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THE PROFITABLENESS OF SOME POULTRY FLOCKS
IN WALES, 1951-52.

by

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E. F. Nash.

June, 1953.

Professor of Agricultural Economics.

THE PROFITABLENESS OF SOME POULTRY FLOCKS
IN WALES, 1951-52.

Financial information relating to their poultry flocks was provided by 17 commercial egg producers and ^{by} 13 accredited breeders for the year 1951-52. The average results for these two groups of flocks are presented separately in the following tables and those for the individual farms in the Appendix Tables. The "financial year" of all farms did not coincide, so that these results actually cover the period January 1951 to October 1952. Five of the commercial egg-producers kept records for January-December 1951, but the records of seven others together related to the period September 1951 - October 1952. The information obtained from ten of the thirteen accredited breeding flocks covered the period July 1951 - October 1952.

Three of the commercial egg-producers were specialist poultry-keepers, whilst the others were mixed farmers. Their system of management varied from "free-range" to the "battery" system. Ten commercial egg-producing flocks were given free range of land; two were kept in folds; three were managed semi-intensively and two were kept under intensive systems (one on deep-litter and one in battery cages.)

Of the thirteen accredited breeders, seven were "specialists". Twelve of these breeding flocks were given free range of land, whilst the other was managed semi-intensively.

Method of Accounting.

(1) Average Size of Laying Flock. This is the average of the number of laying birds at the end of each month, i.e. the sum of the numbers at the end of each month divided by 12.

(2) Average Egg Yield per Laying Bird. This is arrived at by dividing the total number of eggs produced by the average size of the laying flock.

(3) Mortality. For individual farms keeping full and accurate records, this is the sum of the monthly death-rates. (The latter is the number of deaths during the month expressed as a percentage of the number of laying birds at the beginning of the month). For other farms, and also for the average of all farms, it represents the total deaths during the year expressed as a percentage of the average number of layers throughout the year.

(4) Valuations. In the majority of cases all classes of fowl have been valued at conservative market values. For some farms, growing stock and pullets

2.

6-12 months old have been valued at estimated cost of production. The same values have been applied at the end as at the beginning of the year.

Houses and equipment have been depreciated at the following rates:-

	<u>Per cent.</u>
Laying and rearing houses, etc.	10
Brooders and incubators	7½
Coops, nests, bins, buckets	10
Water Fountains and Feed Hoppers	20
Wire netting and fences	20
Transport Equipment	20

(5) Labour. This has been charged as recorded. In other cases it has been charged at the following hourly rates:-

	<u>January 1951- October 1951.</u>	<u>November 1951- October 1952.</u>
Farmers & Sons and hired males over 21	2s. 6d.	2s. 9d.
Farmer's Wife and daughters and hired females over 21	1s. 10d.	2s. 0d.

(6) Food. Purchased foods have been valued at purchase price to the farmers. Home-grown foods have been charged at average costs of production, which were as follows:-

	<u>s. d.</u>
Oats	12. 5
Barley	12. 6
Mixed Corn	12. 5
Potatoes	7. 4

(7) Treatment of Rent and Manures. In the case of free-range flocks no rent has been charged and no credit has been allowed for the residual manurial value of feedingstuffs. For those flocks managed semi-intensively or intensively, rent has been charged only where an appreciable area of land was occupied by the poultry plant; but credit has been allowed for the residual manurial value of foods used by all these flocks.

(8) Eggs Consumed in House. These have been valued at current market prices. Hatching eggs used for home-hatching have been valued at estimated cost of production.

FINANCIAL RESULTS.Commercial Egg-Producing Flocks.

The financial results for our sample of commercial egg-producing flocks in 1951-52 are presented in the following tables, the costs in Table I and the returns and profit in Table II. They are expressed per laying bird and per dozen eggs produced. Some general management factors are presented in Table III, and a study of these is necessary in order to appreciate Tables I and II. The flocks have been grouped according to the system of management but unfortunately some systems are not sufficiently well represented to enable a fair comparison to be made between them. The following figures and remarks must not, therefore, be taken as conclusive evidence to be set against or in favour of any one of these systems. The average results for the total sample are shown in Appendix A.

The Battery and Deep Litter Flocks.

It is interesting to note that the highest profits per layer were provided by those two flocks which were managed intensively, i.e. under the battery system and on deep litter. Although these two flocks provided similar profits of about 24 shillings per laying bird, they exhibited interesting differences in the level of their total costs and returns and also in the relative importance of individual items in their account. The battery flock incurred average costs of just over 100 shillings per laying bird, whereas only a little more than 38 shillings was incurred by the deep-litter flock.

Food was the largest single item of cost in both cases, and of all items it showed the greatest discrepancy as between the two systems. For the battery flock the average cost of food per laying bird was 62s. as compared with only 28s. 3d. per laying bird for the deep-litter. This difference, however, cannot, in this particular comparison be attributed to any peculiarity of either system, since it arose mainly from the fact that, relatively to the size of the laying flock, more growing stock and stock cockerels were carried by the battery flock than by the other. Furthermore, the battery layers were fed almost entirely on purchased food, whereas more than half that fed to the deep-litter flock was home-grown, which is very much cheaper than purchased.

