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## 1978 POULTRY EGG COST STUDY SAN DIEGO, CALIFORNIA

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Cooperative Extension Service  
In Cooperation with San Diego County Poultry Egg Industry

This study includes production of 863,825 average laying hens over 20 weeks of age on 11 ranches in San Diego County.

This study is conducted by the Cooperative Extension Service, University of California, in San Diego County. 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 78,530 laying hens over 20 weeks of age per ranch.

The 11 cooperators in this study supplied monthly reports of their results for the year of 1978 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 the study results.

Costs of Production -- 1978 net costs per dozen was 41.1¢ for all eggs sold wholesale "nest run" at the ranch. Feed costs for layers was 27.6¢ per dozen or 67% of total costs. Net cost of replacement laying stock was 5.9¢ making feed and replacement cost 33.5¢ per dozen. The balance of costs per dozen included labor 2.3¢, and miscellaneous cash 1.2¢, depreciation 1.3¢, interest 1.8¢, and management 1.0¢. Income from culls of 0.8¢ per dozen was credited to replacement cost. Income from manure averaged 5¢ per hen was credited to miscellaneous costs of supplies and services. Cooperator with the lowest cost had a net cost of 37.7¢ per dozen. The highest cost cooperator had a net cost of 43.9¢ per dozen. This resulted in a 6.2¢ range from the high to the low. The average cost was 41.1¢ per dozen. Income per dozen eggs averaged 42.4¢ F.O.B. ranch "nest run" dealer sized and graded basis. There were differences in average price received due to differences in egg price during the year and differences in grade-out for size and quality. The average prices paid for all eggs averaged between 3 to 5¢ per dozen under the large egg wholesale producer price during the year.

The average net profit was 1.3¢ per dozen compared to 1977 of 4.0¢ profit per dozen. Table III and B show the average profit and losses for the last 30 years. The most profitable year in the last 5 years was 1976 which showed a 7.1¢ per dozen margin over costs. The last 5 year average was +1.4¢ per dozen with a 10

year average of +1.0¢. Profit, as considered in this study, is egg income above costs for feed, replacement, labor, cash costs, interest, depreciation and management. Culls and manure sales are credited to costs to obtain net profit or loss for eggs produced.

Housing and Equipment -- Housing is mostly open type, truss construction, metal roof, with curtain 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. None of the ranches in this year's study had forced air ventilation. Feed is located on front of back to back cages and water located in center. Layers were fed with electric carts and mechanical feeders. All ranches had 16 or 18 inch deep cages with varying widths of 12, 16 or 24 inches. Birds were housed usually with 4 inches feed space frontage per bird. At housing time young pullets are often housed at 10% to 30% over the above rate.

Replacements -- Previous to the 1978 study, pullets were added to laying flock at 6 months of age (after they had attained a 50% rate of lay). During 1978 pullets were added to flock at 20 weeks of age which is the usual time for pullets to be housed. This simplifies record keeping. There are some differences in costs charged with this change, but there is no difference in the total cost per dozen eggs produced. Specifically replacement costs per dozen are lower because feed costs from 20 to 26 weeks are charged off as a part of feed for egg production. Total number of hens are increased by adding pullets to the flock 42 days earlier per hen housed. For example, lay flocks housed an average of 420 days have costs reduced by 10% per average laying hen. Table III summary costs show five years of results converted to the cost analysis based on adding pullets to the laying flock at 20 weeks of age. Pullet raising to 20 weeks of age has become more of a separate enterprise. In this study for example 56% of replacements were purchased as started pullets.

Management as a Cost of Production -- Once cent per dozen 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 replacements previous to 1978 had a 10¢ per pullet management charge added to their costs of replacement.

Table I -- Average Results Per Dozen Eggs and Per Average Hen -- Average results for the five individual years of 1974 to 1978 with a five year average are presented. Costs and income are calculated on the basis of per dozen eggs produced and per hen year (365 hen days) for all hens on hand 6 months or older for 1974 - 1977. Pullets were added at 20 weeks of age in 1978.

Table II -- Flock Averages of Mortality, Cull, Added, Feed and Feed Ratios -- Flock averages of mortality, cull, added and feed and feed ratios for the 1974-1978 in individual years with a five year average are included.

Table III -- Summary Costs of Production -- Summary Costs of Production comparing feed and replacement costs versus all other costs. Five individual years (1974 - 1978) and a five year average.

