

June 1957

Mimeographed Bulletin
No. 274

A TEN YEAR STUDY OF FATAL FARM ACCIDENTS

by

R. H. Baker

Department of Agricultural Economics and Rural Sociology
Ohio State University

Cooperating Agencies

88 County Agricultural Extension Agents in Ohio
Division of Vital Statistics, Ohio Department of Public Health
Division of Safety and Hygiene, Industrial Commission of Ohio
Farm and Home Safety Committee, Ohio State Safety Council

A Ten Year Study of Fatal Farm Accidents

R. H. Baker

In the last decade an average of more than eight Ohio farm folk died each week because of accidents. More than two-thirds of them were men and boys.

The death toll in Ohio for the past ten years has averaged 434 farm people each year who died due to accidents. In 1955 fewer deaths due to accidents were reported than in any of the other nine years -- 19 percent fewer than the average. The highest year in the last ten was 1946 just after the close of World War II.

Data presented on death certificates, where death occurred following an accident to people living in rural areas, are the basis for this study. For the past ten years, the Division of Vital Statistics of the Ohio Department of Health, under the direction of W. H. Veigel, has made available photostatic copies of these reports.

Our interest was in studying accidental deaths of members of farm families. Vocation of adult males usually was given on the reports. But only student or housewife was indicated for most of the children and women. To learn whether these uncertain cases had been members of farm families we contacted each county. Usually the County Agricultural Extension Agent provided us with this information. Three times in the past ten years, lists of uncertain cases were checked in each county. In 1946, 50.3 percent of the uncertain cases were found to have been members of farm families; in 1948 49.6 percent and in 1955, 47.3 percent. For the other years these percentages were used to adjust for the uncertain cases.

Cases for each year were sorted by type of accident, place of accident, time of year, and age and sex of person.

What Kind of Accidents

The fall and broken bones that beset farm people cause more farm deaths than any other type of accident. Many times confinement to bed leads to pneumonia or uremic poison that finally causes death. More than one-fourth of the accidental

Table 1
Types of Fatal Accidents: To Ohio Farm People, 1955

Types of accidents causing death	1955	1946-55 Average
Fall or fracture	96	113
Motor vehicle	93	92
Struck by motor vehicle	34	44
Tractor or farm machinery	42	38
Farm animal	7	10
Fire and burn	22	40
Train accident	13	22
Drowning	9	21
Smother or strangulation	9	16
Firearm	9	11
Other	20	27
Total	354	434

deaths to Ohio farm people resulted from falls and broken bones. Another common type of accident that caused deaths was auto and other type of motor vehicle accident. More than one-fifth of the total accidental deaths followed some kind of motor vehicle accident. In addition, pedestrians who were struck while crossing the road or walking along the road accounted for another ten percent of the cases. Fires caused another nine percent. Accidents with tractors and farm machinery cause about the same number. Train accidents and drownings each accounted for about one out of every 20 accidental deaths to Ohio farm people.

Off the Farm Accidents

Over 40 percent of the accidents causing death to Ohio farm people happened while they were away from their farms. About 60 percent of these off-farm accidents occurred while the person was riding in an auto or other motor vehicle that was involved in an accident.

Over one-fifth of these off-farm fatal accidents to farm people were cases where an auto, truck, bus or motorcycle struck a person while crossing or walking along a road.

Table 2
Fatal Accidents Off the Farm: To Ohio Farm People, 1955

Type of accident causing death	1955		<u>1946-55</u> Average
	Male	Female	
Pedestrian struck by motor vehicle	21	6	40
Motor vehicle			
Auto-auto collision	32	21	47
Auto-fixed object collision	19	4	18
Auto-truck collision	6	5	9
Miscellaneous auto accident	5	1	9
Auto or truck and train	6	3	15
Pedestrian struck by train	4		8
Drowning	5	2	15
Fall on same level	2	1	2
Tractor accidents on highway	2		2
Other	3		13
Total	<u>105</u>	<u>43</u>	<u>178</u>

About one-eighth of these accidental deaths occurred when a train struck either an auto, truck or pedestrian.

The other big cause of off-farm fatal accidents is drowning.

In 1955 there was an increase in the number of fatalities in farm families due to motor vehicle accidents. The number of deaths due to drowning and pedestrians being struck by a motor vehicle was lower than the average of the last ten years.

This heavy death toll from auto accidents could be reduced if drivers and pedestrians were more careful to follow good safety rules. If we rural drivers exercised greater care in making turns onto and off-of highways, approached intersections with more care and alertness, respected railroad crossings, reduced speed when visibility is poor or roads are slippery, kept our minds on driving, and kept our brakes and other auto equipment in good condition, lives could be saved. High speed causes some accidents. Poor visibility causes others. Mixing drinking and driving causes far too many. Nineteen twenty drivers in 1950 cars on 1940 roads explain some accidents.