One important feature which is well illustrated by the results in Tables I and II is the relatively low labour requirements of these two intensive

Table I.

Average Costs per Laying Bird and Per Dozen Eggs Produced.
1951-52.

System of Management	Battery.		Deep Litter.		Free-Range.		Semi-Intensive.		Fold.	
Number of Flocks	1		1		10		3		2	
	Per	Per Dozen	Per	Per Dozen	Per	Per Dozen	Per	Per Dozen	Per	Per Dozen
	Laying	Eggs	Laying	Eggs	Laying	Eggs	Laying	Eggs	Laying	Eggs
	Bird.	Produced:	Bird.	Produced:	Bird.	Produced:	Bird.	Produced:	Bird.	Produced:
Cost Items.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Food - Purchased	62. 3	3. 4 $\frac{1}{2}$	20. 0	1. 6 $\frac{1}{2}$	25. 5 $\frac{1}{2}$	2. 2 $\frac{1}{2}$	41. 3	2. 7 $\frac{1}{2}$	43. 4 $\frac{1}{2}$	3. 3 $\frac{1}{2}$
Home-grown	0. 7	0. 0 $\frac{1}{2}$	8. 8 $\frac{1}{2}$	0. 8	3. 6 $\frac{1}{2}$	0. 3 $\frac{1}{2}$	4. 4 $\frac{1}{2}$	0. 3	2. 8	0. 2 $\frac{1}{2}$
Gross Cost of Food	62.10	3. 5	28. 8 $\frac{1}{2}$	2. 2 $\frac{1}{2}$	29. 0	2. 6	45. 7 $\frac{1}{2}$	2.10 $\frac{1}{2}$	46. 0 $\frac{1}{2}$	3. 6
Credit Manurial Residues	0.10	-	0. 5 $\frac{1}{2}$	-	-	-	0. 8 $\frac{1}{2}$	0. 0 $\frac{1}{2}$	-	-
Net Cost of Food	62. 0	3. 5	28. 3	2. 2 $\frac{1}{2}$	29. 0	2. 6	44.11	2.10	46. 0 $\frac{1}{2}$	3. 6
Labour - Hired	-	-	-	-	0. 8	0. 1	0. 6 $\frac{1}{2}$	0. 0 $\frac{1}{2}$	5.10 $\frac{1}{2}$	0. 5 $\frac{1}{2}$
Family	5. 3 $\frac{1}{2}$	0. 3 $\frac{1}{2}$	3. 1 $\frac{1}{2}$	0. 3	10.10	0.11	13. 4	0.10	3. 1	0. 2 $\frac{1}{2}$
Hatching Eggs - Bought	-	-	-	-	-	-	-	-	-	-
- Home-produced	-	-	-	-	0. 4 $\frac{1}{2}$	0. 0 $\frac{1}{2}$	-	-	-	-
Livestock	24. 1	1. 4	2. 3 $\frac{1}{2}$	0. 2	4. 2 $\frac{1}{2}$	0. 4 $\frac{1}{2}$	2. 0 $\frac{1}{2}$	0. 1 $\frac{1}{2}$	6. 4 $\frac{1}{2}$	0. 6
Depreciation on Buildings and Equipment	3.11	0. 2 $\frac{1}{2}$	0. 9 $\frac{1}{2}$	0. 0 $\frac{1}{2}$	1. 6	0. 1 $\frac{1}{2}$	0. 7 $\frac{1}{2}$	0. 0 $\frac{1}{2}$	2. 1 $\frac{1}{2}$	0. 2
Rent	0. 8 $\frac{1}{2}$	0. 0 $\frac{1}{2}$	1. 4 $\frac{1}{2}$	0. 1 $\frac{1}{2}$	-	-	0. 8	0. 0 $\frac{1}{2}$	0. 2 $\frac{1}{2}$	-
Other Costs	4. 4 $\frac{1}{2}$	0. 2 $\frac{1}{2}$	2. 6 $\frac{1}{2}$	0. 2	1. 1	0. 1	5. 5	0. 4	3. 1	0. 2 $\frac{1}{2}$
Total Costs	100. 4 $\frac{1}{2}$	5. 6	38. 4 $\frac{1}{2}$	2.11 $\frac{1}{2}$	47. 8	4. 1 $\frac{1}{2}$	67. 6 $\frac{1}{2}$	4. 3	66. 9 $\frac{1}{2}$	5. 0 $\frac{1}{2}$

systems of poultry-keeping. This is an advantage always claimed for these systems, and for the deep-litter system in particular. One hour per day was the labour requirement of 140 laying birds in cages (plus almost an equal number of other birds on free-range), and only 12 minutes per day that of 74 laying birds on deep litter (plus a few other birds on free-range). Even allowing for the fact that the deep-litter flock was only half the size of the battery flock, the saving of labour secured in connection with the former was still very substantial compared with that for the latter, even more than may be generally true of these two systems. It must be pointed out, however, that no automatic feeding equipment was installed with this battery of cages. Unfortunately these two flocks were too small to enable full advantage to be taken of the labour-saving qualities of the two systems.

