Agricultural Economics Department

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ECONOMICS OF REARING PULLETS TO POINT OF LAY

by

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The photographs on the cover are by courtesy of Poultry World.

SUMMARY

1. The report covers information on the costs and physical requirements obtained from 53 pullet rearing flocks in the North West for the year ending September 30th, 1960.

2. The average cost of rearing was 15s.5d per pullet reared.

3. There was a very wide range in the individual results.

4. The cost of feed and the mortality rate were the chief factors which determined the cost of rearing.

5. Hybrid pullets averaged 14s.5d and "X"s 16s.0d per pullet reared.

6. The intensive system of rearing was associated with a low mortality rate and economy in the use of feedingstuffs.

7. Considerable economy in the use of capital was achieved by the "batch" system of rearing.

8. Economies of scale were achieved by rearing larger pullet flocks.

9. Home rearing is generally preferable to purchasing at point of lay.

10. Results of surveys made each year between 1953/54 and 1959/60 indicate that pullets cost less to rear in recent years than in earlier years. It is likely that this is due to greater efficiency in rearing management, better stock and better housing.

The Economics of Rearing Pullets to Point of Lay

The rapid expansion of broiler production in recent years has caused a fall in the demand for poultry meat in the form of hens culled from laying flocks. This has resulted in a reduction in the price obtained for culled hens. In this situation, unless the cost of rearing replacements can be reduced, then the cost of livestock depreciation for laying flocks will increase in the future.

Economy in the rearing enterprise, therefore, is of great importance to the profitability of the poultry enterprise as a whole. It is for this reason, as well as to determine the more important economic efficiency factors of pullet rearing that this report has been written. The report is largely based upon the results of a survey made into the cost of rearing pullets to point of lay during the year ending September 30th 1960.

The Sample

The information for this study was collected from 53 farms in Lancashire, Cheshire, Shropshire and Staffordshire. The length of the rearing season varied from farm to farm depending upon the breed of the day old chicks which were purchased. Point of lay for this study was taken to be the point at which the rearing flock was transferred into the laying flock quarters.

The majority of the pullets were hatched in batches in order to make the maximum use of the rearing equipment. The majority of the flocks were reared from spring hatched chicks, but 43% of the flocks were reared from chicks hatched between October and early spring. It is interesting to note that the owners of battery flocks seemed to prefer to rear during the autumn and early spring, whereas the owners of free range flocks reared from March/April hatched stock.

Altogether 52,695 chicks were purchased. The number varied from 100 to 6,600 per rearing flock, so the sample can be considered to be fairly large.

The average gross cost of rearing a pullet to point of lay is set out in Table I. The average cost of rearing for the years 1953/54, 1954/55 and 1955/56 is also given in order to show changes which have taken place in the standard of management of pullet flocks during the past few years.

The figures in the table are simple averages of the average gross cost per pullet reared for each flock, so that each flock bears the same weight irrespective of the size of the flock.

Table I

Average Cost of Rearing a Pullet to Point of Lay

	1959/60			Average 1953/54, 1954/55, 1955/56		
	£	s.	d	£	s.	d
Purchased Feedingstuffs		8	6		9	3
Home Grown Feedingstuffs			3			8
		8	9		9	11
D.O.C.		3	10		4	0
Hired Labour			3			5
Family Labour		1	7		1	2
Fuel			2			3
Deadstock Depreciation			6			4
Miscellaneous			4			3
Gross Costs		15	5		16	4
Number of Flocks	53			127		
Total Number Chicks Purchased	52,695			67,055		
Average F/S Intake per Pullet	30 lbs.			32 lbs.		
Average Mortality Rate	13.3%			13.7%		
Average Number Hours per Pullet	0.53			0.65		
Average Cost F/S per cwt.	£1	13	1	£1	14	10

Although there has been an improvement in the average standard of management over the years, there is still a wide range in the individual standards of performance, which is so common a feature of most sections of the poultry industry.

The range in the results is set out in Table II. Clearly, with such a wide range in the results there is room for improvement on those farms which showed a high cost. The rest of this report therefore will be concerned with the causes of high cost production, the standards attained by well managed flocks, and measures of efficiency.