Table 3
Home Fatal Accidents: To Ohio Farm People, 1955

Type of accident causing death	1955		1946-55 Average
	Male	Female	
Fall on same level	15	23	45
Fall on different level	5	2	10
Fracture	14	19	35
Fire in home	8	11	36
Smother or suffocate	6	2	16
Poison	1		5
Firearm	5		4
Other	6	4	11
Total	60	61	162

Drive carefully and enjoy living rather than living dangerously and bring sadness to so many.

Home Accidents

Over one-third of all fatal accidents to Ohio farm people occur in and around the home. Most of these accidents are due to falls and fractures, fires and explosions, and smothering and strangulation. Two-thirds of the farm people who meet with these home accidents are 65 years old or older.

About three out of five of the people who meet with home accidental deaths do so as a result of falls and fractures. Most of these falls are cases where a person slips on a rug or slippery floor, trips over a chair, falls getting into or out of bed or falls on the sidewalk or in the yard. Fires in the home, either when the home is completely burned, when clothing catches fire or explosions in connection with kindling fires, cause about one-fifth of the home accidental deaths. Nearly ten percent of the home accidents are due to children strangling on food or foreign material or smothering under bedding.

In 1955 there were relatively more accidental deaths due to falls and fractures and some reduction in fire and smothering cases.

Farm Accidents

A few more than one-fifth of the fatal accidents that occur to Ohio farm people happen in the fields and in and around the farm service buildings. In 1955 there were about 10 percent fewer accidents occurring on the farm, outside the home than in earlier years.

The tractor and farm machinery accidents accounted for about 40 percent of these deaths in the past ten years. In 1955 there were a few more than the usual number of farm equipment accidents. Twenty-two of these were accidents with tractors. Twelve of the tractor fatal accidents were due to tractors overturning. Four were run over by tractors, three fell from tractors and were killed and others were crushed by or caught in a power-take-off shaft.

Table 4
Fatal Farm Accidents: Outside the Home, Ohio, 1955

Type of accident causing death	1955	<u>1946-55</u> Average
Tractor or farm machinery	40	36
Fall from different level	9	12
Fall on same level	5	4
Struck by falling object or tree	3	6
Firearm	4	5
Farm animal	7	9
Fire and burn	3	4
Drowning	2	4
Lightning or electric shock	4	4
Other	8	9
Total	<u>85</u>	<u>93</u>

Most of the tractor accidents happened in May, June and July.

Five women and girls were victims of tractor accidents.

Many types of machinery were involved in these fatal farm accidents, but most of the cases happened around wagons and balers, and most of them happened to older people.

Falls from barns, trees, roofs, and ladders contributed to the death of several. About one-eighth of the farm accidents are of this type. About one-tenth are due to accidents with horses, cows, bulls, and other farm animals.

Death Rates Higher in Summer

During the summer and early fall the accidental death rate for Ohio farm people was over 20 percent higher than the remainder of the year. Over the past ten years, from May through October, about 40 farm people per month met with fatal accidents as compared to 32 per month for the other six months. Fewer fatal accidents occurred in January and March than for any other months.

The seasonal distribution of fatal accidents on-the-farm-outside-the-home follows the pattern that one might expect. During the planting, cultivating and harvesting seasons when more field work is being done, when there is pressure to get work done on time and when operators work longer hours and are more fatigued, the number of fatal accidents increase. From May through October there were more than twice as many fatal accidents around the farm as during the other six months, during the last ten years.

Fatal accidents in the home were more frequent during the winter months of December, January and February. Over the ten year period there were one-fourth more deaths per month due to accidents in the home than for the remainder of the year. This probably is due to many more hours being spent in the home during this season.

Fatal accidents that occur when people are away from the farm were about one-third higher from June through October than for the rest of the year.

Table 5
Time and Place: of Fatal Accidents to Ohio Farm People, 1955

Month	Farm	Home	Off-Farm	Total
January	4	11	9	24
February	2	19	12	33
March	5	6	8	19
April	9	5	12	26
May	7	12	17	36
June	11	6	9	26
July	10	8	12	30
August	9	10	6	25
September	10	11	19	40
October	9	8	18	35
November	5	13	14	32
December	4	12	12	28
Total	<u>85</u>	<u>121</u>	<u>148</u>	<u>354</u>

Table 6
Time and Place of Fatal Accident to Ohio Farm People,
Ten Year Average, 1946-1955

