

1966

POULTRY MANAGEMENT STUDY
SAN BERNARDINO COUNTY



AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF CALIFORNIA
566 Lugo Avenue
San Bernardino, California

ACKNOWLEDGMENTS

To the ten poultrymen who completed records for this 1966 Poultry Management Study, we wish to express our appreciation. It is their farsighted cooperation that enables us to provide detailed information on poultry management.

The 1966 records were processed, in part, by electronic data equipment at the University of California, Riverside, under the direction of Dr. Thomas Little, Extension Biometrician, and Miss Isabel Reidle, Junior Statistician. To Dr. Little and Miss Reidle we also express our appreciation.

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INTRODUCTION

The ten cooperating poultrymen in the study had a total of 277,396 hens, or an average of 27,740 hens per ranch. The study was conducted to give those poultrymen participating an opportunity to obtain detailed information on their management, production, costs, and income. Through the use of uniform record-keeping methods, poultrymen in the study can compare their results with other cooperators and compare their own records with those obtained in prior years. By careful study of the records obtained, cooperators can determine their strong and weak points and adjust their management accordingly.

The number of records is small, and the averages in this report may not be entirely typical of the county. However, these records do provide useful information on current local production, costs, profits, egg prices, mortality, etc., and therefore should be of interest to all poultrymen and others interested in the poultry business. Most egg producers considered profits in 1966 far above average.

Ranch Size Designation:

A = Lay flock under 25,000 hens

B = Lay flock over 25,000 hens

Arrangement of Data:

The ranches in all tables are listed in the order of decreasing management income per hen, as shown in Table I.

Averages:

Averages for each item were based on those ranches having data for that item.

EXPLANATION OF TERMS

The laying flock--hens over 24 weeks of age.

Per cent culled, died, added, and eggs per hen are the respective yearly totals divided by the average number of laying hens.

The percentages sold Large, Medium, Small, and Commercial are based on wholesale eggs.

Commercial eggs include cracks, pee-wees, and Grade B.

Other income includes change of inventory, cull-hen sales, and fertilizer.

Miscellaneous costs include vaccines, medication, water, insurance, repair of equipment, taxes, utilities, auto, and other expenses.

Depreciation is obtained from the Federal Income Tax Report.

Family labor is valued at \$1.50 per hour.

Interest on investment--computed at 6 per cent of the rancher's value of the land and average value of stock, buildings, and equipment.

Cost of feed per cwt.--total cost of all feed, grit, shell, etc., divided by total pounds.

Feed consumption per hen:

- a. All feed--total feed used on ranch divided by average number of laying hens.
- b. Layers--feed used after 24 weeks, as reported by ranches, divided by average number of hens.

Feed conversion (pounds of feed per dozen eggs):

- a. All feed--total feed divided by dozens sold wholesale and retail.
- b. Layers--total feed fed after 24 weeks divided by dozens sold wholesale and retail.

Chick cost--total cost of chicks divided by number of chicks delivered.

Cash income--amount remaining after feed, replacement, hired labor, and miscellaneous cash costs are paid.

Net farm income--cash income less depreciation.

Management income--net farm income less family labor and interest on investment.

Per cent laying flock change--the difference between the beginning and closing inventory divided by the beginning inventory.

