

# Turkey Mortality In North Dakota, 1956

By Roy Hovey<sup>1</sup> and Theo H. Ellis<sup>2</sup>

Mortality is often the difference between profit and loss for the turkey enterprise. Consequently, it is necessary for the producer to do everything possible to keep death losses at a minimum.

At the request of producers and feed dealers in North Dakota, a study of costs and returns from turkey production was begun in the spring of 1956. The information presented in this article is derived from 18 completed flock records out of the 46 being studied.

Table I shows that mortality was at its highest point during the first two production periods or during the first month that the producers had the birds. It again reached a peak during the fifth period. During the first month the young poults are becoming adjusted to living conditions in the brooder house. Weak and less thrifty poults die in the competition for survival. During the fifth period the birds are from 8 to 10 weeks old. This is the normal time for moving them from the brooder house to range. The adjustment of the birds to less confined surroundings, and exposure to weather are probably responsible for the high death losses at this time.

TABLE I.—Percentage Mortality and Percentage Death Losses by Production Period.

Production period <sup>1</sup>	Percent Mortality <sup>2</sup>		Percent death losses <sup>3</sup>	
	Actual	Cumulative	Actual	Cumulative
1	2.5	2.5	19.7	19.7
2	2.3	4.8	17.4	37.1
3	1.3	6.1	10.3	47.4
4	.7	6.8	5.3	52.7
5	2.0	8.8	15.2	67.9
6	.6	9.4	4.7	72.6
7	.7	10.1	5.2	77.8
8	.7	10.8	5.1	82.9
9	.5	11.3	3.5	86.4
10	.4	11.7	3.4	89.8
11	.6	12.3	4.5	94.3
12	.4	12.7	3.3	97.6
13	.2	12.9	1.8	99.4
14	.1	13.0	.6	100.0
Total or average	13.0		100.0	

<sup>1</sup>Total or average 13.0 100.0

<sup>2</sup>Producers reported death losses on the first day of each month for the two half-month periods immediately preceding the date of report. As a result, the average age of poults for the first period was 9 days. Each other period was either 15 or 16 days long depending on the number of days in the month.

<sup>3</sup>Death losses in each period divided by poults started.

<sup>4</sup>Death losses in each period divided by total death losses.

<sup>1</sup>Graduate Assistant.

<sup>2</sup>Assistant Agricultural Economist.

By the time the birds were approximately 2 months old, over one-half of the death losses had occurred. By the time they were approximately half grown, over three-fourths of the losses had occurred. Total mortality for the production year amounted to 13 percent.

At first consideration, 13 percent does not seem too alarming. But if this mortality is applied to a 2,000 bird flock, it means a loss of 260 birds or 3,900 pounds of live turkey at 15 pounds per bird. Assuming that turkeys are bringing 30 cents per pound, a loss in gross receipts of \$1,170 would be incurred due to this mortality rate. Assume further that it would cost \$3 per bird to carry the 260 birds from the time of their death to market age, the additional cost would have been \$780. The gross receipts figure of \$1,170 would be reduced to \$390. This could easily be the difference between profit and loss. Consequently, every effort should be made to keep the mortality at a minimum.

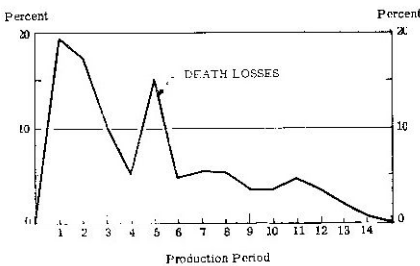


FIGURE 1.—Percent death losses by production period.

When mortality by cause is considered, it was found that the "biggest known killer" of turkeys in this study was bad weather. (See table II.) Bad weather caused approximately 17 percent of the death losses. Inadequate housing account-

TABLE II.—Percentage Mortality by Cause.

Cause of Mortality	Percent due of various causes	
Bad weather .....	16.9	
Inadequate housing:		
Electric failure .....	8.9	
Inadequate space .....	3.8	12.7
Weak poults:		
Starve outs .....	5.5	
Weaklings .....	3.6	9.1
Diseases:		
Coccidiosis .....	2.1	
Cholera .....	2.0	
Blackhead .....	1.1	
Miscellaneous .....	1.9	7.1
Predators:		
Dog or fox .....	4.0	
Hawk or owl .....	0.3	4.3
Cannibalism .....		4.1
Feed problems .....		3.2
Unknown causes .....		42.6
<b>Total .....</b>		<b>100.0</b>

ted for approximately 13 percent; weak poults, 9 percent and diseases, 7 percent. For about 43 percent of the losses the cause of death was not determined.

A major portion of these losses can be classified as caused by lack of proper management. This is pointed out by the high percentage of unknown losses. Good management would be indicated by the producer determining the cause of losses as quickly as possible. If the cause is known, something can possibly be done to eliminate it. If the cause is not known, little can be done to remedy the situation.

In summary, it can be stated that better management means lower mortality and thus greater profits (or smaller losses). Close attention to the birds and practices used in producing them will mean greater profits at the end of the production season.