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POULTRY MANAGEMENT PRACTICES

AS REFLECTED IN

RESULTS OF MANAGEMENT COST STUDY

1960

UNIVERSITY OF CALIFORNIA
AGRICULTURAL EXTENSION SERVICE
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Prepared by:

**Lloyd P. Sharp, Farm Advisor
University of California
Agricultural Extension Service
Room 7, Post Office Building
Riverside, California**

UC Cooperative Extension

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INTRODUCTION

A brief summary of the 1960 Riverside County Poultry Management Study is presented in this leaflet together with a description of the management practices used by the different poultry cooperators in the study.

It is interesting to compare the management practices and note the influence of management upon profit and loss as reflected in the results of this study. In order to realize the greatest value from a management study of this kind, it is necessary to carefully analyze and weigh all management factors which contribute to the success or failure of a poultry enterprise.

The importance of following sound brooding and vaccination practices as related to successful poultry management is briefly discussed in this leaflet.

TABLE I - INCOME AND EXPENSE PER HEN

Ranch No. Flock Size*	Income					Cash and Depreciation Costs							Net Farm Inc.	Non-Cash Costs		Total Cost	Management Income
	Egg Sales	Cull Hens	Misc. Inc.	Stock Inv. Chng.	Total Inc.	Feed	Chicks, Start. Pull.	Med- ica- tion	Hired Labor	Misc.	Depre- cia- tion	Total		Family Labor	Int.on Invest.		
20 B	7.24	.14	- -	1.20	8.58	3.54	.72	.21	.14	.17	.48	5.26	3.32	.63	.26	6.15	2.43
19 D	6.92	.10	.01	.48	7.51	3.20	.31	.02	.75	.46	.67	5.41	2.10	- -	.38	5.79	1.72
8 A	7.23	.21	- -	.46	7.90	3.97	.50	.02	.21	.33	.26	5.29	2.61	.70	.37	6.36	1.54
4 B	6.21	.15	- -	.11	6.47	3.32	.46	.17	- -	.16	.26	4.37	2.10	.57	.20	5.14	1.33
5 D	6.30	.14	.02	.13	6.59	3.31	.32	.04	.35	.38	.37	4.77	1.82	.17	.33	5.27	1.32
3 A	6.48	.15	- -	-.04	6.59	3.82	.32	.02	.65	.20	.15	5.16	1.43	.43	.16	5.75	.84
6 C	6.63	.18	- -	.29	7.10	3.88	.28	.06	.96	.62	.27	6.07	1.03	- -	.24	6.31	.79
1 C	6.48	.12	.06	-.22	6.44	3.86	.35	.11	.22	.13	.23	4.90	1.54	.76	.26	5.92	.52
18 A	6.60	.19	- -	.09	6.88	3.94	.41	.33	- -	.19	.42	5.29	1.59	.85	.33	6.47	.41
12 D	6.14	.14	- -	-.03	6.25	3.60	.40	.12	- -	.37	.53	5.02	1.23	1.01	.44	6.47	-.22
2 A	5.31	.19	- -	.17	5.67	3.83	.37	- -	.01	.36	.14	4.71	.96	1.12	.20	6.03	-.36
10 C	6.08	.29	.03	.11	6.51	3.81	.77	.02	.55	.57	.48	6.20	.31	.44	.37	7.01	-.50
16 A	6.53	.23	- -	.44	7.20	4.20	.45	.15	- -	.28	1.14	6.22	.98	1.49	.47	8.18	-.98
H1.6	6.76	.13	.01	.45	7.35	3.36	.40	.07	.45	.34	.50	5.12	2.23	.25	.33	5.70	1.65
Low7	6.33	.20	.02	.12	6.67	3.86	.45	.09	.47	.44	.38	5.69	.98	.54	.31	6.54	.13
Avg.	6.62	.15	.01	.35	7.13	3.52	.42	.07	.46	.38	.46	5.31	1.82	.34	.32	5.97	1.16

*A: Below 5,000 B: 5,001 - 10,000 C: 10,001 - 15,000 D: 15,001 - up

For the cooperator's identification, each flock is assigned a ranch number. Letters of the alphabet indicate flock size. Flock records in the study are ranked according to management income from highest down to the lowest.

It is encouraging to note that all of the cooperators showed a Farm Income per hen and all but four showed a management income. Medication is an expense item that bears watching. Medication should be used only when necessary, but don't use it continually.