SAN DIEGO EGG COST STUDY  
1974 to 1978 and 5 Year Average

**TABLE 1**

AVERAGE RESULTS PER DOZEN EGGS PRODUCED						
	1974	1975	1976	1977	1978	5 Year Average
Feed Layers Only	29.6¢	29.5¢	28.4¢	26.2¢	27.6¢	28.3¢
Feed Cost, Replacement						
Chicks & Started Pullets	5.7	5.6	6.6	7.8	6.2	6.4
Supplies, Taxes, Utilities & Miscellaneous *	1.5	1.5	1.7	1.8	1.4	1.6
Labor Costs *	2.2	2.2	2.2	2.3	2.5	2.3
Stock Inventory Value & Charge Credit	+2.5	+0.7	0.0	-0.5	-0.3	+0.5
Cull & Manure Sales Credit	-0.5	-0.6	-1.0	-0.7	-0.8	-0.7
<b>Net Cash Cost</b>	<b>41.0¢</b>	<b>38.9¢</b>	<b>37.9¢</b>	<b>36.9¢</b>	<b>36.6</b>	<b>38.4</b>
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Depreciation 15% Average Value of Buildings & Equipment *	1.4	1.5	1.4	1.3	1.5	1.4
Interest on Land, Stock & Average Value of Buildings & Equipment*	1.6	1.5	1.4	1.4	2.0	1.5
Management Per Dozen	1.3	1.3	1.2	1.3	1.0	1.2
<b>Net Cost of Production</b>						
Per Dozen Eggs	45.3¢	43.2¢	41.9¢	40.9¢	41.1¢	42.5
Income Per Dozen Eggs	41.0	42.0	49.0	44.9	42.4	43.9
<b>Profit Per Dozen</b>	<b>-4.3¢</b>	<b>-1.2¢</b>	<b>+7.1¢</b>	<b>+4.0¢</b>	<b>+1.3</b>	<b>+1.4</b>
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<b>RESULTS PER AVERAGE LAYER (365 hen days)</b>						
Feed Layers Only	\$5.63	\$ 5.72	\$ 5.45	\$ 5.37	\$ 5.25	\$ 5.49
Feed Cost, Replacement						
Chicks & Started Pullets	1.08	1.08	1.27	1.45	1.19	1.23
Supplies, Taxes, Utilities, Miscellaneous*	.29	.29	.32	.37	.27	.31
Labor -- Hired*	.43	.42	.41	.46	.47	.44
Stock Inventory Value & Charge -- Credit	+.47	+.14	+.01	-.10	-.05	+.09
Cull & Manure Sales Credit	-.09	-.11	-.19	-.15	-.16	-.14
<b>Net Cash Cost</b>	<b>\$7.81</b>	<b>\$7.54</b>	<b>\$7.27</b>	<b>\$7.57</b>	<b>\$6.97</b>	<b>\$7.42</b>
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Depreciation 15% Average Value of Buildings & Equipment*	.26	.29	.26	.27	.28	.27
Interest 8% on Land, Stock & Average Value of Buildings & Equipment*	.31	.30	.27	.28	.38	.31
Management per Hen (incl. pullets raised)	.25	.24	.23	.26	.19	.23
<b>Total Cost Per Hen</b>	<b>\$8.63</b>	<b>\$8.37</b>	<b>\$8.03</b>	<b>\$8.38</b>	<b>\$7.82</b>	<b>\$8.24</b>
<b>Egg Income Per Hen</b>	<b>\$ 7.80</b>	<b>\$ 8.13</b>	<b>\$ 9.40</b>	<b>\$ 9.21</b>	<b>\$ 8.06</b>	<b>8.52</b>
<b>Net Profit + or - Per Hen</b>	<b>-\$ .83</b>	<b>-\$ .24</b>	<b>+\$1.37</b>	<b>+\$ .83</b>	<b>+\$ .24</b>	<b>+\$ .28</b>

