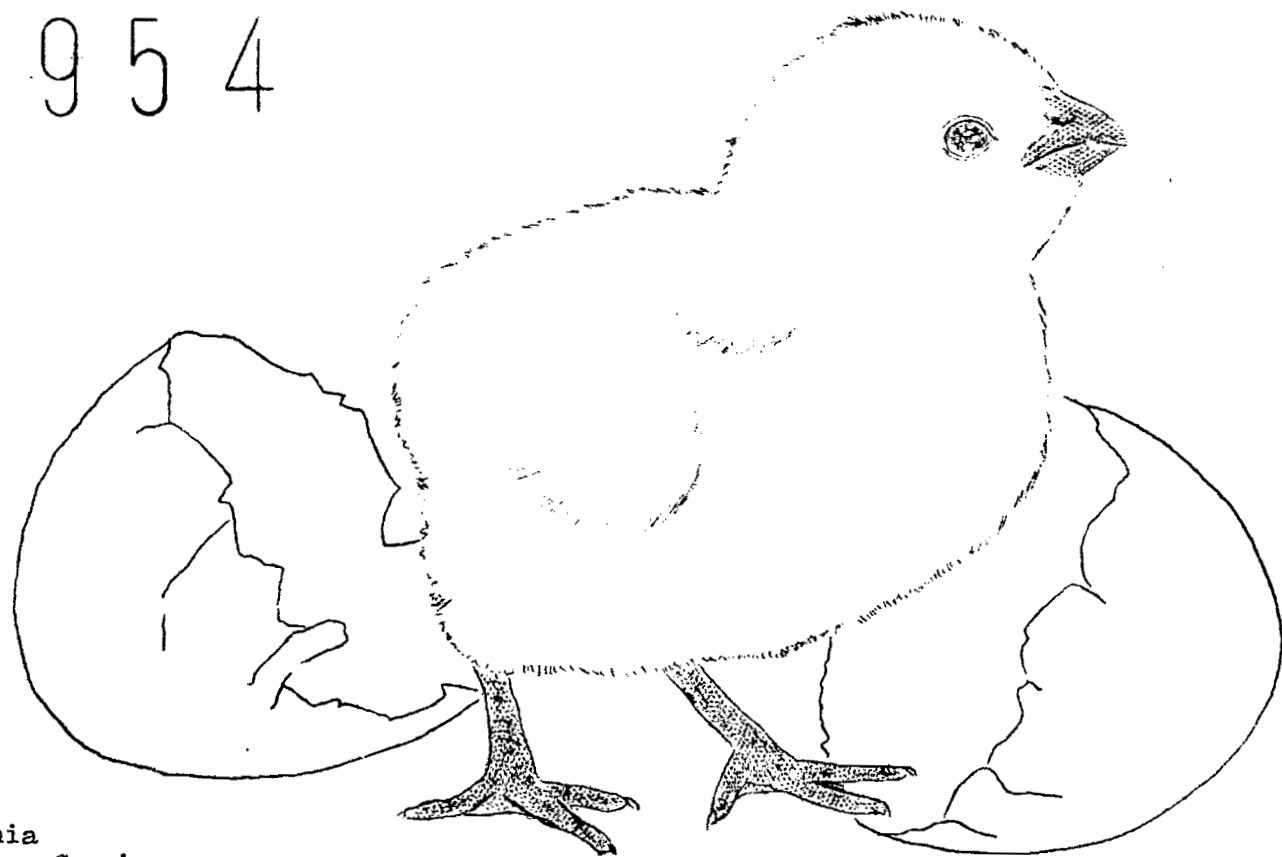


27th SACRAMENTO COUNTY

PY-SV-54-3

POULTRY MANAGEMENT STUDY

1954



University of California
College of Agriculture Extension Service
310 Old Post Office Building
Sacramento, California

HISTORY

This study started March 1, 1928, with 26 co-operating poultrymen located in the Rio Linda district of Sacramento County. This year, 1954, completes 27 years of records in this area. Two ranches have been in the study for the entire 27 years. Three have been in the study for 21 years or more, and four for 16 years or more indicating the permanence of poultry production in this area. Several of the older ranches are being operated by the second generation.

