A STUDY OF WORKMEN'S COMPENSATION FOR AGRICULTURAL EMPLOYERS IN MICHIGAN

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CHAPTER I

INTRODUCTION*

Problem Definition

In recent years, farm labor organizations have generated a public concern for the migratory farm worker. The grape workers' strike in California has directed a great deal of public attention to the plight of the hired farm worker. Many of the crops grown in Michigan utilize hired hand labor in harvesting. As a result, farm labor organizers have conducted activities in Michigan. Public action groups have expressed concern for migrant farm laborers working in Michigan. The net result is that in the past few years there has been a growing public concern for hired farm workers.

The increased public concern for the hired farm worker is reflected in the attitudes of legislators in Michigan. Current legislative proposals would require virtually all agricultural employers in Michigan to carry some form workmen's compensation insurance. But, little is known about the results of Michigan's 1967 extension of workmen's compensation relating to agricultural employers. Agricultural employers in Michigan were not required to carry any workmen's compensation insurance until July of 1967. In 1967, the Michigan Legislature

*All references and footnotes appear at the end of each chapter.

enacted a law which requires agricultural employers meeting specific qualifications to carry some type of workmen's compensation insurance.

Public concern itself does not lead to a need for research. But public concern which leads to actual and probable legislation does create a need for information. Information should provide better and more informed public decisions. Currently proposed legislation will include more hired farm workers under Michigan's workmen's compensation laws. This study attempts to provide more information concerning hired farm labor and workmen's compensation in Michigan.

Need For Study

July 1, 1970 marked the third full year of the inclusion of some agricultural employers under Michigan's Workmen's Compensation Act. Little information is available concerning the premium and loss experience of workmen's compensation for agricultural employers in Michigan. Currently a proposal is being made that will include agricultural employers under Michigan's Workmen's Compensation Act on the same basis as regular private employers. This proposal and the lack of information concerning the current situation have created a need to: (1) Evaluate the workmen's compensation program, in Michigan, for agriculture since 1967; (2) Provide more information concerning the characteristics of hired farm labor in Michigan with respect to workmen's compensation; (3) Predict the effects of proposed changes in the workmen's compensation law affecting agricultural employers.

Objectives

The objectives of this study are as follows:

1. To determine the premium and loss experience of agricultural workmen's compensation sold in Michigan since July 1, 1967.
2. To determine the effect of the type of farm upon the cost of accidents suffered by hired farm workers, the average severity of accidents suffered by hired farm workers and the frequency of accidents suffered by hired farm workers.
3. To evaluate the proposed changes in agricultural workmen's compensation in Michigan with respect to the 1967-1969 experience of agricultural workmen's compensation.

Definitions

Full Workmen's Compensation. In the event of a work accident this coverage provides an injured worker with unlimited hospital and medical benefits as well as compensation for wages lost due to a work accident.

Unlimited Hospital and Medical. This coverage provides an injured worker with unlimited hospital and medical benefits but does not provide the worker with wage compensation benefits.

Losses. The dollars paid out by insurance companies to cover accident claims. This does not include the overhead of an insurance company or any other expenses not associated with the actual cost of accidents.

Earned Premium. The sum of money earned and collected by an insurance company in payment for insurance sold. Usually a final audit of the payroll records of policy holders is made by the

insurance company. This audit indicates the actual "earned" premium the policy holder owes to the insurance company.

Net Premium. The net amount of premium collected by an insurance company when a policy is written. This is the amount of premium paid by the policy holder at the beginning of the policy period. Net premiums are usually greater than earned premiums.

Loss Ratio. The loss ratio is the amount paid out in losses divided the earned premium.

$$\text{Loss Ratio} = \frac{\text{losses}}{\text{earned premium}}$$

Pure Premium. The pure premium is equal to the amount paid out in losses divided by total payroll and multiplied by 100.

$$\text{Pure Premium} = \frac{\text{losses}}{\text{payroll}} \times 100$$

Average Severity. The average severity is equal to the amount paid out in losses divided by the number of claims.

$$\text{Average Severity} = \frac{\text{losses}}{\text{number of claims}}$$

Open Reserves. Open reserves is a term used when referring to the dollar reserve an insurance company is maintaining in anticipation of payment for an accident suffered. When an accident is reported to an insurance company the bills for the accident may be delayed for a long time. Therefore the insurance company estimates how much the accident will cost and maintains enough money to pay for the accident. The dollars held by an insurance company in anticipation of accident costs are called open reserves. When a loss figure includes open reserves the symbol (R) appears after the loss figure.

Closed Reserves. Closed reserves is the term used to indicate that all of the bills for the accidents have been filed with the insurance company. Closed reserves equal the actual cost of accidents. When a loss figure reflects the actual cost of accidents the symbol (C) appears after the loss figure.

An Accident of Slight Severity. An accident costing less than $101 or an accident with accident reserves less than $101 is considered to be of slight severity.

An Accident of Serious Severity. An accident costing more than $101 or an accident with reserves amounting to more than $101 is considered to be of serious severity.

Proposed Changes. Proposed changes refer to a proposal to include all agricultural employers under Michigan's Workmen's Compensation Law on the same basis as private non-agricultural employers.

Classifications for Agricultural Workmen's Compensation in Michigan. Workmen's Compensation for Agricultural employers is divided into 12 separate classifications. The individual classifications are:

Dairy or livestock farms--all employees other than inservants --including drivers.

Farm market or truck farm--all operations including drivers.

Farms "Not Otherwise Classified"--all employees other than inservants--including drivers.

Orchards--all employees other than inservants--including drivers.

Florists--cultivating or gardening--including drivers.

Hatcheries--no farming operations--including drivers.

Poultry or Egg Producers--no farming operations--including drivers.

Haybaling--including drivers.

Nurserymen--including incidental landscape gardening, drivers.

Farm Machinery Operation by Contractors--including drivers.

Stables or Breeding Farms--training of race horses, polo ponies and horses for exhibition purposes, including jockeys, trainers, and drivers.

Tree Pruning, Spraying, Repairing, Trimming or Fumigating--including drivers.

Procedure

Preliminary work on this study began in January 1970. Initially, interviews were conducted with individuals involved with the operation of agricultural workmen's compensation in Michigan. The agencies interviewed were the Michigan Insurance Commission, the Michigan Workmen's Compensation Bureau, the Michigan Department of Labor, and the Michigan State Accident Fund. Extensive interviews were also conducted with the personnel in Michigan Farm Bureau's central insurance office.

Farm Bureau and the Michigan State Accident Fund were the major sources of data. Supporting data was supplied by the Michigan Insurance

Commission, Pioneer State Mutual Insurance, Frankenmuth Insurance Company, and Auto Owners Insurance Company.

Method of Study

The method of analyzing the data collected in this study is as follows:

1. To calculate the loss ratios and pure premiums for the data collected.
2. To calculate the type, average severity and frequency of work accidents suffered by hired farm workers represented in the data.
3. To determine the number of hired farm workers in Michigan covered by workmen's compensation and the number not covered by workmen's compensation.
4. To determine the cost of accidents suffered by hired farm workers in Michigan not covered by workmen's compensation.
5. To calculate the cost of proposed changes in Michigan's Workmen's Compensation Law which relate to agricultural employers.

Limitations of the Study

There are four major limitations of this study. First, many of the loss figures include open reserves. This means that the cost of accidents may be overstated in many cases. Second, the relatively small number of farms included in the study makes the analysis extremely sensitive to large claims. Also, due to the lack of large numbers of farms, only four major classes of agricultural workmen's compensation were able to be analyzed. Third, differences in definitions of hired farm workers makes various sources of data difficult to compare. The

specific problem is that most published data on hired farm workers in Michigan includes all workers receiving a wage for farm labor. However, Michigan's Workmen's Compensation Law excludes members of the agricultural employer's immediate family from the definition of an employee. Also Michigan's Workmen's Compensation Law for agricultural employers includes employers normally thought of as being non-farm employers. Fourth, the lack of individual loss observations for much of the data makes it difficult to find standard deviations and confidence intervals for the loss figures. Because of this the analysis of loss experiences cannot be completed with definite conclusions.

CHAPTER II

DESCRIPTION OF WORKMEN'S COMPENSATION RELATING TO AGRICULTURE IN MICHIGAN

Introduction

This chapter discusses the history and philosophy of workmen's compensation in Michigan as it relates to agricultural employers. The five sections considered in this chapter are: the philosophy of workmen's compensation, the history of workmen's compensation, Michigan's Workmen's Compensation Law applying to farm workers, a description of Michigan's agricultural workmen's compensation system, and statistics relating to hired farm labor in Michigan.

The Philosophy of Workmen's Compensation in Michigan

The philosophy underlying Michigan's Workmen's Compensation Law is that workers have a right to rapid relief from work-related accidents. A worker suffering from a work injury should receive payment for his hospital and medical bills as well as compensation for lost time on the job. Actually a workmen's compensation act may be defined as a plan or system for compensating workmen injured and disabled as a direct result of their employment regardless of the question of fault or negligence [1]. Previous to the passage of a workmen's compensation law in Michigan, 1912, a worker generally had to sue his employer in order to

receive payments for work injuries [2]. Legal action, arising from an injured worker's suit, could force the employer to pay hospital and medical bills as well as compensation for lost working time. However, the employer had three defenses against being forced to pay for an accident. These defenses are known as "common law" defenses. If any one of these defenses was proven, the employer would not be liable for an employee's injury.

The common law defenses of an employer against accident suits are: (1) Negligence of the employee contributed to the accident; (2) Negligence of a fellow worker contributed to the accident; (3) The employee assumes the ordinary risk of the employment in which he is engaged [3].

Proof of any one of the above defenses freed the employer from liability for a particular accident. Because of the "common law defense," an employee often had to wait a considerable length of time before receiving payment for the cost of an injury. Of course, it is quite possible that an employee would never receive payment for a work injury. Studies have shown that 40 percent of the industrial accidents are due to "normal" risks of employment. An additional 30 percent of the industrial accidents are due to the fault of an employee. This means that under a system of common law defenses the cost of 70 percent of the industrial accidents would be borne by the workers themselves [4]. But workmen's compensation insures an employee's right to receive quick and immediate relief for work injuries regardless of the cause of the work accident.

The employer is also protected by workmen's compensation. Coverage under workmen's compensation insures an employer against being sued

by an injured worker. An injured worker receiving workmen's compensation benefits cannot sue his employer for work injuries. However, if an employer is required to carry workmen's compensation, but does not have the insurance, he forfeits his common law defenses against an accident suit.

History of Workmen's Compensation

When Michigan first passed a workmen's compensation law in 1912, only public employers were required to carry workmen's compensation. All private employers with the exception of employers of farm laborers and domestics were required to carry workmen's compensation in 1943 [5]. Private employers included under the Michigan's Workmen's Compensation Act prior to 1967 are required to carry workmen's compensation on all of their employees if the employer hires three or more persons at one time or hires one or more persons for 13 or more weeks out of the preceding 52 weeks.

On July 1, 1967 Michigan's Workmen's Compensation Act was extended to cover hired farm workers on a limited basis. An agricultural employer hiring three or more persons for 35 hours or more per week for 13 or more consecutive weeks has to carry full workmen's compensation on these employees. An agricultural employer hiring one or more persons for 35 or more hours a week for five or more consecutive weeks has to provide unlimited hospital and medical coverage for these employees.

Michigan's Workmen's Compensation Law Applying to Agricultural Employees

This Act shall apply to:
All agricultural employers of 3 or more regular employees paid hourly wages or salaries, and not paid on a piece-work basis,

> who are employed 35 or more hours per week for a period of 13 or more consecutive weeks during the preceding 52 weeks. Coverage shall apply only to such regularly employed employees.
>
> All agricultural employers of 1 or more employees who are employed 35 or more hours per week by that same employer for 5 or more consecutive weeks shall provide for such employees, in accordance with rules established by the director, medical and hospital coverage . . . for all personal injuries arising out of and in the course of employment suffered by such employees not otherwise covered by this Act. The provision of such medical and hospital coverage shall not affect any rights of recovery that an employee would otherwise have against an agricultural employer . . . No person shall be considered an employee of an agricultural employer if the person is a spouse, child or other member of the employer's family residing in the home or on the premises of the agricultural employer.
>
> All other agricultural employers not included in this subdivision shall be exempt from the provisions of this Act. [6]

The above Act actually creates three classes of agricultural employees. There are the employees covered by full workmen's compensation, the employees covered by unlimited hospital and medical insurance and the employees not covered at all. The above Act also excludes members of the agricultural employer's family from workmen's compensation coverage.

Description of the Agricultural Workmen's Compensation System

Rating Bureau.--The Michigan Rating Bureau establishes the recommended workmen's compensation rates. The recommendations are based upon past experience with workmen's compensation and the credibility that can be given to this experience. The National Insurance Council on Compensation Insurance supplies the Rating Bureau with payroll and loss data developed from the aggregate workmen's compensation experience in the State of Michigan. These figures are a composite of the experience of every insurance company selling a specific type of

compensation insurance in Michigan during a given time period. Generally the rates recommended by the Rating Bureau are based upon figures that are at least two years old. For example, rates recommended for December of 1969 were based upon the premium and loss figures from July 1965 to July 1967. The reason for this delay is that insurance companies have to wait for their policies to expire and for as many claims as possible to be settled. Without this delay it would be nearly impossible to collect accurate figures. The insurance companies report their premium and loss experiences to the National Insurance Council on Compensation. The Council compiles the total experience for each classification for each state. The results of the compilations are then sent to the Rating Bureau where the rate recommendations are derived.

Michigan Insurance Commission.--The Michigan Insurance Commission reviews the rates recommended by the Rating Bureau. The Commission is a public agency with the responsibility of reviewing and approving all rate proposals.

Insurance Companies.--The following insurance companies are writing agricultural workmen's compensation insurance in Michigan at the present time. The companies are Farm Bureau, Pioneer State Mutual, Frankenmuth Insurance, Auto Owners and Hastings Insurance. Insurance companies are not at liberty to lower or raise the rates charged for insurance. However some companies do return a dividend to policy holders. The size and percent of this dividend is dependent upon the size of the individual policy and the claims that have been made upon the policy.