Table II

Range in Gross Cost per Pullet Reared

Range in Shillings	1959/60	%	1953/54, 54/55, 55/56	%
10 - 11	2	4	0	0
11 - 12	1	2	3	2
12 - 13	0	0	7	6
13 - 14	8	15	10	8
14 - 15	15	28	21	17
15 - 16	8	15	22	17
16 - 17	9	17	17	13
17 - 18	3	6	16	13
18 - 19	3	6	13	10
19 - 20	4	7	8	6
20 +	-	0	10	8
Total Flocks	53	100	127	100

FACTORS AFFECTING THE COST OF REARING

1. FEEDINGSTUFFS

The cost of feedingstuffs is the chief factor which affects the cost of rearing, since it accounts for roughly 60% of the gross cost of rearing.

The relationship between the cost of feed per pullet and the gross cost of rearing is readily seen in Table III, which illustrates the point that the gross cost increases as the feed cost increases. This is partly related to the increased feed intake of the high cost pullets, and partly to the increase in the cost of feedingstuffs per cwt. as the gross cost per pullet reared increases.

Table III

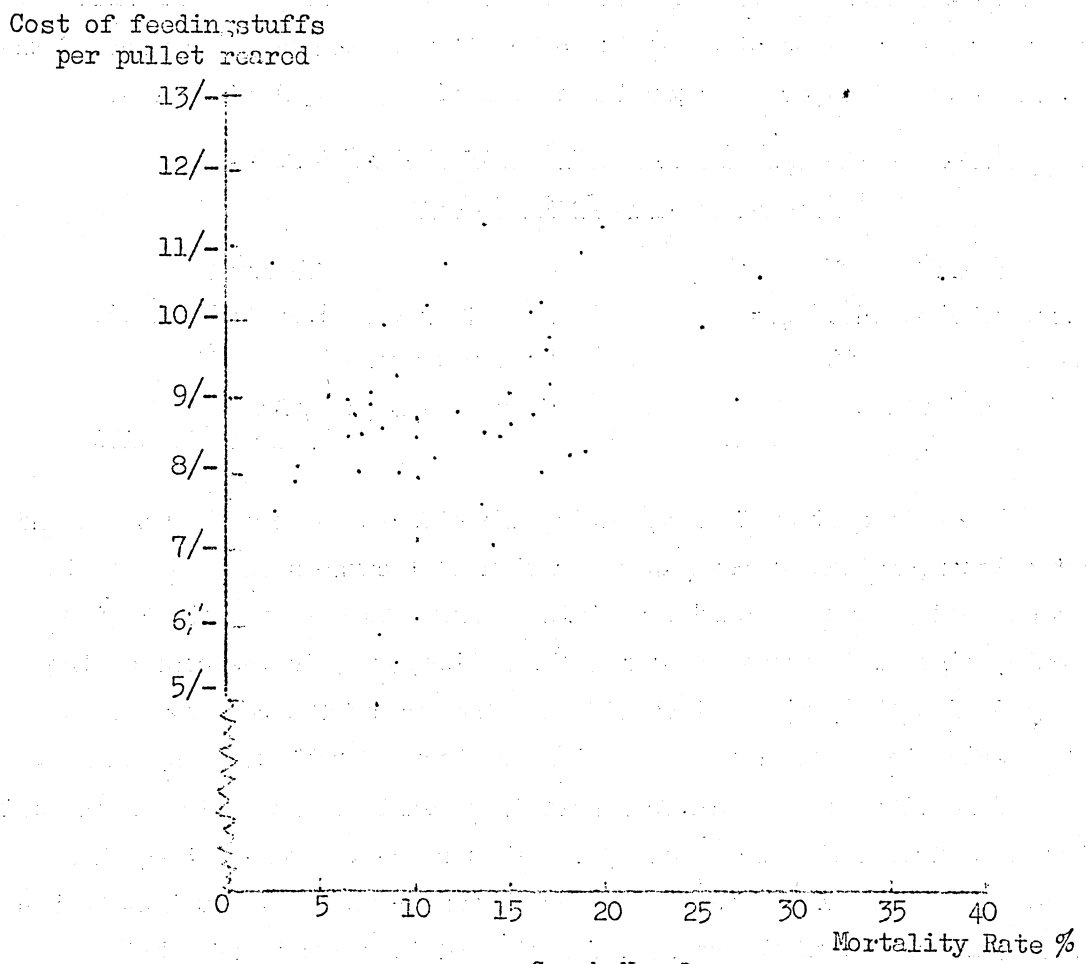
The Relationship between the Cost of Feedingstuffs and the Gross Cost per Pullet Reared

