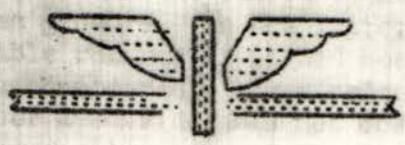
SECOND ANNUAL

TURKEY COST STUDY

SAN DIEGO COUNTY

1939



Compiled by

The Agricultural Extension Service
University of California
and U.S.D.A.

Cooperating with
The Poultry Department
San Diego County Farm Bureau

INTRODUCTION

This is the second annual report of the San Diego County turkey egg enterprise study. This study was undertaken by a group of local turkey egg producers in co-operation with the Agricultural Extension Service for the purpose of learning more about this rather unusual enterprise. Although the cost information obtained may be quite useful in working out a marketing program, it is not presumed that costs shown by these records should be made the basis for pricing hatching eggs but rather that the information developed may help local growers to obtain a profit at whatever price they are able to receive for their eggs.

There are three steps in turkey production: (1) securing the eggs, (2) hatching them, and (3) raising the poults. To a considerable extent each of these phases or steps is being undertaken by some producers who specialize more in that one line. The local climate allows early hatching of poults and early egg production and enables local turkey growers to produce more eggs than they need for their own meat production. Since few other turkey districts obtain such early egg production, there is a rather good market for the early eggs from this district, and their production and handling has become quite a business. It is hoped that this study may assist in the development of this industry by improving the quality and timeliness of the eggs and their efficiency and economy of production and marketing.

This report covers the production of hatching eggs only and hence is for only part of the year. Cooperators have, therefore, reported only the costs which are incurred in the production of eggs. Where land and equipment also serves for meat turkey production, costs have been allocated to both uses as carefully as can be done. The date each record was started and the date it was closed are shown in Table 2. Interest and depreciation on buildings and equipment, however, for purposes of simplicity have been figured for half a year in all cases. Breeding stock in all cases was either purchased at about the time the record opened or was selected from stock previously raised by these same growers. In the latter case it was given a value slightly higher than the probable returns if it had been sold for meat. The ultimate sale of this breeding stock at considerably lower prices at the close of the laying season in May resulted in rather a considerable net cost of stock, as shown in Table 3.

Inspection of the individual flock records shows wide ranges in profits obtained and in methods followed. Table 1 shows the main factors which determine profit. These factors are the egg production per hen, the per cent of total eggs salable as hatching eggs, the price received for hatching eggs, and the net cost per hen of the hatching eggs sold. The first three determine the income per hen from hatching eggs sold, while income less costs determines net income or profit. To understand the various profit or earning figures which are shown in Table 1, it will be necessary to read the definitions or explanations on the next page (page 2). Table 1 shows egg production per hen to have had a greater influence on profits than any other factor so Table 2 shows some of the important factors influencing egg production. Costs are next in importance in determining profits and are shown in detail in Tables 3,4, and 5.

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EXPLANATION OF TERMS

Average number of hens.—The turkey egg producer starts the breeding period with a certain number of hens but some die and others are sold before the close of the period so the number of hens is best expressed as an average for the period. The average number is obtained by dividing the total hen days by the number of days in the breeding period. In this study the average number was about 10 per cent less than the starting number. All production, cost, and income figures are shown for the average hen.

Eggs laid per hen is the total eggs laid during the period divided by the average number of hens. Not all of these eggs meet hatching requirements, however, so the hatching eggs sold per hen is the significant production figure in terms of the main product. Eggs used for home hatching are considered as hatching eggs sold. On the average, about 88.6 per cent of the eggs laid were used or sold for hatching. The cull eggs are considered a by-product in this study and an income other than from hatching eggs.

Income not hatching eggs is income from cull eggs sold or eaten in the home and from sacks and fertilizer. This income is deducted from total costs to get the net cost of the hatching eggs.

Hatching egg income is the amount received from hatching eggs sold and used for hatching. The per-hen figure is the product of the eggs sold per hen and the average price per hatching egg sold.

Net stock cost is the amount by which the value of all breeding turkeys at the start of the period exceeds the value of such turkeys when sold or on hand at the close of the period. Death losses, the seasonal decline in the value of turkeys, and the decline in their condition or quality combine to account for this item of cost.

Total expense of production is composed of all cash expenses and the value of farm-provided items including the value of the operator's own labor, depreciation on the facilities used, and interest on the investment. The net cost is this total with income not hatching eggs deducted.