The Michigan State Accident Fund also writes agricultural workmen's compensation in Michigan. The Accident Fund is a quasi-public agency originally set up to provide workmen's compensation coverage for any employer who could not obtain workmen's compensation insurance elsewhere [7]. The Accident Fund, established in 1912, only sells workmen's compensation insurance and has been a major writer in the area of agricultural workmen's compensation. The Accident Fund has a prerogative to attach a surcharge to the insurance rate for a high risk policy holder and they used to have to sell the workmen's compensation insurance to anyone who could not obtain insurance from any other company. It stands to reason that the Accident Fund will have higher risk policy holders and therefore their losses will probably be higher than those of other insurance companies.

Department of Labor.--The Michigan Department of Labor has several divisions. The central division contains the legislative advisers who make recommendations for legislative changes. Most of the proposed changes in Michigan's Workmen's Compensation Law originate at this point.

The Department of Labor also contains the Michigan Workmen's Compensation Bureau. The Bureau records all of the workmen's compensation claims filed in Michigan. Also the Bureau handles disputed workmen's compensation claims [8].

Agricultural Statistics Relating to Hired Farm Labor in Michigan

Statistical data on hired farm labor in Michigan is available from several sources. However, there are many variations in the

definitions and procedures used to collect data. This section presents some of the basic statistics on hired farm labor in Michigan which have been useful in this study.

Number of Hired Agricultural Workers in Michigan.--Table 1 indicates the average number of hired farm workers employed in Michigan from 1964 to 1969. The average number of hired farm workers in Michigan decreased from 38,000 in 1964 to 22,000 in 1969. Table 1 also indicates that during July and August in 1968 there were as many as 44,000 hired farm workers employed on Michigan farms. It should be noted that the monthly estimates in Table 1 are found by obtaining estimates once a month. Therefore, fluctuations within a month will not be taken into account. Some estimates indicate that there were as many as 65,000 hired farm workers employed at one time in Michigan during the summer months of 1968 [9].

Wages Paid to Hired Farm Workers.--Table 2 indicates the wages paid to hired farm workers in Michigan from 1964 to 1968. The wages paid to hired farm workers in Michigan decreased by about 4.4 million dollars between 1964 and 1968. However, wages did show a slight increase in 1968. Table 3 indicates the hourly wage rate paid to hired farm workers in Michigan from 1964 to 1968. The hourly wage estimates will be very useful in estimating the number of hours of work performed by hired farm workers in Michigan covered by agricultural workmen's compensation.

Table 1

Number of hired workers on Michigan farms,[a] by months, 1964-1968.

Hired Workers	January	February	March	April	May	June	July	August	September	October	November	December	Annual Average
						(Thousand Persons)							
1964	21	21	22	29	37	64	80	54	41	42	21	18	38
1965	17	19	19	24	31	50	59	54	35	31	21	15	31
1966	15	17	20	20	27	42	54	45	34	30	18	16	28
1967	12	16	16	18	30	35	46	44	33	32	19	16	26
1968	15	16	16	17	28	32	44	44	32	36	13	12	25

[a]Persons employed during the last full calendar week ending at least one day before the end of the month.

Source: Michigan Crop Reporting Service, Michigan Agricultural Statistics, July 1969, p. 34.

Table 2

Wages paid to hired farm workers in Michigan, 1964-1968.

Year	Wages Paid to Hired Farm Workers
1964	$60,100,000
1965	$53,500,000
1966	$53,900,000
1967	$53,200,000
1968	$55,700,000

Source: Farm Income. A supplement to the July 1969 Farm Income Situation. U.S. Department of Agriculture, August 1969, pp. 74-82.

Table 3

Farm wage rates, Michigan, 1964-1968.

Year	Per Hour Without Board or Room
1964	$1.13
1965	$1.20
1966	$1.32
1967	$1.41
1968	$1.52

Source: Michigan Crop Reporting Service, Michigan Agricultural Statistics, July 1969, p. 34.

Table 4 is a composite of Tables 1, 2, and 3. The relationship between the average number of hired farm workers employed in Michigan, the wages paid to hired farm workers in Michigan and the average wage rate per hour paid to hired farm workers is shown.

Table 4

Average number of hired farm workers, wages paid to hired farm workers and wage rate per hour paid to hired farm workers, Michigan, 1964-1968.

Year	Average Number of Workers	Total Wages Paid	Rate Per Hour
1964	38,000	$60,100,000	$1.13
1965	31,000	$53,500,000	$1.20
1966	28,000	$53,900,000	$1.32
1967	26,000	$53,200,000	$1.41
1968	25,000	$55,700,000	$1.52

Source: Tables 1, 2, and 3.

Chapter II References

1. Schneider, William R., Schneider's Workmen's Compensation, Vol. I. 3rd ed. St. Louis: Thomas Book Company, 1941, p. 24.

2. Michigan State University Labor and Industrial Relations Center and University of Michigan - Wayne State University Institute of Labor and Industrial Relations. Conference Commemorating the 50th Anniversary of Workmen's Compensation in Michigan. East Lansing, Michigan, March 30, 1962, p. VI-A-1.

3. Ibid., p. VI-A-2.

4. Schneider, William R., Schneider's Workmen's Compensation, Vol. I. 3rd ed. St. Louis: Thomas Book Company, 1941, p. 3.

5. Michigan State University Labor and Industrial Relations Center and University of Michigan - Wayne State University Institute of Labor and Industrial Relations. Conference Commemorating the 50th Anniversary of Workmen's Compensation in Michigan. East Lansing, Michigan, March 30, 1962, p. V-B-1.

6. Michigan Public Act No. 317, Sec. 115e and Sec. 161b, c (1969).

7. Ibid., Sections 701, 705, 711.

8. Ibid., Sec. 201.

9. Michigan Employment Security Commission. Farm Labor Report, Post Season, 1968. Detroit, Michigan, 1968, p. 10.

CHAPTER III

DATA PRESENTATION

Collection of Data

The data in this chapter was obtained from insurance companies writing agricultural workmen's compensation in Michigan. Most of the data contained in this chapter was obtained from the major sources of data. The types of data included in this chapter are: (1) a random sample of 24 insurance policy files of farms carrying full workmen's compensation coverage, (2) a special report on one insurance company's experience with the four major agricultural classes of full workmen's compensation, (3) total premium and loss reports on agricultural workmen's compensation from the insurance companies that made the reports available, (4) data obtained from the Michigan Insurance Commission.

Loss Ratios

Loss Ratios are commonly used to evaluate insurance programs. The Michigan Insurance Commission allows insurance companies to maintain a 65 percent loss ratio. This ratio is used as a mark for the rates charged. If loss ratios vary significantly from the 65 percent level, the rates will probably be changed by the Michigan Rating Bureau. If loss ratios are below 65 percent, the rates are likely to decrease. If the loss ratio is above 65 percent, the rates are likely to increase.

The loss ratios in this study are based upon the data made available by the major sources of data. The number of policies comprising the data is relatively small compared to the number of policies written. With a small number of policies one large claim can significantly influence the loss ratio and distort the implications of the loss ratio. For example, in one case an additional $1,000 claim would increase a loss ratio from 6 percent to 32 percent. Loss ratios are important because they give us some feeling for the experiences insurance companies are having with the new agricultural workmen's compensation program in Michigan.

The following tables contain the data needed for the determination of loss ratios on the four major types of data obtained. In order to make comparisons the data is presented by classification. The four major classes of agricultural workmen's compensation studied are: (1) Farm market or truck farms; (2) Farms not otherwise classified; (3) Dairy or livestock farms; and (4) Orchards. In total there are 12 classes in agricultural workmen's compensation. The above four were selected because these were the four for which data was most readily available. It is believed that the four classifications selected are most predominate classifications in agricultural workmen's compensation in Michigan.

Farm Markets or Truck Farms.--The tables in this section indicate the premiums, number of claims, losses, number of policies and the resulting loss ratios on farm markets or truck farms in Michigan carrying workmen's compensation.

Tables 5 and 6 indicate that losses due to accidents to hired labor have been low for farm markets or truck farms. This group of farms has the lowest loss ratios of the four groups being studied. But this group also has the lowest number of policy holders of any of the groups when all the data is considered together.

Table 5

Loss ratios on farms with farm market or truck farm coverage, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$234,130.00	$344,719.00
Premium	$8,381.00	$12,686.00
Number of Claims	1	3
Losses	$93.00 (C)	$175.00 (C)
Number of Policies	8	13
Loss Ratio	1.11%	1.38%

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Note: A sample containing 4 farms, not included in this table, with farm market or truck farm coverage indicated that the loss ratios on these farms for 1968 were between 0.0 percent and 4.28 percent.

Source: Survey data, Company B.

Table 6

Loss ratios for farms with farm market or truck farm coverage, 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Premium	$15,424	$12,834
Losses	$837	$1,281
Loss Ratio	5.4%	1%

Source: Survey data, Company B.

Farms "Not Otherwise Classified."--The tables in this section indicate the payroll, premiums, number of claims, losses, number of policies, and the resulting loss ratios on farms coded as "Not Otherwise Classified."

Tables 8 and 9 indicate that farms within the "Not Otherwise Classified" code are not suffering large losses. However, the one large claim in Table 7 changes the picture somewhat. But even with this large claim it appears that the losses are not excessive for the "Not Otherwise Classified" code. The large standard deviation for the full workmen's compensation loss figure in Table 7 indicates the uncertainty of the data.

Table 7

Loss ratios on farms with coverage classified as farms "Not Otherwise Classified," 1968.

Item	Full Workmen's Compensation[a]	Unlimited Hospital and Medical
Payroll	$53,486.00	$74,776.00
Premium	$4,395.29	$3,297.92
Number of Claims	3	4
Losses	$4,134.09	$555.65
Standard Deviation	$2124.00	$231.40
Number of Policies	4	4
Loss Ratio	94.06%	16.85%
Standard Deviation	83.60%	14.03%

[a]This classification contains a $3,825.34 claim. Although the accident report for this claim carried a code not being considered in this study the claim was included. The accident was suffered by a domestic worker injured in a farm work accident.

Source: Survey data, 24 farm sample from Company A.

Table 8

Loss ratios on farms with coverage classified as farms "Not Otherwise Classified," 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$47,445.00	$266,174.00
Premium	$3,919.00	$21,572.00
Number of Claims	3	10
Losses	$245.16 (C)	$1,848.06 (C)
Number of Policies	5	52
Loss Ratio	6.25%	8.57%

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Source: Survey data, Company B.

Table 9

Loss ratios for farms coded as farms "Not Otherwise Classified," coverage 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Premium	$6,565.00	$57,710.00
Losses	$420	$4,568.00
Loss Ratio	6.4%	8.7%

Source: Survey data, Company B.

Dairy or Livestock Farms.--The tables in this section indicate the payroll, premiums, number of claims, losses, number of policies and the resulting loss ratios on dairy or livestock farms. It should be noted that the 24 farm sample did not contain any farms within this code.

Tables 10 and 11 indicate that Company B had large losses on full compensation coverage for dairy or livestock farms. Also, Table 10 indicates that open reserves are still being maintained. In most cases, the survey data indicated that the reserves are generally greater than the actual cost of accident. At best open reserves give only a slight indication as to the actual cost of accident. Nevertheless, there are some large and serious claims on the full compensation policies for dairy and livestock farms. It appears that full-time workers, those covered by full compensation, are subject to more serious accidents than part-time workers, those who are only covered by unlimited hospital and medical insurance.

Table 10

Loss ratios on dairy or livestock farms, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$79,357.00	$171,018.00
Premium	$6,555.00	$13,965.00
Number of Claims	5	7
Losses	$27,775.45 (R)	$14,151.50 (R)
Number of Policies	6	23
Loss Ratio	423.73%	101.34%

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Source: Survey data, Company B.

Table 11

Loss ratios for dairy or livestock farms, coverage 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Premium	$5,504	$27,548
Losses	$27,830	$5,724
Loss Ratio	505%	20.8%

Source: Survey data, Company B.

Orchards.--The tables in this section indicate the payroll, premiums, number of claims, losses, number of policies and resulting loss ratios on orchards.

Tables 12, 13, and 14 do not give a clear-cut indication of the hazards involved with orchard employment. It appears that Company B

had an unusually large claim, or claims, in 1968. However, Table 13 indicates that open reserves are still being maintained and it is not certain what the actual loss ratio will be once all claims are in. Large reserves would account for the high loss ratio in Table 14.

Table 12

Loss ratios on orchard farms, 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Payroll	$155,168.00	$335,153.00
Premium	$12,437.87	$14,653.95
Number of Claims	6	13
Losses	$334.00	$634.30
Standard Deviation	$24.12	$36.37
Number of Policies	14	16
Loss Ratio	2.69%[a]	4.32%[a]
Standard Deviation	0.48%	0.89%

[a]Only claims occurring from July 1, 1968 to July 1, 1969 were considered in the loss figures. From July 1, 1967 to May 1970, all claims for full workmen's compensation coverage for these farms amounted to $4,096.92 which if divided by 1968 premiums gives a loss ratio of 32.94 percent. All claims for unlimited hospital and medical coverage from July 1, 1967 to May 1970 amounted to $3,816.55 which when divided by the 1968 premium yields a loss ratio of 26.04 percent. This merely proves that the loss ratios are extremely low for these farms.

Source: Survey data, 24 farm sample from Company A.

Table 13

Loss ratios on orchards, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$170,441.00	$228,163.00
Premium	$14,063.00	$18,682.00
Number of Claims	6	8
Losses	$3,912.69 (C)	$42,873.25 (R)
Number of Policies	15	27
Loss Ratio	27.82%	229.49%

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Source: Survey data, Company B.

Table 14

Loss ratios for orchards, 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Premium	$15,605	$87,519
Losses	$20,954	$32,164
Loss Ratio	134%	36.8%

Source: Survey data, Company B.