A wide difference is shown in the average cost of livestock purchased for these two flocks, that for the battery flock being 24s.1d. per laying bird compared with only 2s.3½d. for the deep-litter flock. The former purchased about half of its replacements as mature pullets, but also bought a considerable number of day old chicks, a proportion of which were reared for table purposes rather than as laying flock replacements. Only a few day-old pullets were bought for the purpose of replacing the deep-litter flock, and normally the cost of livestock purchased would be higher than it was in this particular case.

The battery and deep-litter flocks in our sample were housed in converted farm buildings, and an annual rental of £5 was charged for their use in each case. Whilst birds on deep-litter are allowed to run freely within the building, the battery birds are confined to cages which necessarily involve high capital expenditure. The battery layers had, therefore, to bear the charge for depreciation of the cages (amounting to about 1s.6d. per laying bird), whereas no such charge was borne by the deep-litter flock. (Since some of the laying birds in the former case were given free range of land, the actual depreciation per cage-layer was 1s.10d.). Furthermore, the battery flock had other buildings and equipment (for rearing and feeding etc.) the cost of which amounted, in this case, to very much more than did those for the deep-litter flock. This was another reason why the charge for depreciation on buildings and equipment averaged 3s.11d. per laying bird for the former as compared with only 9½d per

Table II.

Average Returns and Profit per Laying Bird and Per Dozen
Eggs Produced, 1951-52.

System of Management	Battery.		Deep Litter.		Free-Range.		Semi-Intensive.		Fold.	
Number of Flocks	1		1		10		3		2	
	Per Laying Bird.	Per Dozen Eggs Produced.	Per Laying Bird.	Per Dozen Eggs Produced.	Per Laying Bird.	Per Dozen Eggs Produced.	Per Laying Bird.	Per Dozen Eggs Produced.	Per Laying Bird.	Per Dozen Eggs Produced.
<u>Sources of Returns.</u>	s. d	s. d	s. d	s. d	s. d	s. d	s. d	s. d	s. d	s. d
Market Eggs	80. 5	4. 5	55.11	4. 4	45.11	3.11½	68. 8	4. 4	53. 9	4. 0½
Hatching-Eggs - Sold	-	-	-	-	3.11½	0. 4	-	-	-	-
- Used on Farm	-	-	-	-	4½	0. 0½	-	-	-	-
Eggs Consumed in House	0.11½	0. 0½	3. 0	0. 2½	2. 3	0. 2½	2. 5	0. 2	3. 9	0. 3½
Total Returns from Eggs	81. 4½	4. 5½	58.11	4. 6½	52. 6	4. 6½	71. 1	4. 6	57. 6	4. 4
Table Poultry	5. 7½	0. 3½	-	-	2. 9½	0. 3	6. 4½	0. 5	2. 9	0. 2½
Old Hens and Culls	25. 0	1. 4½	3. 7½	0. 3½	4. 9	0. 5	5. 7½	0. 4	8. 6	0. 7½
Poultry Consumed in House	-	-	-	-	0. 7	0. 0½	2. 5	0. 2	0. 8	0. 0½
Cocks, Pullets & Chicks	7. 1	0. 5	-	-	1. 5	0. 1½	-	-	0.11	0. 1
Total Returns from Poultry	37. 8½	2. 1	3. 7½	0. 3½	9. 6½	0.10	14. 5	0.11	12.10	0.11½
Other Returns	4.10	0. 3	-	-	1. 6½	0. 1½	0. 1	-	2. 7½	0. 2½
Total Returns	123.11	6. 9½	62. 6½	4.10	63. 7	5. 6	85. 7	5. 5	72.11½	5. 6
Total Costs	100. 4½	5. 6	38. 4½	2.11½	47. 8	4. 1½	67. 6½	4. 3	66. 9½	5. 0½
Profit	23. 6½	1. 3½	24. 2	1.10½	15.11	1. 4½	18. 0½	1. 2	6. 2	0. 5½

laying bird for the latter.

In the case of the battery flock, "other costs" consisted mainly of transport charges, paraffin and minor repairs to equipment, whilst for the deep-litter flock they consisted almost wholly of a difference in the value of fowls on the farm as between the opening and closing dates of valuation.

The cost per dozen eggs produced is a useful measure of efficiency in commercial egg production. The battery flock showed a much higher cost per dozen eggs than the deep-litter flock - 5s.6d. compared with 2s.11½d. Even allowing for the costs incurred on growing stock for sale (which have been included in the costs per layer and per dozen eggs), it appears that the cost per dozen eggs in the former case was very much higher than that for the deep-litter flock, and was almost as much as the average price per dozen received for the market eggs sold. The higher the egg yield the lower will the cost per dozen eggs tend to be; but the costs (per laying bird) of food and live-stock, and of overheads such as depreciation of equipment, were so very much higher for the battery flock that its higher average egg yield did not reduce the average cost per dozen to a figure comparable with that for the deep-litter flock.

The total returns of 123s.11d. per laying bird for the battery flock were almost double those for the deep-litter one. Since the seasonality of production was roughly the same in both cases, about 50 per cent of the total eggs being produced during the winter period, the average price per dozen received for market eggs was approximately identical for both flocks. It follows that this higher volume of returns from eggs in the battery flock was a direct result of its higher egg yield. This higher rate of egg production was achieved by the battery flock in both summer and winter. It is particularly important to attain a high rate of production during the winter months so as to take advantage of the higher prices ruling at that time. This flock attained a rate of 57 per cent during the winter period, as compared with 41 per cent reached by the deep-litter flock. With the use of artificial lighting rates of winter production much higher than those achieved by the flocks in our sample are claimed for these intensive systems of poultry-keeping. Artificial lighting was used in the battery house in our sample, but not in the deep-litter house; and no doubt this was a factor making for the higher winter production attained

Table III.