Management income is the amount by which the total income from hatching eggs exceeds their net cost.

Labor income is the amount by which income exceeds all net costs except the value of the operator's labor, or it is management income plus the value of that labor. It is the amount received for management and labor.

Farm income is the labor income plus interest on investment. It is the operator's total net earning from his enterprise and is composed of interest for the use of his capital, wages for the labor performed, and profit for his management.

Capital and management income is the management income plus the interest on investment. Where all labor is hired it is the operator's net income composed of the return to invested capital and a reward for good management.

Net Profit is the net income as computed by the producer himself and because of differences in method may not conform to any one of the four standard earning figures above.

TABLE I. GENERAL SUMMARY OF INDIVIDUAL TURKEY HATCHING EGG RECORDS. San Diego County Study - 1939

Ser. No.	Av. No. Hens	Eggs Laid per hen	% Sold for Hatch-ing	Hatch-ing eggs sold per hen	Av. Price per H.egg	Hatch-ing egg income per hen	Net Cost Per Hen	Manage-ment Income per hen	Value of Op.'s labor	Labor In-come per hen	Int. on Invest-ment	Farm Income per hen	Capital & Mgt. Income per hen	Invest-ment per hen
13	441	66.4	92.8	61.6	15.7¢	$9.67	4.79	4.88	.62	5.50	.12	5.62	5.00	4.81
4	144	80.8	81.7	66.0	13.8	9.12	4.48	4.64	.17	4.81	.10	4.91	4.74	3.85
6	521	72.7	99.6	64.6	13.6	8.79	4.40	4.39	hired	4.39	.11	4.50	4.50	4.50
18	288	75.1	97.9	73.5	13.5	9.93	5.58	4.35	1.34	5.69	.12	5.81	4.47	4.97
10	193	59.6	93.1	55.5	14.9	8.28	4.21	4.07	.33	4.40	.12	4.52	4.19	4.85
3	145	52.4	93.9	49.1	14.0	6.85	3.47	3.38	.60	3.98	.16	4.14	3.54	6.34
16	264	56.8	83.8	47.6	14.3	6.82	3.45	3.37	.22	3.59	.11	3.70	3.48	4.28
2	260	67.6	88.8	60.0	13.5	8.15	4.90	3.25	.78	4.03	.17	4.20	3.42	6.82
5	750	44.7	85.7	38.3	14.6	5.59	3.83	1.76	.12	1.88	.10	1.98	1.86	4.18
8	1137	50.6	91.3	46.2	13.5	6.23	4.52	1.71	.37	2.08	.13	2.21	1.84	5.22
24	386	67.0	73.1	49.0	13.3	6.55	5.05	1.50	.84	2.34	.11	2.45	1.61	4.32
9	173	44.5	94.4	42.0	12.0	5.05	3.61	1.44	.69	2.13	.09	2.22	1.53	3.80
7	171	56.6	84.8	48.0	13.4	6.44	5.60	.84	1.48	2.32	.14	2.46	.98	5.51
11	464	39.2	91.8	36.0	14.0	5.06	4.27	.79	.02	.81	.15	.96	.94	6.08
Hi 8	2256	67.4	90.5	61.0	14.2	8.66	4.50	4.16	.49	4.65	.12	4.77	4.28	4.97
Low6	3081	49.5	86.9	43.0	13.7	5.88	4.39	1.49	.40	1.89	.12	2.01	1.61	4.92
Av.	5337	57.1	88.6	50.6	13.9	7.06	4.44	2.62	.43	3.05	.12	3.17	2.74	4.94

The above table shows the main profit determining factors for the 14 individual records, with records listed in order of management income per hen. Management income varied from a low of 79¢ a hen in the last record above to a high of $4.88 in the most profitable flock at the top of the table. The latter, No. 13, sold 61.6 hatching eggs per hen as compared to 36.0 in No. 11 so obtained almost twice as much hatching egg income per hen. No. 13 also received the highest price per egg sold. Egg prices vary somewhat with different buyers and because of differences in the seasonal distribution of production.

In order to illustrate differences in production and other profit determining factors the 14 records have been divided into two groups, averages for which appear at the bottom of the table along with the average of all records. The first 8 records make up the more profitable group shown above as the "Hi 8" and the last 6 records make up the "Low 6". The more profitable group sold more hatching eggs per hen at a higher price so made $4.16 per hen as compared to $1.49 in the other group.