\*Includes layers and replacement costs

**FLOCK AVERAGES OF MORTALITY, CULL, ADDED  
FEED AND FEED RATIOS  
FIVE YEAR AVERAGES 1974 -- 1978 INCLUSIVE\***

**TABLE II**

	1974	1975	1976	1977	1978	5 Year Average
<b>% Average Flock</b>						
Mortality	15	13	13	13	12	13
Cull	37	43	38	51	46	43
Mortality & Cull	52	56	51	64	58	56
Added	50	55	52	66	64	57
<b>% Mortality Loss of Chicks to 6 mos. of age</b>	9	7	8	7	9	8
<b>Cull Income Each</b>	\$ .26	\$ .21	\$ .32	\$ .30	\$ .32	\$ .28
<b>Size Flock</b>	64249	48537	72791	61298	78530	65081
<b>% Flock on Hand Pullets</b>	68	56	51	67	59	60
<b>Egg Production</b>						
Per Layer	228	232	230	246	228	233
Dozen Per Layer	19.0	19.4	19.2	20.5	19.0	19.4
% Production	63	64	63	67	63	64
<b>% Extra Lare Large AA or A</b>	70	76	74	73	75	74
<b>Pounds Feed For Layers Only</b>	87	93	86	87	85	88
<b>Feed Ratio Pounds Feed Layer divided by dozen produced</b>	4.6	4.8	4.5	4.2	4.4	4.5
<b>Cost Feed per 100 lbs.</b>	\$6.49	\$6.19	\$6.37	\$6.24	\$6.26	\$6.31
<b>% Started Pullets of Total Added</b>	39	5	42	48	56	38

\*Hens added to laying flock six months of age for 1974-77. 1978 pullets were added to flock at 20 weeks of age.

SUMMARY COSTS OF PRODUCTION  
 COMPARING FEED AND REPLACEMENT COSTS  
 VERSUS ALL OTHER COSTS  
 (Cents Per Dozen Eggs)

TABLE III Basis: Pullets added to laying flock 20 weeks of age

Cents/Per Dozen Results	1974	1975	1976	1977	1978	5 Year Average
Feed Cost Layers Only	31.1¢	31.3¢	30.0¢	28.0¢	27.6¢	29.6¢
Net Replacement Cost	7.2	5.1	5.3	6.0	5.9	5.9
Total Feed and Replacement Cost	38.3	36.4	35.3	34.0	33.5	35.5
Labor Cost Layers Only	2.0	1.9	2.0	2.1	2.3	2.1
Miscellaneous Cash Layers Only	1.3	1.3	1.0	1.4	1.2	1.2
Depreciation 15% Layers Only	1.3	1.3	1.3	1.2	1.3	1.3
Interest Layers Only	1.4	1.3	1.3	1.2	1.8	1.4
Management 1¢ Per Dozen	1.0	1.0	1.0	1.0	1.0	1.0
Total All Other Costs	7.0	6.8	6.6	6.6	7.6	7.0
Total Net ¢ Cost Per Dozen	45.3	43.2	41.9	40.9	41.1	42.5
Wholesale Only Income Per Dozen Eggs	41.0	42.0	49.0	44.9	42.4	43.9
Profit + or - (Per Dozen Eggs)	-4.3	-1.2	+7.1	+4.0	+1.3	+1.4

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

TABLE A - POULTRY EGG COST STUDY - SAN DIEGO COUNTY - 30 YEAR SUMMARY 1949 - 1978 INCLUSIVE  
Cooperative Extension, University of California - San Diego County