Compiled by:

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The flocks in this study have nearly all been of the White Leghorn breed. Most of the feed has been purchased through the Rio Linda Poultry Producers Association, a local Feed Co-operative. Most of the egg sales are through the Poultry Producers of Central California, except for hatching eggs sold to hatcheries. Management practices have varied some from ranch to ranch, but there has been rather universal adoption of practices as soon as their worth was proven. The 27 years of the study have seen a gradual change in practices to meet changing economic and technical conditions. Few radical changes have been made but rather a change to sound economic practices which were able to take advantage of the changing conditions.

Trends observed through Management Study conducted during the past 25 years. See Table I.

1. Size of flocks - Average number maintained per ranch has quadrupled.
2. Egg Production - Increased from a low of 153 eggs in 1932 to a high of 203 in 1954 or a 33% production increase.
3. Mortality - Due to breeding, disease control and management, death losses have been cut in half.
4. Culling - Each year, culling has increased, and now most poultrymen maintain "all pullet" flocks which contributes to the increased egg production and egg quality.
5. Feed Consumption - Has increased from 100 pounds per hen per year to 120 pounds per hen due to higher pullet replacement and increased egg production.
6. Labor - By increasing the size of their flock, and by using labor saving equipment, poultrymen have cut their average hours of labor required from two hours per hen to one hour and twelve minutes per hen per year.
7. Income - Due to high production costs and low egg prices, 1954 showed a farm income loss of 8 cents per hen, the only average farm income loss in 25 years of record keeping.

DEFINITIONS:

Management Income - Total income minus total expense including family labor and interest on investment as expenses.

Farm Income - Total income minus cash and depreciation costs (not including family labor) and interest on investment as expenses.

Egg-Feed Ratio - The pounds of feed which can be purchased with a dozen eggs.

