

FARM ACCIDENTS IN OHIO
Their Nature, Causes, and Costs

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The need for this study, which had become increasingly apparent in recent years, received consideration and fostering at the third annual (1941) Ohio State Safety Conference in Cleveland.

To make this study possible, the Supervisor of Vocational Agricultural Education in Ohio, along with vocational agriculture high school students and their instructors, cooperated in reporting on farm and home accidents on a sufficient number of farms to make this study fairly representative of the farm and home accident toll in Ohio.

These reports were summarized and interpreted as a Masters' Degree thesis by G. E. Ferris in the Department of Rural Economics and Rural Sociology, Ohio State University, during the spring quarter, 1943.

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FARM ACCIDENTS IN OHIO

Their Nature. Causes. and Costs

Need for this study was expressed at the round table discussion held at the third annual Ohio State Safety Conference in Cleveland, September 24, 1941, by Harry M. Pontious, Safety Director of the Ohio Farm Bureau. He suggested that ways and means be found to secure from a large number of farm families information about any farm and home accidents experienced.

Later at this same round table discussion, G. W. McCune, Chairman of the Agricultural Engineering Department at Ohio State University, suggested it might be possible for the vocational agriculture teachers in the high schools of Ohio to secure from their students reports on farm and home accidents, and in turn report these to someone selected to tabulate and interpret them.

Before the round table discussion ended, the chairman, H. L. Sain, Assistant Superintendent of the Division of Safety and Hygiene, Industrial Commission of Ohio, appointed the following committee to study ways and means of securing information about farm and home accidents in Ohio: Chairman, A. L. Sorenson, Director, Farm Security Administration in Ohio; J. I. Falconer, Chairman of the Department of Rural Economics and Rural Sociology at Ohio State University, and Harry M. Pontious, Safety Director of the Ohio Farm Bureau.

Subsequently at a planning committee meeting of the Ohio Farm Safety and Fire Prevention Program held in Columbus, January 27, 1942, a plan for carrying out the present study in cooperation with the vocational agricultural department was presented by the committee appointed in Cleveland. A copy of the instructions sent to the vocational agriculture teachers together with the report form used in reporting accidents follows.

Instructions for the Reporting of Farm Accidents

The object of the study:

This study is undertaken at the request of the Ohio Safety Council. It is hoped to obtain from the study the data which will enable us to make an estimate of the extent of farm accidents in Ohio, their nature, their cause, and the costs. To do this in a fairly reliable manner, it is estimated that there should be available records for one year on approximately 25,000 farms. The information secured will be used by the Ohio Safety Council and other agencies in their Farm Safety Campaign. The collecting and recording of the information in the schools should in itself prove one of the most effective means of teaching safety.

Whom to report on:

Each student should report on his home farm and on three adjoining farms. Select the adjoining farms from which it will be easiest to get the records. Having selected the farms upon which you are to report, carry these farms through the year. Do not switch to other farms because there was an accident. This would destroy the reliability of our sample.

When to report:

The student should fill out his report as far as possible as soon as he hears about the accident and hand it in to his instructor. Use a report blank for each accident. That part of the report dealing with extent of disability and cost should be filled in as soon as these items are known.

Period of the report:

For one year. It will be desirable to select students who, so far as you know, will be in school for one year from the date of starting to report. It is suggested that the making of reports begin as of March 1, 1942 and extend to February 28, 1943.

To the instructor:

At the beginning of the study you should make a record of the names of the occupants of the farms for which each student is to report. It will be desirable for you once each month to check up on the boys and ask if they have reported all the accidents occurring on the farms for which they are reporting for that month. You should keep a record of the number of farms your boys are reporting on for each month. A blank is enclosed which may be used for this purpose. Send this blank in to us at the end of the year, along with the reports of accidents. This will enable us to know that a report has been made for each month whether there was an accident or not.

It is suggested that at the beginning the student acquaint the farmer on whom he is to report with the fact that he desires to report accidents for his farm and state to him the reason for the study.

It should be understood that these reports will not cover all farm accidents in the neighborhood but only those accidents which occur to those farmers or on those farms which have been selected by the student to report on.

