

POULTRY EGG COST STUDY

1953 REPORT - SAN DIEGO COUNTY

Agricultural Extension Service
University of California

Prepared in Cooperation with the
San Diego County Poultry Industry

Poultry Egg Cost Study, 1953 Report, San Diego County

Compiled by Robert H. Adolph, Farm Advisor and A. D. Reed, Farm Management Specialist

The 1953 Poultry Egg Cost Study is comprised of records from 35 poultrymen in San Diego County. The Study is conducted by the University of California Agricultural Extension Service in cooperation with the poultry industry of San Diego County.

Particular reference has been made to comparative results with one bird to a cage, two birds to a cage, and wire floor pen housing.

Records reported are not presented as representative of the industry in the county. The purpose of the Study is to provide opportunity for participating poultrymen to obtain a detailed analysis of their poultry operation and to improve efficiency by comparing results with others in the Study.

Poultrymen interested in participating in the Study may contact the Farm Advisor.

PRODUCTION AND MANAGEMENT PRACTICES

1. Flock size average 3801 layers--range of 680 to 13,150.
2. One and one-tenth hours labor per hen. Bulk delivery and labor saving equipment for feeding and handling of eggs made this possible.

3. Pullet performance--105% replacement--76% culled--year around purchase of sexed baby pullets for replacement.
4. 228 eggs per hen--chicks purchased from stock bred to lay and year around replacement and culling.
5. 15% mortality average for layers, 7% chick mortality.
6. 6.5 pounds feed per dozen eggs produced. All mash rations used. All except two growers had white leg-horns for laying flock.
7. Quality egg production--pullet flocks ---- eggs gathered frequently, cooled rapidly, and handled carefully.
8. Live virus vaccination programs used, proper de-beaking, and other disease control practices used to minimize mortality and losses in egg production.
9. Care and management varied according to type of housing and equipment.
10. Records of production and cost accounts maintained by cooperating poultrymen.

TABLE I. INCOME AND COSTS - WIRE FLOOR PENS

TOTAL INCOME LESS CASH AND DEPRECIATION COSTS IS FARM INCOME - TOTAL INCOME LESS ALL COSTS IS MANAGEMENT INCOME
 CASH COSTS PER DOZEN INCLUDES ONLY FEED, CHICKS AND MISCELLANEOUS AND HIRED LABOR COSTS

Rank No. & Flock Size	Income			Cash and Depreciation Costs					Farm Income	Non-Cash Costs		Total all Costs	Management Income	Cash Costs Per Doz.
	Egg	Other (Poultry)	Total	Feed	Chix & Misc.	Hired Labor	Deprec.	Total		Family Labor	Int. on Invest.			
	Dollars per Hen			Dollars per Hen						Dollars per Hen				Dollars
1-E	10.08	.67	10.75	4.20	.85	.37	.15	5.57	5.18	.44	.14	6.15	4.60	.28
2-C	9.97	.95	10.92	4.46	.57	.39	.26	5.68	5.24	.75	.20	6.63	4.29	.28
4-C	10.30	1.00	11.30	4.69	.80	.27	.34	6.10	5.20	1.34	.21	7.65	3.65	.29
11-E	8.85	.71	9.56	4.24	.89	.88	.25	6.26	3.30	.11	.17	6.54	3.02	.35
15-A	9.36	.89	10.25	4.27	.65	-	.68	5.60	4.65	1.50	.30	7.40	2.85	.26
17-B	10.17	1.21	11.40	5.05	.94	.20	.33	6.52	4.88	1.77	.27	8.56	2.84	.32
19-D	9.97	.50	10.47	4.51	1.05	.52	.57	6.65	3.82	.71	.27	7.76	2.84	.31
20-B	9.76	1.03	10.79	5.38	.96	-	.24	6.58	4.21	1.40	.17	8.15	2.64	.34
21-B	9.07	1.63	10.70	5.43	1.07	.31	.30	7.11	3.59	.82	.19	8.12	2.58	.39
22-A	9.27	1.28	10.55	5.53	.88	.41	.29	7.11	3.44	.72	.17	8.00	2.55	.37
23-C	9.07	.67	9.74	4.50	.83	.55	.22	6.10	3.64	.93	.17	7.20	2.54	.33
24-E	9.29	.76	10.05	4.65	.94	.54	.45	6.58	3.47	.74	.21	7.53	2.52	.33
26-E	8.55	.34	8.89	4.16	.77	.89	.25	6.07	2.82	.52	.16	6.75	2.14	.35
32-A	8.83	.71	9.54	4.57	.62	.41	.30	5.90	2.64	2.22	.20	8.32	1.22	.35
35-B	10.05	1.38	11.43	6.74	1.07	.33	.66	8.80	2.63	2.07	.29	11.16	.27	.42
Av. Wire 4079	9.42	.81	10.23	4.60	.87	.52	.32	6.31	3.92	.79	.19	7.29	2.94	.33
Av. 35 Rec.	9.64	.96	10.60	4.96	.91	.46	.37	6.70	3.90	.85	.21	7.76	2.84	.34