TABLE 1. SUMMARY OF SACRAMENTO COUNTY POULTRY MANAGEMENT STUDY, 1930-54

Record Year	No. Records	Hens per Flock	Eggs per Hen	Laying Flock		Lbs. Feed per Hen	Hrs. Labor per Hen	Value per Dozen			Cost Feed per Cwt.	Egg Feed Ratio	Value per Hen			
				% Mortality	% Culled			Av. Price	Net Cost	Net Income			Total Income	Total Cost	Management Inc.	Farm Income
1930	43	1362	168	19	56	101	1.8	23.3	19.5	3.8	1.95	11.9	4.01	3.47	.54	1.53
1931	54	1260	164	26	59	99	1.9	19.7	18.9	.8	1.51	13.2	3.19	3.07	.12	1.09
1932	58	1232	153	23	64	100	1.9	17.4	19.5	-2.1	1.28	13.5	2.49	2.77	-.28	.63
1933	30	1453	157	27	61	104	2.0	16.5	17.5	-1.0	1.35	11.6	2.59	2.73	-.14	.59
1934	22	1580	158	25	70	108	2.2	20.8	17.9	2.9	1.55	12.5	3.50	3.09	.41	1.14
1935	24	1697	166	24	61	118	2.2	23.2	17.6	5.6	1.58	14.1	4.08	3.26	.82	1.44
1936	24	2022	165	25	66	108	1.8	23.2	19.6	3.6	1.64	13.5	3.53	3.01	.52	1.07
1937	20	2234	174	22	71	107	1.8	21.5	19.7	1.8	1.85	11.1	3.45	3.17	.28	.76
1938	24	2361	180	19	68	112	1.7	23.7	16.9	6.8	1.52	15.2	3.92	2.89	1.03	1.50
1939	26	2812	187	17	82	112	1.5	18.9	15.8	3.1	1.49	12.2	3.26	2.77	.49	.89
1940	25	3298	186	15	71	112	1.4	21.4	16.1	5.3	1.47	14.1	3.58	2.75	.83	1.19
1941	30	3422	175	15	73	116	1.5	29.2	19.3	9.9	1.75	16.1	4.74	3.25	1.49	1.86
1942	28	3819	172	16	74	118	1.4	36.6	24.6	12.0	2.09	16.9	5.69	3.92	1.77	2.26
1943	26	3913	177	14	83	117	1.6	42.1	25.8	16.3	2.36	17.2	6.87	4.41	2.46	2.99
1944	24	4106	185	18	91	121	1.7	39.6	28.3	11.3	2.74	14.1	6.95	5.15	1.80	2.35
1945	21	4291	178	14	85	121	1.6	43.7	30.7	13.0	2.82	14.9	7.38	5.38	2.00	2.56
1946	23	3817	175	13	98	127	1.6	44.2	40.4	3.8	3.59	12.4	7.61	6.79	.82	1.47
1947	21	4842	187	14	84	121	1.5	53.0	41.5	11.5	4.10	12.5	8.83	7.01	1.82	2.40
1948	21	4875	177	14	75	125	1.7	55.9	45.0	10.9	4.09	13.2	9.10	7.46	1.64	2.23
1949	24	4875	181	15	80	121	1.6	46.0	38.8	7.2	3.48	12.6	7.53	6.42	1.11	1.71
1950	22	5713	184	14	74	115	1.3	42.0	34.5	7.5	3.23	12.4	6.91	5.74	1.17	1.69
1951	24	5689	180	13	88	119	1.4	52.6	41.9	10.7	3.76	13.4	8.42	6.78	1.64	2.20
1952	22	6246	184	14	81	117	1.2	47.3	43.5	3.8	4.08	11.1	7.69	7.10	.59	1.11
1953	29	5513	190	12	81	119	1.3	50.7	44.0	6.7	3.85	12.7	9.02	7.93	1.09	1.84
1954	31	5124	203	11	93	120	1.2	34.1	38.7	-4.6	3.49	9.4	6.48	7.29	-.81	-.08
Av.	28	3502	176	18	76	114	1.6	33.8	27.8	6.0	2.50	13.3	5.64	4.71	.93	1.54

Income and Expense Per Hen - See Table II.

1. Total Income - Varied from a low of \$4.76 to a high of \$8.94 per hen this year.
 - a. Income from egg sales was largely responsible for total extremes with a low of \$4.34 to a high of \$8.03 per hen.
 - b. Percentage-wise - Income from poultry sales, manure and change of stock inventory show extreme variations.
2. Total Costs - Varied from a low of \$4.58 to a high of \$8.99 per hen.
 - a. Feed cost - Largest single expense item varies from a low of \$3.55 per hen to a high of \$6.83 per hen.
 - b. Labor cost varies in proportion to size of the operation.
 1. Small operators doing own work have low labor costs.
 2. Medium sized operators often are not able to use full time help efficiently.
 3. Large operators usually depend entirely on hired labor and costs per hen are high.

Farm Income - Greater variations occurred between individual ranches in 1954 than between averages over the 25 year period.

Management or net income - Shows even a greater variation.

* The following pertains to Table III:

Size of flock: Large - over 7,000; Medium - 4,000 to 7,000; Small - under 4,000.

Pounds Feed per Hen:

Total: Pounds of feed fed divided by the average number of hens.

Estimated for pullets: Number of pullets raised times 25 divided by average number of hens.

Estimated for hens: Total minus estimated for pullets.