TABLE II. PRODUCTION FACTORS AND PRODUCTION PER HEN. San Diego County Study – 1939

Ser. No.	Record Dates		No. days Record	Months most hens hatched	Date Pro-duction 10%	Total eggs laid hen	% pro-duction entire period	Percent Production				Lights used	Feeding			Loca-tion
	Began	Closed						Jan.	Feb.	Mar.	Apr.		Mash Grain Pel.	Milk	Fresh Green	
13	12/1	4/30	151	2	12/7	66.4	44.0	36.9	51.1	63.2	63.8	Yes	M.G.	No	Yes	M
4	9/23	5/23	243	1	11/22	80.8	33.1	46.0	49.4	43.3	55.9	Yes	M.P.G	Yes	Yes	M
6	12/1	5/30	181	5&6	1/8	72.7	40.2	16.1	49.6	65.0	61.5	Yes	Pel.	No	Yes	H
18	11/1	5/13	194	2	11/1	75.1	38.6	38.1	41.7	52.2	54.4	Yes	M.P.G	Yes	Yes	M
10	10/20	5/6	198	3&5	1/7	59.6	30.2	15.8	31.2	56.8	68.7	No	Pel.	No	Yes	M
3	11/15	4/4	140	4	12/13	52.4	37.4	52.0	55.1	48.0	51.6	Yes	Pel.	No	Yes	M
16	11/1	5/17	198	5&6	1/12	56.8	28.7	11.4	29.0	47.5	50.1	No	P.G.	No	Yes	H
2	12/1	5/21	172	5&6	1/12	67.6	39.3	29.5	55.6	50.6	55.0	Yes	M.G.	No	Yes	L
5	10/1	5/7	209	3&4	1/10	44.7	21.4	13.9	30.9	49.9	54.3	Yes	M.	No	Yes	M
8	11/25	5/29	184	5	1/15	50.6	27.4	15.1	35.8	44.2	37.6	Yes	M.G.	Yes	Yes	M
24	9/1	5/17	258	2	9/23	67.0	25.9	18.6	32.0	53.3	50.6	Yes	M.G.	Yes	Yes	M
9	12/1	5/23	174	5	3/15	44.5	25.6	0.5	29.6	71.8	64.3	No	M.G.	Yes	No	M
7	11/1	5/16	197	4	1/24	56.6	28.8	6.2	28.5	54.6	66.2	No	M.G.	Yes	Yes	H
11	12/4	5/4	151	5	1/8	39.2	26.0	11.5	22.5	52.0	39.8	Yes	M.G.	No	Yes	M
Hi 8			181			67.4	37.3	28.0	47.3	56.0	58.7					
Low6			195			49.5	25.4	13.4	29.7	47.6	46.9					
Av.			189			57.1	30.3	19.6	37.3	51.2	51.8					

The period covered, production obtained, and some of the factors influencing production are presented above for individual records with records and group averages in the same order as in Table 1. The average length of all records was 189 days or 6.2 months, although this varied from 140 to 258 days. The months in which most of the breeding hens were hatched in some cases seems to have had some effect on earliness of production. Most of the early hatched flocks reached 10% production before January, although some of the late hatched flocks also show early production, particularly where lights were used. No. 9 was late hatched, did not use lights, and came into production very late. In most cases lights may also be seen to have boosted production. The more profitable group of the first 8 records above averaged fewer days in the period but obtained much heavier egg production per hen. For the whole period and for the four months shown above that group had a much higher percent production. Many factors are doubtless responsible, breeding of birds, time of hatching, use of lights, feeding milk and wet mashes and location as to climate.

LOCATION: H – High and relatively free from cold.
M – Medium, but a location not usually severely frosted in winter.
L – Low. Birds subjected to frost and cold nights. Low spots where cold air settles.

