator respectively.

Operators with fewer than nine years of formal schooling had much smaller coverages than those with nine years or more. Only $2,105 of life insurance was carried per insured operator in the group with fewer than nine years of schooling. Insured operators with 9 to 12 years of schooling had $12,833 of coverage, and operators with 13 to 16 years of schooling had $10,025 of life insurance per insured operator.

The age of the interviewed farmers was inversely related to the amount of their life insurance coverage. Insured farmers under 40 years of age had $8,900 coverage, those from 40 to 59 years of age carried $6,868 per insured operator, while those 60 years and over averaged only $4,525 coverage.

Other Personal Insurance Coverages

Disability income insurance, designed to pay the insured a monthly income if disabled, was carried by five of the farmers interviewed. Benefits on the policies varied from $12.50 to $150.00 per month. Two operators had their disability insurance in connection with life insurance policies.

Medical expense insurance was carried by 23 farmers either on themselves or on their families. Stock companies were used by 15 of the 23 families. Four families had Blue Cross and Blue Shield, three families had insurance with mutual companies, and one family had insurance with both a mutual and stock company.

Property Insurance

Ownership of physical property carries with it the possibility of a loss. In order to protect the financial structure of the business, it may be important for the farmer to be insured against some proportion of the loss. A larger proportion of the farmers interviewed had hedged against these losses than any other insurable risk.

Forty-five of the 52 farmers interviewed owned houses and outbuildings. Thirty-eight of these 45 had fire insurance on their houses. Outbuildings were covered by 32 out of the 45 farmers. All 52 farmers owned household goods and 27 of them had these goods partially covered with fire insurance.

Twenty-nine of the 40 farmers who had some kind of fire insurance had wind and hail coverage in their policies. Eight others had extended coverage to include explosion and aircraft as well.

Although the majority of the farmers carried fire insurance, their total coverage did not approximate the replacement costs in case of a total loss. Thus, farmers were not attempting to shift the total risk from fire loss. Only six of the interviewed farmers had over $10,000 total fire insurance coverage on all their buildings and household goods. Even though farmers were not shifting total fire risks, the study indicates that the distribution of fire insurance was more closely correlated with the needs of the individual farmer than was life insurance coverage.

Three farmers had insurance protection on their farm machinery. One farmer had fire and extended coverage, one carried coverage for fire, tornado, and hail, and one other for fire, theft, and wind damage.

The only type of crop insurance found in the study was hail insurance on wheat. This was carried by 12 of the 40 farmers who raised wheat. The protection ranged from $20.00 to $58.33 per acre which cost at the rate of $3.50 per $100 of insurance.

Liability Insurance

Financial liability suits could result in claims of serious proportions. Four of the interviewed farmers had purchased insurance for protection against such suits. Two of these farmers were insurance agents. One farmer stated that he had asked his insurance agent about a liability policy, but was discouraged from purchasing one. Thirty-nine percent of the farmers interviewed stated they were not familiar with such coverage.

Motor Vehicle Insurance

Insurance on motor vehicles may be purchased to cover losses sustained from liability suits, medical expenses, and physical loss to the vehicle.

Liability insurance on vehicles was carried by 76 percent of the farmers with vehicles. Forty-nine percent of the farmers had medical payment insurance on their vehicles. Collision and comprehensive property insurance was carried by 43 and 45 percent of the farmers respectively. These coverages varied in combination from liability alone to a combination of liability, medical payments, collision, and comprehensive.

The study shows that the majority of the farmers with vehicle liability coverages have been conservative on the size of their liability coverage although 13.6 percent of the vehicles carried liability limits of 50-100. For only a small additional cost, the narrower limits could be increased several times. This same situation applies also to the size of property damage limits for which 44.8 percent of the vehicles had coverages of only $5,000, and 20.8 percent had no property damage liability coverage. On 67 percent of the 96 vehicles in the study, farmers were carrying all of their own risk of collision. About 57 percent of the vehicles carried no medical payment insurance. Fifty-eight percent of the vehicles did not have comprehensive coverage.

Case Studies

Two case studies are presented. In one, the farmer has attempted to hedge against insurable risks to a much greater extent than the other. Farmer "A" was spending a total of $780.46 per year for all forms of insurance while farmer "B" was spending only $127.60. The ages and risk areas of these two farmers were rather similar. Farmer "A" presented a case in which the total protection provided by his insurance dollars was less than would be necessary to meet his needs in the event of disaster. However, his basic insurance program was such that revision could be suggested which would materially increase his overall protection without increasing the total expenditure in premiums. Farmer "B" on the other hand presented a case in which the basic program was so inadequate with reference to the risk element that the protection could have been enlarged only with the expenditure of additional premium dollars.

The alternative program suggested for farmer "A" would provide $9,223.72 of additional face value of life insurance during the next five years and in spite of some decreasing term insurance element in the program, would still leave him with $3,817.51 more face value of life insurance at age 63. These sums are offered without greatly changing the cash values available to the farmer at age 65. At the same time, it would leave the farmer covered for risks of possible disaster proportions on his motor vehicles and medical expenses, and in addition provide him with insurance which he did not have under his actual program to give fire and extended coverage on his house and household goods, and comprehensive liability insurance to cover both general liability suits and suits from employees.

Since farmer "B" was 40 years of age, few improvements in his insurance program could be suggested without greatly increasing his premium outlay. This case is reasonably typical of many in which farmers are carrying a heavier portion of the risk load than they could well handle in the event of personal or physical disaster. It demonstrates the desirability of early comprehensive analysis of farmers' possibilities for risk management.

Concluding Remarks

The study as a whole tends to illustrate that most of the interviewed farmers were purchasing their insurance without comprehensive programming of their needs and possibilities. There is no clear evidence that farmers in many cases were attempting to correlate closely their kinds and amounts of insurance with their degrees of risk. There is little evidence that sellers of farm insurance have made consistent attempts to counsel farmers within the framework of comprehensive programming to meet the needs of the particular farmer. This is most evident in the study of personal coverages. Judging from the limited knowledge of some of the farmers interviewed, the study indicates that some of the insurance was purchased from nonlocal or transient agents. This was most evident with life insurance and medical expense insurance. Much insurance of all kinds was purchased through part-time resident agents.

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