Range in Cost of F/S per Pullet Reared	No. of Flocks	Feed Intake per pullet lbs.	Average Cost F/S per cwt. £ s. d	Gross Cost £ s. d
Under 7/0	(6)	21.5	1. 11. 3	12. 7
7/1 - 8/0	(8)	27.0	1. 12. 2	14. 4
8/1 - 9/0	(20)	29.2	1. 13. 0	15. 3
9/1 - 10/0	(8)	31.6	1. 13. 8	16. 1
10/1 - 11/0	(8)	34.4	1. 14. 1	17. 3
11/1 - 12/0	(2)	35.5	1. 15. 2	18. 7
12/1 - 13/0	(1)	38.0	1. 17. 7	19. 7

There are several factors which may cause a high cost of feed per pullet.

The mortality rate is one of the chief factors, and this is illustrated by Graph No. 1. The tendency for the feed cost to rise as the mortality rate increases is evident, for very few of the high mortality flocks

Mortality Rate and Cost of Feedingstuffs per Pullet Reared



Graph No. 1

averaged a low feed cost, but it is also evident that the mortality rate is not the only cause of a high feed cost, since quite a number of farms showed a high feed cost despite a low mortality rate. The reason may be partly related to the particular stage at which deaths occur in flocks, since a high mortality rate in near point of lay pullets will result in a high feed cost per pullet reared, whereas a high mortality rate during the first week or two of rearing will have little effect on the feed cost of the surviving pullets to point of lay. If it had been possible to adjust for the time factor then the graph would have shown more clearly the effect of mortality upon the cost of feed.

However, the following partial budget which compares the results of two flocks, both purchasing 100 day old chicks, but one showing a 20% mortality rate at four weeks, and the other at 20 weeks, illustrates the influence of the stage at which mortality occurs upon the cost of feed per pullet reared.

Estimate of the Effect of 20% Mortality Rate at 4 weeks and 20 weeks upon Cost of Feed

4 weeks		20 weeks	
F/S 20 cwt. 30 lbs.	£36.10s.0d.	F/S 24 cwt. 12 lbs.	£43.13s.4d.
Number Reared	80	Number Reared	80
Cost of F/S per pullet reared	9s.1d.	Cost of F/S per pullet reared	10s.11d.

The unit cost of feedingstuffs also affects the cost per bird, and clearly the incorporation of corn in the ration will cause a reduction in the unit cost of feed. But it would be a false economy to overload the ration with cereals, since this might unbalance the ration, and, in the case of the lighter breed of pullet, it might cause a lengthening of the rearing period beyond that which is normal for the particular flock of pullets being reared.

Home mixed feedingstuffs result in a considerable saving in the unit cost of feed, and upon the gross cost per pullet reared. Home mixing is a skilled job and should not be tackled unless a farmer is confident that he has the necessary knowledge of the correct formula and ingredients of a balanced ration which is required for pullets in the various stages of growth.

Table IV

Flocks Fed Home Mixed Feedingstuffs

No. of Flocks	5
Average F/S Cost per Pullet	6s. 4d
Average Gross Cost " "	12s. 9d
Average F/S Intake	23 lbs.
Average Cost F/S per cwt.	£1.10s. 7d.
Average No. Chicks Purchased	2240
Average Mortality Rate	16.3%
Hybrid Flocks	3
"X"s "	2
Intensively Reared Flocks	2

Five of the farmers in the survey home mixed the feedingstuffs for their pullet flocks, and Table IV shows that they achieved a useful saving in the unit cost of feed. (But it is noteworthy that they all purchased chick meal and pellets to cover the first few weeks of the rearing period in order to be certain that the correct ration was fed to the pullets during the early stage of growth). The feed intake per pullet for these flocks was much lower than the average for all the flocks in the survey. This may not have been due entirely to the fact that the feed was home mixed, but that three of the flocks contained hybrid pullets which consume less feed than heavier breeds, and that two of the flocks were intensively housed. The mortality rate for the flocks was rather higher than average but this was mainly due to the very high rate of 34% for one of the flocks.

