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Fatal Accidents on Farms

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The number of fatal accidents occurring on farms as reported by the Department of Health, Education and Welfare (HEW) generally increased from 1949 to 1954.^{1/} Since 1954, the number of fatalities has declined (table 1). However, the decrease in fatalities has not been as rapid as the decline in the farm population. The death rate per 100,000 farm people increased from 10.4 in 1949 to 17.3 in 1963--a 66-percent increase. Part of the increased rate may be caused by the larger proportion of young people migrating from farms; older farmers and farmers with mechanized operations who may be more vulnerable to accidents tend to remain in farming.

Table 1.--Fatal accidents occurring on-farm: Total farm population, total fatalities, and fatalities per 100,000 farm people, 1949-1963

Year	U. S. farm population	Total fatal on-farm accidents	Fatalities per 100,000 farm people
	Thousands	Number	Number
1949-----	24,194	2,522	10.42
1950-----	23,048	2,421	10.50
1951-----	21,890	2,580	11.78
1952-----	21,748	2,523	11.60
1953-----	19,874	2,572	12.94
1954-----	19,019	2,609	13.72
1955-----	19,078	2,482	13.01
1956-----	18,712	2,417	12.92
1957-----	17,656	2,420	13.71
1958-----	17,128	2,389	13.95
1959-----	16,592	2,407	14.51
1960-----	15,635	2,407	15.39
1961-----	14,803	2,403	16.23
1962-----	14,313	2,246	15.69
1963-----	13,367	2,309	17.27

^{1/} On-farm fatal accidents as reported by the Public Health Service, National Vital Statistics Division, HEW, include those deaths occurring to farm and nonfarm people "in buildings and on land under cultivation but exclude the farm home and home premises." Even with the limitations of the definition, these data are quite useful in indicating causes of and trends of accidental deaths, and age and regional relationships. Studies in Ohio and Iowa suggest that on-farm fatalities account for approximately 25 percent of all fatal accidents to farm people. The data in this report are from unpublished data furnished by HEW.

The number of regional fatalities resulting from on-farm accidents from 1960 through 1963 ranged from 1,872 in the Corn Belt to 540 in the Pacific region (table 2). The average annual death rate for the same period varied from less than 12 per 100,000 farm people in the Delta States to more than 24 per 100,000 in the Mountain region. These latter two regions had almost identical numbers of fatalities--606 and 601, respectively.

The death rates from on-farm accidents varied considerably by age groups. The fatality rate increased rapidly after age 49, reaching more than double the U. S. average death rate (from accidents) for the group 75 or older. Ages 15 to 24 had the highest death rate of any group under 50 years old. Although the death rate for those under 5 was generally lower than the average for all ages, it was considerably higher than that for ages 5 to 9. The Appalachian, Southeast, Delta States, and Southern Plains regions had relatively stable death rates among continuous age groups.

Part of the variability in death rates by age group can be explained. Under age 5, a youngster may not recognize danger. Thereafter and through the early twenties, reasoning may improve but actions may become more reckless. Older persons tend to become less alert and less steady. As a result they may be more prone to accidents and often recover less readily when injured.

From 1960 to 1963, the leading causes of on-farm fatal accidents in decreasing order of importance were machinery, drowning, firearms, falls, blows, burns, electricity, and poison. Of the 9,365 on-farm deaths from 1960-63, 37.6 percent involved machinery, up from 35.3 percent in 1954-59 (table 3). As reported by HEW, machinery killed 44 percent more people on farms than it did in mines, quarries, and industrial workplaces combined.

Only the Southeast, Delta States, and the Mountain regions showed a decrease between 1954-59 and 1960-63 in the percentage of on-farm fatalities caused by machinery. The Lake States increased from an average of 41.5 percent in 1954-59 to 48.1 percent in 1960-63.

Fatalities vary seasonally, increasing from February through July and then steadily decreasing (table 4). A high proportion of machinery fatalities occur in May and June, and in August through October--the principal planting and harvesting months. More than 70 percent of the on-farm drownings occurred from May through August. After declining steadily from January through May, fatalities caused by firearms increased throughout the summer and fall.