TABLE I. INCOME AND INCOME OVER COSTS IN DOLLARS PER HEN

Ranch Rank and Size	Income			Cash Costs					Cash In- come	Depr.	Net Farm In- come	Other Non- Cash Costs		Total Cost	Mgmt. Income
	Eggs	Other	Total	Feed	Replace- ments	Hired Labor	Misc.	Total				Family Labor	Int. on Invest.		
1 B	6.34	.21	6.55	3.15	.22	.15	.19	3.71	2.84	.18	2.66	.24	.19	4.32	2.23
2 A	6.54	.23	6.86	3.28	.13	.62	.33	4.36	2.50	.13	2.37	.19	.24	4.92	1.94
3 A	6.49	.24	6.73	3.14	.15	.63	.31	4.23	2.50	.18	2.32	.21	.19	4.81	1.92
4 A	6.61	.32	6.93	3.41	.36	.04	.46	4.27	2.66	.15	2.51	.45	.16	5.02	1.91
5 A	6.49	-.24	6.25	2.99	.28	.15	.50	3.92	2.33	.12	2.21	.25	.14	4.43	1.82
6 A	6.30	.22	6.52	3.56	.31	.35	.32	4.54	1.98	.19	1.79	.04	.23	5.00	1.52
7 B	6.26	.30	6.56	3.06	.60	.47	.52	4.65	1.91	.16	1.75	.24	.18	5.23	1.33
8 A	6.63	-.94	5.68	3.20	.07	.17	.52	3.96	1.72	.22	1.50	.27	.14	4.59	1.09
9 B	4.39	.21	4.60	3.07	.15	.45	.20	3.87	.73	.01	.72	.00	.07	3.96	0.64
10 B	5.71	.32	6.03	3.40	.27	.68	.63	4.98	1.05	.23	.82	.03	.21	5.44	0.59
<u>Averages</u>															
1966	6.18	.09	6.27	3.23	.25	.37	.40	4.25	2.02	.15	1.87	.19	.18	4.77	1.50
1965 ^{1/}	5.43	.06	5.49	3.95	.24	.13	.46	4.77	.72	.24	.47	.40	.23	5.64	-.15
1964 ^{2/}	5.30	.27	5.57	3.88	.33	.25	.21	4.68	.89	.20	.69	.35	.18	5.40	.16
1963 ^{3/}	5.58	.31	5.89	3.70	.44	.31	.44	4.89	1.00	.24	.75	.70	.25	6.10	-.21

^{1/} Average of 5 ranches, or a total of 137,297 hens.

^{2/} Average of 9 ranches, or a total of 107,561 hens.

^{3/} Average of 10 ranches, or a total of 89,090 hens.

The individual records are listed above in order of declining management income per hen; this appears in the last column to the right. Management income per hen shows a wide range in the 1966 study. In order to rank high in the above table, it is necessary to have good income per hen and low costs. Notice that cooperator 1 had slightly better than average income per hen and the lowest costs among the 10 cooperators. Cooperator 10 had below average egg sales and the highest costs. A study of this table and subsequent tables explains the variation in management income.

TABLE II. EGG PRODUCTION, SIZES, PRICES, AND TYPES OF SALE

Ranch Rank and Size	Eggs Laid Per Hen	% Production	% of Eggs Marketed					Price Received (Cents/Dozen)		
			Large	Medium	Small	Commercial	Retail	Wholesale	Retail	All Eggs
1 B	217	59.6	69.0	18.4	3.4	9.1	0.0	34.6	--	34.6
2 A	235	64.4	77.3	13.3	2.1	7.3	0.7	33.6	38.9	33.7
3 A	228	62.6	77.3	12.6	2.1	8.1	0.3	34.1	48.0	34.2
4 A	233	64.1	60.0	28.4	7.4	4.2	2.4	33.6	37.3	33.7
5 A	227	62.3	75.0	15.7	2.6	6.7	0.0	34.5	--	34.5
6 A	211	58.0	69.1	21.6	5.1	4.2	0.0	34.8	--	34.8
7 B	224	61.5	70.7	20.3	3.8	5.2	5.0	34.3	33.6	34.2
8 A	236	64.9	78.3	7.6	0.9	13.2	4.4	34.0	37.6	34.1
9 B	156	42.8	80.3	12.7	2.9	4.1	0.0	33.3	--	33.3
10 B	207	56.8	69.9	20.9	2.9	6.3	1.9	34.4	36.4	34.4
<u>Averages</u>										
1966	217	60.0	72.7	17.2	3.3	6.8	1.5	34.1	40.1	34.2
1965	232	63.8	70.0	21.7	3.4	5.0	6.1	27.8	43.5	28.7
1964	227	61.9	68.0	22.6	4.5	4.9	2.8	27.4	35.1	28.2
1963	233	64.0	71.3	21.4	3.8	4.0	3.3	--	--	28.9

High egg production per hen is a very important factor in obtaining high income per hen. Notice that cooperators 4 and 8 had higher than average egg production, and also had higher than average egg sales per hen. In the case of cooperator 8, a decrease in flock inventory value accounted for the lower than average figure on total income per hen.

