

Papers and Feeders

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Feeders Alone For Starting Chicks

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Papers and Feeders vs. Feeders Alone For Starting Chicks

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The question often arises, "Should day-old chicks receive their first feed from regular chick feeders, or should it be scattered over newspapers and egg flats in addition to being provided in feeders?"

This bulletin reports the results of a comparison of the two methods. In a series of three feeding trials involving 3,191 day-old chicks, the feed for half the chicks was placed only in feeders. For the other half, it was provided both in feeders and on papers and egg flats. The two methods were compared under the following conditions:

1. Difference in amount of floor space— $\frac{3}{4}$ and 1 square foot per chick.
2. Difference in the time chicks were held before being placed in the brooder house—0, 24, 48 hours.
3. Where paper was used, difference in the time chicks were kept on paper—24, 48, and 72 hours.

WHAT THE COMPARISON SHOWED

The data obtained showed that the use of papers at the first feeding does not in any way lower mortality, or improve growth or feed conversion. Results were the same regardless of how long the chicks were held after hatching or before they were placed in the brooder house.

The use of feeders instead of paper and egg flats not only reduced the labor required in starting chicks, but also eliminated an unnecessary waste of feed.

Chicks ate out of the feeders from the beginning and were less inclined to eat litter. Some of the chicks which were given their first feed on paper or egg flats continued to search for feed in the litter long after the papers and egg flats were removed. This meant that they went through two complete learning processes in learning to eat.

The chicks on paper appeared to be less content and chirped continuously. In moving about they appeared to have difficulty in keeping their footing on the smooth surface of the paper.

FIRST FEEDING TEST

How the Test Was Made

The first feeding test was made from June 5 through August 15, 1952. Four 15 by 30 foot pens were used. Six hundred New Hampshire chicks were placed in each of two of these pens which allowed $\frac{3}{4}$ of a square foot per chick. Four hundred and fifty New Hampshire chicks were placed in each of the remaining two pens which allowed one square foot per chick. Processed sugar cane pulp was used as litter. Newspapers were spread under and around the hovers in one pen in each of the two floor space classifications. The remaining two pens were used as controls. The papers remained in place for 48 hours after the chicks had been placed in the brooder house.

At two-hour intervals after the chicks were placed in the brooder house, five chicks from each pen were examined for the presence of

Figure 1.—Chicks on newspapers four hours after they were placed in the brooder house. Notice that the chicks have not started to eat out of the feeders.



litter and feed in the crop and gizzard. The broilers were weighed by lots and marketed at 10 weeks of age.

Results

The market weights and feed conversion figures are summarized in Table I. Mortality figures were slightly lower where no papers were used. At market time, fewer culls were found in those lots where no papers were used. The average weight of the broilers sold was the same for all lots. It required less feed per pound of broiler sold where no paper was used. This is probably due to the fact that much of the feed was wasted by being placed on the papers.

Examination of the contents of the digestive tract indicated that very little, if any, litter was eaten by the chicks in the pens without paper. They also show that the papers do not shorten the time required for the chicks to learn to eat.

SECOND FEEDING TEST

How the Test Was Made

The second feeding test was run from October 25, 1952 to January 3, 1953. Eight pens with 66 New Hampshire chicks per pen were used.

Figure 2.—Chicks without newspapers four hours after they were placed in the brooder house. Notice that the chicks have started to eat out of the feeders and that very little searching is being done for feed in the litter.



Table I.—Mash on Paper and in Feeders Versus Mash in Feeders Only During the First 48 Hours in the Brooder House with Floor Space Allowances of $\frac{3}{4}$ and 1 Square Foot.