The causes of on-farm fatal accidents also vary with the person's age. Machinery caused more than one-third of the accidental deaths of those under 5 years old, 23 percent of those 5 to 9, and then increased to 52 percent of those aged 55 to 59 (fig. 1). Drowning accounted for almost a third of the total accidents for those under 20 years old and then decreased rapidly for older ages. Falls accounted for a small proportion of all fatalities to those under 50, but increased rapidly for older persons. Firearm fatalities accounted for about 20 percent of the deaths of those 10 to 19 years old. For age groups over 19, firearms as a cause of accidental deaths steadily decreased in importance.

Table 2.--On-farm fatal accidents: Total and average annual number per 100,000 farm people of specified ages, by regions and the United States, 1960-1963 1/

Age	North- east 2/ 2/	Lake States 3/ 3/	Corn Belt 4/ 4/	Northern Plains 5/ 5/	Appa- lachian 6/ 6/	South- east 7/ 7/	Delta States 8/ 8/	Southern Plains 9/ 9/	Mountain 10/ 10/	Pacific 11/ 11/	United States 12/ 12/
Under 5----	20.9	13.0	9.5	13.0	6.0	6.0	5.6	13.4	26.8	16.8	11.1
5-9-----	10.2	8.6	8.5	9.4	5.2	5.0	5.5	16.0	13.1	10.2	8.3
10-14-----	19.9	8.6	13.5	12.5	11.4	13.2	11.1	17.9	17.9	11.9	13.1
15-19-----	26.8	14.1	18.1	20.6	14.8	18.8	15.6	28.9	21.3	16.6	17.6
20-24-----	21.1	8.2	18.7	23.8	15.2	17.4	14.0	36.0	36.2	14.8	17.7
25-29-----	12.9	11.1	13.4	20.0	14.3	19.9	14.0	22.9	14.4	16.0	16.2
30-34-----	14.2	14.1	12.5	8.6	9.7	15.0	14.9	15.3	21.7	18.3	14.5
35-39-----	15.8	10.4	9.7	13.2	12.0	13.9	14.0	17.6	13.2	15.7	13.7
40-44-----	17.6	10.6	11.9	14.7	12.6	15.5	12.7	17.3	14.6	14.4	14.2
45-49-----	17.4	10.8	13.3	17.3	13.8	15.1	13.5	13.9	25.3	9.4	14.2
50-54-----	22.0	19.7	19.0	22.2	13.8	17.0	13.0	14.2	33.5	27.5	18.3
55-59-----	23.8	19.2	20.4	32.7	13.0	18.1	13.5	22.7	28.2	18.6	19.3
60-64-----	27.7	27.9	25.5	30.0	15.6	21.7	12.1	22.8	42.1	22.4	22.5
65-69-----	27.0	29.4	27.1	45.2	14.3	17.9	12.5	25.0	43.8	26.9	23.3
70-74-----	39.4	38.6	37.6	50.1	23.8	20.4	16.5	29.9	73.9	41.5	31.8
75 and over	51.7	54.0	48.3	57.9	22.9	18.2	14.9	39.3	59.6	41.0	37.6
Average, all ages	21.2	15.1	16.6	19.4	12.3	14.3	11.6	20.3	24.4	17.5	16.2
Total number--	1,010	962	1,872	781	1,317	870	606	788	601	540	9,365

1/ See text footnote 1 for definition of on-farm accidents.

2/ Maine, N. H., Vt., Mass., R. I., Conn., N. Y., N. J., Pa., Del., Md.

3/ Mich., Wis., Minn.

4/ Ohio, Ind., Ill., Iowa, Mo.

5/ N. Dak., S. Dak., Nebr., Kans.

6/ Va., W. Va., N. C., Ky., Tenn.

7/ S. C., Ga., Fla., Ala.

8/ Miss., Ark., La.

9/ Okla., Tex.

10/ Mont., Idaho, Wyo., Colo., N. Mex., Ariz., Utah, Nev.

11/ Wash., Oreg., Calif.

12/ Includes Alaska and Hawaii.

Source: Farm population age distribution for each State from U. S. Census of Population, 1960: General Social and Economic Characteristics, Series PC (1)--1C to 53C, table 37. Regional age distribution for 1960 used to distribute the regional farm population estimates from 1960 through 1963. Farm population estimates from ERS-130, Farm Population Estimates for 1910-62, and unpublished data of farm population for 1963 furnished by Farm Population Branch, ERS, USDA.