The method of rearing the pullet flock also affects the cost of feed per bird, and the importance of correct housing cannot be overemphasised. The intensive method of rearing has much to recommend it apart from the fact that the birds are housed in a relatively warm environment which encourages growth, because at the same time less food is required to maintain the body temperature of the birds. They are also protected from sudden changes in temperature, which should result in a lowering of the mortality rate. At the same time they are not subject to three or four moves in housing which normally takes place with the extensive method of rearing, and which often results in chills etc. and an increased mortality rate. Intensively housed stock is also protected from marauding foxes and rats, and from dogs where farms are situated close to towns. Less feed is likely to be wasted with the intensive system, since it is much easier to detect waste of feed in an intensive house than feeding a flock on free range.

Table V

	Intensive System	Extensive System
Number of Flocks	3	50
Average Cost F/S per pullet	5s.4d.	8s.11d.
" Gross Cost " "	10s.9d.	15s.9d.
Feed Intake per pullet	19.3 lbs.	30.1 lbs.
Mortality Rate	8.4%	13.5%
Hybrid Flocks	3	17
"X"s "	0	33

However, on the other hand, it can be said that the extensive rearing method produces healthy stock since they have to face several changes in climate and environment, and the surviving pullets may therefore be healthier and fitter to face an intensive laying period. Certainly some of the extensively reared pullet flocks were reared very efficiently, but it is clear from the wide range in the mortality rates from 2.3% to 38.3% that this system of rearing requires a high standard of stockmanship. At the same time the wide range in the feed intake from 21 lbs. to 38 lbs. indicates that a great deal of the food must have been wasted and not consumed by some of the flocks.

There were only three flocks in the survey which were reared by the intensive method of rearing, therefore their results can only be regarded as a tentative indication of the economies of this method of rearing. The results in Table V indicate that the feed intake was very low and the mortality rate was much lower than was achieved by the extensive system of rearing.

2. HYBRIDS AND "X"s

Differences in the standard of performance of flocks and in the cost of rearing also occur because of differences between breeds and strains of bird. The earlier maturing strains reach point of lay 5 - 6 weeks earlier than other strains, and hybrids and lighter pullets require less food in order to reach point of lay.

Table VI indicates the results for the flocks in the survey according to whether they were "hybrid" stock, or the more conventional crossbreds.

The hybrid pullets consumed less feed on average than the conventional crossbreds, and this more than compensated for the higher cost of hybrid day old chicks. But both hybrids and crossbreds exhibited a wide range in the individual results, which indicates the need for a high standard of management regardless of the breed of bird.

Table VI

Average Cost per Pullet Reared

	"Hybrids"	"X"s
	s. d	s. d
F/S Cost	7. 9	9. 4
D.O.C.	4. 3	3. 8
Labour	1. 7	2. 0
Fuel, Miscellaneous and Deadstock Depreciation	10	1. 0
Gross Cost	14. 5	16. 0
Range in Gross Costs	10s.2d - 19s.6d	13s.1d - 20s.0d
Average Feed Intake	27 lbs.	31 lbs.
Range in F/S Intake	18 lbs - 35 lbs	27 lbs - 38 lbs
Average Mortality Rate	13.3%	13.3%
Range in Mortality Rate	2.7% - 34%	2.3% - 38.3%
Number of Flocks	20	33

3. THE MORTALITY RATE

It is clear that there is a close relationship between the cost of feed per pullet reared and the mortality rate of the flock. It follows, therefore, that in general high mortality rates are associated with high gross costs of rearing. The stage at which the pullets die largely determines the effect of the mortality rate upon the feed cost per pullet reared, but the effect of a high mortality rate upon the fixed costs of production will be the same regardless of when the majority of the deaths take place. The higher the mortality rate therefore the greater the effect upon the fixed costs of production, and this point is illustrated by the results shown in Table VII.

