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Enterprise efficiency studies

Cooperative Agric. Extension Service
 University of California,
 Bldg. 4, 5555 Overland Ave.
 San Diego, California 92123

1974 POULTRY EGG COST STUDY
 San Diego County, California.

Prepared and compiled by Farm Advisor Robert H. Adolph
 Cooperative Agricultural Extension Service
 In cooperation with San Diego County Poultry Egg Industry

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This study includes production of 1,092,251 average laying hens
 on 17 ranches in San Diego County

This study in San Diego County is conducted by the Cooperative Agricultural Extension Service, University of California. The results of this study cannot be considered as representative of this area. The results are from a group of specialized egg producing ranches with flock sizes varying from 20,000 layers per ranch to 200,000 layers with an average of 64,249 laying hens over six months of age.

The 17 cooperators in this study supplied monthly reports of their results for the year of 1974 for the purpose of comparing and evaluating their results. The overall results are published so that former cooperators and others in San Diego County may compare and evaluate their own records with that of the study results.

Housing and Equipment - Mostly open type, truss construction, metal roof, with curtains or lath siding. During winter, most houses have an added plastic cover over lath to retain warmth in poultry housing. It is considered that closing the houses during the winter months helps to save on feed energy requirements.

Most ranches have cages 16- to 18-inches deep, with two birds in 8-inch-, three in 12-inch-, four in 16-inch-, and six in 24-inch-wide cages. Feed is located on front of back-to-back cages and water located in center. Layers were fed with electric carts and mechanical feeders.

Replacements - Pullets were added to the laying flock as layers at six months of age. All eggs produced were considered as being produced by the laying flock. Poultry egg farms in study had multi-aged birds and replaced pullets up to four times during the year. Since costs exceeded income during 1974, pullet replacements were cut back and hens were force molted, resulting in a low replacement rate of 50 percent of the average number of layers on hand for the year.

Management as a cost of production - One cent per dozen eggs was charged as a management cost of production to cover hours of labor required to maintain the operation other than regular chore labor of care, feeding and gathering eggs. Poultrymen growing their own pullets for replacement have a 20 cents per pullet added management charge to cover the management required for producing the replacement pullet.

Total costs per dozen eggs average 45.3 cents per dozen with an average income of 41.0 cents for all eggs sold wholesale "nest run" at the ranch.

Cost of production exceeded income by 83 cents per average laying hen. Loss during 1974 was due to high cost of feed. Feed cost is expected to stay high in 1975. Prices received for eggs are expected to be higher this year since there were fewer replacement pullets hatched in 1974.

SUMMARY

Results of the 1974 study, with comparisons to previous years, are presented as follows:

Results per dozen eggs produced.

Results per average layer (365 hen days).

Flock statistics, mortality, cull, added, feed and feed ratios.

Summary - Costs of production - comparing low and high cost operators.

Table A and B provide a 26-year summary of study results.

Feed for layers only averaged 29.6 cents per dozen. The next highest cost was replacement stock costs of 8.6 cents per dozen. The cull income of 26 cents per cull marketed reduced replacement costs by .5 cents per dozen, compared to previous year which had 51 cents cull income and reduced costs by 1.8 cents per dozen. The total of 38.2 cents per dozen cost for feed and replacement accounted for 84 percent of total costs.

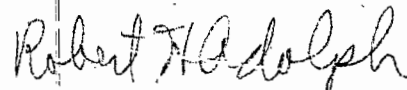
Feed used was 87 pounds of feed per layer only for 19 dozen eggs, or 4.6 pounds of feed per dozen eggs produced. Older hens lay at a lower rate with feed ratio usually around 5 pounds to the dozen, while pullets with a higher rate of lay use around 4 pounds of feed per dozen.

Average hen now kept to 26 months of age.

An analysis of the results over the last three years indicates a continuation of the trend of increasing average laying life to an average after six months of age of 595 days. A 62.7 percent three-year average rate of lay shows a production per hen housed at 373 eggs or 31 dozen eggs. During the last three years feed required for laying hen was 4.5 pounds of feed per dozen eggs. With feed for pullet replacements included, the feed ratio averages at 5.3 pounds per dozen eggs produced. This means that a 19 cent difference in feed cost per 100 pounds changes the cost of production 1 cent per dozen because 19 dozen was produced from 100 pounds of feed.