TABLE II. BROODING, MANAGEMENT, AND HOUSING

Serial No.	Number Broods	Months Brooded	Bought Started Pullets	Type Brooders Used	Age Artificial lights started	Coxy Control	Age Debeaked	Housing* Layers
20	4	Ja, Ap, S, N.	3 broods 3-5 mos.	Gas - Fl. Canopy	5 mos.	S.Q.- Gro.Mash	Growing birds	MC
19	8	A, Oc, Ja, F, Ma, Ju, S, N.		Gas - Hot Water on wire	6 wks, 2 hrs. Eve.	None	Growing birds	MC
8	7	Ja, Mar, Ma, Ju, Oc, D, S.		Electr. - On wire	16 wks	None	Day old	50% S 50% MC
4	10	Ja, Mar, Ap, June, Jul, A, S, Oc, N, D.		Gas - Hot Water on wire	day old	None	in lay cages	MC
5	9	A, Oc, N, Mar, Ma, Jul, A, Oc, D.		Gas - on wire	18-20 wks.	None	Growing birds	MC
3	3	Ja, Ap, S.		Gas - Fl. Canopy	5 mos.	in Gro.Mash	Growing birds	Floor
6	6	S, D, Mar, Jun, A, N.		Gas - Fl. Canopy Infra-red bulbs	18-20 wks.	None	Growing birds	S & MC
1	9	A, Oc, D, Ap, Jun, A, Oc, D, F.		Gas - Hot Water on wire	6 mos.	None		MC
18	6	S, D, Mar, Jun, S, D.		Gas - Fl. Canopy	10% 21-24 wks.	Megasul Gro.Mash	6 wks.	Floor
2	9	Ap, Oc, D, F, Mar, Jul, A, N.		Electr. on wire Electr. Fl. Canopy	18 wks.	None	Growing birds	MC
10	13	A, A, Oc, F, Ap, Ma, A, Oc, D, Ja, F, Mar, Ap.	3 broods 3 mos.	Electr. Fl. Canopy	6 mos.	None		MC
16	16	Jul, A, S, Oc, N, D, Ja, Mar, Ap, M, Ju, Jul, A, S, N, Mar.		Gas - on wire	10 wks.			S
12	8	A, Oc, N, Ja, Ap, Jun, Oc, Oc.		Electr. on wire	16-18 wks.		Growing birds	MC

*Key: S - Single Cages (1 bird) MC - Multiple Cages (2 - 6 birds)

Listed in the above table are the management practices, different methods of brooding, and types of cages used in housing layers on the ranches represented in this study.

Checking the above factors with the production costs and farm incomes of these different operations may be helpful in making management decisions relative to needed changes in management practices.

TABLE III. IMMUNIZATION, DISEASE PROBLEMS, AND MORTALITY

Serial No.	NEWCASTLE			Coryza C.R.D. Killed Bacterin	Tracheitis	Bronchitis	Fowl Pox	DISEASE HISTORY			Per cent Mortality	
	Mild Strains		Wing-Web Roakin & MK 107					Out-break	Treatment	Lab. Diagnosis	Chixs	Hens
	I B	LaSota 717										
20	Water 12 das. 9wks.		14 wks.		Br. 14 wks.	Water 4wks.	(Pigeon P.) W.W. 19 wks.	None			15.9	9.4
19	Intraoc. 3 wks.		12 wks.		Br. 8 wks.	Water 4das. Eye 10wks.	W.W. 14 wks.	Bronc.	Antibiotic	yes	1.3	8.1
8	Intraoc. 10 das.		13 wks.		Br. 10 wks.		W.W. 10 wks.	None			3.5	7.8
4		Intra M. 3½ wks. Wa. 3½ mos.		Intra M 2 wks.	Drop 2, 6wks. Br. 3 mos.		Flank 1 da.	Yes	Re-vac. for Trach.	no	20.8	17.6
5		Intra M. 4 wks.	14 wks.		Br. 7 wks.	Eye, 7 das. Eye, 12wks.	W.W. 1 da.	None			9.6	20.3
3	Intraoc. 3 das.		12 wks.		Br. 12 wks.	Water 10 das.	W.W. 8 wks.	None			7.6	8.1
6	Water 21 das.		14 wks.	Intra M. 7 wks.	Br. - -	Water 7 das Water 8wks.	W.W. 6 wks.	Yes			1.4	8.1
1	Intraoc. 1 wk.		10 wks.		Br. 7 wks.	Eye 3 wks. Eye 12wks.	W.W. 16 wks.	Yes	Strep, Shots TNIO-NF180 SQ.	no	40.9	27.7
18	Intraoc. 2 wks.		12 wks.	14 wks.	Br. 8 wks.	Eye 4 das. Eye 14wks.	Thigh 1 da. 8wks.				3.2	15.2
2			7 wks.				W.W. 14wks.				10.3	7.6
10	Intra N. 4 wks.		3-4 mos.		Br. 2-3mos.	Intra N 2 wks.		Bact.	High level Au-mycin		9.6	11.1
16	Intraoc. 4 wks.		9 wks.		Br. 6 wks.	Water 5das. Intraoc. 12 wks.	W.W.	Colds	Twin Biotics	no	10.6	6.6
12	Water 4 wks.	Intra.M. 11 wks.			Br. 16&18 wks.	Water 5das. Water 9wks.	W.W. 6 wks.	None			8.5	21.1