TABLE II. INCOME AND EXPENSE PER HEN

Rank	Income					Cash and Depreciation Costs						Farm Income	Non-cash Costs		Management Income
	Egg Sales	Poultry Sales	Manure	Change Stock Inv.	Total	Feed	Hired Labor	Chix	Misc.	Deprec.	Total		Family Labor	Interest	
1	6.18	.51	.03	.37	7.09	3.87	.08	.43	.61	.34	5.33	1.76	.56	.35	.85
2	6.11	.44	.03	.61	7.19	4.24	.40	.39	.44	.21	5.68	1.51	.51	.27	.73
3	6.05	.13	-	.30	6.48	3.81	-	.35	.28	.14	4.58	1.90	1.12	.24	.54
4	5.68	.30	.02	.09	6.09	3.62	.65	.27	.54	.19	5.27	.82	.51	.17	.14
5	8.03	.48	.01	.42	8.94	5.87	.09	.91	.92	.15	7.94	1.00	.88	.14	-.02
6	5.57	.50	.02	-.09	6.00	3.94	.69	.23	.65	.09	5.60	.40	.42	.13	-.15
7	5.42	.64	.09	-.29	5.86	3.55	.50	.51	.55	.18	5.29	.57	.66	.11	-.20
8	5.81	.46	.02	.17	6.46	4.02	.59	.49	.47	.34	5.91	.55	.48	.33	-.26
9	6.86	.35	.07	-.10	7.18	3.92	.83	.34	.73	.83	6.65	.53	.46	.34	-.27
10	6.90	.75	.03	-.28	7.40	5.76	-	.13	.41	.24	6.54	.86	.93	.29	-.36
11	6.49	.28	.02	.16	6.95	4.26	.44	.34	.90	.50	6.44	.51	.42	.48	-.39
12	5.33	.24	.02	.19	5.78	3.97	.35	.27	.56	.23	5.38	.40	.61	.21	-.42
13	5.82	.40	.07	-.38	5.91	3.75	1.28	.60	.35	.17	6.15	-.24	-	.18	-.42
14	5.82	.39	.07	.28	6.56	4.02	1.02	.41	.63	.22	6.30	.26	.41	.31	-.46
15	5.87	.37	.02	.73	6.99	4.42	.62	.56	1.00	.40	7.00	-.01	.44	.31	-.76
16	4.34	.16	.01	.25	4.76	3.57	.72	.34	.42	.23	5.28	-.52	.10	.17	-.79
17	5.72	.44	.03	.04	6.23	4.30	.03	.40	.76	.27	5.76	.47	1.02	.28	-.83
18	5.63	.45	.05	.38	6.51	4.54	.51	.79	.59	.33	6.76	-.25	.40	.30	-.95
19	6.05	.38	.04	.16	6.63	4.34	1.09	.51	.79	.30	7.03	-.40	.34	.25	-.99
20	7.13	.58	.04	.14	7.89	6.07	.89	.53	.36	.64	8.49	-.60	.13	.27	-1.00
21	5.69	.56	.05	.26	6.56	4.25	1.00	.68	.70	.47	7.10	-.54	.30	.37	-1.21
22	5.58	.57	.05	-.17	6.03	3.85	.94	.44	1.02	.45	6.70	-.67	.26	.36	-1.29
23	5.98	.49	.05	.03	6.55	4.08	1.28	.45	1.32	.24	7.37	-.82	.13	.35	-1.30
24	5.25	.58	.02	-.27	5.58	4.16	.27	.43	.71	.16	5.73	-.15	.97	.22	-1.34
25	5.95	.29	.06	.21	6.51	4.42	.73	.33	.91	.51	6.90	-.39	.75	.20	-1.34
26	6.04	.36	.04	.17	6.61	4.42	1.10	.61	1.12	.19	7.44	-.83	.44	.20	-1.47
27	6.22	.46	.02	-1.13	5.57	4.63	.14	-	.93	.34	6.04	-.47	1.25	.34	-2.06
28	6.55	.58	.05	-.03	7.15	5.02	.95	.38	1.49	.84	8.68	-1.53	.60	.41	-2.54
29	6.51	.76	.02	-.01	7.28	6.05	1.25	.70	.76	.23	8.99	-1.71	.62	.33	-2.66
30	7.23	.46	-	.84	8.53	6.83	.05	.36	.98	.49	8.71	-.18	2.03	.48	-2.69
31	5.84	.58	.11	.02	6.51	5.09	-	.97	1.35	.19	7.60	-1.09	1.32	.97	-3.38
Hi 15	5.98	.39	.04	.13	6.54	4.03	.63	.42	.61	.30	5.99	.55	.46	.26	-.17
Lo 16	5.88	.49	.04	.03	6.44	4.39	.86	.49	.92	.36	7.02	-.58	.42	.32	-1.32
Av. All	5.92	.45	.04	.07	6.48	4.23	.76	.46	.78	.33	6.56	-.08	.44	.29	-.81