Table VII

Effect of Mortality Rate upon Fixed Costs of Production

Mortality Rate	Fixed* Costs per Pullet Reared	
	Hybrids	"X"s
0 - 10%	4s.10d	4s.2d
10% - 20%	5s.0d.	4s.3d
20% - 30%	5s.3d	4s.9d
30% - 40%	5s.11d	5s.4d

*Fixed Costs = D.O.C., Miscellaneous, and Deadstock Depreciation Costs.

The effect of a high mortality rate in the pullet rearing flock does not finish with the flock at point of lay, because a further loss will be incurred by the laying flock, since a farmer will not be able to utilise all his laying equipment and houses, which will have been purchased with a particular size of laying flock in mind. Nor, in the case of a specialist poultry keeper will there be any alternative use for his labour. The extra cost of the point of lay pullets, plus the reduced size of the laying flock will not only cause a reduction in the profit margin per bird, but it might in fact cause a total loss to the farmer from his poultry enterprise.

4. "BATCH" SYSTEM AND SAVINGS IN CAPITAL REQUIRED FOR HOUSING AND EQUIPPING REARING FLOCKS.

Considerable savings are achieved in the amount of capital required to house and equip a rearing flock if the replacement flock is reared in more than one batch per annum.*

The more traditional type of farmer tends to rear one batch of pullets per annum from spring hatched chicks. This places a heavy burden on the amount of capital invested in rearing houses and equipment, because it is

*I. W. Rhys. Planned Production, Poultry Farmer & Packer, February 1962.

only used once during the year and consequently it lies idle for the rest of the year.

Table VIII illustrates the saving which was achieved by the flocks in the survey which were reared in more than one batch per annum. The results for the flocks in the survey do not perhaps indicate the saving in capital invested as markedly as they might have done, because the rearing equipment and houses varied a good deal in age from farm to farm, which in consequence caused the valuation of the deadstock to vary from farm to farm. Therefore the current cost of purchasing new equipment has been entered in Table VIII in order to indicate the actual saving in the amount of capital which would be required if completely new equipment and houses had to be purchased.

Table VIII

	One Batch	Two Batches	Three + Batches
Average Gross Cost per pullet reared	16s.4d	15s.1d	14s.10d
Capital Invested " " "	6s.9d	6s.7d	5s.1d
Capital per pullet which would be required at current cost	18s.0d	9s.0d	6s.0d

5. SCALE OF PRODUCTION

The size of the individual flocks reared varied from 100 to 6,600. Clearly there are many economies associated with large scale production which are largely derived from higher discounts given by firms to farmers who purchase their goods in bulk.

Table IX shows that on the whole, the larger flocks tended to average a lower gross cost per pullet reared than the smaller flocks. The difference in the cost of rearing would have been much higher than is indicated in the table if all farmers had fed the same type of feedingstuffs. As the figures stand it appears that it is likely that the farmers who reared the smaller flocks must have incorporated a high proportion of grain in the ration in order to reduce the unit cost of the feed fed to their flocks. If all the farmers in the survey had

purchased the same type of food, the saving to the large scale rearers of more than 5,000 birds would probably have amounted to about five shillings per cwt.

Table IX

Distribution of Costs and Performance of Flocks According to Scale of Operation

Size of Flock	0 - 250	250-500	500-1000	1000-2000	2000 +
	£ s. d	£ s. d	£ s. d	£ s. d	£ s. d
F/S Cost per Pullet Reared	9. 2	9. 1	9. 3	8. 8	6. 1
Hired Labour " "	2	-	4	4	10
Family Labour " "	2. 5	2. 4	1. 5	1. 0	1
Gross Cost per " "	16. 8	16. 3	15. 6	14. 9	12. 6
Capital Invested per chick Purchased	6. 1	6. 0	4. 4	5. 4	4. 9
No.hours per Pullet Reared	0.74	0.69	0.49	0.35	0.18
Mortality Rate	12.3%	12.0%	15.6%	12.2%	13.8%
F/S per cwt.	£1.13. 1	£1.13. 5	£1.13. 6	£1.13. 1	£1.11. 7
Feed intake per Pullet Reared (lbs)	31	30	31	29	22
Number of Flocks	13	10	14	10	6

The amount of labour required to rear a flock decreases very markedly per pullet reared as the size of flock increases. The system of rearing will of course tend to affect the amount of labour required. One of the many advantages of the intensive system of rearing is that it requires very much less labour per pullet reared than the extensive system.