Composite Loss Ratios.--The tables in this section represent the loss ratios for all classifications. The tables indicate the loss ratio for all of the farms in the 24 farm sample, the reported loss ratios for all workmen's compensation sold by Company A in 1967, 1968, and 1969, the loss ratios for all of the farms in Company B's special

report and the loss ratio for all of the agricultural workmen's compensation insurance sold by Company B in 1967 and 1968.

Tables 15, 16, 17, and 18 give an indication as to the loss experience of agricultural workmen's compensation in Michigan since July 1, 1967. The difference in loss ratios may be the result of not having any dairy or livestock farms included in the 24 farm sample. Since dairy or livestock farms have high loss ratios for Company B it is possible that Company A may also have high loss ratios for dairy or livestock farms. Another reason why Company A's loss ratios would be lower than the loss ratios for Company B is that Company B may have higher risk policy holders than Company A.

Table 15

Loss ratios for all farms included in the 24 farm sample, 1968.[a]

Item	1968
Earned Premium	$36,459.96
Losses	$2,401.90
Number of Claims	27
Number of Policies	22
Loss Ratio	6.59%

[a]Includes full workmen's compensation and unlimited hospital and medical coverage.

Source: Survey data, Company A.

Table 16

Loss ratios for all workmen's compensation sold to agricultural employers in Michigan by one company, 1967, 1968 and 1969.

Item	1967	1968	1969
Net Premium	[a]	$789,000	$998,561
Earned Premium	$162,842	$467,000	[a]
Losses	$109,650	$227,000	$232,351
Number of Claims	434	827	1,127
Number of Policies	4,200	4,200	4,200
Loss Ratio	67.34%	48.61%	23.27%[b]

[a]Figures not available.

[b]This loss ratio is determined on the basis of net premium rather than earned premium. The earned premium figures are not yet available for 1969.

Source: Survey data, Company A.

Table 17

Loss ratios for all farms included in the special report by Company B, 1967 and 1968.

Item	1967	1968
Payroll		
Earned Premium	$32,918.00	$66,905.00
Losses	$32,026.30	$59,047.81
Number of Claims	15	28
Number of Policies	34	115
Loss Ratio	97.29%	88.26%

Note: These figures only include four codes. The codes are the full workmen's compensation coverage on Truck Farms, Farms "Not Otherwise Classified," Dairy or Livestock Farms, and Orchards.

Source: Survey data, Company B.

Table 18

Loss ratios for all agricultural workmen's compensation sold by Company B for 1967 through 1968.

Item	Amount
Earned Premium	$302,828
Losses	$165,433
Loss Ratio	54.63%

Source: Survey data, Company B.

Pure Premium

Pure Premium is a relationship between payroll and losses. If the pure premium equals the premium rate charged then net premiums would be exactly equal to losses. The rate recommendations of the Rating Bureau are largely dependent upon pure premium calculations. The advantage of pure premiums is that they are not dependent upon the current insurance premium rates.

The tables in this section calculate the pure premiums for the classifications of agricultural workmen's compensation being studied. Also included in this section are the pure premium calculations made by the National Council on Compensation Insurance for 1965-1967. These are the figures upon which the current rates for agricultural workmen's compensation in Michigan are based. It should be noted that the National Council's figures are based upon workmen's compensation coverage that was not mandatory. Also, there are only 6 farm codes included in the National Council's report as opposed to the 12 current codes for agricultural workmen's compensation in Michigan.

Farm Markets or Truck Farms.--The tables in this section indicate the payroll, losses and resulting pure premiums for farm markets or truck farms. The pure premiums resulting from each set of data are calculated. Tables 19 and 20 indicate that the pure premiums range from 0 to .199. Since the Rating Bureau uses pure premium calculations, it is useful to have pure premium figures when reviewing the Rating Bureau recommendations.

Table 19

Pure premium on farms with farm market or truck farm coverage, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$234,130.00	$344,719.00
Losses	$93.00 (C)	$175.00 (C)
Pure Premium	.039	.05

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Note: A sample containing 4 farms, not included in this table, with farm market or truck farm coverage indicated that the pure premiums on these farms for 1968 were between 0.0 and 0.04 per $100 of payroll.

Source: Survey data, Company B.

Table 20

Pure premium for farms with farm market or truck farm coverage, 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Payroll[a]	$419,130	$671,937
Losses	$837	$1,281
Pure Premium	.199	.190

[a]Payroll is estimated by dividing premiums in Table 6 by the approved rates for December 1, 1967 and multiplying by 100. In this case, the rate for full workmen's compensation is $3.68 per $100 of payroll, the rate for unlimited hospital and medical is $1.91 per $100 of payroll.

Source: Survey data, Company B.

Farms Not Otherwise Classified.--The tables in this section indicate the payroll, losses and resulting pure premiums for farms within the category "Not Otherwise Classified." Tables 24 and 25 represent data obtained before July 1, 1967. There are two reasons why these figures obtained before July 1, 1967 are not comparable to data obtained after July 1, 1967, the figures in Tables 21, 22, and 23. First, the payroll and losses for Tables 24 and 25 are for years when workmen's compensation did not have to be carried by any agricultural employer in Michigan. Secondly, the classification of farms "Not Otherwise Classified" includes more farms prior to July 1, 1967 than after that date.

Tables 24 and 25 do provide insight into the reason for the decrease in agricultural workmen's compensation rates in December of 1969. It should be pointed out that the National Council on Compensation Insurance bases its estimates upon the latest two-year composite

statement. Therefore, we see that the pure premium decreased from Table 24 to Table 25. This was part of the reason for the reduction in rates in December of 1969.

Table 21

Pure premium on farms with coverage classified as "Farms Not Otherwise Classified," 1968.

Item	Full Workmen's Compensation[a]	Unlimited Hospital and Medical
Payroll	$53,486	$74,776
Losses	$4,134.09 (R)	$575.65 (R)
Standard Deviation	$2,124.06	$231.40
Pure Premium	7.729	.769
Standard Deviation	6.87	0.618

[a]This classification contains a $3,825.34 claim. Although the accident report for this claim carried a code not being considered in this study the claim was included. The accident was suffered by a domestic worker injured in a farm work accident.

Source: Survey data, 24 farm sample from Company A.

Table 22

Pure premium on farms with coverage classified as "Farms Not Otherwise Classified," 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$47,445.00	$266,174.00
Losses	$245.16 (C)	$1,848.06 (C)
Pure premium	.516	.694

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Source: Survey data, Company B.

Table 23

Pure premium with coverage classified as "Farms Not Otherwise Classified," 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Estimated Payroll[a]	$79,963.46	$1,195,238.00
Losses	$420	$4,568.00
Pure Premium	.525	.916

[a]Payroll is estimated by dividing the premium in Table 9 by the approved rates for December 1, 1967 and multiplying by 100. In this case, the rate for full workmen's compensation coverage is $8.21 per $100 of payroll; for unlimited hospital and medical, the rate is $4.41 per $100 of payroll.

Source: Survey data, Company B.

Table 24

Pure premiums on farms with coverage classified as "Farms Not Otherwise Classified," 1964-1966.[a]

Year	Payroll	Losses and Loss Adjustment			
		Serious Amount		Non-Serious Amt.	
		Number of Cases		Number of Cases	
1964-1965	$5,960,023	7	$168,821	67	$113,355
1965-1966	$6,789,284	2	$19,795	61	$93,305
Total	$12,751,676	9	$188,616	128	$206,660

[a]This code includes farms placed in other codes after the change in the law on July 1, 1967.

Note: All of the figures in this table are based upon voluntary coverage of agricultural employers under full workmen's compensation.

Source: Michigan State Insurance Commission.

Table 24--Continued

Expense		Pure Premium Per $100 of Payroll			
Med. Amt.	Total Amt.	Serious 50% Credibility	Non-Serious 70% Credibility	Medical 50% Credibility	Total
$65,404	$347,585				
$51,108	$164,208				
$116,517	$511,793	1.479	1.621	.914	4.01

Table 25

Pure premium on farms with coverage classified as "Farms Not Otherwise Classified," 1965-1967.[a]

Year	Payroll	Losses and Loss Adjustment			
		Serious Amount		Non-Serious Amt.	
		Number of Cases		Number of Cases	
1965-1966	$6,789,284	2	$18,593	61	$89,745
1966-1967	$5,030,817	5	$46,695	41	$66,956
Total	$11,821,106	7	$65,288	102	$156,701

[a]This code includes farms placed in other codes after the change in the law on July 1, 1967.

Note: All of the figures in this table are based upon voluntary coverage under full workmen's compensation.

Source: Michigan State Insurance Commission.

Table 25--Continued

Expense		Pure Premium Per $100 of Payroll			
Med. Amt.	Total Amt.	Serious 40% Credibility	Non-Serious 60% Credibility	Medical 50% Credibility	Total
$49,608	$157,946				
$46,954	$160,605				
$96,562	$318,551	.552	1.326	.817	2.70

Dairy or Livestock Farms.--The tables in this section indicate the payroll, losses and resulting pure premiums for dairy or livestock farms. The 24 farm sample did not contain any policies for dairy or livestock farms. It is important to note that the losses reported on dairy farms still contain open resources. As a general rule, open reserves tend to be greater than the actual cost of accidents. Nevertheless, Table 27 indicates that the cost of accidents under hospital and medical coverage is much less than the cost of accidents under full workmen's compensation coverage.

Table 26

Pure premium for dairy or livestock farms, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$79,357.00	$171,018.00
Losses	$27,775.45 (R)	$14,151.50 (R)
Pure Premium	35.00	8.27

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Source: Survey data, Company B.

Table 27

Pure premium for dairy or livestock farms, 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Estimated Payroll[a]	$67,040.19	$624,671.20
Losses	$27,830	$5,724
Pure Premium	41.51	.916

[a]Payroll is estimated by dividing the premiums in Table 11 by the approved rates for December 1, 1967 and multiplying by 100. In this case, the rate for full workmen's compensation coverage is $8.21 per $100 of payroll; the rate for unlimited hospital and medical coverage is $4.41 per $100 of payroll.

Source: Survey data, Company B.

Orchards.--The tables in this section indicate the pure premiums for orchard farms. The pure premiums are higher for the farms in Company B's data than for the farms in the 24 farm sample. Only two of the pure premiums, Tables 29 and 30, are higher than current rates. A possible reason for the higher rates is that Company B may have had an unusually large claim in 1968.

Table 28

Pure premium for orchard farms, 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Payroll	$155,168.00	$335,153.00
Losses	$334.00	$634.30
Standard Deviation	$24.12	$36.27
Pure Premium	.215[a]	.189[a]
Standard Deviation	0.038	0.039

[a]Only claims occurring from July 1, 1968 to July 1, 1969 were considered in the loss figures. From July 1, 1967 to May 1, 1970 all claims for the farms with full workmen's compensation coverage amounted to $4,096.92 which if divided by the 1968 payroll and multiplied by 100 yields a pure premium equal to 264. The total loss for unlimited hospital and medical coverage from July 1, 1967 to May 1970 amounted to $3,816.55 and the resulting pure premium equals 1.138.

Source: Survey data, 24 farm sample from Company A.

Table 29

Pure premium for orchard farms, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$170,441.00	$228,163.00
Losses	$3,912.69 (C)	$42,873.25 (R)
Pure Premium	2.295	18.79

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Source: Survey data, Company B.

Table 30

Pure premium for orchard farms, 1967 through 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Estimated payroll[a]	$190,073.08	$1,984,557.82
Losses	$20,954	$32,164
Pure Premium	11.02	1.62

[a]Payroll is estimated by dividing the premiums in Table 14 by the approved rates for December 1, 1967 and multiplying by 100. In this case, the rate for full workmen's compensation coverage is $8.21 per $100 of payroll; for unlimited hospital and medical, the rate is $4.41 per $100 of payroll.

Source: Survey data, Company B.

Average Severity

Average severity of accidents indicates how the seriousness of accidents on one type of farm compares with the seriousness of accidents on other types of farms. These figures are useful in determining the cost of accidents based upon estimations of the number of accidents.

Farm Market or Truck Farms.--Table 31 indicates the average severity of reported accidents on truck farms. For the 5 claims reported, the average severity ranges from $50 to $100. The low average severity explains the relatively low level of losses reported for farm markets of truck farms.

Table 31

Average severity of accidents on farms with farm market or truck farm coverage, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (168)
Losses	$93.00	$175.00
Number of Claims	1	3
Average Severity	$93.00	$58.33

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Note: A sample containing 4 farms, not included in this table, with farm market or truck farm coverage reported 1 accident, costing $25, in 1968.

Source: Survey data, Company B.

Farms Not Otherwise Classified.--Tables 32 and 33 indicate the average severity of accidents on farms coded as "Not Otherwise Classified." The average severity of the 20 claims reported in this section ranged from $81.67 to $1,378.03. The 24 farm sample, Table 32, indicates that full workmen's compensation claims are more costly than the unlimited hospital and medical claims. This is to be expected since full workmen's compensation carries the added benefit of wage compensation as well as unlimited hospital and medical insurance. Since the number of farms included in the data is small, one unusually large claim can significantly change the average severity figure. This is shown by the large standard deviation for full workmen's compensation in Table 32.

Table 32

Average severity of accidents on farms with coverage classified as "Farms Not Otherwise Classified," 1968.

Item	Full Workmen's Compensation[a]	Unlimited Hospital and Medical
Losses	$4,134.09	$555.65
Number of Claims	3	4
Average Severity	$1,378.03	$138.91
Standard Deviation	$1,227.75	$115.70

[a]This classification contains a $3,825.34 claim. Although the accident report for this claim carried a code not being considered in this study the claim was included. The accident was suffered by a domestic worker injured in a farm work accident.

Source: Survey data, 24 farm sample from Company A.

Table 33

Average severity of accidents on farms with coverage coded as "Farms Not Otherwise Classified," 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Losses	$245.16	$1,848.06
Number of Claims	3	10
Average Severity	$81.67	$184.81

[a]Data on unlimited hospital and medical coverage was not available for this survey.

Source: Survey data, Company B.