Egg size and price per dozen eggs sold are also shown in the table above. Notice that cooperator 1 had slightly less than the average percentage of large eggs, while he was able to obtain four-tenths of a cent more per dozen than average. Cooperator 4 was considerably less than average in the percentage of large eggs and obtained five-tenths of a cent less per dozen eggs than average.

TABLE III. INCOME AND INCOME OVER COSTS IN CENTS PER DOZEN

Ranch Rank and Size	Income			Cash Costs					Cash In- come	Depr.	Net Farm In- come	Other Non- Cash Costs		Total Cost	Mgmt. Income
	Eggs	Other	Total	Feed	Replace- ments	Hired Labor	Misc.	Total				Family Labor	Int. on Invest.		
1 B	34.6	1.2	35.8	17.2	1.2	0.8	1.1	20.3	15.5	1.0	14.5	1.3	1.0	23.6	12.2
2 A	33.7	1.2	34.8	16.6	0.6	3.2	1.7	22.1	12.7	0.7	12.0	1.0	1.2	24.9	9.9
3 A	34.2	1.3	35.5	16.5	0.8	3.3	1.6	22.2	13.3	1.0	12.2	1.1	1.0	25.3	10.1
4 A	33.7	1.6	35.3	17.4	1.8	0.2	2.3	21.7	13.6	0.8	12.8	2.3	0.8	25.6	9.7
5 A	34.5	-1.3	33.2	15.9	1.5	0.8	2.7	20.9	12.3	0.6	11.7	1.3	0.7	23.6	9.7
6 A	34.9	1.2	36.1	19.7	1.7	2.0	1.8	25.2	10.9	1.1	9.9	0.2	1.3	27.7	8.4
7 B	34.2	1.7	35.9	16.8	3.3	2.6	2.8	25.5	10.4	0.9	9.6	1.3	1.0	28.6	7.3
8 A	34.1	-4.9	29.3	16.5	0.4	0.8	2.7	20.4	8.9	1.2	7.7	1.4	0.7	23.7	5.6
9 B	33.3	1.6	34.9	23.2	1.2	3.4	1.5	29.3	5.6	0.1	5.4	0.0	0.6	30.0	4.9
10 B	34.3	1.9	36.2	20.4	1.7	4.1	3.8	30.0	6.2	1.4	4.9	0.2	1.2	32.7	3.5
<u>Averages</u>															
1966	34.2	0.5	34.7	18.0	1.4	2.1	2.2	23.7	11.0	0.9	10.1	1.1	0.9	26.6	8.1
1965	28.7	0.3	29.1	21.0	1.3	0.6	2.4	25.3	3.8	1.3	2.4	2.1	1.2	29.9	-0.9
1964	28.2	1.5	29.7	20.7	1.8	1.4	1.1	25.1	4.6	1.0	3.6	1.9	0.9	28.9	0.8
1963	28.9	1.6	30.5	19.1	2.3	1.7	2.3	25.4	5.1	1.2	3.8	3.6	1.3	31.7	-1.1

In the table above, we see little difference in the total income per dozen eggs sold, with the exception of record 8 which had a substantially lower flock inventory value. The change in inventory value is considered in arriving at the income per dozen eggs sold.

The feed cost per dozen eggs sold varies quite widely--from 15.9 cents for cooperator 5 to 23.2 cents for cooperator 9--and this is an area where several producers may be able to improve their efficiency. Miscellaneous cost per dozen eggs sold also is quite variable, as is the total cash cost per dozen sold. The total cost of producing a dozen eggs for the 10 cooperators was 26.6 cents per dozen.