	Paper		No Paper	
	$\frac{3}{4}$ Square foot per broiler	1 Square foot per broiler	$\frac{3}{4}$ Square foot per broiler	1 Square foot per broiler
Number broilers sold—	588	444	587	454
Total feed (lbs.)—	4054.3	3265.0	4071.7	3159.7
Total weight of saleable broilers (lbs.)*	1360	1088	1426	1104
Total weight of broiler produced (lbs.)	1366.7	1088.6	1427.5	1104
Culls	6	1	1	0
Average weight all broilers (lbs.)	2.30	2.45	2.43	2.43
Average weight broilers sold (lbs.)	2.31	2.45	2.43	2.43
Pounds of feed per pound broiler produced	2.97	3.00	2.85	2.86
Pounds of feed per pound of broiler sold	2.98	3.00	2.86	2.86
Percent Mortality	8.6	9.0	6.8	7.3

* Ten weeks of age.

Table II.—Mash on Paper and in Feeders Versus Mash in Feeders Only During the First 24 Hours in the Brooder House.

Treatment	Pen number	Average 10 week weight* (pounds)	Pounds feed per pounds weight	Percent mortality
Paper	4	3.1	2.89	0
	6	2.8	3.09	0
	8	3.1	3.01	1.5
	10	2.8	3.17	3.0
Average		3.0	3.04	1.1
No Paper	3	3.0	2.98	1.5
	5	3.0	3.08	1.6
	7	3.0	2.85	0
	9	2.9	3.23	3.0
Average		3.0	3.04	1.5

* Equal number cockerels and pullets.

Table III.—Mash on Paper and Egg Flats and in Feeders Versus Mash in Feeders Only During the First 72 Hours in the Brooder House with Chicks Held for 0, 24, and 48 Hours Prior to Being Placed in the Brooder House.

	Immediate		24 Hours		48 Hours	
	Paper	No paper	Paper	No paper	Paper	No paper
Number broilers	98	98	97	98	99	100
Total feed pounds	662.4	639.1	645.4	636.3	629.7	627.1
Total weight broilers pounds ¹	256.8	255.5	246.4	252.1	257.6	254.4
Average weight broiler pounds ²	2.64	2.60	2.56	2.58	2.59	2.59
Pounds of feed per pound of weight	2.58	2.50	2.62	2.52	2.44	2.47
Mortality percent	2.0	2.0	3.0	2.0	1.0	0.0

¹ Nine weeks of age.

² Equal number of cockerels and pullets.

In four alternate pens newspapers were put down on the litter around the edge of the hover. Feed was sprinkled over the surface of this paper. The usual number and arrangement of feeders and water founts were used in addition to the paper. The remaining four pens were fed using feeders without the aid of papers. The digestive tracts of chicks fed with and without the aid of paper were examined at one hour intervals for the presence of feed and litter. The broilers were marketed at 10 weeks of age.

Results

The market weight and feed conversion data are given in Table II. No difference in mortality, market weight or feed conversion was obtained in the pens which were given their first feed on paper.

It required an extra one hour and 25 minutes to prepare the pens in which the newspapers were used. This extra time did not result in additional income and constitutes an unnecessary item of expense. With a large number of chicks, the extra time required would be proportionately greater and the unnecessary expense involved proportionately greater also.

Examination of the digestive tracts once again showed that the chicks on paper did not learn to eat any more rapidly than did those where paper was not used.

THIRD FEEDING TEST

How the Test Was Made

The third feeding test was run from February 11 to April 14, 1954. Three groups of chicks were used in this experiment. One group was put out immediately after hatching, the second group was held in chick boxes for 24 hours and the third was held for 48 hours. One-half of the chicks in each of the three groups were given their first feed on egg flats and paper, the other half was held as a control. The broilers were weighed and marketed at 9 weeks of age.

Results

In Table III are listed the market weight, the feed conversion and mortality figures for the chicks of the third feeding test. The time the chicks were held prior to being placed in the brooder house did not adversely affect market weight and feed conversion. Neither did the use of egg flats and paper at the first feeding result in an increase in market weight or efficiency of feed conversion as this holding time was increased. Overall mortality was slightly higher in those lots where egg flats and paper were used. In general results showed that the use of paper at the first feeding is of no real benefit.