The long term rearing method naturally requires more labour per bird than the short term method. But the wide range in the individual labour utilisation results, even when the two systems of rearing are taken into consideration, indicates either that the quality of labour employed in rearing varies greatly from farm to farm, or that there is a need for a re-examination of the siting of the rearing houses which may be labour extravagant at the

present time. There are many repetitive tasks in pullet rearing which offer the opportunity for work study which will reduce the amount of labour required to look after the rearing flock.

There was a particularly wide variation in the amount of labour used by the smaller flocks in the survey. Unless a small flock is reared intensively a low labour cost may indicate that the work has been skimped. The quality of the labour may be poor, or disinterested hired labour may be employed, or the pullets may be reared on mixed farms, where the work of rearing often conflicts with the other work on the farm, particularly during the peak labour periods such as sowing, haytime and harvest when the pullets tend to receive scant attention. This type of labour will tend to cause, through lack of attention, a high mortality rate and wasteful feeding, and it will result in a high gross cost per pullet reared despite the low labour cost.

On the other hand, where a farmer's wife is responsible for the whole poultry enterprise, and receives the returns from the sale of eggs as "pin money", she will spend more time than is theoretically required to rear the pullets to point of lay, but she will consider it worth her while to do so, since she will be rewarded by the extra egg returns of the pullets which have been well reared.

On the whole the time spent looking after pullets should not be reduced to the point where efficiency of management is adversely affected. Close attention to the flock by interested labour will be rewarded by a low mortality rate, and consequently a low gross cost of rearing.

6. THE COST OF DAY OLD CHICKS

High standards in pullet rearing and the eventual laying capacity of the bird, can only be achieved by the purchase of chicks from breeders with a consistent reputation for healthy and high yielding stock.

Clearly it would be very unwise for farmers to be tempted to purchase "cheap" day old chicks from unreliable sources. The extra cost of as

much as a shilling per day old pullet purchased from a reliable breeder is a good investment since it is soon covered by the extra egg returns of high egg laying stock. Poor quality chicks do not only increase the cost of rearing, but they also disrupt the whole production programme of the farm and lead to poor economy in the laying flock.

The best source of information on the performance of laying stock is obtained from laying trials. But care should be taken in assessing the relative merits of the strains under trial. The best strain will be the one which has shown a high standard of performance over a number of different trials, and over a number of years.

Home Rearing Versus the Purchase of Point of Lay Pullets

Since the rearing of pullet stock is a highly skilled task, many poultry keepers may, at one time or another, have considered the advisability of purchasing all their replacements at point of lay. There is the advantage of specialisation in one task, namely egg production, and the possibility of keeping a larger flock because the capital which would otherwise be required by the rearing flock can be invested in extra laying equipment. Similarly the pullet rearing labour can be diverted to looking after a larger laying flock.

The strength of the argument rests partly upon costs, but partly also upon the availability of a reliable source of mature pullets. Unless the pullets can be obtained from a reliable source, there can be little doubt that it is better to rely upon home rearing of chicks. From the point of view of costs the advantages also lie with home rearing. During 1959/60 the average profit per bird for laying flocks surveyed by this department was 6s.9d for the battery flocks and 5s.5d for the deep litter flocks. (Home reared pullets were charged to the laying flocks at 16s.0d per head.) Clearly on average it would hardly be worthwhile purchasing pullets if the difference between the cost of home rearing and the purchase price was more than 5s.0d.

Some large scale egg producers, (generally members of groups) specialise in egg production and purchase replacement pullets from fellow members of the group who specialise in pullet rearing. If the price of these purchased pullets is only a shilling or two higher than the cost of home rearing, then clearly it would be more profitable to invest all the available capital for the poultry enterprise into laying equipment only.

The capital saved through not investing in pullet rearing equipment and which could be invested in extra laying houses and equipment, would mean that the laying flock could be increased in size by 30%.*

In general, the difference between the purchase price and the cost of home rearing pullets on a small scale does not warrant the purchase of point of lay pullets. Most small scale producers realise this, and in fact rear their own replacements. Those who purchase replacement pullets usually make a low margin of profit or more often - a loss. These farmers should consider the advisability of rearing their own replacements.