TABLE IV. MISCELLANEOUS MANAGEMENT DATA

Ranch Rank and Size	Feed Requirements				% Mortality to 24 Weeks	% of Average Lay Flock			% Change in Lay Flock	Feed Cost Per Cwt.	Labor Requirements			Chick Price (¢)	Avg. Cull Price (¢)
	Pounds Feed Per Hen		Pounds Feed Per Dozen			Died	Culled	Added			Hours Family Labor Per Hen	Hours Hired Labor Per Hen	Total Hours Per Hen		
	All Feed	Layers	All Feed	Layers											
1 B	96.3	86.7	5.3	4.7	1.1	19.1	40.5	58.4	2.0	3.27	.16	.09	.25	29.8	28.8
2 A	102.2	91.1	5.2	4.6	4.1	9.0	37.2	48.1	0.1	3.21	.14	.30	.44	29.3	32.9
3 A	97.3	87.3	5.1	4.6	4.5	11.3	36.2	49.4	2.4	3.23	.14	.32	.46	28.9	32.0
4 A	104.5	81.6	5.3	4.2	9.1	12.2	103.3	101.0	-14.3	3.26	.30	.02	.32	27.2	27.1
5 A	97.9	97.7	5.2	5.2	--	17.1	38.4	18.1	-31.3	3.06	.17	.09	.26	(\$1.55)*	34.6
6 A	103.4	89.2	5.7	4.9	7.5	19.3	13.9	88.7	70.6	3.44	.25	.03	.28	31.7	23.3
7 B	93.7	86.4	5.1	4.7	3.3	19.1	39.8	77.5	22.8	3.27	.28	.15	.43	27.8**	31.3
8 A	92.5	92.5	4.8	4.8	--	17.1	111.7	31.3	-100.0	3.46	.17	.13	.30	--	28.0
9 B	93.1	86.1	7.1	6.5	16.7	23.7	0.0	25.4	1.8	3.30	.00	.30	.30	31.8	--
10 B	103.6	85.2	6.2	5.1	27.1	25.2	31.4	80.9	24.0	3.28	.02	.35	.37	27.5	27.9
Averages															
1966	98.5	88.4	5.5	4.9	9.2	17.3	45.2	57.9	-2.1	3.28	.16	.18	.34	29.3	29.5
1965	114.8	101.1	6.1	5.4	20.5	21.5	47.3	79.2	13.1	3.32	.27	.08	.35	23.2	26.8
1964	115.8	93.1	6.2	5.0	10.6	22.9	54.7	90.2	11.0	3.36	.23	.18	.42	28.3	19.6
1963	116.6	93.9	6.0	4.9	8.4	20.4	57.7	90.3	12.2	3.15	--	--	.66	32.9	23.4

* 20-week-old started pullets. ** Also 16-week-old started pullets at \$1.39 each, and 21-weeks-old at \$1.56.

Many important management factors which determine profits are shown above. One of the most important is a good feed conversion; that is, a relatively low amount of feed per dozen eggs sold (shown in column 5). Average for the 10 cooperators was 4.9 pounds of feed per dozen eggs sold. Feed efficiency is good when egg production is high. Mortality in the lay flock shows a wide variation, from 9.0 for cooperator 2 to 25.2 for cooperator 10.

When flocks are operating with little or no change in the number of hens, the percentage died and culled approximates the percentage added. On an all-pullet flock, figures such as those shown for cooperator 4 would be expected. In most of the other records it appears that some hens are maintained for more than one year's egg production. The cost of all feed purchased by the 10 cooperators averaged \$3.28 cwt., with a range from \$3.06 to \$3.46. Labor averages approximately one-third of an hour per hen. Seven of the 10 cooperators purchased replacements only as baby chicks, one purchased both baby chicks and started pullets, one purchased only started pullets, and one purchased no replacements.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND ECONOMICS

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