Table 3.--On-farm fatal accidents: Percentage distribution by causes and regions, 1954-59 and 1960-63 1/

Cause and period	Distribution of accidents in--2/													
	North- east	Lake States	Corn Belt	Northern Plains	Appa- lachian	South- east	Delta States	Southern Plains	Mountain	Pacific	United States			
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Machinery: 3/														
1954-59----	37.6	41.5	41.1	44.9	28.7	27.0	31.9	25.6	32.3	34.1	35.3			
1960-63----	38.5	48.1	44.7	48.5	33.1	26.7	27.6	29.3	31.9	35.0	37.6			
Drowning:														
1954-59----	11.4	5.6	9.8	12.3	21.0	23.8	24.2	22.3	21.7	12.5	15.3			
1960-63----	14.2	4.2	10.1	10.8	22.3	27.6	25.7	21.8	16.1	13.3	15.9			
Firearms:														
1954-59----	9.8	10.8	12.4	9.9	12.5	14.0	11.2	17.6	12.7	11.0	12.2			
1960-63----	8.8	9.0	8.1	9.1	11.2	12.8	13.7	14.2	14.0	10.6	10.6			
Falls:														
1954-59----	12.9	12.6	10.8	7.7	7.7	5.2	4.0	4.9	4.4	9.7	8.7			
1960-63----	11.4	11.3	10.3	6.5	5.9	4.4	2.8	4.9	4.7	12.0	7.8			
Blows:														
1954-59----	6.0	7.1	6.3	4.2	8.1	5.8	6.3	3.2	3.2	5.5	5.5			
1960-63----	6.4	8.3	7.1	3.8	7.1	5.7	4.8	3.6	5.7	5.2	6.1			
Burns:														
1954-59----	5.5	4.4	4.5	4.3	5.2	5.0	5.4	7.2	3.3	5.0	5.0			
1960-63----	6.1	4.2	5.1	4.9	4.6	6.1	5.1	5.6	3.3	5.7	5.1			
Electricity:														
1954-59----	2.5	3.1	2.6	2.2	2.7	2.9	3.3	6.1	4.6	7.5	3.4			
1960-63----	2.4	2.5	3.1	2.2	2.1	2.5	4.0	6.5	5.0	7.2	3.4			
Poison:														
1954-59----	1.7	1.8	1.3	1.7	1.5	2.3	.6	1.6	1.8	2.2	1.6			
1960-63----	2.4	1.6	1.0	1.2	2.8	3.4	2.0	2.1	2.0	1.1	1.9			
All other:														
1954-59----	12.6	13.1	11.2	12.8	12.6	14.0	13.1	11.5	16.0	12.5	13.0			
1960-63----	9.7	10.8	10.4	13.1	10.7	10.1	14.4	12.3	17.3	9.8	11.5			

1/ See text footnote 1 for definition of on-farm accidents and footnotes 2-12, table 2, for the States of each region.

2/ Detail may not add to 100 percent because of rounding.

3/ Data for 1954-1959 on p. 10 in: Rush, John D. Farm Accidents in the United States. U. S. Dept. Agr., Agr. Econ. Rpt. No. 11, October 1962.

Table 4.--On-farm fatal accidents: Occurrence by month and by selected cause, 1960-1963 1/

Month	All fatalities	Machinery	Drowning	Firearms
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
January-----	4.9	2.8	2.4	8.6
February-----	4.5	3.1	2.5	5.6
March-----	6.5	5.8	4.6	5.9
April-----	7.8	9.7	6.4	5.5
May-----	9.7	11.8	12.8	5.1
June-----	12.1	11.4	21.6	5.6
July-----	12.3	10.2	22.7	7.1
August-----	10.6	11.1	14.7	6.8
September-----	9.0	10.9	5.9	8.2
October-----	8.6	10.7	2.9	10.9
November-----	8.0	8.3	1.8	16.9
December-----	6.1	4.2	1.7	13.6
Total <u>2/</u> -----	100.0	100.0	100.0	100.0

1/ See text footnote 1 for definition of on-farm accidents.

2/ Details may not add to 100 percent because of rounding.