TABLE III. PRODUCTION FACTORS AND MANAGEMENT PRACTICES

Rank	Size of Flock	Laying Flock			Price per Cull Hen	Hours per Hen	*Pounds Feed per Hen			% Mash	Cost per Cwt.			Average Cost Pullet Chicks	% Chix Died
		% Died	% Cull ed	% Add- ed			Est. for Pullets	Est. for Hens	Mash		Grain	Av.			
1	M	5	103	84	.49	.6	115	21	94	50	3.76	2.84	3.30	34.0	7
2	M	13	101	98	.43	.9	127	25	102	52	3.73	2.84	3.30	31.5	13
3	S	11	27	27	1.25	1.1	111	7	104	65	3.74	2.70	3.38	44.0	22
4	M	5	68	72	.44	1.0	105	18	87	49	3.74	3.09	3.41	33.1	13
5	S	6	101	143	.47	1.0	135	36	99	100	4.70	—	4.70	50.0	19
6	M	15	88	75	.56	1.1	113	19	94	51	3.83	3.01	3.43	31.7	20
7	S	9	135	54	.47	1.1	101	13	88	57	3.84	2.89	3.43	35.0	3
8	M	17	78	108	.54	1.1	118	27	91	50	3.85	2.89	3.37	36.9	11
9	M	13	68	74	.52	1.3	110	18	92	75	3.75	2.83	3.52	31.0	7
10	S	3	17	34	.62	.9	108	9	99	100	5.24	—	5.24	18.8	4
11	M	7	66	120	.42	.9	115	30	85	63	3.94	3.15	3.65	56.1	4
12	L	12	60	88	.41	.9	112	21	99	57	3.92	2.98	3.52	30.1	11
13	L	15	73	61	.45	1.4	110	15	95	50	3.70	2.85	3.28	82.0	12
14	M	17	86	106	.46	1.3	115	25	90	52	3.81	2.99	3.41	34.0	13
15	M	6	90	124	.41	1.2	124	31	93	54	3.88	3.11	3.53	32.3	15
16	M	7	38	85	.41	.8	105	21	84	52	3.73	2.96	3.36	36.3	24
17	M	9	114	108	.38	1.0	123	27	96	59	3.73	3.03	3.44	35.1	6
18	M	15	116	134	.38	1.1	135	33	102	53	3.90	2.71	3.34	43.2	23
19	L	10	88	127	.44	1.3	125	32	93	49	3.80	3.06	3.42	34.4	14
20	M	19	118	112	.50	1.0	137	28	109	100	4.42	—	4.42	41.7	5
21	L	16	101	113	.53	1.3	125	28	97	49	3.74	2.93	3.33	37.7	16
22	L	8	101	103	.55	1.4	110	26	84	55	3.92	2.91	3.47	35.7	16
23	L	9	98	105	.47	1.5	122	26	96	50	3.76	2.97	3.36	34.4	17
24	M	11	130	112	.44	1.2	119	28	91	53	4.03	2.79	3.44	35.8	6
25	S	8	75	160	.37	1.5	124	40	84	62	3.81	3.03	3.51	34.8	6
26	S	11	94	119	.37	1.7	132	30	102	54	3.71	2.83	3.31	32.0	18
27	S	12	117	98	.39	1.4	132	24	108	51	3.97	2.98	3.48	—	22
28	S	8	119	121	.49	1.3	143	30	113	54	3.89	3.00	3.48	34.0	14
29	S	18	185	163	.41	1.9	142	41	101	87	4.42	2.99	4.23	38.9	11
30	S	10	59	150	.73	2.1	145	38	107	100	4.75	—	4.75	32.4	11
31	S	32	115	176	.48	1.3	145	44	101	53	4.01	2.83	3.45	40.5	21
Hi 15	4,771	11	81	89	.47	1.1	114	22	92	57	3.86	2.95	3.47	38.9	12
Lo 16	5,456	11	102	115	.46	1.3	124	29	95	57	3.94	2.61	3.50	36.5	15
Av. All	5,124	11	93	103	.46	1.2	120	26	94	57	3.91	2.93	3.49	37.5	14