At the end of the year the reports of accidents together with the check sheet should be mailed to Mr. Howard. The data will be tabulated by the Department of Rural Economics of the Ohio State University.

Notes on the schedule:

How many people live on this farm: Enter here the total number of people living on the farm; this would include those living in tenant houses as well as those in the household of the operator.

Farm accident, home accident, or recreational accident: If the accident occurred in the house or about the house, report it as a home accident. If the accident occurred elsewhere on the farm or off the farm, it would be reported either as a farm or as a recreational accident, depending on what the person was doing.

Describe the accident: Describe the manner in which the accident occurred.

Degree of injury, extent of disability, and costs: It is desirable to secure the items of cost where possible. This cannot be done at the time of the accident if it was a severe accident. The question as to cost should be filled in as soon as these items can be determined.



OHIO STATE SAFETY COUNCIL

207-209 REPUBLIC BLDG.—CLEVELAND, OHIO



REPORT FORM

FARM FIRE AND ACCIDENT SURVEY OF OHIO FARM FAMILIES

Name of operator of farm _____

Address _____

Number of people living on farm—In Operator's family _____ Tenants _____ Employees _____

ACCIDENT

_____ (Person injured) _____ Age _____

Address _____ Sex _____

WHEN AND WHERE DID THE ACCIDENT OCCUR?

Day of Week _____ Date _____ Time _____ a. m. _____ p. m. _____

Location _____
(Kitchen, barnyard, cornfield, garden, on highway, in store in town, etc.)

Size of Farm _____

WHAT TYPE OF ACCIDENT WAS IT? (Indicate Classification by an X)

- | | |
|---|---|
| _____ Fall | _____ Animals (kicked by, stepped on, etc.) |
| _____ Tractor | _____ Burn, scald or explosion |
| _____ Other Machinery | _____ Harmful substances (acid, alkali, etc.) |
| _____ Hand Tool | _____ Lightning |
| _____ Struck by falling or flying objects | _____ Asphyxiation or suffocation |
| _____ Stepping on or striking against objects | _____ Poison |
| _____ Handling, lifting, or carrying objects | _____ Firearms |
| _____ Motor vehicle | _____ Excessive heat |
| _____ Horse and wagon | _____ All other _____
(specify) |

HOW DID THE ACCIDENT OCCUR?

What was person doing when hurt? _____
(Climbing stairs, sawing wood, working at ensilage cutter,

building fire, carrying water, etc.)

Was this a farming accident _____, a home accident _____, or a recreational accident _____?

Describe the accident _____

Did the accident result from faulty equipment or other hazards? If so, describe _____

(Rickety stepladder, hole in hayloft floor, rubbish on stairways, etc.)

Personal factors contributing to accident: _____
(Physical defect, old age, hurry, fear, etc.)

DEGREE OF INJURY, EXTENT OF DISABILITY, AND COSTS

Kind of injury: _____
(Broken leg, fractured skull, crushed fingers, burned hand, etc.)

Did injured person have doctor? _____ How much were doctor's fees? \$ _____

Medicines, bandages, etc.? \$ _____ Nurse's salary? - - - - \$ _____

Was injured person taken to hospital? _____ How much were hospital fees? \$ _____

How long was person totally disabled? (That is, unable to do any work?) _____

Was it necessary to hire anyone to do injured person's work? _____

If so, how much was paid? \$ _____

Was the person permanently disabled to any extent? _____ If so,

describe _____
(Such as middle finger cut off, blindness in one eye, etc.)

Did death result from the injury? _____

PROPERTY LOSS BY FIRE

What was burned? _____

Cause of the fire _____

What, if any, fire department came to the fire? _____

Loss (in dollars) _____

Report submitted by _____ Date submitted _____

High School _____ County _____

Reports From Vocational Agriculture Students

During the year ending in February 1943, a total of 1,694 vocational agriculture students in 104 high schools of Ohio reported on farm and home accidents which occurred on 4,976 farms in their localities. A total of 395 such accidents were reported, on forms provided to them through their instructor, by the students in 70 of these schools located in 48 of Ohio's 88 counties.