Dairy or Livestock Farms.--Table 34 indicates the average severity of accidents on dairy or livestock farms. The data for this section is limited because the 24 farm sample did not contain policies for dairy or livestock farms. The average severity of the claims, Table 34, ranges from $2,021.64 to $5,555.09. These are the most serious claims in the codes considered. The seriousness of the claims gives some indication why losses are extremely high for this code. This indicates that accidents on dairy or livestock farms are likely to be more serious than accidents on the other types of farms considered in this study.

Table 34

Average severity of accidents on dairy or livestock farms, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Losses	$27,775.45 (R)	$14,151.50 (R)
Number of Claims	5	7
Average Severity	$5,555.09	$2,021.64

[a]Data on unlimited hospital and medical coverage was not available.

Source: Survey data, Company B.

Orchards. Tables 35 and 36 indicate the average severity of accidents occurring on orchard farms. Table 35 supports the previous indication that the severity of full compensation claims is greater than the severity of hospital and medical claims. The difference in average severities is probably due to the difference in benefits.

Table 35

Average severity of accidents on orchard farms, 1967, 1968 and 1969.

Year	Item	Full Workmen's Compensation	Unlimited Hospital and Medical
1967			
	Losses	$1,752.92	$1,157.25
	Number of Claims	3	8
	Average Severity	$584.31	$144.65
	Standard Deviation	$294.80	$77.99
1968			
	Losses	$334.00	$634.30
	Number of Claims	6	13
	Average Severity	$55.67	$48.79
	Standard Deviation	$9.85	$10.05
1969			
	Losses	$2,010.00	$2,025.00
	Number of Claims	10	12
	Average Severity	$201.00	$168.75
	Standard Deviation	$91.56	$58.70

Source: Survey data, 24 farm sample from Company A.

Table 36

Average severity of accidents on orchard farms, 1967 and 1968.[a]

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Losses	$3,912.69 (C)	$42,873.25 (R)
Number of Claims	6	8
Average Severity	$652.12	$5,359.16

[a]Data on unlimited hospital and medical coverage was not available in this survey.

Source: Survey data, Company B.

The average severity of claims in Tables 35 and 36 ranges from $48.79 to $5,359.16. The large average severity figure in Table 36 is probably due to an abnormally large claim filed with Company B in 1968.

Accident Frequency

From the data available, it is possible to determine the frequency of accidents per one million man hours of exposure. The accident frequencies calculated in this study can then be compared with accident frequencies in other studies. A comparison between the frequencies indicates whether or not employers are reporting all of the accidents that are suffered by hired farm workers. The frequency of accidents suffered will also indicate which farm jobs are the most hazardous. Knowledge of the hazard of different types of farm jobs can lead to inferences about workmen's compensation rates and at the same time form a basis for future workmen's compensation rates. The frequencies of accidents suffered by hired farm workers covered by workmen's compensation are presented in this section.

Truck Farms or Farm Markets. Table 37 indicates the number of accidents suffered per one million man hours of exposure on truck farms represented in the data. The frequency of accidents ranges from 0 to 24.2 accidents per million man hours of exposure. These calculations are below Hofmeister's estimate of 31.2 accidents suffered by hired farm labor per million man hours of exposure [1]. The farms represented in Table 37 have the lowest accident frequency of the groups being considered.

Table 37

Estimated number of accidents per one million man hours of exposure on Michigan truck farms with workmen's compensation coverage, 1967 and 1968.

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$234,130	$344,719
Number of Claims	1	3
Man Hours[a]	156,087	229,813
Rate of Accidents	6.4	13.1

[a]An average hourly wage of $1.50 was assumed [2]. The $1.50 figure was divided into the total payroll to obtain an estimate of the number of hours worked.

Note: A sample containing 4 farms, not included in this table, with farm market or truck farm coverage reported 1 accident with a frequency of 24.2 accidents per 1 million man hours.

Source: Survey data, Company B.

Farms Not Otherwise Classified.--Tables 38 and 39 indicate the estimated number of accidents per one million man hours of exposure on farms coded as "Not Otherwise Classified." The estimates of the number of accidents per one million man hours of exposure ranges from 56.4 to 94.8. This is a much higher frequency of accidents than the frequency reported by truck farms, Table 37.

Table 38

Estimated number of accidents per one million man hours of exposure on farms coded as "Not Otherwise Classified," 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Payroll	$53,486	$74,776
Number of Claims	3	4
Est. Man Hours[a]	35,657	49,850
Accidents per One Million Man Hours	84	80.2

[a]An average hourly wage of $1.50 was assumed [2]. The $1.50 figure was divided into the total payroll to obtain an estimate of the number of hours worked.

Source: Survey data, 24 farm sample from Company A.

Table 39

Estimated number of accidents per one million man hours of exposure on farms coded as "Not Otherwise Classified," 1967 and 1968.

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$47,445	$266,174
Number of Claims	3	10
Est. Man Hours[a]	31,630	177,449
Accidents per One Million Man Hours	94.8	56.4

[a]An average hourly wage of $1.50 was assumed [2]. The $1.50 figure was divided into the total payroll to obtain an estimate of the number of hours worked.

Source: Survey data, Company B.

Dairy or Livestock Farms.--Table 40 indicates the accident frequency for dairy or livestock farms. The accident frequency ranges from 61.4 to 94.5. These frequencies of accidents are in the same range as "Farms Not Otherwise Classified" but are higher than the accident frequencies for truck farms.

Table 40

Estimated number of accidents per one million man hours of exposure on dairy or livestock farms, 1967 and 1968.

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$79,357	$171,018
Number of Claims	5	7
Est. Man Hours[a]	52,905	114,012
Accidents per One Million Man Hours	94.5	61.4

[a]An average hourly wage of $1.50 was assumed [2]. The $1.50 figure was divided into the total payroll to obtain an estimate of the number of hours worked.

Source: Survey data, Company B.

Orchards.--Tables 41 and 42 indicate the frequency of accidents on orchard farms. The frequency of accidents ranged from 52.6 to 58.2. This range of frequency closely corresponds to the frequency of accidents found on dairy or livestock farms and farms "Not Otherwise Classified." However, the accident frequency on orchard farms is higher than the accident frequency on truck farms.

Table 41

Estimated number of accidents per one million man hours of exposure on orchard farms, 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Payroll	$155,168	$335,153
Number of Claims	6	13
Est. Man Hours[a]	103,445	223,435
Accidents per One Million Man Hours	58	58.2

[a]An average hourly wage of $1.50 was assumed [2]. The $1.50 figure was divided into the total payroll to obtain an estimate of the number of hours worked.

Source: Survey data, 24 farm sample from Company A.

Table 42

Estimated number of accidents per one million man hours of exposure on orchards, 1967 and 1968.

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$170,441	$228,163
Number of Claims	6	8
Est. Man Hours[a]	113,627	152,109
Accidents per One Million Man Hours	52.8	52.6

[a]An average hourly wage of $1.50 was assumed [2]. The $1.50 figure was divided into the total payroll to obtain an estimate of the number of hours worked.

Source: Survey data, Company B.

Totals For All Farms.--The accident frequency for all farms included in the study is indicated on Tables 43 and 44. Table 45 indicates the accident frequency for all of the workmen's compensation insurance sold by Company A for 1967, 1968 and 1969. Table 43 indicates that the accident frequency for unlimited hospital and medical insurance is 57.2. The accident frequency for full workmen's compensation coverage is 60.7, Table 43. This indicates that there is a slightly higher frequency of reported accidents for full workmen's compensation coverage than for hospital and medical coverage only. The accident frequency for all workmen's compensation insurance sold by Company A ranges from 96.5 in 1969 to 159.9 in 1967. These figures are based upon an estimated payroll which is derived from reported premiums. The important point is that the frequency of accidents reported under Company A's workmen's compensation coverage is higher than the predicted accident frequency of 31.2. Also the frequency of reported accidents for Company A is higher than the accident frequency for Company B.

Table 43

Estimated number of accidents per one million man hours of exposure on all farms included in the 24 farm sample, 1968.

Item	Full Workmen's Compensation	Unlimited Hospital and Medical
Payroll	$224,434	$471,862
Number of Claims	9	18
Est. Man Hours	148,289	314,575
Accidents per One Million Man Hours	60.7	57.2

Source: Survey data, 24 farm sample from Company A.

Table 44

Estimated number of accidents per one million man hours of exposure on all farms included in the special report by Company B, 1967 and 1968.

Item	Full Workmen's Compensation (1967)	Full Workmen's Compensation (1968)
Payroll	$531,373	$1,010,074
Number of Claims	15	28
Est. Man Hours	354,249	673,383
Accidents per One Million Man Hours	42.3	41.6

Source: Survey data, Company B.

Table 45

Estimated number of accidents per one million hours of exposure on all farms covered by Company A's Workmen's Compensation Insurance, 1967, 1968, and 1969.

Item	1967	1968	1969
Estimated Payroll[a]	$4,071,000	$11,675,000	$17,500,000
Number of Claims	434	837	1,127
Est. Man Hours	2,714,000	7,783,333	11,666,667
Accidents per One Million Man Hours	159.9	106.2	96.5

[a]Payroll was estimated by assuming a rate of $4.00 per $100 of payroll as the average rate. Payroll was then estimated from net premium. For 1969, only gross premium figures were available. From the differences between gross and net premium in 1968, $322,000, it is assumed that the difference between gross and net premium in 1969 is $298,561. Therefore, the assumed net premium for 1969 is $700,000. Payroll is estimated from the $700,000 figure.

Source: Survey data, Company A.

Type of Accident Suffered

This section relates the type of work accidents suffered on farms represented in the 24 farm sample. The accident reports in each file were evaluated with respect to: (1) circumstances of the accident; (2) severity of the injury; (3) nature of the injury; and (4) part of the body injured [3].

Circumstances of the Accident.--Table 46 indicates the circumstances of the accidents suffered. In total, 52 reported accidents were evaluated. Since only orchard farms were considered, it seems reasonable that highest percentage of accidents were due to falls. In fact, 46.15 percent of the total accidents were due to falling to a different level. The second largest classification, 30.77 percent, was being struck by various objects. Most of these accidents were caused by being struck by a tree limb.

Severity of Injury.--Table 47 indicates the number of accidents suffered in different working conditions and the average cost of accidents suffered under each condition. It should be noted that a fall from a ladder is considered an accident involving a working surface. An accident was considered slight if the cost of the accident or the reserve for the accident was $100 or less. If the cost of the accident or the reserve for the accident was more than $100, the accident was considered severe. Only 9 of the 52 accidents were in the severe classification, while the remaining 43 accidents were considered to be slight injuries. Accidents to hired farm workers classified according

to the accident situation have a wide range in the average of cost of accidents. Accidents involving vehicles were by far the most costly.

Table 46

Circumstances of accidents suffered on a sample of Michigan orchard farms, 1967-1969.

Cause of the Accident	Number of Cases		Percentage
Struck by	16		30.77
Machines		6	
Hand Tools		2	
Vehicles		0	
Animals		2	
Misc.		6	
Slip (not Fall)	3		5.77
Handling Heavy Material		1	
Hand Tools		2	
Other		0	
Fall to Different Level	24		46.15
Vehicles		5	
Ladder		15	
Others		4	
Falling on Same Level	1		1.92
Striking Against Object	2		3.85
Inhalation	3		5.77
All Other	3		5.77
TOTAL	52		100.00

Source: Survey data, 24 farm sample from Company A.

Table 47

Severity of accidents suffered by hired workers on a sample of Michigan orchard farms, 1967-1969.

Accident Situation	Number of Cases	Average Cost
Machines	7	$61.07
Prime Movers	4	$220.06
Vehicles	3	$1,641.78
Chemicals	3	$68.33
Hand Tools	4	$44.75
Working Surfaces	22	$111.46
Misc. Objects	6	$220.83
Animals, Persons	2	$375.00
All Others	0	0

Source: Survey data, 24 farm sample from Company A.

Nature of the Injury.--Table 48 indicates the nature of the accidents suffered on Michigan orchard farms. Most of the injuries, 40.43 percent, were classified as cuts, punctures and lacerations. The second largest number of accidents, 23.40 percent, were due to strains and sprains. Factures, which would generally be classified as severe accidents, only accounted for 14.89 percent of the accidents.

Table 48

Nature of the injuries suffered by hired workers on a sample of Michigan orchard farms, 1967-1969.

Nature of Injury	Number of Cases	Percentage
Fractures	7	14.89
Strains and Sprains	11	23.40
Cuts, Punctures and Lacerations	19	40.43
Bruises and Contusions	6	12.77
All Other Injuries	4	8.51

Source: Survey data, 24 farm sample from Company A.

Part of the Body Injured.--Table 49 indicates the part of the body injured in the accidents being studied. Most of the injuries, 21, were to the lower extremities. These accidents would be injuries to the legs and feet of an individual. It should be noted that 6 of the 8 injuries to the face and neck were eye injuries.

Table 49

Part of the body injured in accidents suffered by hired workers on a sample of Michigan orchard farms, 1967-1969.

Part of Body Injured	Number of Cases
Trunk	9
Lower Extremities	21
Hands and Fingers	10
Upper Extremities	2
Two or More Parts	2
Face and Neck	8
All Other Injuries	2

Source: Survey data, 24 farm sample from Company A.

Chapter III References

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CHAPTER IV

DATA ANALYSIS

Using data in the previous chapter, the analysis in this chapter is directed to several important relationships. Initially comparisons are made between the four basic calculations presented in Chapter III. These are: loss ratios, pure premium, average severity, and accident frequency. The probable future directions of workmen's compensation rates are considered in the second part of this chapter.

Loss Ratios

Loss ratios were developed in Chapter III for all classifications of agricultural workmen's compensation represented in the data. Table 50 contains all of the loss ratios obtained in Chapter III. The loss ratios vary from 0.0 percent to 505.00 percent.

As indicated earlier it is difficult to compare the loss-ratios in this study. Since standard deviations could only be calculated for a few loss ratios there is no basis upon which to compare the size of the various loss ratios. Therefore the reader should realize that the following observations are restricted by limitations of the data.

It appears that the lowest loss-ratios were experienced by the farm market or truck farm classification. The loss ratios for farms "Not Otherwise Classified" appear to be higher than the loss ratios

Table 50

Composite table of loss ratios previously presented, 1967 and 1968.