Year	Eggs Per Hen	% Eggs Large or Xtra LG.	Percent of Average Laying Flock			Cull Income Each	Feed -- Laying Hen Only				Hired Labor Cost Per Doz.	Pullet Chick Cost Each	
			% Died	% Culls	% Added		% Increase	Pounds Per Hen Year	Pounds Per Dozen "Ratio"	Cost Per 100 Pounds			Cost Cents Per Dozen
1978	228	75	12	46	64	+ 6	\$ .32	85	4.4	6.26	27.6	2.5	\$ .39
1977	246	73	13	51	66	+ 2	.30	87	4.2	6.24	26.2	2.3	.38
1976	230	74	13	38	52	+ 1	.32	86	4.5	6.37	28.4	2.2	.38
1975	232	76	13	43	55	- 1	.21	93	4.8	6.19	29.5	2.2	.36
1974	228	70	15	37	50	- 2	.26	87	4.6	6.49	29.6	2.2	.34
1973	227	68	16	66	78	- 4	.51	90	4.8	5.68	26.9	2.1	.31
1972	234	72	17	34	56	+ 5	.20	86	4.4	3.89	17.1	2.0	.30
1971	245	68	20	59	81	+ 2	.14	88	4.3	3.60	15.4	1.9	.29
1970	230	69	22	50	70	- 2	.25	89	4.6	3.43	15.7	2.0	.29
1969	232	69	23	36	66	+ 7	.34	89	4.6	3.15	14.4	1.8	.30
1968	246	70	20	58	85	+ 7	.20	91	4.5	3.07	13.2	1.7	.30
1967	243	69	18	65	86	+ 3	.20	87	4.3	3.24	13.5	1.9	.31
1966	247	70	15	66	96	+15	.31	90	4.4	3.17	13.4	1.9	.31
1965	246	70	16	68	95	+11	.18	89	4.4	3.12	13.1	1.7	.31
1964	242	72	15	76	98	+ 7	.21	89	4.4	3.10	13.5	1.8	.32
1963	243	69	14	63	94	+17	.25	88	4.3	3.12	13.1	1.8	.33
1962	245	72	13	68	106	+25	.23	90	4.4	3.08	13.1	2.2	.35
1961	246	71	13	75	105	+17	.29	91	4.4	3.02	12.9	2.2	.36
1960	241	70	13	71	96	+12	.27	89	4.5	2.90	12.5	2.1	.39
1959	243	68	14	82	107	+11	.30	90	4.5	3.23	14.1	2.1	.43
1958	239	68	14	79	105	+12	.46	91	4.6	3.31	14.8	2.6	.40
1957	235	70	14	68	100	+18	.40	91	4.6	3.45	16.0	1.9	.40
1956	236	69	14	74	102	+14	.52	93	4.8	3.63	16.9	2.5	.40
1955	234	66	17	70	103	+16	.56	92	4.8	3.84	18.0	2.2	.40
1954	235	61	14	86	114	+14	.52	94	4.9	3.95	18.9	2.1	N.A.
1953	228	60	15	76	107	+16	.75	95	5.1	4.06	20.2	2.5	N.A.
1952	231	61	14	82	118	+22	.61	96	5.1	4.53	22.2	2.4	N.A.
1951	222	68	13	74	102	+15	.75	100	5.4	4.06	21.5	2.3	N.A.
1950	217	65	15	64	108	+29	.70	98	5.4	3.65	19.2	1.8	N.A.
1949	213	64	15	77	124	+32	.88	100	5.6	4.09	22.3	2.6	N.A.

\* Pounds Feed to one dozen eggs.