TABLE III. STOCK COSTS IN TURKEY EGG PRODUCTION. San Diego County Study - 1939

Ser. No.	No. of hens At Start	No. of hens Average	Hens per Tom	Percent mortality & lost Hens	Percent mortality & lost Toms	Average Value toms Start	Average Value toms Sold	Average Value Hens Start	Average Value Hens Sold	Stock costs per hen Value at start	Stock costs per hen Stock Bought	Stock sold per hen	Net Stock cost per hen
13	461	441	8.3	2.5	3.7	4.18	4.01	2.64	1.67	3.24	——	2.18	1.06
4	150	144	10.0	3.5	6.7	4.85	3.39	2.45	1.55	3.05	——	1.89	1.16
6	526	521	10.5	.4	4.0	4.37	2.95	2.83	1.49	3.28	——	1.76	1.52
18	300	288	10.3	.3	3.5	5.00	3.43	3.00	1.81	3.39	.32	2.31	1.40
10	196	193	8.0	.5	.0	4.20	4.52	2.31	1.75	2.88	——	2.35	.53
3	150	145	10.0	1.5	.0	4.17	4.51	2.85	2.55	3.38	.45	3.53	.30
16	309	264	9.4	5.7	12.1	3.60	2.93	2.64	1.58	1.30	1.89	2.08	1.11
2	265	260	8.8	6.2	30.0	4.94	3.47	3.12	1.82	3.76	——	2.02	1.74
5	762	750	7.7	5.7	18.2	4.40	3.47	2.50	1.85	2.94	.19	2.15	.98
8	1538	1137	11.2	7.0	27.4	4.60	3.24	3.00	2.05	4.52	——	2.88	1.64
24	400	386	9.1	1.0	4.5	5.50	2.97	4.48	1.68	3.25	——	2.05	1.20
9	179	173	8.5	4.6	9.5	3.60	3.40	2.42	1.91	2.94	——	2.26	.68
7	171	171	7.0	1.2	.0	4.80	3.40	2.90	1.76	3.63	——	2.24	1.39
11	475	464	9.5	3.7	10.0	4.64	3.86	2.98	1.87	3.55	——	2.22	1.33
Hi 8	2357	2256	8.9	2.3	7.2	4.33	3.64	3.01	1.71	3.06	.29	2.15	1.20
Low6	3525	3081	10.6	5.0	16.2	4.60	3.38	2.65	1.92	3.70	.04	2.43	1.31
Av.	5882	5337	9.7	3.9	12.2	4.49	3.50	2.78	1.83	3.43	.15	2.31	1.27

The loss in value of breeding stock both through death and through decline in market or salvage value during the breeding period makes up the net stock cost which is shown above in the last column. After feed this is the next largest cost item. It varied from a low of $.30 in flock 3 to a high of $1.74 in flock 2. Valuation placed on stock at the start, mortality or death losses, and selling prices of the stock at the close of the period determine this figure. Mortality in hens varied from .3% or only 1 out of 300 to a high of 7.0% or seven out of 100. Mortality in toms varied from none up to 27.4%, over one fourth of the birds. Prices received per tom varied from $2.93 up to $4.52 while costs or opening values were from $3.60 to $5.50. Hens were valued at from $2.31 to $4.48 at the start and brought $1.49 each up to $2.55. The more profitable group had a lower net stock cost by 11¢ per hen because of lower average starting values and lower mortality despite lower selling prices of hens and lower total stock sales.

Hens and Toms were valued by the owners at the current market value plus some slight value in recognition of the birds being selected birds. Weight, time of entering the breeding pen and the owners judgement were all factors of hen and tom values in the opening inventory.

TABLE IV. FEED QUANTITIES AND COSTS PER BREEDING HEN, AND LABOR PER HEN. San Diego County Study - 1939

Ser. No.	Lbs. Mash & Pellets	Lbs. Grain	Total lbs. Conc. Feed	% Feed Mash & Pel.	Cost Mash & Pel. cwt.	Cost Grain per cwt.	Av. Feed Cost cwt.	Feed Costs per Av. Hen				Hrs. Labor per hen	Average value per hour
								Mash & Pels.	Grain	Other Feeds	Total		
13	54.0	42.8	96.8	55.8	$ 1.99	$ 1.27	$1.67	$ 1.07	.55	.44	2.06	3.7	.33
4	111.3	13.2	124.5	89.4	2.05	1.31	1.97	2.28	.17	.29	2.74	1.8	.30
6	89.2	.0	89.2	100.0	2.35	——	2.35	2.10	——	.11	2.21	1.4	.25
18	61.9	60.0	121.9	50.8	1.71	1.37	1.54	1.06	.82	.47	2.35	3.3	.47
10	116.8	.0	116.8	100.0	2.32	——	2.32	2.71	——	.15	2.86	1.1	.30
3	74.5	11.3	85.8	86.8	2.35	1.60	2.25	1.75	.18	.12	2.05	2.0	.30
16	35.4	50.1	85.5	41.5	2.21	1.54	1.82	.78	.77	.07	1.62	1.1	.30
2	43.1	48.8	91.9	46.9	2.11	1.49	1.78	.91	.73	.07	1.71	2.5	.35
5	94.9	.0	94.9	100.0	2.32	——	2.32	2.20	——	.08	2.28	.9	.30
8	60.7	32.2	92.9	65.4	2.40	1.30	2.02	1.45	.42	.18	2.05	1.2	.30
24	74.5	43.3	117.8	63.2	1.93	1.29	1.69	1.44	.56	.55	2.55	3.2	.30
9	51.2	36.0	87.2	59.7	2.30	1.50	1.97	1.18	.54	.11	1.83	2.3	.30
7	74.3	43.0	117.3	63.3	1.93	1.31	1.70	1.43	.56	.24	2.23	4.2	.35
11	68.7	17.6	86.3	79.7	2.50	1.75	2.35	1.72	.31	.08	2.11	1.1	.36
Hi 8	70.1	29.1	99.2	70.7	2.16	1.40	1.94	1.52	.40	.23	2.15	2.6	.30
Low6	72.2	24.3	96.5	74.8	2.30	1.36	2.06	1.66	.33	.18	2.17	1.6	.31
Av.	71.3	26.3	97.6	73.0	2.24	1.38	2.01	1.60	.36	.20	2.16	2.0	.31