Classification and Type of Coverage	Company B			Company A
	1967	1968	Total 1967 & 1968	1968
				(Sample)
Farm Market				
Full Workmen's Compensation	1.11%	1.38%	5.40%	
Hospital & Medical			1.00%	
Farms NOC				
Full Workmen's Compensation	6.25%	8.57%	6.40%	94.06%
Hospital & Medical			8.70%	16.85%
Dairy or Livestock				
Full Workmen's Compensation	423.73%	101.34%	505.00%	
Hospital & Medical			20.80%	
Orchards				
Full Workmen's Compensation	27.82%	229.49%	134.00%	2.69%
Hospital & Medical			36.80%	4.32%
TOTALS	97.29%	88.26%[a]	116.11%	6.59%[b]

[a]For all 12 classifications, the loss ratio is 54.63%.

[b]For all classifications of agricultural workmen's compensation sold by Company A in 1968 the loss ratio is 48.61%.

Source: Survey data.

for truck farms but are still relatively low, with the exception of the full workmen's compensation experience of Company A. The dairy or livestock farms have generally reported the highest loss ratios obtained in the study. Unfortunately, the 24 farm sample did not contain any dairy or livestock farms. Therefore, the experience of Company A cannot be compared with the experience of Company B. The high loss ratios for dairy or livestock farms were experienced only under full workmen's compensation coverage sold by Company B. The loss-ratio for unlimited hospital and medical coverage was relatively lower, 20 percent. Accident reports indicating the reason for the difference between full workmen's compensation and unlimited hospital and medical coverage were not made available by the data sources.

From viewing the loss ratio figures obtained from the data in this study it appears that dairy or livestock farming is relatively more hazardous for full-time hired labor than the other classifications. Secondly, it can be seen that Company B is losing money selling full workmen's compensation coverage to dairy or livestock farmers.

Most of the farms in the 24 farm sample were orchard farms. However, the loss ratios for orchard farms indicate a mixed experience. Basically, the loss ratios are low with the exception of the 1968 experience of Company B. Apparently Company B had one or several large claims under full workmen's compensation for orchard farms in 1968. It seems that this large loss ratio may be an exception because the data from Company A, 16 farms, indicates that the loss ratios as does the 1967 experience of Company B. It appears that Company B may have higher risk policy holders than Company A. Nevertheless, it should be

noticed that with the exception of Company B's 1968 experience that the loss ratios for orchards are very similar to the loss ratios for farms "Not Otherwise Classified."

Table 50 indicates that with the exception of full workmen's compensation coverage for dairy or livestock farms, the 1968 orchard farm experience of Company B, and the farms "Not Otherwise Classified" experience of Company A that the loss ratios for the four classes of agricultural workmen's compensation being considered are low. The loss ratio for all agricultural workmen's compensation sold by Company A in 1968 was 48.61 percent while the loss ratio for all agricultural workmen's compensation sold by Company B in 1967 and 1968 was 54.63 percent. Two observations can be made from this information. First, Company A is experiencing lower loss ratios than Company B. The reason for this is that Company B seems to have higher risk policy holders than Company A. Currently it seems that the insurance companies are finding agricultural workmen's compensation profitable, if a 65 percent loss ratio is equitable.

The data indicates that loss ratios are generally lower for unlimited hospital and medical insurance than for full workmen's compensation coverage. A possible reason for this is the difference in benefits between the two types of coverage. Full workmen's compensation coverage provides unlimited hospital and medical insurance as well as compensation for lost wages, while unlimited hospital and medical benefits only provide payment for hospital and medical expenses. Therefore, the difference in cost of the two types of coverage should be equal to the amount of wages lost.

Pure Premiums

Pure premiums represent a method of evaluating insurance programs independent of the premium rate being charged. A pure premium is the rate per $100 of payroll that would equate premiums and losses. Table 51 indicates all of the pure premiums derived in Chapter III. The pure premiums in Table 51 range from 0.039 to 41.51. The pure premiums for farm markets or truck farms are extremely low. Similar to loss ratios the pure premiums for farms "Not Otherwise Classified" are somewhat higher than pure premiums for truck farms. When pure premiums vary greatly from the established rates, there will probably be recommendations to change the rates. Full workmen's compensation coverage for dairy or livestock farms has extremely high pure premiums. However, the pure premium for unlimited hospital and medical coverage is very low. Generally the pure premiums for orchards are low with the exception of the 1968 experience of Company B.

The above analysis follows along the same lines as the analysis of loss ratios. Figure 1 indicates that pure premiums and loss ratios are directly related. This relationship is expected to hold since the main variable for both pure premiums and loss ratios is the amount of losses. The relationship between loss ratios and pure premiums can be represented algebraically.

$$\text{loss ratio} = \frac{\text{losses}}{\text{earned premium}}$$

$$\text{pure premium} = \frac{\text{losses}}{\text{payroll}}$$

$$\text{earned premium} = \text{rate} \times \text{payroll}$$

$$\text{earned premium} = \text{pure premium} + \text{net returns to the insurance company}$$

Table 51

Composite table of pure premiums previously presented, 1967 and 1968.

Classification and Type of Coverage	Company B			Company A
	1967	1968	1967 & 1968	1968
				(Sample)
Farm Market				
Full Workmen's Compensation	.039	.05	.199	
Hospital & Medical			.190	
Farms NOC				
Full Workmen's Compensation	.516	.694	.525	7.729
Hospital & Medical			.382	.743
Dairy or Livestock				
Full Workmen's Compensation	35.00	8.27	41.51	
Hospital & Medical			.916	
Orchards				
Full Workmen's Compensation	2.295	18.79	11.02	.215
Hospital & Medical			1.62	.189

Source: Survey data.

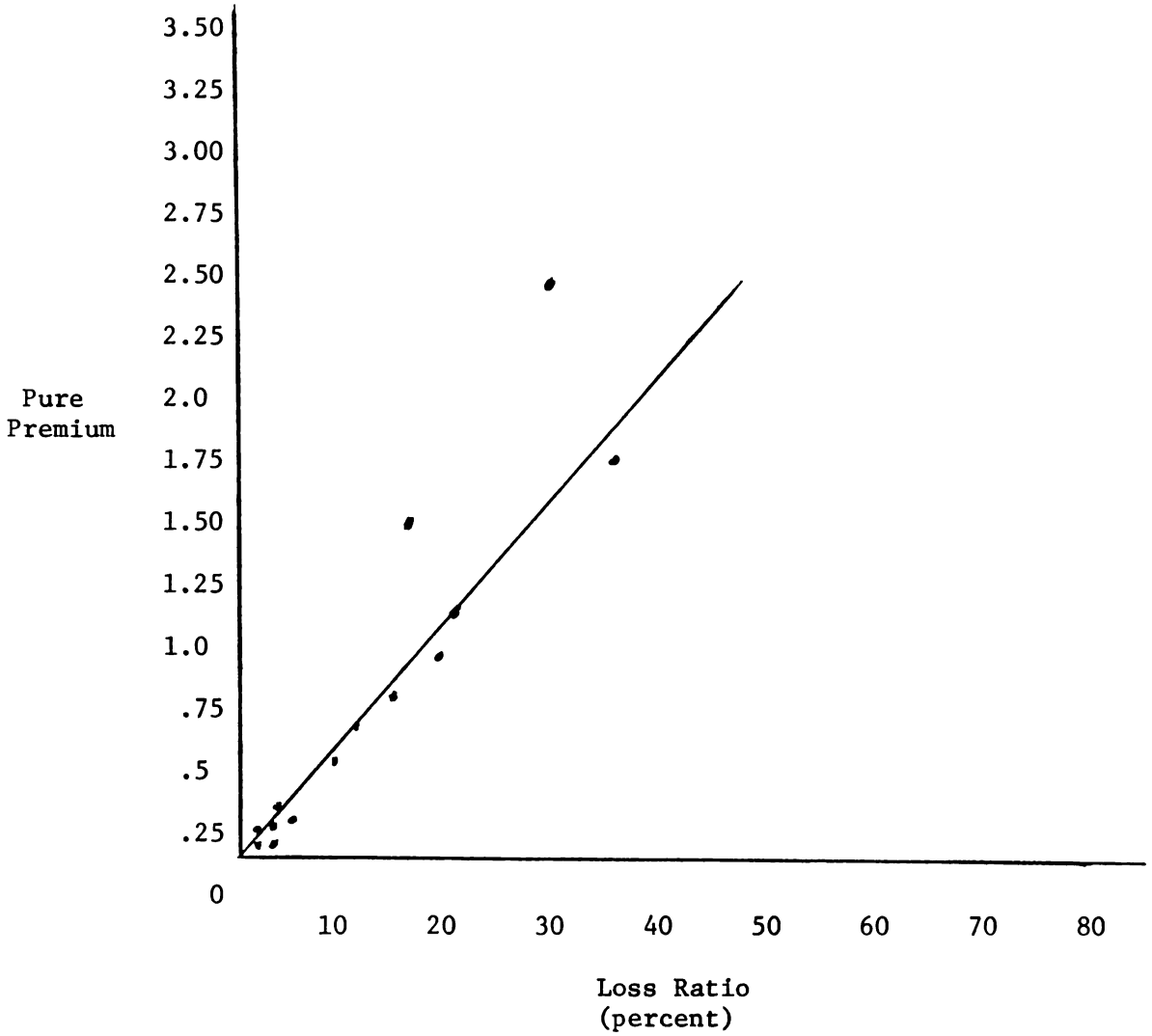

Figure 1

The relationship between loss ratios and pure premiums.

Source: Survey data

Generally insurance companies speak of insurance programs in terms of loss ratios. However, the Rating Bureau will refer to the same programs in terms of pure premiums. Either loss ratios or pure premiums will yield nearly the same conclusions about insurance programs.

Average Severity

Average severity is obtained by dividing the number of accidents reported into the total cost of claims. Table 52 indicates the average severity of accidents derived in Chapter III. From looking at Table 52, it can be seen that the average severities range from $58.33 to $5,555.09. It appears that where the loss ratios were low that the average severity is also low. In fact, Figure 2 indicates that average severity is directly related to loss ratios. There is an algebraic relationship between average severities and pure premiums.

$$\text{average severity} = \frac{\text{losses}}{\text{number of claims}}$$

$$\text{loss-ratio} = \frac{\text{losses}}{\text{earned premium}}$$

This again points to the fact that the amount of losses is a crucial variable in analyzing insurance programs. A classification with low loss ratios will generally have low average severity figures. The reason for this relationship will be seen when accident frequencies are examined. Basically, accident frequency varies randomly among all of the classifications considered, with the exception that truck farms have an extremely low accident frequency. It will be seen that as losses increase that the average severity of accidents will also increase.

Table 52

Composite table of average severities previously presented, 1967 and 1968.

Classification and Type of Coverage	Company B		Company A[a]
	1967	1968	1968
			(Sample)
Farm Market			
Full Workmen's Compensation	$93.00	$58.33	
Hospital & Medical			
Farms NOC			
Full Workmen's Compensation	$81.67	$184.81	$1,378.03
Hospital & Medical			$111.13
Dairy or Livestock			
Full Workmen's Compensation	$5,555.09	$2,021.64	
Hospital & Medical			
Orchards			
Full Workmen's Compensation	$652.12	$5,359.16	$55.67[b]
Hospital & Medical			$48.79

[a]The average severity for accidents reported under all of Company A's Agricultural Workmen's Compensation in 1967 was $503.00; for 1968, the average severity was $275 and for 1969 the average severity was $206.

[b]The average severity of accidents to hired farm labor on orchard farms in 1967 was $584.31 for full workmen's compensation coverage and $144.66 for unlimited hospital and medical coverage. The average severity for accidents to hired farm labor on orchard farms in 1969 was $201 for full workmen's compensation coverage and $168.75 for unlimited hospital and medical coverage.

Source: Survey data.

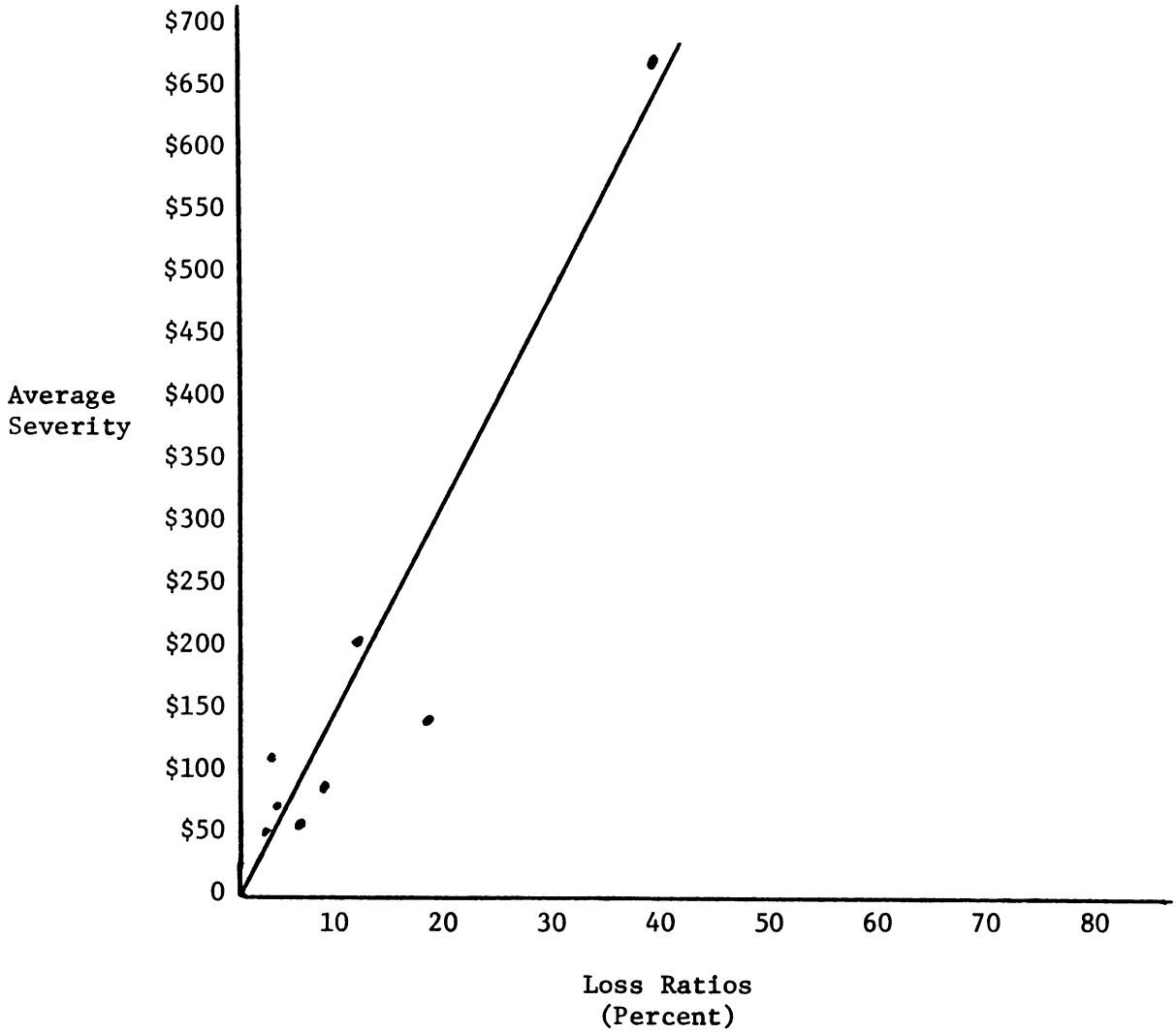

Figure 2

The relationship between loss ratios and average severity.