FATAL ACCIDENTS ON FARMS

Percentage Distribution of Selected Causes by Age Groups, 1962-63

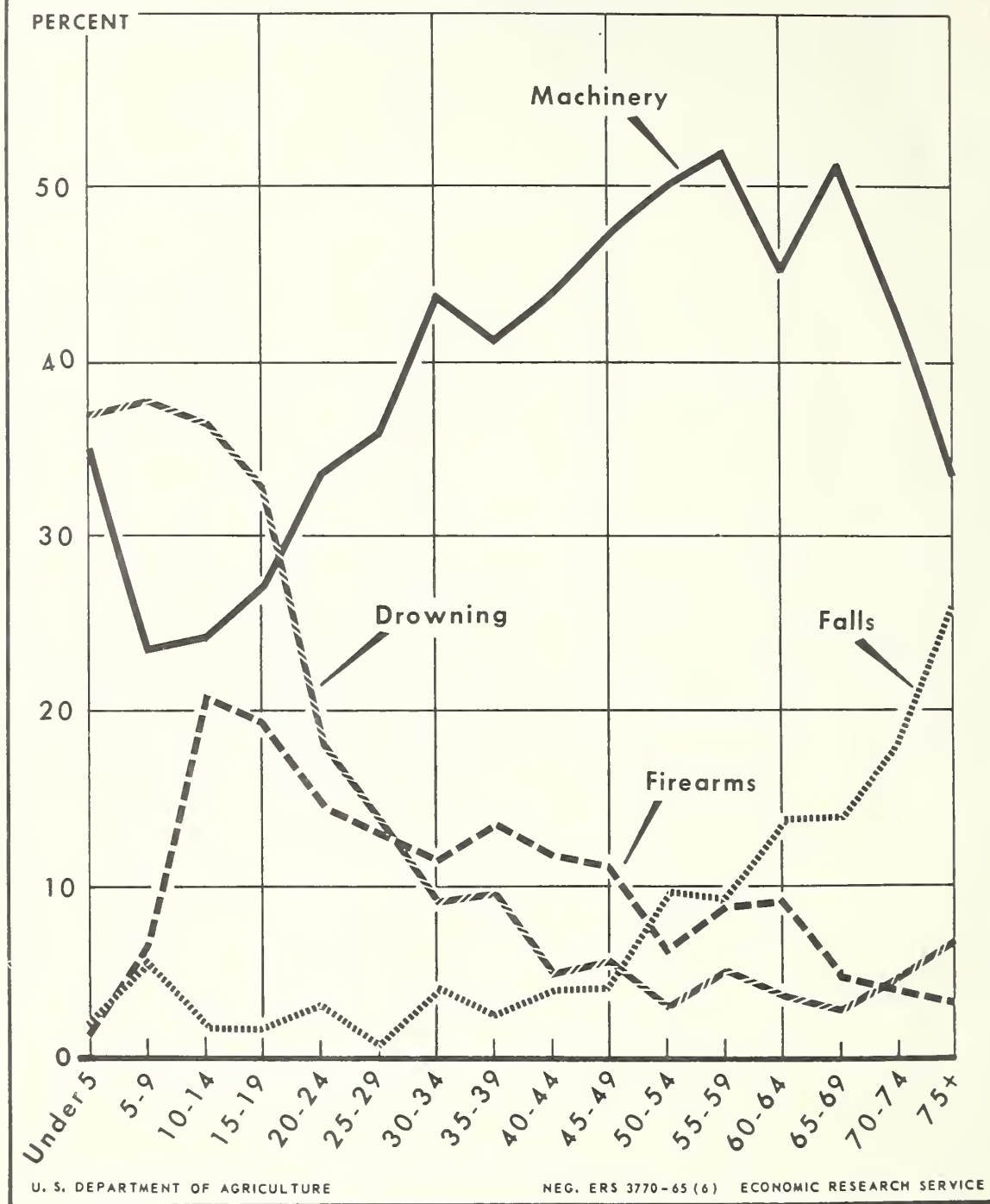


Figure 1

USE INSECTICIDES WITH CAUTION

To protect the ultimate consumer of food crops and animal products, the use of pesticides is regulated under the Federal Insecticides, Fungicides, and Rodenticides Act and the Federal Food, Drug, and Cosmetic Act. The rate and method of application and any resulting residues must comply with the requirements of these two Acts. Products in violation of the Food, Drug, and Cosmetic Act are subject to Federal action. If the insecticides are used according to the instructions on the label, there should be no violation of the laws.

USE CAREFULLY

Insecticides are poisonous. They should be used only when needed, and should be handled with extreme care. The directions and precautions on the container label should be followed carefully.

When handling or mixing a concentrate of any insecticide, avoid spilling it on the skin and keep it out of the eyes, nose, and mouth. If any is spilled, wash it off the skin and change clothing immediately. If it gets in the eyes, flush with plenty of water for 15 minutes and get medical attention.

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