General Information.

System of Management.	Battery.	Deep-Litter.	Free-Range.	Semi-Intensive.	Fold.
Number of Flocks	1	1	10	3	2
Number of Birds per Farm:-	(Average Results).				
Laying Birds	140	74	176	145	167
1st Year Layers as % of Laying Flock	100	77	56	51	61
Growing Stock and Stock Cockerels	105	17	65	76	98
Chicks under 1 month	32	4	11	10	29
Feeding and Food Prices:-					
Cwts. Fed per Laying Bird per Annum	2.10	1.29	0.99	1.47	1.71
Lbs. Fed per Dozen Eggs Produced	12.9	11.2	9.5	10.4	14.5
Home-grown as % of Total Food Fed	2	56	29	24	13
Average Price per cwt. of Purchased Food	30s.0d.	34s.9d.	36s.6d.	36s.5d.	28s.9d.
Egg Production and Prices:-					
Egg Yield per Laying Bird	219	155	139	189	159
Eggs Laid in Sept.-Feb. as % of Total Egg Yield:	56	51	41	45	51
Winter Production (per cent)*	57	41	31	47	38
Summer Production (per cent)	76	46	47	58	45
Average Price per Dozen Received for Market Eggs	4s.6d.	4s.6½d	4s.5d.	4s.6d	4s.7d.
Labour - Hours per Flock per Day	1.0	0.2	2.3	2.4	1.8
Culls as per cent of Input**	54	19	47	36	58
Mortality (per cent)	5	31	11	24	33

* Average Number of eggs laid per day expressed as a percentage of the average number of laying birds during September-February inclusive.

** Total Culls expressed as percentage of the numbers of laying birds at beginning of year plus number added during the year.

in the former case. Another important factor was the more drastic culling which was made possible in the battery flock by the fact that the birds were kept in cages, and records could therefore be kept of the performances of individual birds.

The higher rate of culling was also largely responsible for the fact that the returns from the sale of old hens and culls averaged 25s.0d. per laying bird for the battery flock, compared with only 3s.7½d. for the deep-litter flock. But another important reason for this higher return from old hens and culls was the fact that battery hens, being confined to their cages, develop into heavier birds, with higher quality flesh and thereby command a better price on the market.

Table IV.

System of Management.	Average	Old Hens and Culls.		Table Poultry.	
	Number of Laying Birds.	Number Sold.	Average Price Per Head.	Number Sold.	Average Price Per Head.
Battery	140	207	s. d 16. 10	47*	s. d 16. 7½
Deep Litter	74	20	13. 6	-	-

* All young cockerels.

Although the volume of returns per laying bird was higher for the battery than for the deep-litter flock, the total costs incurred were also very much higher for the former, so that the ultimate profit per laying bird was actually slightly less. The profit per dozen eggs produced was also lower for the battery flock.

Free-Range, Semi-Intensive and Folded Flocks.

Both the free-range and the semi-intensive flocks gave favourable average profits, these being 15s.11d and 18s.0d per laying bird respectively; but the average profit per laying bird for the folded flocks (of which there were only two) was rather low at 6s.2d. The average costs and returns per laying bird for the free-range flocks were low as compared with those for the other two groups. So far as the costs were concerned, this was a result of the lower feeding rate and of the larger proportion of home-grown food contained in the ration for the free-range group. These flocks also pick up some food by foraging.

Owing to the fact that the folds require frequent moving, and that water and food have to be carried to them, a high labour requirement and cost is usually associated with the "fold" system of poultry-keeping. Less time, however, was spent per 100 laying birds, and the average cost of labour per laying bird was less, for each of the folded flocks in our sample than for the average free-range or semi-intensively managed flock.

The semi-intensive flocks as a group showed the highest average egg yield and, despite the high average cost per laying bird which they incurred, this high yield ensured an average cost per dozen eggs which was only slightly above that for the free-range group, and very much lower than that for the fold-units. The semi-intensive group also showed the highest average rate of winter production - 47 per cent compared with 38 per cent and 31 per cent for the other groups respectively - and the ^{highest} average returns from eggs per laying bird.

Accredited Breeding Flocks.

Thirteen accredited breeders co-operated in our accounts scheme in 1951-52. The records provided covered the period January 1951-October 1952 and the average costs, returns and profit per laying bird and per dozen eggs are presented in Tables V and VI. Some general information which has a bearing on the financial results is presented in Table VII.

Table V.

Average Costs per Laying Bird and per Dozen Eggs 1951-52.