Source: Survey data

It should be noted that the average severity for unlimited hospital and medical coverage is generally lower than the average severity for full workmen's compensation coverage claims. This is probably due to the difference in benefits. It should also be noted that the average severities of claims for Company B are higher than the average severities for the claims on Company A policies. The probable reason for this is that Company B has higher risk policy holders than does Company A.

Frequency of Accidents

The frequency of accidents per one million man hours of exposure is often used in accident studies. Table 53 indicates that the frequency of accidents per one million man hours of exposure ranged from 6.4 to 159.9. Kenneth Hofmeister's study indicated that the accident frequency for hired labor on Michigan farms was about 31.2 accidents per one million man hours [1]. Looking at Table 53, it can be seen that farm markets or truck farms have an extremely low accident frequency. However, it is reported by Hofmeister that truck farms and farm markets account for a low percent of the total accidents and therefore we would expect a lower than average accident frequency for these farms [2]. The frequencies of accidents for the other three classifications do not appear to indicate any particular trends. In fact, there seems to be no apparent relationship between the frequency of accidents and average severity or loss ratios. The reason for this is that the frequency of accidents is not a function of the amount of losses sustained. However, it will be seen later that an estimation of the frequency of accidents can lead to predictions of the amount of

Table 53

Composite table of frequency of accidents per one million man hours of exposure, 1967 and 1968.

Classification and Type of Coverage	Company B		Company A[a]
	1967	1968	1968
			(Sample)
Farm Market			
Full Workmen's Compensation	6.4	13.1	
Hospital & Medical			
Farms NOC			
Full Workmen's Compensation	94.8	56.4	84.0
Hospital & Medical			80.2
Dairy or Livestock			
Full Workmen's Compensation	94.5	61.4	
Hospital & Medical			
Orchards			
Full Workmen's Compensation	52.8	52.6	58.0
Hospital & Medical			58.2
TOTALS			
Full Workmen's Compensation	42.3	41.6	60.7
Hospital & Medical			57.2

[a]The accident frequency per one million man hours of exposure for all of the agricultural workmen's compensation sold by Company A in 1967 was 159.9. The accident frequency for 1968 was 106.2 and the accident frequency for 1969 was 96.5.

Source: Survey data.

losses sustained by a particular classification. Table 53 also indicates that the frequency of accidents suffered by hired farm workers with full workmen's compensation coverage is higher than the frequency of accidents suffered by hired farm workers with unlimited hospital and medical insurance. However, the 3.5 difference in the frequency of accidents is not extremely large given the range of the other accident frequencies.

Direction of Rates

Assuming that there are no changes in the law, will the rates for agricultural workmen's compensation continue to decrease in the future? Table 54 indicates the rates that have been charged for agricultural workmen's compensation coverage for the classifications being considered. Table 55 indicates the absolute and percentage changes in the rates over the past three years.

It should be noted that farms "Not Otherwise Classified," dairy or livestock farms, and orchard farms all pay the same rates. Also, the rate decreases for these three classifications have been the same. However, the loss ratios and pure premiums need to be considered in determining whether or not equal rates are justified. If equal rates are justified, the three coverages should have similar pure premiums and similar loss ratios. Looking at Tables 50 and 51, above, it can be seen that the range of loss ratios varies between farms "Not Otherwise Classified," dairy or livestock farms, and orchards. The pure premiums, Table 51, indicate that the pure premiums for full workmen's compensation for dairy or livestock farms should be higher than the rates for farms coded as "Not Otherwise Classified" and orchard farms.

Table 54

Rates charged per $100 of payroll for four selected classes of agricultural workmen's compensation in Michigan, 1967-1969.

Farm Classifications	12/1/67		12/1/68		12/1/69	
	Full Workmen's Compensation	Hospital and Medical	Full Workmen's Compensation	Hospital and Medical	Full Workmen's Compensation	Hospital and Medical
Farm Market or Truck Farm	3.68	1.91	2.95	1.72	3.38	1.72
Farms "NOC"	8.21	4.41	6.95	3.97	6.34	3.97
Dairy or Livestock	8.21	4.41	6.95	3.97	6.34	3.97
Orchards	8.21	4.41	6.95	3.97	6.34	3.97

Source: Michigan Workmen's Compensation Rating Bureau.

Table 55

Rate change and percent decrease for each of the four selected classifications, 1967-1969.

Farm Classifications	Full Workmen's Compensation		Hospital and Medical	
	Net Change	% Decrease	Net Change	% Decrease
Farm Market or Truck Farm	-.30	8%	-.19	10%
Farms "NOC"	-1.87	23%	-.44	10%
Dairy or Livestock	-1.87	23%	-.44	10%
Orchards	-1.87	23%	-.44	10%

Source: Derived from Table 54.

The 24 farm sample indicates that the rates for both full workmen's compensation coverage and unlimited hospital and medical coverage on farms "Not Otherwise Classified" should probably be higher than the rates for orchard farms. However, Company B's data suggests just the opposite, that rates for orchard farms should probably be higher than the rates for farms "Not Otherwise Classified." The ratios seem to be indicating that rates for farms "Not Otherwise Classified" and truck farms might be expected to continue decreasing.

Table 55 indicates that the rates for all classifications considered have been going down. The pure premiums for all classifications considered, except for full workmen's compensation coverage for dairy or livestock farms, the 1968 experience of Company B with orchard farms, and the 1968 experience of Company A with farms "Not Otherwise Classified" are less than the rates being charged. From these indications

it appears that the rates will generally continue to decrease for both coverages of farm markets or truck farms and for unlimited hospital and medical coverage of farms "Not Otherwise Classified." Rates might continue to decrease for unlimited hospital and medical coverage for dairy or livestock farms and for unlimited hospital and medical coverage for orchards. It is uncertain whether or not there will be a further decrease in the rate for full workmen's compensation coverage for orchards but the predominance of low loss ratios reported by Company A seems to indicate that the rates may continued to decrease. It is also uncertain as to whether or not there will be future decreases in the full workmen's compensation rates for farms "Not Otherwise Classified."

If all of the accidents suffered by workers covered under agricultural workmen's compensation are not being reported, it is possible that losses will increase as a higher percentage of the actual claims are filed. The tables on the frequency of accidents to hired labor, Table 53, above, indicate that truck farms were the only farms with an accident frequency less than 31.2, which was the accident frequency found by Hofmeister. The remaining three classifications experienced an accident frequency ranging from 52.6 to 94.8. It appears that all or nearly all reportable accidents covered under agricultural workmen's compensation are being reported. It also appears that the frequency of accidents suffered by hired farm labor in Michigan may be higher than the Hofmeister study indicates.

Extent of Coverage of Agricultural Workmen's Compensation in Michigan

Number of Farms Covered.--A proposal has been made which would include agricultural employes in Michigan under the workmen's compensation law on the same basis as all other private employers regularly covered under the workmen's compensation law. If this proposal is passed, it would mean that all agricultural employers who employ three or more employees at one time and all agricultural employers who employ at least one employee for 35 or more hours a week for 13 or more weeks during the preceding 52 weeks would have to carry full workmen's compensation coverage.

Table 56 indicates the number of farms in Michigan for the period 1950 to 1964 as reported in the U.S. Census for Agriculture, Michigan. An estimate of 78,543 farms in Michigan in 1968 was obtained by assuming a normal progression in the decrease of the number of farms [3]. Table 57 indicates the number of farms hiring labor in Michigan in 1964. Assuming that the same percentage of farms will hire labor in 1968 as did in 1964 an estimate of 36,130 farms hiring labor in 1968 was obtained, Table 57 [4]. But how many of the farms hiring labor in 1968 were hiring labor that had to be covered by agricultural workmen's compensation? If it is assumed that any farm with an annual payroll in excess of $1,000 has to have some type of agricultural workmen's compensation coverage, an estimate as to the number of farms having agricultural workmen's compensation policies can be obtained. Table 58 indicates the number of farms with a hired labor payroll in excess of $1,000 in 1964, assuming that the same percentage holds in 1968 an estimate of

8,589 farms with a payroll in excess of $1,000 in 1968 is obtained. Assuming that a farm with a payroll in excess of $1,000 will have to have some type of workmen's compensation coverage an estimate of 8,589 farms carrying agricultural workmen's compensation policies in 1968 is obtained. Assuming that around 8,500 farms are covered by agricultural workmen's compensation insurance, it can be estimated that around 27,000 farms hiring labor in Michigan are not carrying agricultural workmen's compensation policies, Table 59. If the agricultural workmen's compensation act is extended to include agricultural employers on a regular basis, it is probable that those farms with payrolls in excess of $500 would have to provide workmen's compensation coverage for their employees.

Table 56

Number of farms in Michigan, 1950 to 1968.

Year	Number of Farms	(Decrease) Percent Change
1950	155,589	10.71%
1954	138,922	19.51%
1959	111,817	16.38%
1964	93,504	15.00%[a]
(1968)[a]	(78,543)[a]	

[a]Assuming a 15 percent decrease from 1964 to 1968, the estimates for 1968 were obtained.

Source: U.S. Bureau of the Census. 1964 United States Census of Agriculture. Volume 1, Part 13: Michigan, p. 7.

Table 57

Number of farms hiring labor in relation to the number of farms, 1964 and 1968.

Year	Number of Farms	Number of Farms Hiring Labor
1964	93,504	43,461
1968	78,543[a]	36,130[b]

[a]This estimate was obtained from Table 50.

[b]In 1964, 46.48 percent of the farms hired labor. This estimate assumes that the same percent of farms will hire labor in 1968.

Source: U.S. Bureau of the Census. 1964 United States Census of Agriculture. Volume 1, Part 13: Michigan, p. 11.

Table 58

Number of farms covered under the workmen's compensation act.

Year	Number of Farms W/Payroll in Excess of $1,000
1964	10,105
1968	8,589[a]

[a]This is assuming a 15 percent reduction in the number of farms between 1964 and 1968.

Source: U.S. Bureau of the Census. 1964 United States Census of Agriculture. Volume 1, Part 13: Michigan, p. 11.

Table 59

Comparison of the number of farms hiring labor covered and the number of farms hiring labor not covered under the Workmen's Compensation Act.

Year	Number Covered	Number Not Covered	Total
1968	8,589	27,541	36,130

Source: Tables 57 and 58.

Amount of Payroll and Number of Workers Covered.--The next question is how many hired farm workers are being covered by workmen's compensation in Michigan? Also, what amount of payroll is being covered by workmen's compensation in Michigan?

In determining how many hired farm workers are currently covered by workmen's compensation, an assumption needs to be made as to the total earnings of a farm worker. For the worker covered under full workmen's compensation, working 13 or more consecutive weeks for the same employer, an average annual income of $4,000 was assumed. The basis for this assumption is that the 24 farm sample indicated that orchard growers were paying workers covered under full workmen's compensation an average of $2,400 per worker. Dr. Karl Wright estimated that in 1968 the equivalent of a full-time farm worker in Michigan would be earning around $3,380 per year [5]. However, the law states that persons working in processing plants which are non-commercial and associated with the grower are considered agricultural employees [6]. Therefore, the higher wage estimate of $4,000 was assumed. The average

income for a worker covered under unlimited hospital and medical insurance is somewhat more difficult to determine. The 24 farm sample indicated that, in 1967, 16 orchard growers were paying an average of $450 to each worker covered by unlimited hospital and medical insurance. However, the figure of $450 might yield a higher number of workers than might actually be covered because of wage increases and higher wages paid on other types of farms. For the worker covered under unlimited hospital and medical insurance, a wage of $750 was assumed. At $1.50 per hour and working a 42-hour week, the $750 figure would be reached in the 12th week of work [7]. Another reason for using the higher estimate is that if an employer has less than 3 full-time employees he only needs to carry unlimited hospital and medical insurance. Therefore, the higher estimate would seem to be more appropriate.

It has been estimated that the largest writer of agricultural workmen's compensation in Michigan sells one-half of the workmen's compensation insurance covering hired farm workers that is sold in Michigan. However, the data seems to suggest that this writer was selling about 40 percent of the agricultural workmen's compensation sold in Michigan in 1968. The reason for this assumption is that in 1966 a payroll of approximately $29,000,000 was covered by agricultural workmen's compensation [8]. There are some reasons why this payroll might decrease after the law changed in 1967. Prior to July 1, 1967 an agricultural employer carrying workmen's compensation insurance, whcih was optional, had to insure all employees. However, with the 1967 extension of workmen's compensation to cover agricultural employers an agricultural employer did not have to insure employees

working less than 5 consecutive weeks. The additional coverage required should have increased the payroll covered. If the largest writer of agricultural workmen's compensation in Michigan sold one-half of the agricultural workmen's compensation sold in Michigan in 1968, the maximum payroll that could have been covered would have been about $26,000,000. However, if this writer sold 40 percent of the agricultural workmen's compensation in 1968, the payroll covered would have been over $32,000,000. Therefore, it was assumed that the largest writer of agricultural workmen's compensation in Michigan sold 40 percent of the agricultural workmen's compensation sold in Michigan in 1968.