CONCLUSIONS

1. Force molting has extended the laying life and is a standard method of egg production performance. A three-year average showed 373 eggs produced per hen housed in 595 days of production after six months of age.
2. Breeding improvement has improved the productive ability of the laying hen. Rate of lay still averages 63 percent even though laying life has been extended.
3. Breeding for quality of eggs produced is not sufficiently improved to merit second-year production without the proper force molting and rest periods.
4. Developing adequate capital reserves to pay for fixed cost of replacement pullets continues to be a major problem. Insufficient capital reserves result in inadequate replacement during low egg price years.
5. The use of force molting and extending laying life had tended to offset the increased capital cost of the laying stock.
6. Income received per dozen eggs by flocks in their second year of production average a higher price due to larger egg size even though egg shell quality is not up to first-year performance standards.
7. The most important part of maintaining low costs of production is obtaining production performance expected from the laying stock maintained.



Robert H. Adolph
Farm Advisor

SAN DIEGO EGG COST STUDY, 1972, 1973, and 1974

<u>RESULTS PER DOZEN EGGS PRODUCED</u>	1972 Average All Cents	1973 Average All Cents	1974 Average All Cents	Compare Your Results
Feed Layers Only	17.1¢	26.9¢	29.6¢	_____
Feed Cost Replacements	1.8	2.7	3.0	_____
Replacement Chicks & Started Pullets	2.4	6.3	2.7	_____
Supplies, Taxes, Utilities, Misc., for Layers & Replacements	1.2	1.5	1.5	_____
Hired Labor Costs for Layers and Replacements	2.0	2.1	2.2	_____
Home Chore Labor	.1	.1	_____	_____
Stock Inventory Value + Charge - Credit	+1.3	-2.2	+2.5	_____
Cull Sales - Credit	-.4	-1.8	-.5	_____
Net Cash and Labor Cost	25.5¢	35.6¢	41.0¢	_____
Depreciation 15% Average Value of Buildings & Equipment	1.1	1.2	1.4	_____
Interest 8% on Land, Stock and Average Value of Buildings & Equipment (9%-1974)	1.2	1.4	1.6	_____
Management Per Dozen (hens & pullets raised)	1.3	1.3	1.3	_____
Net Cost of Production Per Dozen Eggs	29.1¢	39.5¢	45.3¢	_____
Income Per Dozen Eggs	24.5¢	46.7¢	41.0¢	_____
<u>RESULTS PER AVERAGE LAYER (365 hen days)</u>				
Feed Layers Only	\$3.31	\$5.10	\$5.63	_____
Feed for Replacements	.37	.51	.57	_____
Replacement Chicks, Started Pullets	.46	1.20	.51	_____
Supplies, Taxes, Utilities, Misc.	.23	.28	.29	_____
Hired Labor	.39	.39	.42	_____
Home Chore Labor	.01	.01	.01	_____
Stock Inventory Value + Charge - Credit	+1.25	-.42	+1.47	_____
Cull Sales - Credit	-.07	-.34	-.09	_____
Net Cash Cost Incl. Home Chore Labor	\$4.95	\$6.73	\$7.81	_____
Depreciation 15% Average Value of Buildings & Equipment	.22	.22	.26	_____
Interest 8% on Land, Stock and Average Value of Buildings & Equipment (9%-1974)	.24	.26	.31	_____
Management Per Hen (incl. pullets raised)	.25	.25	.25	_____
Total Cost Per Hen	\$5.66	\$7.47	\$8.63	_____
Egg Income Per Hen	\$4.76	\$8.83	\$7.80	_____

**FLOCK STATISTICS, MORTALITY, CULL, ADDED, FEED AND FEED RATIOS
STUDY AVERAGES**

	1972	1973	1974	6 Records Low Cost 1974	6 Records High Cost 1974
% Ave. Flock					
Mort.	17	16	15	14	19
Cull	34	66	37	20	44
M & C	51	82	52	34	63
Added	56	78	50	27	54
% Mort. Loss of chicks to 6 mos. of age	9	9	9	7	9
Cull Income each	\$.20	\$.51	\$.26	\$.26	\$.26
Size Flock	63940	58106	64249	65088	44109
% Flock on hand Pullets	---	57	68	52	65
Egg Production					
Per layer	234	227	228	221	224
Dozen per layer	19.5	18.9	19.0	18.5	18.7
% Production	64	62	63	61	61
% Extra Large Large AA or A	72	68	70	73	70
Pounds Feed					
All including replacements	94	99	96	89	97
Per layer only	86	90	87	83	89
Feed Ratio					
All including replacements	4.9	5.2	5.0	4.8	5.2
Per layer only	4.4	4.8	4.6	4.5	4.8
Cost Feed per 100 lbs.	\$3.89	\$5.68	\$6.49	\$6.42	\$6.56
% Started pullets of total added	49%	67%	39%	19%	46%

Feed ratio: All feed, including layers, started pullets, and raised own replacements estimated - 5.3 pounds per dozen eggs produced for 1974 compared to 1973 with 78% added of 5.7 pounds feed per dozen eggs.