Principal Causes of Accidents

The causes of the 395 farm and home accidents in the order of their largest numerical incidence and the percentage of the total were:

Machinery, 87 or 22 percent

Falls, 73 or 18.5 percent

Animals, 53 or 13.5 percent

Hand tools, 42 or 11 percent

Falling or flying objects, 30 or nearly 8 percent

Stepping on injurious objects, 20 or 5 percent

Motor vehicle traffic, 17 or 4.3 percent

Miscellaneous, 73 accidents

Sixty-seven of the 395 accidents resulted from recreational activities and 29 of them occurred in homes.

Of the 87 accidents which resulted from the use of, or which were caused by farm machinery and implements, tractors -- often with other machines involved -- figured in 35 of them; haying machinery and equipment in 19; combine-harvesters in 7; corn pickers in 6; disks in 3; threshing machines, corn shredders,

corn shellers, ensilage cutters, and feed grinders in 2 each, and there were 7 miscellaneous farm machinery and implement accidents.

The 73 accidents from falls were variously accounted for as follows: Falls off trucks and wagons, and around the barn, 11 each; around the house, 9; off of ladders, 8; on ice and off of farm machinery, 4 each; because of ill-kept steps, 3; and miscellaneous falls, 23.

By their being implicated in 41 of the 53 accidents caused by animals, horses far exceeded the 7 caused by cattle, 4 by hogs, and 1 by a dog. Farm implements, however, were often involved with horses.

Pitchforks accounted for 11 of the 42 accidents caused by hand tools. Others include knives, 10; buzz saws, 6; hand saws and axes, 3 each; hammers, 2; and miscellaneous, 7.

The 7 accidents sustained while cutting or splitting wood outranked all others among the 30 in the falling or flying objects classification. There were also 4 each from falling machinery and from handling lumber; 2 from gates; and 13 miscellaneous.

Ten cases of stepping on nails were reported among the 20 accidents sustained from stepping on injurious objects. Two were from stepping on broken glass, and there were 8 miscellaneous such accidents.

Of the motor vehicle accidents, 17 were from traffic; 7 involved the use of trailers; and 4 were encountered in repairing motor vehicles.

Miscellaneous causes for the remainder of the 395 farm and home accidents include 13 from lifting and carrying; burns, 9; firearms and fencing, 3 each; scalds, cutting kraut, and injury from projecting nails, 2 each; and miscellaneous, 28.

Recreational and Home Accidents.- Of the 395 accidents, 67 were the result of recreational activities. Falls while playing and gaming accounted for

21 of these, and falls caused by animals resulted in 7 injuries, roller skating in 3, and miscellaneous falls in 12. Other causes of recreational accidents include motor vehicles, 9; bicycles and playing with and on machinery, each 4; firearms 2; hand tools and swimming, 1 each; and 3 miscellaneous.

A total of 29 of the 395 farm and home accidents occurred in homes as follows: Falls, 10; burns, 8; hand tools, 3; scalds, 2; washing machine and lifting and carrying, 1 each; and miscellaneous, 4.

Total Accidents by Months

Of the 393 accidents for which the date was reported for the year ending in February 1943, a total of 39 occurred in March, 40 in April, 37 in May, 53 in June, 54 in July, 44 in August, 39 in September, 19 in October, 13 in November, 16 in December, 13 in January, and 26 in February.

Five of the recreational accidents were reported as occurring in March, 9 in April, 6 in May, 10 in June, 5 in July, 2 in August, 14 in September, 4 in October, 6 in November, 1 in December, 1 in January and 3 in February.

Of the home accidents, 6 were reported in March, 6 in April, none in May, 4 in June, 2 in July, 3 in August, 1 in September, none in October, 2 in November, 3 in December, 1 in January, and 1 in February.

Age Groupings

Tabulation of age, in the 386 cases with age reported, shows that 34 persons were 10 years old or less, 153 were 11 to 20 years old, 26 were 21 to 30 years old, 47 were 31 to 40 years old, 52 were 41 to 50 years old, 48 were 51 to 60 years old, 21 were 61 to 70 years old, and 5 were more than 71 years old.