Cost Items.	Per		Per cent.
	Per Laying Bird.	Dozen Eggs Produced.	
	s. d.	s. d.	
Food - Purchased	59.11	5. 0	61.8
- Home-grown	1. 7½	0. 1½	1.6
Gross Cost of Food	61. 6½	5. 1½	63.4
Credit for Manure Residues	0. 2½	-	0.2
Net Cost of Food	61. 4	5. 1½	63.2
Labour - Hired	5.11	0. 6	6.1
- Family	13. 3½	1. 1½	13.7
Hatching Eggs - Bought	0. 1	-	0.1
- Home-Produced	6. 0	0. 6	6.2
Livestock	3. 2½	0. 3	3.3
Depreciation on Buildings & Equipment	2.10	0. 3	2.9
Rent	0. 3	0. 0½	0.3
Other Costs	4. 0½	0. 4	4.2
Total Costs	96.11½	8. 1½	100.0

Table VI.

Average Returns and Profit per Laying Bird and per Dozen Eggs, 1951-52.

Sources of Returns.	Per Laying Bird.	Per Dozen Dozen Eggs Produced.	Per cent.
	s. d.	s. d.	
Market Eggs	31. 3½	2. 7½	28.4
Hatching Eggs - Sold	22. 8	1. 11	20.6
- Used on Farm	6. 0	0. 6	5.4
Eggs Consumed in House	0. 10½	0. 1	0.8
Total Returns from Eggs	60. 10	5. 1½	55.2
Table Poultry	14. 7	1. 2½	13.2
Old Hens and Culls	5. 4	0. 5	4.9
Poultry Consumed in House	0. 9	0. 1	0.7
Cocks, Pullets and Chicks	25. 4½	2. 1½	22.9
Total Returns from Poultry	46. 0½	3. 10	41.7
Other Returns	3. 5	0. 3½	3.1
Total Returns	110. 3½	9. 3	100.0
Total Costs	96. 11½	8. 1½	-
Profit	13. 4	1. 1½	-

On average for all flocks a profit of 13s.4d. per laying bird was achieved in 1951-52, but the results for individual flocks showed a very wide variation from a loss of 25s.3d. to a profit of 40s.3d per laying bird. Three flocks, in fact, showed losses and the returns for another barely covered the costs. Of the other nine flocks, four made profits of over 20s.0d. per laying bird.

The costs of rearing replacement stock (for use on the farm and for sale) and those incurred in producing table poultry are included in the total costs, which are expressed per laying bird.

Table VII.

Distribution of Flocks According to Profit or Loss per Laying Bird 1951-52.

Range in Shillings.	No. of Flocks.
<u>Profits:</u>	
Over 30	2
20 - 30	2
10 - 20	2
Up to 10	4
Total with Profits	10
<u>Losses:</u>	
0 - 10	2
10 - 20	0
20 - 30	1
Total with Losses	3

Table VIII.

General Information, 1951-52.

	Average for All Flocks.
<u>Number of Birds per Farm:</u>	
Laying Birds	326
1st Year Layers as % of Laying Flock	58
Growing Stock and Stock Cockerels	245
Chicks under 1 month	77
<u>Feeding and Food Prices:</u>	
Cwt. Fed per Laying Bird per annum	1.77
Home-grown as % of Total Food Fed	6
Average Price per cwt. of Purchased Food	34s.0d
<u>Egg Production and Prices:</u>	
Egg Yield per Laying Bird	143
% Eggs Laid in September-February	42
Winter Production (per cent)	31
Summer Production (per cent)	49
Average Price per Dozen Received for Market Eggs:	4s.8d
" " " " " " " Hatching "	6s.9d
<u>Labour</u> - Hours per Flock per Day	7.4
<u>Mortality</u> - Per cent	11.4

For these accredited flocks, which are concerned with the breeding of poultry, the sales of hatching eggs and of livestock are important sources of revenue. In fact, on average for all 13 flocks, the returns from these two sources amounted to just under one-half of the total returns. However, only 42 per cent of the total eggs produced were sold, or used on the farm, for hatching, and these realised one-quarter of the total returns. The returns from hatching eggs and from the sale of replacement stock are limited by the fact that the demand for day old chicks and pulllets is seasonal. The hatching season is confined to the first four months of the year, and consequently market eggs (i.e. eggs sold for human consumption) necessarily made an important contribution to the total returns from the poultry enterprise. Fifty-six per cent of the total eggs produced were sold for human consumption and the revenue from these amounted to 28 per cent of total returns.

Table IX.

Proportionate Uses and Returns from Eggs.

	Per cent of Total Production.	Per cent of Returns from Eggs.	Per cent of Total Returns.
Hatching Eggs Sold	28	37	21
Hatching Eggs Home-Hatched	14	10	5
Market Eggs	56	51	28
Eggs Used in House	2	2	1

Table X.

Sales and Returns from Poultry, 1951-52.

Class of Poultry.	Number Sold Per Flock.	Price per Head.	Returns per Laying Bird.	% of Total Returns.
Growing Cockerels	83	s. d 5. 0	s. d 1. 3½	1.2
Stock Cockerels	3	35. 1	0. 4	0.3
Pullets 1 - 6 months	334	8. 5	8. 7	7.8
<u>Day-old Chicks:</u>				
Pullets	1250	3. 5	13. 2	11.9
Cockerels	114	0. 5½	0. 2	0.1
Mixed	297	2. 1	1.10	1.7
Table Poultry	325	14. 7½	14. 7	13.2
Old Hens and Culls	182	9. 7	5. 4	4.8
Poultry Consumed in House	22	11. 5	0. 9	0.7
Total	-	-	46. 0½	41.7

The sale of live poultry, i.e. day-old chicks, growing cockerels, pullets, etc. realised just under one-quarter of the total returns. The returns from the sale of day-old chicks alone represented 14 per cent of the total. The majority of the pullets were sold at 2 to 4 months old, and the returns from these amounted to almost 8 per cent of the total.