SUMMARY COSTS OF PRODUCTION
STUDY AVERAGES

Cents/Per Dozen Results	1972	1973	1974	6 Records Low Cost 1974	6 Records High Cost 1974
Feed cost Layers only	17.1	26.9	29.6	29.0	31.4
*Net Replace. Cost to 6 mos.	6.0	5.9	8.6	6.7	8.5
Total Feed and Replace. Cost	23.1	32.8	38.2	35.7	39.9
Labor cost Layers only	1.9	2.0	2.0	2.3	2.3
Misc. cash Layers only	1.0	1.3	1.3	1.3	1.5
Deprec. 15% Layers only	1.0	1.1	1.3	1.3	1.3
Interest 9% Layers only	1.1	1.3	1.5	1.5	1.5
Management 1¢ per doz.	1.0	1.0	1.0	1.0	1.0
Total Net ¢ Cost per doz.	29.1	39.5	45.3	43.1	47.5
Wholesale only Income per Dozen eggs	24.5	46.7	41.0	41.2	40.9

*Net replacement cost per dozen: Total of chick or started pullet cost, feed, miscellaneous, cash, labor, depreciation, interest, management 20¢ per pullet chick raised, plus or minus difference in stock inventory value, less cull income divided by dozens produced = Net replacement cost per dozen analysis based on replacement cost to 6 months of age.

TABLE A - POULTRY EGG COST STUDY, SAN DIEGO COUNTY - 26 - YEAR SUMMARY 1949 - 1974 INCLUSIVE
 Cooperative Agricultural Extension, University of California - San Diego County

Year	Eggs per Hen	Sold			Percent of Average Laying Flock			Cull Income Each	Lbs. Feed per Layer Only	Feed Ratio Layers Only*	Feed Cost			Hired Labor Cost per Doz.	Pullet Chick Cost Each
		% Lrg.	% Died	% Culls	% Added	% Increase	per Cwt.				per Doz. **	Layers only per Doz.			
1974	228	70	15	37	50	- 2	\$.26	87	4.6	\$6.49	32.6¢	29.6¢	2.2¢	\$.34	
1973	227	68	16	66	78	- 4	.51	90	4.8	5.68	29.6	26.9	2.1	.31	
1972	234	72	17	34	56	+ 5	.20	86	4.4	3.89	18.9	17.1	2.0	.30	
1971	245	68	20	59	81	+ 2	.14	88	4.3	3.60	18.6	15.4	1.9	.29	
1970	230	69	22	50	70	- 2	.25	89	4.6	3.43	18.7	15.7	2.0	.29	
1969	232	69	23	36	66	+ 7	.34	89	4.6	3.15	17.1	14.4	1.8	.30	
1968	246	70	20	58	85	+ 7	.20	91	4.5	3.07	16.8	13.2	1.7	.30	
1967	243	69	18	65	86	+ 3	.20	87	4.3	3.24	17.7	13.5	1.9	.31	
1966	247	70	15	66	96	+15	.31	90	4.4	3.17	17.6	13.4	1.9	.31	
1965	246	70	16	68	95	+11	.18	89	4.4	3.12	17.1	13.1	1.7	.31	
1964	242	72	15	76	98	+ 7	.21	89	4.4	3.10	17.6	13.5	1.8	.32	
1963	243	69	14	63	94	+17	.25	88	4.3	3.12	17.2	13.1	1.8	.33	
1962	245	72	13	68	106	+25	.23	90	4.4	3.08	17.4	13.1	2.2	.35	
1961	246	71	13	75	105	+17	.29	91	4.4	3.02	16.9	12.9	2.2	.36	
1960	241	70	13	71	96	+12	.27	89	4.5	2.90	16.6	12.5	2.1	.39	
1959	243	68	14	82	107	+11	.30	90	4.5	3.23	18.5	14.1	2.1	.43	
1958	239	68	14	79	105	+12	.46	91	4.6	3.31	19.3	14.8	2.6	.40	
1957	235	70	14	68	100	+18	.40	91	4.6	3.45	20.2	16.0	1.9	.40	
1956	236	69	14	74	102	+14	.52	93	4.8	3.63	21.8	16.9	2.5	.40	
1955	234	66	17	70	103	+16	.56	92	4.8	3.84	24.4	18.0	2.2	.40	
1954	235	61	14	86	114	+14	.52	94	4.9	3.95	25.2	18.9	2.1	N.A.	
1953	228	60	15	76	107	+16	.75	95	5.1	4.06	26.5	20.2	2.5	N.A.	
1952	231	61	14	82	118	+22	.61	96	5.1	4.53	29.7	22.2	2.4	N.A.	
1951	222	68	13	74	102	+15	.75	100	5.4	4.06	28.5	21.5	2.3	N.A.	
1950	217	65	15	64	108	+29	.70	98	5.4	3.65	26.3	19.2	1.8	N.A.	
1949	213	64	15	77	124	+32	.88	100	5.6	4.09	32.7	22.3	2.6	N.A.	