Figures from another writer of agricultural workmen's compensation in Michigan indicated that two-thirds (2/3) of the agricultural workmen's compensation sold was for unlimited hospital and medical coverage, while the remaining one-third (1/3) of the agricultural workmen's compensation insurance was for full workmen's compensation coverage.

With the above assumptions it can be calculated that the premium for full agricultural workmen's compensation coverage sold in Michigan in 1968 was approximately $389,165. The premium for unlimited hospital and medical insurance in 1968, under the agricultural workmen's compensation provision, was calculated to be approximately $778,335.

The rates for full workmen's compensation coverage for agricultural employers ranged from $1.67 to $7.29 per $100 of payroll in 1968. A representative rate of $6.00 per $100 of payroll was assumed for full workmen's compensation coverage. The payroll paid to hired farm

workers, which was covered by full workmen's compensation insurance in 1968 was calculated to be about $6,486,083. For unlimited hospital and medical coverage the rates ranged from $1.04 to $4.03 per $100 of payroll in 1968. A rate of $3.00 per $100 of payroll was assumed as the rate charged for unlimited hospital and medical coverage. The payroll, paid to hired farm workers, covered by unlimited hospital and medical insurance in 1968, was calculated to be about $22,088,733. Therefore, it is calculated that the payroll paid to workers covered by agricultural workmen's compensation in 1968, in Michigan, was approximately $32,430,583.

If the assumed average wage of $4,000 for workers covered under full agricultural workmen's compensation is divided into $6,486,083, the number of workers can be found. The approximate number of workers covered under full agricultural workmen's compensation coverage is calculated to be about 1,622. Correspondingly, if $750 is divided into $25,944,500, the estimated number of workers covered under unlimited hospital and medical insurance can be found. It is calculated that 34,593 hired farm workers in Michigan were covered under unlimited hospital and medical coverage in 1968. Thus, in total, it is calculated that approximately 36,225 hired farm workers were covered under agricultural workmen's compensation in Michigan in 1968. Actually it would be more realistic to say that 30,000 to 40,000 hired farm workers in Michigan were covered by workmen's compensation in 1968.

Losses Covered by Agricultural Workmen's Compensation.--If it is assumed that other insurance companies have approximately the same loss experience as Company A, the estimated number of accidents and

total cost of accidents suffered under agricultural workmen's compensation coverage in 1968 can be determined. In 1968, Company A reported 827 agricultural workmen's compensation claims. The accident frequency derived from Company A's report for agricultural workmen's compensation in 1968 is 95.6 accidents per one million man hours. Assuming this same accident frequency it is calculated that in 1968 there were about 2,067 claims costing a total of $568,425 reported under agricultural workmen's compensation.

The reported payroll to hired farm workers in Michigan during 1968 is $55,700,000 [9]. However, many of the workers covered under the agricultural workmen's compensation act are not included in these figures. But wages paid to family workers, who are not covered under agricultural workmen's compensation, are included in the above figure. Therefore, it is assumed that the payroll paid to farm labor, excluding members of the employer's immediate family, in 1968 was about $60,000,000. Dividing this $60,000,000 figure by $1.50 the estimated number of man hours worked was obtained. Assuming that the accident frequency of 95.6 still held an estimate of 3,824 accidents suffered by hired farm labor in Michigan in 1968 was obtained. It was estimated that the cost of these accidents was $1,051,600. Therefore, in 1968, it is estimated that 1,757 accidents to hired farm labor costing a total of $483,175 were not covered by workmen's compensation. Actually, the number of accidents not covered by workmen's compensation which are suffered by hired farm workers in Michigan is probably between 1,400 and 1,900 accidents. The cost of these uncovered accidents is between $400,000 and $500,000.

Chapter IV References

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6. Michigan Public Act No. 317, Sec. 155 (1969).

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CHAPTER V

FURTHER ANALYSIS

Issues

Workmen's compensation insurance for hired farm workers is a controversial issue among different groups within the State of Michigan. This section will deal with some of the critical issues concerning the extension of workmen's compensation for agricultural employers, an attempt will be made to see whether or not the facts presented in this thesis can illuminate issues in the following statements.

Will Private Insurance Companies Refuse to Sell Workmen's Compensation Insurance to Agricultural Employers if the Law is Extended to Full Coverage?--An extension of Michigan's Workmen's Compensation Act which has been proposed would include agricultural employers in the definition of private employers under Michigan's Workmen's Compensation law [1]. It has been said that insurance companies will refuse to sell agricultural workmen's compensation insurance if this proposal is passed. The main reason for making this assertion is the belief that there will be a disproportionate increase in costs and inconveniences to the insurance companies if agricultural employers are included under the regular provisions of the Workmen's Compensation Act in Michigan.

Typically insurance companies find agricultural workmen's compensation particularly difficult to deal with because of the short tenure of many hired farm workers. The actual difficulty arises in the settlement of claims. If an injured worker leaves the state shortly after he sustains an accident, the cost of settling the claim will increase. The extension of the Workmen's Compensation Act to include all agricultural employers on a regular basis will increase the number of workers covered. Many of the additional workers brought under the Act, with an extension, would be seasonal workers. An increase in the number of seasonal farm workers in Michigan covered under the Workmen's Compensation Act may result in a more than proportionate increase in claims that have to be settled outside of the state.

Specifically, there is a great deal of concern about the settlement costs for claims made by non-Michigan residents. This would be a claim by the migrant or seasonal worker who comes to Michigan for only a few short weeks out of the year for the harvest season. Many times bills for claims are coming in long after an accident occurs. The cost and difficulty of administration of claims by a person living outside of Michigan could be considerable.

There are two main points that seem to underlie the concern for this issue. First, how many of the hired farm workers being brought under the coverage of workmen's compensation would be out-of-state workers? Also, what percent of the claims could be expected to be claims by out-of-state residents? Secondly, what is the added cost of administrating the claims of out-of-state farm workers injured in Michigan?

The Michigan Farm Labor Report for 1968 estimated that 47.4 percent of the total farm work force was accounted for by Michigan residents. Also, it was estimated that approximately 70,700 interstate farm workers were employed in Michigan in 1968 [2]. In Chapter IV, it was calculated that 36,225 farm workers were covered by workmen's compensation insurance. It was estimated that an average of 27,000 hired farm workers were employed in Michigan in 1968 [3]. If Michigan's Workmen's Compensation Act is extended to include all agricultural employers, how many more workers would be included under the Act? Estimates of the number of hired farm workers employed in Michigan in 1968 have ranged as high as 130,000 [4]. However, it is difficult to determine just how many of the hired farm workers are members of the employer's immediate family. Realizing that the figure of 130,000 may be high and that some allowances need to be made for family members, it is assumed that there were about 100,000 hired farm workers employed in Michigan in 1968. If 36,225 of these hired farm workers are covered by workmen's compensation insurance, then 63,775 hired farm workers in Michigan were not covered by workmen's compensation in 1968.

In Chapter IV it was calculated that the payroll to hired farm labor not covered by workmen's compensation is $27,569,417. If all hired farm workers are covered by workmen's compensation about 63,775 additional workers would be covered. Given the current agricultural Workmen's Compensation law, it can be assumed that most of the 63,775 additional workers will be seasonal. If 50 percent of the seasonal workers are out-of-state, it would mean that 31,888 of the added workers would be out-of-state workers. In Chapter IV it was calculated

that there would be 1,757 additional claims. Therefore, it can be expected that 879 of the additional claims will be filed by out-of-state residents. What is the added cost of an out-of-state accident claim? Assume that an attorney would have to spend 16 hours, two days, handling an out-of-state claim for an insurance company and that the attorney's fees would be about $30 per hour. According to these assumptions, it can be estimated that an out-of-state accident claim would cost $500 more than an in-state claim. Assuming that there are 879 additional out-of-state claims, it can be estimated that the added out-of-state claims would cost an additional $438,500 per year. The impact of this added cost will be discussed after the premium and loss estimates for an extension of agricultural workmen's compensation are developed.

If the Workmen's Compensation Act is Extended, Would This Significantly Affect the Number of Jobs Available to Hired Farm Workers? --The average number of hired farm workers in Michigan has been declining over the past few years. Many people have said that an increase in the cost of hiring farm labor due to workmen's compensation will ultimately lead directly to a decrease in the number of jobs available.

It is extremely difficult to determine the impact of the current agricultural workmen's compensation law upon the hired farm labor market in Michigan. It is also difficult to determine the extent to which an extension of the Act would decrease the number of jobs for hired farm workers in Michigan. If agricultural workmen's compensation rates remain at the same level, the cost of labor for workers not currently

covered would be increased by about 4 percent with an extension of the Act. The 4 percent increase is obtained by assuming that the rates average out to about $4.00 per $100 of payroll.

Since this study is dealing with aggregate data, a simplified model of the employment market will help to predict the effects of a 4 percent increase in the cost of labor. Assume that the demand for labor is a function of labor's marginal value product. As the marginal value product of labor increases, more labor will be demanded. Also, assume that the employer will equate the price for labor to labor's marginal value product and that the supply of labor is a function of the real wage rate. The employment market is represented by Figure 3 [5].

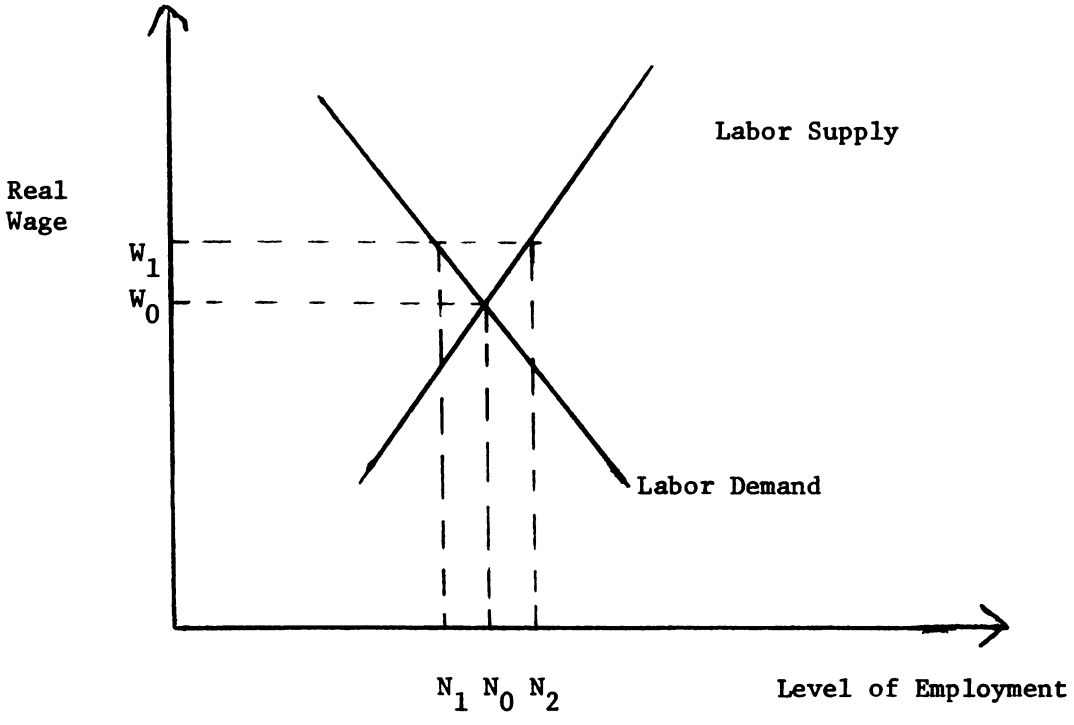

Figure 3

Model of the employment market.

Source: Bailey, Martin J., National Income and Price Level [5].

If wage W_0 and level of employment N_0 is assumed, the market is in equilibrium. If the wage charged to the employer moves to W_1 as a result of a 4 percent increase due to workmen's compensation, the employer will employ less labor and decrease employment to N_1. If the hired farm workers view workmen's compensation benefits as an increase in real wages, then supply at wage W_1 would be N_2. However, if workers do not see workmen's compensation benefits as an increase in real wage, then supply would be N_0. Therefore, the model indicates that the expansion of the agricultural workmen's compensation law would decrease the level of employment. Without knowing the elasticities of the supply and demand for labor it is impossible to determine the magnitude of the changes in the level of employment. But does this model actually indicate what happens? Many times employers are in a position where they cannot immediately adjust to changes in wages. Also,employers may change their level of capital investment when faced with having to pay higher wages. Nevertheless, theory tells us that fewer workers will be hired when wages are increased. Therefore, it can be predicted that the extension of the agricultural Workmen's Compensation Act will decrease the number of farm workers hired in Michigan. However, this analysis does not predict how great the decrease in employment will be. It might be possible to predict the size of these changes if the elasticties of the supply and demand for hired farm labor in Michigan were available.

Will the Farmer be Able to Bear the Increase in Labor Costs That the Extension of Workmen's Compensation Would Cause?--An increase in cost to the farmer can be allocated in one of three ways or any combination of the three ways. First, the added cost can be absorbed by the farmer. Second, the cost can be passed on to the consumer. And, third, the added cost can be shared between the farmer and the worker by decreasing employment. Initially, it is most likely that the increase in the cost of labor due to increased workmen's compensation benefits will be absorbed by the farmer. The 1964 Census of Agriculture indicated that labor costs are about 18.6 percent of the total costs on Michigan farms [6]. A 4.0 percent increase in the cost of hired labor absorbed by the farmer might increase total costs by about .75 percent. It seems likely that many farms could absorb this cost into their operation. Also, since most of the large agricultural employers in Michigan, 8,500, already have workmen's compensation insurance, it is not likely that many farms would be significantly affected by an extension of the Workmen's Compensation Act.