Costs and Income are based on totals for year divided by average number birds, over 5½ months old on a hen day basis.
 Cash costs per dozen based on total cash costs divided by dozens laid.

Rank identifies cooperators record arranged according to management income--Size of flock: A--under 2000; B--2000-3000; C--3000-4000; D--4000-5000; E--over 5000 layers.

Labor: Hired labor at cost. Family labor at \$1.50 per hour. Interest: Based on average investment at 5%.

Income: Egg Income--Total receipts divided by average number layers.

Income: Other Income (Poultry)--Includes Total poultry and manure sales and stock inventory credit or debit divided by average number layers.

TABLE II. INCOME AND COSTS: CAGES--ONE AND TWO LAYERS TO A CAGE

TOTAL INCOME LESS CASH AND DEPRECIATION COSTS IS FARM INCOME--TOTAL INCOME LESS ALL COSTS IS MANAGEMENT INCOME
CASH COST PER DOZEN INCLUDES ONLY FEED, CHICKS AND MISCELLANEOUS AND HIRED LABOR COSTS

Rank No. & Flock Size	Income			Cash and Depreciation Costs					Farm Income	Non-cash costs		Total all Costs	Management Income	Cash Costs PerDoz.
	Egg	Other (Poultry)	Total	Feed	Chix & Misc.	Hired Labor	Deprec.	Total		Family Labor	Int. on Invest.			
	Dollars per Hen			Dollars per Hen						Dollars per Hen				
				ONE BIRD TO A CAGE										
2-C	10.49	.87	11.36	5.34	.65	.59	.47	7.05	4.09	.39	.22	7.66	3.70	.33
7-D	10.48	1.11	11.59	5.76	.78	.04	.54	7.12	4.47	1.03	.28	8.43	3.16	.32
8-C	10.15	.79	10.94	5.50	.71	.29	.40	6.90	4.04	.65	.23	7.78	3.16	.34
13-B	11.18	1.12	12.30	5.69	1.15	.41	.78	8.03	4.27	.96	.30	9.29	3.01	.33
16-C	9.26	1.07	10.33	4.72	.95	.73	.48	6.88	3.45	.35	.25	7.48	2.85	.34
27-E	9.63	1.25	10.88	5.52	.98	.94	.49	7.93	2.95	.67	.24	8.84	2.04	.42
Av. Cage 1 3758	10.14	1.06	11.20	5.46	.87	.51	.52	7.36	3.84	.69	.25	8.30	2.90	.35
				TWO BIRDS TO A CAGE										
5-E	9.99	.93	10.92	5.36	.74	.51	.26	6.87	4.05	.31	.17	7.35	3.57	.34
6-D	9.89	.76	10.65	4.70	.86	.41	.31	6.28	4.37	.69	.18	7.15	3.50	.31
9-D	9.50	.98	10.48	4.58	.92	.60	.27	6.37	4.10	.85	.17	7.39	3.09	.33
10-A	10.17	.90	11.07	5.48	.64	-	.41	6.53	4.54	1.27	.20	8.00	3.07	.30
12-C	9.43	1.73	11.16	4.87	1.22	.25	.32	6.66	4.50	1.28	.21	8.15	3.01	.35
14-E	9.26	.77	10.03	4.65	.89	.57	.31	6.42	3.61	.54	.16	7.12	2.91	.33
18-E	9.64	1.69	11.33	5.30	1.31	.40	.43	7.44	3.89	.94	.23	8.61	2.72	.37
25-D	9.32	.88	10.20	5.22	.77	.07	.47	6.53	3.67	.96	.24	7.73	2.47	.32
28-A	12.09	1.16	13.25	6.97	.60	-	.63	8.20	5.05	2.94	.29	11.43	1.82	.31
29-B	10.13	1.00	11.13	5.71	1.01	.36	.49	7.57	3.56	1.68	.25	9.50	1.63	.35
30-A	10.03	2.00	12.03	6.73	1.56	.48	.40	9.17	2.86	.97	.26	10.40	1.63	.46
31-A	9.47	.88	10.35	4.90	1.02	-	.35	6.27	4.08	2.56	.19	9.02	1.33	.33
33-A	9.71	1.09	10.80	6.39	.85	.03	.52	7.79	3.01	1.98	.25	10.02	.78	.39
34-B	9.66	.84	10.50	5.66	1.07	.02	.45	7.20	3.30	2.29	.24	9.73	.77	.37
Av. Cage 2 2808	9.68	1.08	10.76	5.18	.97	.37	.36	6.88	3.88	.99	.20	8.07	2.69	.34
Av. 35 Rec.	9.64	.96	10.60	4.96	.91	.46	.37	6.70	3.90	.85	.21	7.76	2.84	.34