Table XI.

Hatching Results for Four Farms 1951-52 Season.

<u>Fertility and Hatchability.</u>	<u>%.</u>	<u>Cost of Hatching.</u>	<u>£. s. d</u>
Total Eggs Set	100.0	Eggs - 58,978	1,110. 4. 6
Infertiles Removed	14.8	Labour - 851 hours	105. 9. 2
Fertile Eggs (Fertility)	85.2	Electricity - 3,989 units	18. 5. 8
Dead Germs, Chicks Dead in Shell and Weak Chicks Killed or Dead within 7 days	18.4	Paraffin - 662 gallons	54.12. 0
Vigorous Chicks	66.8	Depreciation on Incubators and Incubator Houses	93. 7. 2
Vigorous Chicks as % of Fertile Eggs	78.4	Total Cost	1,381.18. 6*
		Total Cost per 100 Vigor- ous Chicks	3.10. 2*

* Excluding cost of sexing.

The above table presents the hatching results and the average cost of producing day-old chicks for the four farms which kept complete records for the 1952 season. Eighty-five per cent of the eggs set were fertile. The total losses up to 7 days after hatching were 33.2 per cent of the total eggs set. About 78 per cent of the fertile eggs produced chicks which were strong enough to be reared.

The average total cost of hatching came to £3.10. 2 per 100 vigorous chicks or $8\frac{1}{2}$ d. per vigorous chick. This figure includes the cost of the eggs, which were charged at 4s.6d. per dozen when home-produced. The cost of sexing has not been included. Two farms recorded the cost of sexing and this came to, on average, 6s.3d. per 100 chicks or $\frac{3}{4}$ d. per chick.

APPENDIX A.

COMMERCIAL EGG PRODUCING ENTERPRISES.

Table No.

- I. Profits and Losses of Poultry Enterprises.
- II. Range of Profit and Loss per Bird in the Laying Flock.
- III. Returns per Laying Bird.
- IV. Costs per Laying Bird.
- V. Range of Egg Yields.
- VI. Seasonal Prices of Hen Eggs delivered to Packing Stations January 1951 - October 1952.
- VII. Yearly Average Prices of Eggs.

Chart No.

- 1. Prices of Eggs and Costs of Food.
- 2. Yearly Average Profits per Bird and Number of Eggs Required to Purchase 1 cwt. of Food.

Table I.
Profits and Losses of Poultry Enterprises.

Year.	Total.	Profits.	Losses.	Per-centage Losses.	Over-all Average Profit per Bird in the Laying Flock.
	No.	No.	No.	%.	Pence.
1938-39	63	48	15	23.8	48.7
1939-40	53	44	9	17.0	91.0
1940-41	31	29	2	6.5	135.3
1941-42	24	22	2	8.3	167.2
1942-43	18	16	2	11.1	148.9
1943-44	11	11	-	-	181.7
1944-45	11	11	-	-	172.7
1945-46	10	10	-	-	190.1
1946-47	12	11	1	8.3	205.0
1947-48	14	14	-	-	286.0
1948-49	14	14	-	-	351.0
1949-50	17	16	1	5.9	262.0
1950-51	21	16	5	23.8	130.0
1951-52	17	14	3	17.6	188.0

Table II.
Range of Profit and Loss per Laying Bird.

Range in Shillings.	Number of Cases.													
	1938:-39	1939:-40	1940:-41	1941:-42	1942:-43	1943:-44	1944:-45	1945:-46	1946:-47	1947:-48	1948:-49	1949:-50	1950:-51	1951:-52
<u>Profits:</u>														
20 & over	-	1	3	7	2	2	4	3	7	8	12	12	6	8
16 - 20	-	2	2	4	2	3	-	1	-	1	1	1	3	4
12 - 16	2	6	9	4	5	1	-	3	1	1	-	1	2	-
8 - 12	8	8	5	3	2	4	4	3	-	2	1	-	2	2
4 - 8	19	12	7	1	5	-	2	-	2	1	-	-	1	-
0 - 4	19	15	3	3	-	1	1	-	1	1	-	2	2	-
Total Profits	48	44	29	22	16	11	11	10	11	14	14	16	16	14
<u>Losses:</u>														
0 - 4	12	6	1	1	2	-	-	-	-	-	-	1	1	1
4 - 8	3	1	1	-	-	-	-	-	1	-	-	-	-	1
8 & over	-	2	-	1	-	-	-	-	-	-	-	-	4	1
Total Losses	15	9	2	2	2	-	-	-	1	-	-	1	5	3

Table III.

Returns per Laying Bird.