N.A. = Not Available

TABLE B - POULTRY EGG COST STUDY - SAN DIEGO COUNTY 30 YEAR SUMMARY - 1949 - 1978 INCLUSIVE

Year	Av. Flock Size (1000)	Per Dozen Eggs*		Per Average Hen		Costs		Per Average Hen Costs			Feed Layer Only		
		Income	Net Cost	Egg Income	Net Cost Eggs	Labor	Home	Investment Interest	Allow-ance	Misc. Cash			
												+Profit	-Loss
1978	86	42.4¢	41.1¢	+ 1.3¢	\$ 8.06	\$ 7.82	\$+.24	\$.47	\$ .00	\$ .38	\$ .28	\$ .27	\$5.25
1977	61	44.9	40.9	+ 4.0	9.20	8.38	+.82	.46	.00	.28	.27	.37	5.37
1976	73	49.0	41.9	+ 7.1	9.40	8.03	+1.37	.41	.01	.27	.26	.32	5.45
1975	48	42.0	43.2	- 1.2	8.13	8.37	-.24	.42	.00	.30	.29	.29	5.72
1974	64	41.0	45.3	- 4.3	7.80	8.63	-.83	.41	.01	.31	.26	.29	5.63
1973	58	46.7	39.5	+ 7.2	8.83	4.47	+1.36	.39	.01	.26	.22	.28	5.10
1972	64	24.5	29.1	- 4.6	4.76	5.66	-.90	.39	.01	.24	.22	.23	3.31
1971	47	21.3	28.5	- 7.2	4.35	5.74	-1.39	.38	.03	.28	.24	.29	3.15
1970	47	29.7	28.4	+ 1.3	5.70	5.42	+.28	.39	.02	.26	.24	.32	3.01
1969	46	31.7	25.5	+ 6.2	6.13	4.92	+1.21	.36	.03	.22	.14	.32	2.78
1968	43	24.7	24.8	- 0.1	5.07	5.09	-.02	.36	.01	.21	.14	.23	2.71
1967	44	24.5	26.2	- 1.7	5.00	5.29	-.30	.39	.02	.19	.16	.31	2.73
1966	42	33.2	25.4	+ 7.8	6.84	5.22	+1.62	.40	.02	.20	.15	.30	2.82
1965	29	26.9	25.6	+ 1.3	5.52	5.26	+.26	.34	.06	.20	.20	.33	2.75
1964	25	27.9	26.2	+ 1.7	5.62	5.26	+.36	.37	.08	.21	.19	.30	2.79
1963	21	28.4	26.4	+ 2.0	5.73	5.33	+.40	.36	.07	.23	.23	.34	2.70
1962	16	28.9	27.8	+ 1.1	5.90	5.66	+.24	.35	.23	.23	.23	.44	2.74
1961	13	31.5	27.5	+ 4.0	6.45	5.65	+.80	.45	.21	.21	.25	.38	2.69
1960	9	33.3	28.7	+ 4.6	6.61	5.72	+.89	.42	.31	.27	.30	.43	2.55
1959	7	29.8	30.9	- 1.1	5.97	6.20	-.23	.38	.44	.26	.29	.42	2.91
1958	6	37.0	31.1	+ 5.9	7.32	6.15	+1.17	.48	.38	.25	.29	.52	3.01
1957	6	36.3	30.8	+ 5.5	7.00	5.95	+1.05	.47	.60	.26	.34	.45	3.14
1956	5	38.4	32.1	+ 6.3	7.45	6.23	+1.22	.49	.64	.26	.35	.43	3.38
1955	4	41.3	32.1	+ 9.3	8.00	6.15	+1.85	.43	.59	.20	.33	.41	3.53
1954	4	36.8	34.1	+ 2.7	7.12	6.59	+.53	.40	.54	.20	.34	.40	3.71
1953	4	51.5	36.3	+15.2	9.64	6.80	+2.84	.46	.85	.21	.37	.41	3.86
1952	3	46.0	40.8	+ 5.2	8.74	7.75	+.99	.47	1.04	.24	.38	.35	4.35
1951	3	55.2	40.3	+14.9	9.90	7.20	+2.70	.42	1.34	.25	.38	.41	4.14
1950	2	43.6	35.6	+ 8.0	7.73	6.32	+1.41	.33	.94	.23	.31	.34	3.68
1949	2	52.0	42.0	+10.0	9.18	7.42	+1.76	.48	1.08	.24	.29	.53	4.17

\*Total net cost of eggs per dozen and per hen includes feed, replacement stock, labor, miscellaneous cash, interest, depreciation, difference in stock inventory begin and end of year values and management with cull and manure income credited to costs.

Tables: A & B -- 30-Year Summary Egg Cost Study 1949 - 1978 Inclusive --  
The 30 year summary presents a review of many changes which have taken place within the industry not only in San Diego County, but also among commercial egg production ranchers in Southern California.

Conclusion:

1. The 1978 Egg Cost Study Results show increased costs for labor, interest and depreciation. Miscellaneous costs did not go up because property taxes were reduced, and with low egg prices, repairs and maintainance costs tended to be deferred. Miscellaneous costs as reported in this study should be considered inadequate for normal ranch operations.
2. Feed costs on a year to year basis have been rather stable (ranging with-in 5%) over the past five years. During the individual years feed prices have fluctuated over 20%.
3. Table III presents a summary of costs of production per dozen for the last five years. Data has been computed on the basis of adding pullets to laying flock at 20 weeks of age. For 1978 pullets were added at 20 weeks of age. Previous years were based on adding hens at 6 months of age, but for the purpose of comparison the 1974-1977 data was converted to the 20 weeks of age added to flock basis.

The main difference is in feed costs from 20 to 26 weeks of age. Under the 20 week addition pullet replacement cost is figured at the 20 week age, and the 8 or 9 pounds of feed used to 26 weeks of age per pullet is added to total feed cost. Total cost is the same per dozen eggs produced.

4. Cost of production per dozen eggs tends to level out in the range of 25 to 35 dozen eggs produced per hen housed. On an overall shorter laying period program the fewer dozen eggs produced raise the cost of replacement at a rate greater than the savings from a low feed to egg ratio. On the extended laying life programs the lower rate of lay with two or more molt cycles raises the feed to egg ratio increasing feed costs beyond any replacement cost savings. Overall reduced egg production cause all fixed cost to also increase. Where hens are kept beyond one year of lay force molting is used to maintain egg quality. Hens returning to egg production will compensate total egg production loss within 4 to 5 months after a force molt period.



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