Feed cost makes up about half of the total production cost and hence being highly important is presented above in considerable detail. Total feed cost per hen is shown to vary from a low of $1.62 to a high of $2.86 per hen, a range of more than one dollar. No. 10 had the highest feed cost, using all pellets which cost $2.32 per hundredweight. Where part of the feed is fed as grain the average feed cost per 100 pounds of concentrate feed is bound to be lower. In comparing quantities and feed costs between flocks it is necessary to allow for differences in the period covered which is shown in days in Table 2. No. 16 had the lowest feed cost and fed more grain than mash but did not obtain as high egg production or make as much profit as some of the other flocks. Nos. 13, 18, and 2, had excellent production at reasonable feed cost by the use of mash and grain in about 50-50 proportion, which is the most economical proportion. The more profitable group although feeding more total feed used a slightly higher proportion of grain than did the other group and with lower cost per cwt. of mash and pellets has a lower feed cost per hundredweight and per hen.

TABLE V. COSTS PER BREEDING HEN AND PER HATCHING EGG SOLD. San Diego County Study - 1939

Ser. No.	Costs per average hen for period										H. eggs Sold per hen	Net Cost per H. egg	Av. Price per H. egg	Mgt. Income per H. egg
	Total Feed	Hired Labor	Operators Labor	Miscellaneous	Depreciation	Int. on Invest.	Net Stock Cost	Total Cost	Income not H. egg	Net Cost H. eggs				
13	2.06	.67	.62	.22	.17	.12	1.06	4.92	.13	4.79	61.6	7.8¢	15.7	7.9
4	2.74	.36	.17	.24	.11	.10	1.16	4.88	.40	4.48	66.0	6.8	13.8	7.0
6	2.21	.35	—	.30	.07	.11	1.52	4.56	.16	4.40	72.4	6.8	13.6	6.8
18	2.35	.20	1.34	.16	.05	.12	1.40	5.62	.04	5.58	73.5	7.5	13.5	6.0
10	2.86	—	.33	.37	.09	.12	.53	4.30	.09	4.21	55.5	7.6	14.9	7.3
3	2.05	.01	.60	.28	.13	.16	.30	3.53	.06	3.47	52.0	7.1	14.0	6.9
16	1.62	.11	.22	.21	.08	.11	1.11	3.46	.01	3.45	47.6	7.2	14.3	7.1
2	1.71	.11	.78	.32	.18	.17	1.74	5.01	.11	4.90	60.0	8.1	13.5	5.4
5	2.28	.14	.12	.26	.08	.10	.98	3.96	.13	3.83	38.3	10.1	14.6	4.5
8	2.05	—	.37	.36	.10	.13	1.64	4.65	.13	4.52	46.2	9.8	13.5	3.7
24	2.55	.10	.84	.44	.06	.11	1.20	5.30	.25	5.05	49.0	10.2	13.3	3.1
9	1.83	—	.69	.27	.09	.09	.68	3.65	.04	3.61	42.0	8.6	12.0	3.4
7	2.23	—	1.48	.31	.15	.14	1.39	5.70	.10	5.60	48.0	11.7	13.4	1.7
11	2.11	.36	.02	.26	.08	.15	1.33	4.31	.04	4.27	36.0	11.8	14.0	2.2
Hi 8	2.15	.29	.49	.26	.11	.12	1.20	4.62	.12	4.50	61.0	7.4	14.2	6.8
Low6	2.17	.10	.40	.32	.09	.12	1.31	4.51	.12	4.39	43.0	10.2	13.7	3.5
Av.	2.16	.18	.43	.30	.10	.12	1.27	4.56	.12	4.44	50.6	8.8	13.9	5.1