* Pounds Feed To One Dozen Eggs.
 ** Includes Feed Used For Replacement and Layers.
 N.A. Not Available

TABLE B - POULTRY EGG COST STUDY, SAN DIEGO COUNTY - 26 - YEAR SUMMARY 1949 - 1974 INCLUSIVE
Cooperative Agricultural Extension, University of California - San Diego County

Year	Avg. Flock Size (1000)	Egg Income Per Doz.	Per Doz. Net* Cost Eggs	+Profit -Loss Per Doz.	Egg Income Per Hen	Net Cost Eggs Per Hen	+Profit -Loss Per Hen	Labor Costs Per Hen	Hired Home	Int. on Invest-ment	Per Allow.	Average Misc. Cash Costs	Hen All Feed Cost
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1974	64	41.0¢	45.3¢	- 4.3¢	\$7.80	\$8.63	\$- .83	\$.41	\$.01	\$.31	\$.26	\$.29	\$6.20
1973	58	46.7	39.5	+ 7.2	8.83	7.47	+1.36	.39	.01	.26	.22	.28	5.61
1972	64	24.5	29.1	- 4.6	4.76	5.66	- .90	.39	.01	.24	.22	.23	3.68
1971	47	21.3	28.5	- 7.2	4.35	5.74	-1.39	.38	.03	.28	.24	.29	3.80
1970	47	29.7	28.4	+ 1.3	5.70	5.42	+ .28	.39	.02	.26	.24	.32	3.58
1969	46	31.7	25.5	+ 6.2	6.13	4.92	+1.21	.36	.03	.22	.14	.32	3.30
1968	43	24.7	24.8	- 0.1	5.07	5.09	- .02	.36	.01	.21	.14	.23	3.45
1967	44	24.5	26.2	- 1.7	5.00	5.29	- .30	.39	.02	.19	.16	.31	3.57
1966	42	33.2	25.4	+ 7.8	6.84	5.22	+1.62	.40	.02	.20	.15	.30	3.62
1965	29	26.9	25.6	+ 1.3	5.52	5.26	+ .26	.34	.06	.20	.20	.33	3.52
1964	25	27.9	26.2	+ 1.7	5.62	5.26	+ .36	.37	.08	.21	.19	.30	3.55
1963	21	28.4	26.4	+ 2.0	5.73	5.33	+ .40	.36	.07	.23	.23	.34	3.47
1962	16	28.9	27.8	+ 1.1	5.90	5.66	+ .24	.35	.23	.23	.23	.44	3.55
1961	13	31.5	27.5	+ 4.0	6.45	5.65	+ .80	.45	.21	.21	.25	.38	3.47
1960	9	33.3	28.7	+ 4.6	6.61	5.72	+ .89	.42	.31	.27	.30	.43	3.30
1959	7	29.8	30.9	- 1.1	5.97	6.20	- .23	.38	.44	.26	.29	.42	3.72
1958	6	37.0	31.1	+ 5.9	7.32	6.15	+1.17	.48	.38	.25	.29	.52	3.80
1957	6	36.3	30.8	+ 5.5	7.00	5.95	+1.05	.47	.60	.26	.34	.45	3.91
1956	5	38.4	32.1	+ 6.3	7.45	6.23	+1.22	.49	.64	.26	.35	.43	4.22
1955	4	41.3	32.1	+ 9.3	8.00	6.15	+1.85	.43	.59	.20	.33	.41	4.52
1954	4	36.8	34.1	+ 2.7	7.12	6.59	+ .53	.40	.54	.20	.34	.40	4.86
1953	4	51.5	36.3	+15.2	9.64	6.80	+2.84	.46	.85	.21	.37	.41	4.96
1952	3	46.0	40.8	+ 5.2	8.74	7.75	+ .99	.47	1.04	.24	.38	.35	5.71
1951	3	55.2	40.3	+14.9	9.90	7.20	+2.70	.42	1.34	.25	.38	.41	5.16
1950	2	43.6	35.6	+ 8.0	7.73	6.32	+1.41	.33	.94	.23	.31	.34	4.65
1949	2	52.0	42.0	+10.0	9.18	7.42	+1.76	.48	1.08	.24	.29	.53	5.77

*Total net cost of eggs per dozen and per hen includes all costs: feed, replacement stock, all labor, miscellaneous cash, interest, depreciation, and management. Cull income is credited to costs for net cost of egg production.