Of the 67 who sustained an accident as a result of recreational activities, 24 were in the group 10 years old or less, 36 were 11 to 20 years old, 1 was 21 to 30 years old, 3 were 31 to 40 years old, 2 were 41 to 50 years old, and 1 was 51 to 60 years old.

Among the 29 who encountered home accidents, 2 were 10 years old or less, 9 were 11 to 20 years old, 3 were 21 to 30 years old, none were reported in the 31 to 40 year old group, 7 were 41 to 50 years old, 5 were 51 to 60 years old, 2 were 61 to 70 years old, and 1 was more than 71 years old.

Sex Groupings

Of the 395 farm and home accidents, 48 were reported to have been sustained by women or girls, 11 resulting from recreational and 13 from home activities. This leaves half or a total of 24 accidents to women and girls from farm activities.

Personal Factors in Accidents

Among the personal factors reported as causes of 45 of these accidents, carelessness was indicated in 21 cases, haste in 18 and excitement and youthfulness in others.

Expenses From Farm and Home Accidents

Of the 395 farm and home accidents --

299 or 76 percent required a doctor, entailing fees ranging from \$1 to \$350. The average of the 257 fees reported is \$20.02.

83 or 21 percent required a nurse, medicine or bandages, with costs ranging from .25 to \$1,000. The average of the 83 reports is \$19.06.

46 or 12 percent required hospitalization, entailing costs ranging from \$1 to \$400. The average of 38 reports is \$61.32.

241 or 61 percent resulted in disability ranging from 1/2 day to permanent disability. Of 239 cases for which disability, including partial permanent disability was reported, the average is 22-1/3 days.

61 or 15 percent necessitated substitute hired help, ranging in cost from \$2 to \$175. The average of 45 reports is \$31.27.

15 or 4 percent resulted in permanent partial disability.

2 or .5 percent resulted in complete disability.

8 or 2 percent resulted in death -- 3 from machinery, 2 from falls, 2 from motor vehicles, and 1 from an animal.

The Farm and Home Accident Toll in Ohio as a Whole

Imposing the same incidence as the 395 farm and home accidents reported by vocational agriculture students in 104 high schools of Ohio for 4,976 farms in their localities, indicates that on the 173,056 Ohio farms -- as reported in the 1940 United States Census of Occupation -- there were suffered a total of 13,737 farm and home accidents in the year ending in February 1943.

Imposing further the same incidence and expenses of farm and home accidents to the indicated 13,737 accidents as estimated above, the farm and home accident toll in Ohio as a whole is indicated to be as follows:

10,440 required a doctor, entailing average fees of \$20.02 and totaling \$209,000.

2,885 required a nurse, medicine or bandages, with costs averaging \$19.06 and totaling \$55,000.

1,648 required hospitalization, entailing costs averaging \$61.32 and totaling more than \$101,000.

8,380 resulted in disability ranging from 1/2 day to permanent disability, including partial permanent disability, with a resultant loss of 187,153 days of work calculated at the average of 22-1/3 days of loss from each accident.

2,061 necessitated substitute hired help, costing \$64,447 calculated at the average cost of \$31.27 for each accident.

549 resulted in permanent partial disability.

69 resulted in complete disability.

275 resulted in death.

Expenses From Total Farm and Home Accident Toll in Ohio

The total cash outlay during the year ending in February 1943, for all the indicated doctor fees, nurse, medicine and bandage costs, hospitalization, and for hired help necessitated on the farm or in the home because of accidents in Ohio, totals more than \$429,447.

Furthermore, since there are indicated 3,380 accidents resulting in disability, including partial permanent disability, for 187,153 days of work, the total loss for this time at \$3 per day would be \$561,459. Of this amount, \$64,447 was paid to substitute hired help, leaving a difference of \$497,012 additional expense.

For the 69 cases of complete disability, plus the 275 deaths, there would be a loss of \$6,192,000 -- computed at the rate of \$3 a day for 6,000 working days loss from each complete disability and death, in accordance with the days-lost scale used by the Industrial Commission of Ohio.

Thus the total expense of farm and home accidents in Ohio during the year ending in February 1943, is indicated to be \$7,118,459.