Individual Cages mostly 8"xl8" Two birds to a cage 12"xl8"

Explanation of Terms Used see Table I

TABLE III. INPUTS AND OUTPUTS - WIRE FLOOR PENS

Rank No. & Flock Size	EGGS				CHICKENS						FEED			LABOR	Original Cost Bldg. and Equip. per Hen Dollars
	% Prod.	Per Hen	Doz. Sold per Hen	% Large Sold	Price Rec'd Per Doz. Cents	Price Rec'd Per Cull Dollars	% of Laying Flock			% Chix Mort.	Lbs. per Hen		Cost per Cwt. Dollars	Hours per Bird	
							Died	Culled	Re-placed		Lay-ers Only	Laying and Growing			
1-E	64	234	19.4	59	51.9	.72	11	99	100	2	81	106	3.98	.7	1.65
2-C	62	226	19.0	58	53.0	.83	11	90	111	3	88	116	3.84	.9	2.66
4-C	65	238	19.7	57	52.4	.93	13	68	124	7	85	116	4.03	1.2	3.45
11-E	58	212	17.3	57	51.4	.85	13	69	88	5	87	109	3.88	.9	2.53
15-A	61	221	18.8	46	51.1	.57	9	55	105	5	79	105	4.07	1.0	6.76
17-B	65	238	19.6	47	52.0	.68	24	62	125	22	97	123	3.93	1.4	3.32
19-D	66	239	19.5	53	51.4	.88	23	61	99	5	91	116	3.90	1.0	5.51
20-B	62	226	18.9	53	51.9	.76	23	89	109	5	105	132	4.08	.9	2.26
21-B	61	222	17.4	59	52.0	.79	24	59	88	6	121	143	3.81	1.2	3.04
22-A	61	22.3	18.4	62	50.9	.75	31	63	123	6	105	136	4.06	1.0	2.69
23-C	60	218	17.9	50	50.8	.80	13	68	109	2	84	111	4.05	1.2	2.55
24-E	62	226	18.5	58	50.4	.64	16	79	116	5	83	112	4.14	1.1	4.53
26-E	55	202	16.7	57	50.9	.64	20	40	110	12	81	104	3.98	1.2	2.49
32-A	55	199	16.1	49	49.2	.64	13	66	98	4	86	110	4.10	1.9	2.96
35-B	64	232	19.5	66	51.5	.59	22	69	143	9	121	165	4.07	1.7	6.64
Av. Wire 4079	61	222	18.3	56	51.5	.76	16	71	106	7	90	116	3.97	1.0	3.20
Av. 35 Rec.	62.5	228	18.7	60	51.5	.75	15	76	107	7	95	122	4.06	1.1	3.75

Wire Floor Pens mostly 4' x 12' and 6' x 16' pens. Housed at slightly less than one bird to square foot.