Although costs per hen are not as important as income in determining profit there is some opportunity to improve profits by reducing costs. Total cost above may be seen to vary from $3.46 to $5.70 a range of more than $2.00. It would seem that costs no higher than somewhere between 4 and 5 dollars should be necessary and in some cases with short periods total cost could be as low as $3.00. Income not from hatching eggs is composed of cull eggs, manure, and sacks. It is deducted from total cost to get the net cost of the hatching eggs sold per hen. This latter figure when divided by the hatching eggs sold per hen gives the net cost per hatching egg sold. This varied from a low of 6.8¢ to a high of 11.8¢ with an average of 8.8¢. It is interesting to note that although the more profitable group had slightly higher total cost per hen because of the heavier production of hatching eggs the cost per egg was only 7.4 cents as compared to 10.2¢ in the other group.

TABLE VI. COMPARISON OF RIVERSIDE STUDY RECORD AVERAGES WITH THOSE FROM A SIMILAR STUDY IN SAN DIEGO COUNTY OVER THE SAME PERIODS, SPRING OF 1938 AND 1939.

	Riverside		San Diego	
	1938	1939	1938	1939
Number of records in study	17	13	11	14
Average number of breeding hens per flock	263	354	325	382
Average length of period covered, months	5.1	5.2	5.6	6.2
Average number of eggs laid per hen	59.8	63.2	48.5	57.1
Hatching eggs sold per hen	56.6	56.2	44.6	50.6
Per cent of all eggs—hatching eggs	94.6	88.9	92.0	88.6
Average price per hatching egg sold	13.2	14.2	13.9	13.9
Net cost of production per hatching egg	6.3	7.0	10.6	8.8
Management income per egg	6.9	7.2	3.3	5.1
Pounds of grain, mash, & pellets per hen	77.1	86.7	102.6	97.6
Per cent of feed, mash, and pellets	64.8	67.6	71.9	73.0
Average price per cwt. of feed	$ 2.03	$ 1.76	$ 2.18	$ 2.01
Cost of mash and pellets per hen	1.15	1.17	1.77	1.60
Cost of grain per hen	.42	.56	.46	.36
Other feed cost, shell, greens, etc.	.17	.15	.32	.20
Total feed cost per hen	$ 1.74	$ 1.68	$ 2.55	$ 2.16
Cost of hired labor	.15	.09	.09	.18
Value of operator's and family labor	.45	.39	.57	.43
Miscellaneous costs per hen	.23	.28	.32	.30
Depreciation on buildings and equipment	.08	.11	.12	.10
Interest on investment	.13	.13	.16	.12
Net stock cost	.89	1.38	1.03	1.27
Total expense per hen	$ 3.67	$ 4.06	$ 4.84	$ 4.56
Less miscellaneous income - manure, sacks, and cull eggs	.08	.12	.08	.12
Net cost of hatching eggs sold per hen	$ 3.59	$ 3.94	$ 4.76	$ 4.44
Hatching egg income per hen	7.49	7.97	6.22	7.06
Management income per hen	3.90	4.03	1.46	2.62
Labor income per hen	4.35	4.42	2.03	3.05
Farm income per hen	4.48	4.55	2.19	3.17
Capital and Management income per hen	4.03	4.16	1.62	2.74
Average investment per hen	5.21	5.17	6.27	4.94

The above table shows the results obtained by cooperators in their turkey egg studies in Riverside and San Diego counties the last two years. Since the flocks in the study are only small samples in each area, one should not conclude that the differences shown above represent actual differences in efficiency between the districts. Another year of records may narrow or even reverse the difference.

Both years the Riverside group had slightly higher profits because of more eggs sold per hen and lower costs. The biggest difference in cost was in feed, the Riverside records showing slightly less feed and lower prices per hundredweight. They had a particular cost advantage in using a higher proportion of lower cost grain. The record period was a month shorter in Riverside in 1939 than in San Diego.