TABLE IV. EGG PRODUCTION AND SALES

Rank	Eggs Per Hen	Per Cent of Eggs Sold		Per Cent of Market Eggs Sold			% Fall Eggs	% Production During Fall	% Fall Hens of Av.	% Pullets	Price Market Eggs	Per Dozen			
		Mar-ket	Hatch-ing	Large	Medium	Small						Price Hatch Eggs	Av. Price Eggs	Net Cost	Mgt Income
1	217	100	-	49	27	24	34	58	105	100	33.5	--	33.5	28.9	4.6
2	210	100	-	48	27	25	39	60	112	100	33.6	--	33.6	29.6	4.0
3	179	100	-	72	24	4	26	38	100	56	39.7	--	39.7	36.1	3.6
4	197	100	-	47	28	25	31	46	109	67	33.4	--	33.4	32.6	.8
5	250	100	-	58	28	14	40	68	120	98	35.7	--	35.7	35.8	-1.1
6	185	96	4	46	28	26	34	46	112	77	33.2	73.4	34.9	35.8	-1.9
7	192	100	-	54	17	29	29	48	95	61	32.6	--	32.5	33.7	-1.2
8	208	100	-	42	32	26	39	58	114	100	32.7	--	32.7	34.2	-1.5
9	213	100	-	63	26	11	36	57	111	91	40.7	--	40.5	42.1	-1.6
10	182	91	-	84	15	1	27	43	93	42	44.9	--	45.6	48.0	-2.4
11	234	89	11	40	29	31	42	63	129	100	30.0	59.2	33.1	35.1	-2.0
12	189	98	2	47	24	29	35	46	118	69	33.4	75.0	34.0	36.7	-2.7
13	163	75	25	53	18	29	17	25	93	81	31.0	74.1	41.8	44.8	-3.0
14	207	100	-	48	31	21	39	54	121	100	34.1	--	34.1	36.8	-2.7
15	209	100	-	44	32	24	42	58	124	100	32.8	--	32.7	36.9	-4.2
16	165	100	-	46	24	30	41	43	129	90	31.2	--	31.1	36.7	-5.6
17	203	100	-	45	32	23	36	53	112	100	33.4	--	33.4	38.3	-4.9
18	201	98	2	38	32	30	38	56	113	68	31.6	71.7	32.3	37.7	-5.4
19	220	100	-	43	29	28	39	57	121	100	31.3	--	31.3	36.4	-5.1
20	240	99	-	51	28	21	33	63	104	95	33.2	--	33.3	37.9	-4.6
21	193	95	5	39	30	31	36	47	118	76	31.0	72.6	33.3	40.4	-7.1
22	194	93	7	43	28	29	38	48	123	83	31.4	72.4	34.1	42.0	-7.9
23	207	96	4	45	25	30	33	50	112	76	32.4	72.5	34.1	41.5	-7.4
24	184	97	3	52	24	24	34	43	118	74	33.0	74.1	34.1	42.8	-8.7
25	224	100	-	39	36	25	54	61	159	100	31.8	--	31.7	38.8	-7.1
26	219	100	-	45	27	28	41	61	119	100	31.3	--	31.2	38.8	-7.6
27	204	100	-	47	31	22	35	57	104	100	34.5	--	34.4	45.8	-11.4
28	210	100	-	44	32	24	44	58	132	100	33.1	--	33.0	45.8	-12.8
29	215	100	-	61	25	14	37	57	113	71	36.2	--	36.2	51.0	-14.8
30	233	100	-	56	30	14	40	65	120	100	36.7	--	36.6	50.2	-13.6
31	206	100	-	38	30	32	45	59	128	82	31.8	--	31.7	50.0	-18.3
Hi 15	201	96	4	49	27	24	35	52	112	85	33.7	70.4	35.2	36.2	-1.0
Lo 16	204	97	3	45	28	27	37	52	118	84	32.3	72.6	33.3	40.8	-7.5
Av. All	203	97	3	47	28	25	36	52	115	85	32.9	71.4	34.1	38.7	-4.6