Year.	Total Returns.	Eggs sold and consumed.	Poultry sold and consumed.	Appreciation on Poultry.	Other Returns.
	s. d	s. d	s. d	s. d	s. d
1938-39	22. 11	17. 3	5. 5	-	0. 3
1939-40	29. 4	22. 7	6. 8	-	0. 1
1940-41	33. 1	26. 11	6. 1	-	0. 1
1941-42	40. 8	32. 2	8. 3	0. 1	0. 2
1942-43	37. 4	31. 11	5. 4	-	0. 1
1943-44	38. 8	31. 5	6. 6	0. 8	0. 1
1944-45	40. 7	31. 4	6. 11	2. 2	0. 2
1945-46	38. 11	29. 8	5. 10	3. 4	0. 1
1946-47	40. 6	30. 6	9. 9	-	0. 3
1947-48	53. 7	39. 7	8. 10	5. 0	0. 2
1948-49	59. 8	46. 5	8. 5	4. 7	0. 3
1949-50	58. 6	49. 11	7. 1	1. 4	0. 2
1950-51	61. 3	48. 7	10. 6	1. 4	0. 10
1951-52	70. 5	57. 9	12. 0	0. 7	0. 1

Table IV.

Costs per Laying Bird.

Year.	Total Costs.	Foods.	Labour.	Hatching Eggs and Stock.	Other Costs.
	s. d	s. d	s. d	s. d	s. d
1938-39	18. 10	11. 9	3. 6	1. 7	2. 0
1939-40	21. 9	13. 0	3. 11	1. 10	3. 0
1940-41	21. 10	14. 1	4. 2	1. 5	2. 2
1941-42	26. 9	16. 0	6. 1	2. 0	2. 8
1942-43	24. 11	14. 11	6. 9	1. 4	1. 11
1943-44	23. 7	12. 7	6. 8	2. 7	1. 9
1944-45	26. 2	15. 4	6. 7	2. 6	1. 9
1945-46	23. 0	14. 0	5. 9	2. 1	1. 2
1946-47	23. 5	11. 1	6. 4	4. 2	1. 10
1947-48	29. 9	15. 9	6. 10	5. 5	1. 9
1948-49	30. 5	17. 1	7. 1	4. 10	1. 5
1949-50	36. 8	20. 9	9. 8	3. 7	2. 8
1950-51	50. 5	29. 5	12. 5	4. 6	4. 1
1951-52	54. 9	35. 3	11. 0	5. 4	3. 2

Table V.

Range of Egg Yields.

No. of Cases of Average Yields within the Stated Ranges.													
Range of Egg Yields.	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51
Under 100	7	8	10	4	3	2	3	2	6	4	2	2	1
100 - 119	8	13	2	8	5	1	1	3	3	4	-	1	4
120 - 139	13	14	9	6	5	3	2	3	1	2	4	4	3
140 - 159	20	8	7	4	3	4	2	2	1	4	4	3	4
160 - 179	11	9	-	2	-	1	2	-	-	-	4	4	5
180 & over	4	1	3	-	2	-	1	-	1	-	-	3	4
Total	63	53	31	24	18	11	11	10	12	14	14	17	21
Aver. Yield per Bird	149	143	121	120	127	125	123	109	101	122	144	143	143

Table VI.

Seasonal Prices of Hen Eggs delivered to Packing
Stations, January 1951 - October 1952.

Period.	Rate of deduction for:		
	Prices of 1st quality eggs.	Dirty Eggs: otherwise: of 1st quality.	2nd quality Eggs.
	(Per dozen)		
1951:	s. d.	s. d.	s. d.
21st December 1950 - 28th February 1951	4. 6	1. 0	1. 0
1st March - 16th May	3. 6	1. 0	1. 0
17th May - 30th May	3. 6	1. 0	1. 6
31st May - 20th June	4. 0	1. 0	1. 6
21st June - 8th August	4. 6	1. 0	1. 6
9th August - 17th October	5. 0	1. 0	1. 6
18th October - 5th December	6. 0	1. 0	1. 6
6th December - 26th December	6. 1	1. 0	1. 6
1952:			
27th December 1951 - 16th January 1952	5. 7	1. 0	1. 6
17th January - 30th January	5. 1	1. 0	1. 6
31st January - 13th February	4. 7	1. 0	1. 6
14th February - 27th February	4. 1	1. 0	1. 6
28th February - 7th May	3. 7	1. 0	1. 6
8th May - 2nd July	4. 0	1. 0	1. 6
3rd July - 3rd September	4. 0	1. 0	1. 6
4th September - 24th September	5. 0	1. 0	1. 6
25th September - 15th October	5. 6	1. 0	1. 6
16th October - 14th January 1953	6. 1	1. 3	1. 9

Table VII.

Yearly Average Prices of Market Eggs.