Eggs per Hen: Total eggs laid divided by average number layers. % died, culled, and replaced based on year totals divided by average number layers.

Feed: Net cost after sacks and potential refunds considered. Includes all feed for layers and growing of replacement pullets. Layers only based on total feed for layers and growing less estimated amount used for growing replacement pullets.

Labor: Includes hired and family labor. Price per cull: Includes refund where applicable. Original Cost Buildings and Equipment is determined by total costs divided by average number of layers. Total cost of buildings and equipment includes a consideration for labor costs of construction.

TABLE IV INPUTS AND OUTPUTS: CAGES - ONE AND TWO LAYERS TO CAGE

Rank No. & Flock Size	EGGS					CHICKENS					FEED			LABOR	Original Cost Bldg. & Equip. per Hen Dollars
	% Prod.	Per Hen	Doz. Sold per Hen	% Large Sold	Price Rec'd Per Doz Cents	Price Rec'd Per Cull Dollars	% Laying Flock			% Chix Mort.	Lbs. per Hen		Cost per Cwt. Dollars	Hours per Bird	
							Died	Culled	Re-placed		Lay-ers Only	Layer and Growing			
<u>One Bird to a Cage</u>															
2-C	66	240	19.8	79	52.7	.77	9	94	109	4	104	131	4.07	1.0	4.64
7-D	67	243	20.3	65	51.7	.69	9	59	127	6	108	140	4.13	.8	5.41
8-C	61	223	19.3	81	52.6	.74	11	93	91	6	113	136	4.03	1.0	3.96
13-B	72	262	21.6	60	52.4	.77	8	65	131	14	106	139	4.09	1.3	7.82
16-C	64	232	18.6	60	50.2	.70	6	65	89	15	92	114	4.27	1.0	6.28
27-E	62	225	17.5	65	51.6	.83	10	85	91	3	110	133	4.15	1.4	4.88
Av. Cage 1 3758	65	237	19.3	68	51.9	.76	9	77	105	7	107	133	4.11	1.1	5.38
<u>Two Birds to a Cage</u>															
5-E	65	237	19.3	66	51.9	.67	30	71	119	1	102	132	4.07	.7	2.56
6-D	66	241	19.5	59	50.8	.63	10	87	112	12	89	117	4.02	.9	3.09
9-D	64	234	18.6	64	51.0	.79	12	83	97	2	86	110	4.15	1.2	3.03
10-A	68	247	20.1	--	50.0	.73	22	126	139	4	104	139	3.95	.8	4.12
12-C	61	223	18.3	71	51.7	.71	12	55	85	11	97	118	4.14	1.1	3.31
14-E	62	228	18.7	47	50.6	.67	16	43	68	14	94	111	4.21	1.0	3.10
18-E	63	229	19.0	62	51.1	.76	18	93	145	10	83	129	4.09	1.1	4.30
25-D	61	224	18.7	61	50.5	.57	16	99	134	3	94	128	4.09	.7	4.66
28-A	75	275	24.0	--	50.3	.75	5	103	98	15	102	127	5.43	2.0	6.31
29-B	67	244	20.2	--	50.5	.83	23	86	115	6	108	137	4.18	1.5	4.93
30-A	62	223	19.1	75	52.5	1.15	7	115	145	4	128	164	4.08	1.6	4.07
31-A	60	218	18.1	--	52.5	.86	21	80	71	32	97	115	4.10	1.7	3.30
33-A	62	228	18.7	72	51.0	1.25	15	81	132	35	132	152	4.19	1.4	5.23
34-B	59	216	18.0	67	53.6	.73	12	125	153	10	96	134	4.23	1.5	4.47
Av. Cage 2 2808	63	231	19.0	61	51.2	.74	17	82	111	8	97	125	4.13	1.1	3.65
Av. 35 Rec.	62.5	228	18.7	60	51.5	.75	15	76	107	7	95	122	4.06	1.1	3.75