Characteristics of Low Cost Flocks

The results of eleven flocks with costs of less than 14s.0d per pullet reared are shown in Table X, in order to indicate the characteristics of efficiently managed flocks.

These flocks show the importance of a low mortality rate and a low feed cost, and the effect of large scale production as a means of reducing the gross cost of pullet rearing.

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* Assuming that two batches of pullets could have been reared per annum. If the capital required for one batch of pullets was invested in laying equipment, this would probably lead to a 50% increase in the size of the laying flock.

Table X

Low Cost Flocks

Average Cost of Rearing per Pullet Reared
(11 Flocks)

	£ s. d
Feedingstuffs	7. 3
D.O.C.	3. 9
Labour	1. 0
Fuel	1
Deadstock Depreciation	7
Miscellaneous	2
Gross Cost	12. 10
Feed Intake	25 lbs.
Mortality Rate	9.3%
Hours per pullet	0.28
Average Size of Flock	1984 (Chicks Purchased)
F/S Cost per cwt.	£1. 12. 3
Number Hybrid Flocks	7
" "X" "	4
Number of Intensively Reared Flocks	3
" " Extensively " "	8
" " "One Batch" Flocks	3
" " More than one batch Flocks	8

Table XI is included to show the results of earlier pullet rearing surveys made by this department which may be of historical interest. These results indicate that the average cost of rearing has tended to fall since 1955/56, but that the individual results for each year show a very wide range both in the gross cost of rearing and in the physical standards of performance of the rearing flocks.

Table XI

Average Cost of Rearing a Pullet to Point of Lay-per Pullet Reared

Costs	1953/54 £ s. d	1954/55 £ s. d	1955/56 £ s. d	1956/57 £ s. d	1957/58 £ s. d	1958/59 £ s. d
Purchased F/S	8 1	9 7	10 0	9 11	8 10	8 11
Home Grown F/S	1 1	6	6	6	4	3
Total F/S	9 2	10 1	10 6	10 5	9 2	9 2
Chicks	3 9	4 1	4 0	4 4	4 3	3 11
Labour (Hired)	5	5	6	5	4	5
Labour (Family)	1 2	1 1	1 3	1 5	1 8	1 8
Fuel	3	2	2	2	2	2
Deadstock Depreciation	4	4	5	4	4	5
Miscellaneous	2	4	4	2	3	3
Gross Cost	15 3	16 6	17 2	17 3	16 2	16 0
Number of Flocks	40	44	43	25	38	46
Total No. Chicks Purchased	20,705	22,527	23,823	13,172	25,938	32,375

Management Factors

Range in Gross Costs p.p.r.	11/0 - 19/3	11/8 - 20/6	12/9 - 23/6	12/6 - 23/7	13/2 - 24/5	12/6 - 25/9
Average F/S Intake p.p.r.	31 lbs.	32 lbs.	33 lbs.	34 lbs.	32 lbs.	31 lbs.
Range in F/S Intake	19 - 43	24 - 42	18 - 49	24 - 45	23 - 45	19 - 47
Average Cost F/S per cwt.	33/4	35/3	35/10	34/10	32/2	32/8
Average Mortality Rate	12.2%	15.0%	13.8%	13.4%	15.7%	14.3%
Range in Mortality Rate	2 - 34%	3 - 43%	0 - 35%	4 - 33%	2 - 53%	3 - 37%
Average No. Hours p.p.r.	0.66 hrs.	0.61 hrs.	0.66 hrs.	0.59 hrs.	0.64 hrs.	0.60 hrs.
Range in Hours p.p.r.	0.18 - 1.9	0.13 - 1.24	0.12 - 1.9	0.22 - 1.4	0.27 - 1.6	0.2 - 1.6

DEFINITION OF TERMS AND STANDARD CHARGES USED IN COMPILATION OF COSTS FOR 1959/60

1. Feed Purchased feed was charged at the actual price paid by farmers. Home grown feed was charged at the estimated market value.

2. Labour Hired and family labour was charged at the hourly statutory rate, with an allowance for overtime earnings, holidays with pay, employer's share of National Insurance. (Male workers 3s.11d per hour. Female workers 3s.0d.).

3. Deadstock Depreciation Houses depreciated at 5%. Equipment at 10%.