Range in pence per dozen.	No. of Cases of Average Prices within the Stated Ranges.													
	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
	-39	-40	-41	-42	-43	-44	-45	-46	-47	-48	-49	-50	-51	-52
Under 15	9	1	-	-	-	-	-	-	-	-	-	-	-	-
15 - 17	38	4	-	-	-	-	-	-	-	-	-	-	-	-
18 - 20	10	10	-	-	-	-	-	-	-	-	-	-	-	-
21 - 23	5	20	-	-	-	-	-	-	-	-	-	-	-	-
24 - 26	-	15	1	-	-	-	-	-	-	-	-	-	-	-
27 - 29	-	2	8	-	-	-	-	-	-	-	-	-	-	-
30 - 32	-	-	13	1	-	-	-	-	-	-	-	-	-	-
33 - 35	-	-	7	2	-	-	-	-	-	-	-	-	-	-
36 - 38	-	-	2	11	18	11	11	2	-	-	-	-	-	-
39 - 42	-	-	-	9	-	-	-	8	3	-	-	-	-	-
43 - 46	-	-	-	-	-	-	-	-	9	4	4	-	-	-
47 - 49	-	-	-	-	-	-	-	-	-	10	10	5	10	-
50 - 52	-	-	-	-	-	-	-	-	-	-	-	12	11	2
53 - 55	-	-	-	-	-	-	-	-	-	-	-	-	-	13
56 - 58	-	-	-	-	-	-	-	-	-	-	-	-	-	1
59 - 61	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	62	52	31	24	18	11	11	10	12	14	14	17	21	17
Average Price per dozen	d. 16.7	d. 23.1	d. 32.3	d. 38.3	d. 37.0	d. 37.0	d. 37.0	d. 39.7	d. 43.0	d. 46.5	d. 47.3	d. 50.5	d. 49.3	d. 54.0

Chart 1.

Prices of Eggs and Costs of Foods (Commercial Flocks).

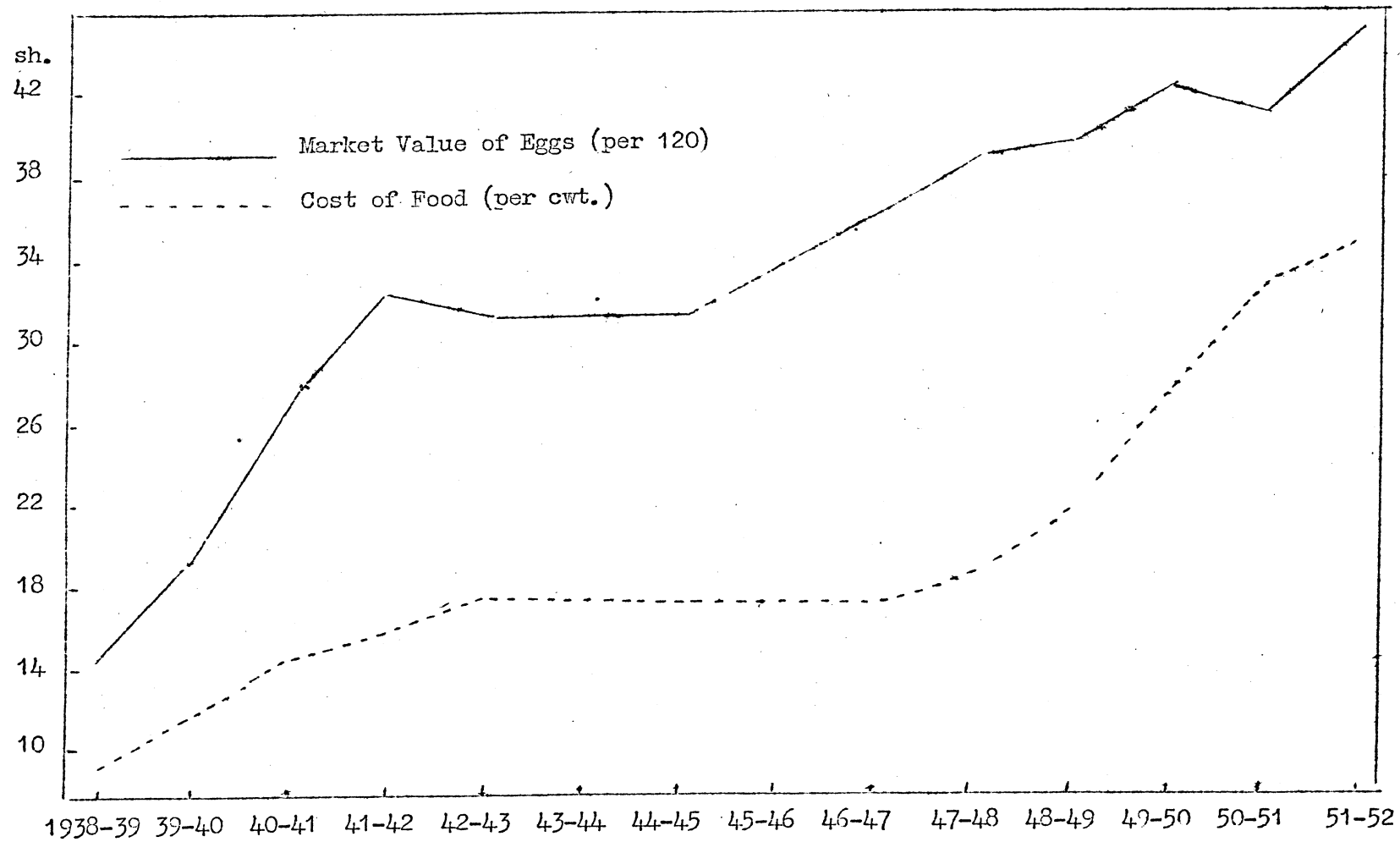


Chart 2.

Yearly Average Profits per Laying Bird and No. of Eggs Required
to Purchase 1 cwt. of Food. (Commercial Flocks).