Explanation of terms see Table III

TABLE V. SUMMARY - 1953 STUDY

Housing	No. Rec	Orig. Cost Bldg. & Equip. Dollars	Ave. Flock Size	% Hens Died	% Hens Cull	Eggs		Feed Lbs. Doz.	Feed Cost Cwt. Dol.	Hours Labor per Hen	Tot. In- come Dol.	Cash and Depre Costs Dol.	Farm In- come Dol.	Family Labor Dol.	Int. on Inv. Dol.	Management Income Dollars
						Per Hen	Price Dozen									
							Cents									
"1" Cage	6	5.38	3758	9	77	237	51.9	6.9	4.11	1.1	11.20	7.36	3.84	.69	.25	2.90
"2" Cage	14	3.65	2809	17	82	231	51.2	6.6	4.13	1.1	10.76	6.88	3.88	.99	.20	2.69
Wire Pens	15	3.20	4079	16	71	222	51.5	6.3	3.97	1.0	10.23	6.31	3.92	.79	.19	2.94
Ave.	35	3.75	3801	15	76	228	51.5	6.5	4.06	1.1	10.60	6.70	3.90	.85	.21	2.84

Conclusions:

1. No great difference is shown between the average net earnings in favor of any one type of housing.
2. Factors of care and management other than type of housing are shown to be of as much, or more, importance. Average cost of production and net earnings per bird varies in a wider range than the group averages for the three types of housing.
3. Advantages of slightly lower mortality and higher egg production per hen are shown for the one-bird-to-a-cage group, which served to offset the higher cost per bird for housing and related equipment.
4. Mortality attributable to cannibalism appears to be highest in the two-birds-per cage group; however, not significantly different from that of the wire floor pen group. It was noted that the operators who followed a good debeaking program reduced the mortality due to "pick outs" and other forms of cannibalism.

TABLE VI. SUMMARY - FIVE YEARS 1949-1953

Year	No. Rec-ords	Orig. Cost Bldg. & Equip. Dol.	Ave. Flock Size	% Hens Died	% Hens Cull	Eggs		Feed Lbs. Dozen	Feed Cost Cwt. Dol.	Hours Labor per Hen	Tot. In- come Dol.	Cash and Depre Costs Dol.	Farm In- come Dol.	Family Labor Dol.	Int. on Inv. Dol.	Manage ment Income Dollar
						Per Hen	Price Dozen									
							Cents									
1953	35	3.75	3801	15	76	228	51.5	6.5	4.06	1.1	10.60	6.70	3.90	.85	.21	2.84
1952	30	4.00	3034	14	82	231	46.0	6.6	4.53	1.2	9.69	7.42	2.27	1.04	.24	.99
1951	27	4.40	2517	13	74	222	55.2	7.0	4.06	1.3	11.18	6.89	4.29	1.34	.25	2.70
1950	23	4.02	2183	15	64	217	43.6	7.2	3.65	1.4	8.66	6.08	2.58	.94	.23	1.41
1949	21	4.11	2070	15	77	213	52.0	8.0	3.79	1.6	10.76	7.68	3.08	1.08	.24	1.76
Ave. 1949-53	27	4.06	2721	14	75	222	49.7	7.1	4.01	1.3	10.18	6.95	3.22	1.05	.23	1.94

A summary of the averages for the five years of San Diego County Poultry Management Studies show increased efficiency of egg production:

1. Culling rate has increased.
2. Number of eggs per layer has increased.
3. Fewer pounds of feed required per dozen eggs produced.
4. Fewer hours of labor required per layer.