Month	Farm	Home	Off-Farm	Total
January	4	15	11	30
February	4	16	13	33
March	4	14	12	30
April	7	13	13	33
May	9	13	16	38
June	10	12	17	39
July	14	12	19	45
August	12	11	17	40
September	9	12	17	38
October	9	13	17	39
November	7	14	12	33
December	4	17	15	36
Total	<u>93</u>	<u>162</u>	<u>179</u>	<u>434</u>

Table 7
Accidental Deaths by Age Groups to Ohio Farm People
Ten Year Average, 1946-1955

Type of accident causing death	Oldsters				Youngsters	
	Age, 65 & over		Age 5 - 64		Age, under 5	
	Male	Female	Male	Female	Male	Female
Fall or fracture	45	52	10	4	1	1
Motor vehicle accident	15	4	42	20	2	1
Struck by auto	12	3	17	5	4	3
Tractor or farm machinery	10	-	23	2	2	1
Farm animal	5	-	4	1	-	-
Train accident	6	1	11	3	-	1
Fire	8	4	8	10	6	4
Drowning	1	-	13	2	4	1
Smother or strangle	-	-	1	-	8	7
Lightning or shock	-	-	3	1	-	-
Struck by object	2	-	5	-	1	-
Poison	1	1	2	1	1	1
Firearms	2	-	7	1	1	-
Others	5	-	8	1	1	1
Total	112	65	154	51	31	21

Type of Accident Causing Death of Young and Old

More than one half of the accidental deaths of oldsters, people age 65 or over, were caused by falls and fractures. In the 10 year period one in eight resulted from motor vehicle accidents. In addition, one in twelve were cases where pedestrians were struck by motor vehicles. Fires, and tractors and farm machinery accidents also caused many deaths.

We see that the principal accidents causing death of children under five years of age, are smothering and strangulation, and fires. These cause about half of the youngsters accidental deaths. Children struck by autos while on the highway and drownings also are important causes of death.

For the people from age five to age sixty-five, motor vehicle accidents accounted for about 30 percent of their accidental deaths. Tractor and farm machinery

accidents caused one-eighth; pedestrians struck on the highway by motor vehicles, over 10 percent; and fires caused almost as many of the fatal accidents to Ohio farm people during the last 10 years.

In Table 9 one notices the very large number of persons, 65 or over, who meet with fatal accidents.

When the number of people in each age class is considered we find that there is seven times as many chances that a farm person who is age 65 or older, will have a fatal accident than other adults on the farm.

Table 8
Accidental Deaths by Age Groups: To Ohio Farm People, 1955

Type of accident causing death	Oldsters		Age 5-64		Youngsters	
	Age 65 & over Male	Female	Male	Female	Age, under 5 Male	Female
Fall or fracture	40	44	10	1		1
Motor vehicle accident	16	11	46	17		3
Struck by auto	7	2	15	4	4	2
Tractor or farm machinery	12	1	23	2	2	2
Farm animal	4	1	1		1	
Train accident	4		5	2	1	1
Fire	3	5	7	4	1	2
Drowning	1		5	1	1	1
Smother or strangle	2		1	1	4	1
Lightning or shock			4	1		1
Struck by object	2		1			
Poison			1		1	
Firearm	1		8			
Others	4		5			
Total	96	64	132	33	15	11

Table 9
Age, Sex, and Place: Accidental Deaths to Ohio Farm People, 1955

Age group	1955						Total
	Farm		Home		Off-Farm		
	Male	Female	Male	Female	Male	Female	
0-4	6	2	7	7	2	5	29
5-14	5		6		14	5	30
15-24	8		3	2	22	5	40
25-44	13	1	4	1	13	2	34
45-64	17	1	3	4	24	12	61
65 & over	29	3	37	47	30	14	160
Total	78	7	60	61	105	43	354

Average 1946-1955

0-4	6	3	19	13	7	5	53
5-14	9	1	7	4	21	7	48
15-24	8		1	2	28	6	45
25-44	12	1	2	4	15	8	42
45-64	20	1	5	6	26	11	69
65 & over	30	2	43	55	38	8	177
Total	85	8	77	84	135	45	434

Table 10
 Fatal Accidents to Ohio Farm People, 1946-55

Year	Number	Year	Number
1946	507	1951	400
1947	452	1952	460
1948	442	1953	410
1949	444	1954	447
1950	424	1955	354

Other Accidents

Other studies of accidents to farm people have shown that there are 60 non-fatal accidents that occur to farm people for every fatal accident. More than three-fourths of these non-fatal accidents were cuts, bruises or fractures.

This ten year study indicates that of our 800,000 farm people, during a lifetime of 60 years, one has about one chance in 33 of dying as a result of an accident. The probability is that on one farm in eight there will be an accident to some member of the farm family that will require medical attention or result in loss of time from work or play.

A LITTLE CARE MAKES MISHAPS RARE