Another increase in costs that could result from an extension of the Workmen's Compensation Act with respect to agricultural employers is the cost of physical examinations. In order to prevent claims from previous injuries, farmers might find it necessary to have all employees receive physical examinations. This could represent a substantial cost and inconvenience to the farmer. Assume that the cost for one physical examination is $15.00. If a farmer has a $45,000 payroll and employs 100 employees, the additional cost would be $1,500. This would represent a 3.3 percent increase in labor costs to this farmer.

Consequently, with the added cost of coverage and the cost of physical examinations, farmers not currently covered by the Workmen's Compensation Law might expect a 5 to 10 percent increase in the cost of hiring labor. This would represent a 1 to 3 percent increase in the total cost of operations. Farmers already carrying workmen's compensation incurring the cost of physical examinations would be increasing total costs by 1 to 2 percent. In the above analysis it is assumed that the level of technology is constant.

Some Advantages of Farmers With Workmen's Compensation Insurance. --One of the reasons why a farmer might be in favor of agricultural workmen's compensation is that he is freed from the liability of work accidents. In some cases, the cost of an accident to a hired worker that would have to be paid by a farmer without workmen's compensation coverage would be very great. Of course, the farmer who is not required to carry workmen's compensation has the option to purchase workmen's compensation insurance. But does a farmer gain from having workmen's compensation insurance? Perhaps an example would be helpful. A farmer with a payroll of $45,000 and an hourly wage of $1.50 per hour would have 30,000 man hours of exposure to accidents. The premium that would be paid by this farmer at $4.00 per $100 of payroll would be $1,800 per year. With a frequency of 90 accidents per million man hours, this farmer could expect an average of 2.7 accidents per year. The average severity of these accidents would be about $275 to $300 per accident. Therefore, accident costs would equal about $870.00. This would mean that if this farmer was self-insured he would be ahead by about $1,000

per year. However, $1,000, about 2.2 percent of labor costs, as insurance against the risk of being sued for several thousand dollars might be worthwhile to this farmer.

A second reason why farmers might favor workmen's compensation has to do with the competition for hired labor. If farmers have a difficult time obtaining hired labor, it will be important to offer benefits that are competitive with other types of employment. In the future farmers may have to offer accident protection if they expect to compete in the hired labor market. This will be especially true in the market for skilled labor.

A third reason why some of the larger farmers might be in favor of extending agricultural workmen's compensation is that the large agricultural employer is already covered by workmen's compensation. Larger farmers might reason that since they are required to pay for workmen's compensation insurance that all farm employers should have to pay for workmen's compensation.

Other Issues Supporting the Extension of Agricultural Workmen's Compensation.--An issue being raised about the current agricultural workmen's compensation law in Michigan is that if one worker has worked 12 weeks while another has worked 13 weeks, the two workers are not entitled to the same insurance benefits. For example, if two workers, one having worked 12 weeks and the other 13 weeks, are both injured on the same job, the first worker, 12-week tenure, would only receive hospital and medical benefits. While the second worker, 13-week tenure, would receive hospital and medical benefits as well as compensation for

lost wages. Many feel that this type of a system is highly inequitable and therefore advocate the complete extension of the Act.

It has been said that social programs to care for the injured farm worker are already available. These would be social and public health programs. One argument is that since hospital and medical services are already provided for many hired farm workers that there is no need to provide workmen's compensation insurance. However, the reason why the losses for agricultural workmen's compensation have been so low may be that many times claims on workmen's compensation policies are never filed. Instead the injured farm worker might receive treatment from a social service agency. The exact cost of care provided by social services in Michigan to hired farm workers suffering from work accidents is not known. However, the Federal Migrant Health program in Michigan is reported to have spent approximately $823,000 in Michigan in 1968. Most of the expenditures included in this figure are not for work related accidents. Taking this into account, it has been estimated that as much as $150,000 in farm accident claims are handled by social services in Michigan each year.

The main question here is, who has the obligation to care for an injured worker? The fact that society will care for injured workers does not necessarily mean that the employer should not. The data suggests that agricultural jobs are hazardous and that severe injuries are incurred. Who has the responsibility to cover the estimated more than one-half million dollars of losses that are being suffered annually by hired farm workers in Michigan which are not covered by workmen's compensation?

Comparison of Different Possible Extensions of the Agricultural Workmen's Compensation Law

Present Law.--Under the present law, it is estimated that farmers paid $1,167,500 in premiums in 1968. It is also estimated that there were 2,067 claims costing a total of $568,425 in 1968. Assuming that the total payroll to agricultural workers in the state was about $60,000,000 in 1968, it is calculated that all hired farm workers in Michigan suffered 3,824 accidents. The cost of the accidents not covered by workmen's compensation is calculated to be about $483,175.

Assuming that there were 100,000 hired farm workers in Michigan in 1968, it is estimated that about 63,775 of these workers did not have any type of workmen's compensation coverage.

Complete Hospital and Medical Coverage.--A proposal currently being made is to extend unlimited hospital and medical coverage to all hired farm workers who are not members of the employer's immediate family. Currently it is estimated that a payroll of $27,569,417 is not being protected by workmen's compensation insurance. If this amount of payroll is covered by unlimited hospital and medical insurance at a rate of $3.00 per $100 of payroll, the net increase in premium would be $837,082.51. This premium would cover the $483,175 in claims not currently protected by agricultural workmen's compensation. Currently it is estimated that $1,167,500 in premiums are being paid for agricultural workmen's compensation in Michigan. The increase under this proposal would raise total premiums collected for agricultural workmen's compensation in Michigan, assuming no rate change, to about $2,004,582.57. The total claims would be equal to about $1,051,600. This would yield a

loss ratio equal to 52.45 percent. The increase in costs due to out-of-state claims was calculated to be about $439,500. With the additional of this cost to claims, total costs to insurances would be about $1,491,900. This would represent a loss ratio equal to 74.42 percent.

The advantages of this type of program are that all hired farm workers would be covered with some type of insurance. Also, the accident reports studied imply that the greatest cost of farm work accidents is for hospital and medical fees. The data does not suggest that there are many disabling injuries. This program would not pay compensation indefinitely to a non-resident migratory worker but would merely pay for the accidents he sustains while working on Michigan farms.

The disadvantages of this program are that hired farm workers would not be able to receive compensation for time lost because of injuries. In the event of a disabling injury, the worker's only recourse in obtaining compensation would be legal action.

Full Extension of the Law.--This proposal would include all agricultural employers under the workmen's compensation law on the same basis any regular employer currently included under the law.

The payroll not being covered by any workmen's compensation at this time is an estimated $27,569,417. At a rate of $6.00 per $100 of payroll, there would be a $1,674,165 addition to premiums being paid. The increase in the cost of coverage for those now covered by unlimited hospital and medical insurance would be $778,335. Therefore, this program,

at current rates, would increase premiums by an estimated $2,452,500. Total premium collected would equal $3,620,000.

It is assumed that 33 percent of the full workmen's compensation claim costs are for compensation benefits. Using this estimate, the increased claims that would be covered by the additional $2,452,500 in premiums would amount to an estimated $792,713. The total claims would now be $1,361,138 under this program. Assuming that there are no changes in rates charged, the loss ratio under this program would be 37.60 percent. If the cost of settling out-of-state claims is added to the cost of claims, the total cost of claims would equal about $1,800,638. The loss ratio would then be 49.74 percent. This loss ratio indicates that an additional $552,362 in claims could be incurred before the 65 percent loss ratio would be attained.

This program would be more costly to the employer than would the extension of hospital and medical coverage. However, this program, full extension, would insure a hired farm worker's right to receive compensation for work accidents. Also, this program would make agriculture comparable with other industries with respect to insurance. This would simplify the problems in claim settlement that currently exist.

There is one problem with this plan for extending agricultural workmen's compensation to include agricultural employers in the definition of private employers under Michigan's Workmen's Compensation Law. With this extension, members of the employer's immediate family with the exception of a spouse or partner would have to be covered by workmen's compensation insurance. This would generate an additional

increase in the estimated premiums and losses that have been previously calculated. When a hired farm worker is a member of his employer's immediate family it is especially difficult to distinguish between management and labor. This is a situation which is unique to agriculture and for this reason it might be best to exclude members of an employer's immediate family from worker's compensation coverage.

The Distribution of the Costs of Extending the Agricultural Workmen's Compensation Law

One characteristic of the proposed extensions of agricultural workmen's compensation in Michigan is that the hired farm worker and the farm employer must bear the additional cost. Farm employers would have to pay a higher rate for labor and hired farm workers would tend to have less work. Two alternatives to this situation have been expressed.

It has been suggested that farm employers be allowed a deductable form of workmen's compensation. Under this plan the employer would pay for all injuries costing less than a set amount of money. The employer would then directly compensate workers for minor injuries. The problem with this suggestion is that it defeats the purpose of workmen's compensation. This program would allow the employer to not compensate an injured worker and force the worker to take action in order to receive compensation. But the idea of workmen's compensation is that the worker should not be forced to take action against his employer in order to receive compensation for a work injury.

A second proposal is that the public should underwrite the cost of providing workmen's compensation insurance to hired farm workers.

This plan would lower the cost of workmen's compensation for the agricultural employer and probably retain more jobs for hired farm workers.

Proponents of this idea maintain that the experience of insurance companies with agricultural workmen's compensation is very limited. It is believed that the premium rates are scaled upward in an effort to compensate for the uncertainty and that the insurance companies are charging agricultural employers for the uncertainties of providing protection. Indications are that premium rates should go down but there has not been enough time to verify this indication. The above idea proposes that the public pay for part of uncertainty of providing workmen's compensation insurance to agricultural employers. However, once the public begins to underwrite insurance for agricultural employers it is probable that the program will continue indefinitely. Farm employers should pay for accidents suffered by their employees. The public needs to weigh the cost of increased unemployment in the hired farm labor market against the cost of public support of workmen's compensation for hired farm workers.

Chapter V References

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CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

The following points briefly summarize the results obtained from studying the data on agricultural workmen's compensation in Michigan.

1. The loss ratios for workmen's compensation insurance sold to agricultural employers in Michigan are generally low. Most of the loss ratios were below 40 percent. Dairy or livestock farms seemed to have consistently high loss ratios for full workmen's compensation coverage.
2. The pure premiums for the classifications studied were generally low. In most cases, the pure premiums were significantly less than the rate being charged for workmen's compensation coverage. Full compensation coverage for dairy or livestock farms was the only classification with pure premiums consistently higher than the rate being charged.
3. The average severity of claims ranged from $0.0 to $5,555.09. There was a direct correlation between the average severity of claims and loss ratios. The classifications with high loss ratios had high average severity figures.
4. It was found that the amount of losses were the crucial variable in evaluating the agricultural workmen's compensation program.

5. The frequency of accidents was found to be a key estimate in the prediction of losses. The accident frequencies ranged from 0 to 94.8 per estimated one million man hours of exposure. Considering all workmen's compensation sold to agricultural employers, accident frequencies were generally between 40 and 90 accidents per million man hours.
6. It was calculated that nearly one-half million dollars in accident claims of hired farm workers in Michigan were not covered by workmen's compensation in 1968.
7. It was calculated that 36,225 hired farm workers in Michigan were covered by agricultural workmen's compensation insurance in 1968.
8. The rates being charged for workmen's compensation insurance sold to agricultural employers in Michigan have decreased between 8 and 23 percent over the past three years.
9. It was found that approximately 82.7 percent of the farm accidents studied were considered to be of slight severity.

Observations

Several observations were made in the process of working with agricultural workmen's compensation in Michigan. First, it was extremely difficult to collect recent data. Most of the data which is readily available is at least three years old. In most cases, insurance companies do not have information at hand concerning recent workmen's compensation they have sold. This makes it difficult to locate the needed recent information to make current decisions.

Secondly, the published data concerning hired farm labor is extremely ambiguous for the purposes of this study. U.S. Census figures define hired farm workers as any farm worker receiving a wage. Since the current workmen's compensation law in Michigan omits family members from coverage, it is difficult to determine just how many hired farm workers would be eligible for workmen's compensation coverage.

Thirdly, it is very difficult to determine the costs of accidents under workmen's compensation. Many times companies do not know the total cost of a claim for years after the actual accident occurred. Many times the reserves held for a specific claim are totally uncorrelated to the actual cost of the accident.

Conclusions

The following points are the conclusions of this study.

1. The rates charged for agricultural workmen's compensation can be expected to generally decrease for the next few years, assuming no change in the law. But the rates for some specific classifications may increase over the next few years.
2. The accident frequency estimates indicate that farmers are reporting all or nearly all accidents that occur. The reason for this might be that the farmer wants to protect himself from the dangers of not reporting accidents.
3. With the current rates, the added cost of out-of-state claims would not seriously hurt insurance companies. It appears that the cost of claims by non-Michigan residents is not a valid reason for opposing the extension of the Workmen's Compensation Act.

4. The extension of the Workmen's Compensation Act may contribute to a decrease in the number of hired farm workers. However, the increase in the cost of labor should not appreciably hurt Michigan farmers.
5. The extension of workmen's compensation to cover agricultural employers on a regular basis is recommended. The reasons for this are that there are serious accident losses being suffered by hired farm workers not being covered by workmen's compensation.
6. It is also recommended that agricultural employers be allowed to split their pay rolls on the basis of the work being performed. The data indicates that there are differences in losses between various agricultural workmen's compensation classes. It would seem to be more equitable for the agricultural employer to pay the rate applicable to the job being performed by the hired farm worker rather than to require the employer to pay the higher rate for all jobs.
7. Due to the difficulty of farmers incurring sudden increases in costs, it might be feasible to initially expand unlimited hospital and medical coverage to all hired farm workers. At some future date agricultural employers could then be required to carry workmen's compensation on a regular basis. With respect to the question of whether or not a member of an agricultural employer's immediate family should be covered by workmen's compensation it is recommended that such workers be excluded from coverage. The reason for this is that it is difficult to distinguish between management and labor in the case of an agricultural employer's immediate family.

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