TABLE V. COMPARISON OF SACRAMENTO WITH OTHER COUNTIES FOR 1954

Record year ending	Alameda	Napa	Orange	Placer	San Bern- ardino	San Diego	S. Cruz Monterey S. Benito	Sonoma	Butte	Sacramento
	December 31							Jan. 31	Feb. 28	
Number of records	22	7	6	7	19	38	12	27	12	31
Average number of hens	2,638	1,493	3,324	2,469	2,571	3,719	1,932	2,293	1,017	5,124
Eggs per hen	208	212	250	221	229	235	218	228	235	203
Per cent pullets	82	78	93	89	87	-	83	86	91	85
Per cent mortality	22	25	9	14	12	14	17	13	17	11
Per cent culled	98	91	97	99	108	86	87	96	106	93
Hours labor per hen	1.0	1.6	1.4	.9	1.2	1.0	1.4	1.2	1.7	1.2
Pounds feed per hen	134	132	144	137	142	123	143	135	129	120
Per cent mash	68	66	100	74	91	100	59	56	83	57
Cost feed per cwt.	3.94	3.82	4.05	3.91	3.91	3.95	3.99	3.79	4.13	3.49
Average price eggs	42.0	39.1	38.6	37.7	38.4	36.8	42.8	40.7	37.6	34.1
Net cost per dozen	41.6	42.0	40.2	34.3	39.6	34.1	41.9	38.3	39.7	38.7
Management income per dz.	.4	-2.9	-1.6	3.4	-1.2	2.7	.9	2.4	-2.1	-4.6
Income per hen										
Egg sales	7.52	6.94	8.03	7.45	7.32	7.12	7.87	8.05	7.57	5.92
Poultry sales	.53	.44	.48	.52	.62	.45	.61	.57	.63	.45
Manure	.06	-	.06	.09	.09	.04	.12	.04	.04	.04
Change stock inventory	-.04	.05	.37	.61	.16	.12	.32	.43	.09	.07
Total income	8.07	7.43	8.94	8.67	8.19	7.73	8.92	9.09	8.33	6.48
Cash & Depreciation costs										
Feed	5.31	5.08	5.82	5.42	5.61	4.86	5.73	5.15	5.39	4.23
Chicks	.46	.56	.60	.64	.62	.46	.38	.60	.55	.46
Miscellaneous	.45	.42	.63	.51	.45	.40	.69	.62	.55	.78
Depreciation	.32	.22	.35	.24	.25	.34	.27	.27	.31	.33
Hired labor	.14	.47	.45	.14	.37	.40	.11	.24	.24	.76
Total	6.68	6.75	7.85	6.95	7.30	6.46	7.18	6.88	7.04	6.56
Farm income	1.39	.68	1.09	1.72	.89	1.27	1.74	2.21	1.29	-.08
Family labor	1.07	.99	1.16	.83	.87	.54	1.30	1.45	1.49	.44
Interest	.25	.21	.26	.22	.25	.20	.28	.29	.23	.29
Management income	.07	-.52	-.33	.67	-.23	.53	.16	.47	-.43	-.81