The above chart to be of value should be checked with the results in Table I.

TABLE IV. RESULTS OF POULTRY MANAGEMENT COST STUDY FOR 1960 AND 1959

	Average of 13 Ranches		Average of 14 Ranches	
	Per Hen	Per Dozen	Per Hen	Per Dozen
	-1960-		-1959-	
INCOME				
Egg Sales	6.62	.3383	5.89	.3001
Cull Hens	.15	.0077	.22	.0110
Miscellaneous	.01	.0006	.03	.0013
Stock Inventory Change	.35	.0177	.14	.0073
Total Income:	<u>\$7.13</u>	<u>.3643¢</u>	<u>\$6.28</u>	<u>.3197¢</u>
CASH AND DEPRECIATION COSTS				
Feed	3.52	.1802	4.06	.2069
Chicks, Started Pullets	.42	.0212	.44	.0223
Medication	.07	.0038		
Hired Labor	.46	.0234	.40	.0205
Miscellaneous	.38	.0193	.46	.0235
Depreciation	.46	.0234	.41	.0211
Total Cash & Depreciation Costs:	<u>\$5.31</u>	<u>.2713¢</u>	<u>\$5.77</u>	<u>.2943¢</u>
Net Farm Income	\$1.82	.0930¢	\$.51	.0254¢
NON-CASH COSTS				
Family Labor	.34	.0178	.66	.0337
Interest on Investment	.32	.0163	.29	.0146
Total Expense	<u>\$5.97</u>	<u>.3054¢</u>	<u>\$6.72</u>	<u>.3426¢</u>
Less Income Not Eggs	.51	.0260	.39	.0196
Net Cost of Eggs	<u>\$5.46</u>	<u>.2794¢</u>	<u>\$6.33</u>	<u>.3230¢</u>
Management Income	\$1.16	.0589¢	- \$.44	-.2290¢

Management Factors

	1960	1959		1960	1959
Eggs Produced Per Avg. Hen	240	242	Estimated Feed Per Laying Hen	93.6	95.0
Per Cent Production	65.4	66.2	Feed Conversion	4.7	4.7
% Hen Mortality	12.4	11.6	Feed Cost Per 100 lbs. Feed	3.03	3.31
% Average Layers Culled	55.7	79.9	Hours Labor Per Hen	.6	.8
% Added to Laying Flock	90.0	107.5	All Labor Cost Per Hen	.80	1.06
% of Feed Cost to Total Costs	59.9	60.4	Egg-Feed Ratio	11.2	9.1
Total Pounds Feed Per Hen	116.1	121.9	Average Size of Flock	8,152	5,536

BROODING AND VACCINATION RECOMMENDATIONS

BROODING

It should be kept in mind that the frequency of brooding and the kind of vaccination program followed are two important factors affecting the control of diseases on every poultry ranch. Therefore, they can have a definite bearing upon the financial results at the end of the year.

We feel that brooding more chicks less often is a sounder program from the standpoint of controlling diseases on a poultry ranch. It helps to break a disease cycle and should aid in controlling disease outbreaks.

Brooding no oftener than every three or four months is a much sounder practice and one that can be recommended. It will also reduce the labor in brooding.

VACCINATION

The purpose of vaccination is to immunize birds against disease outbreaks. Therefore, it is important to use the most effective and safest practices. Most every poultryman has his own method of vaccinating; some of which are sound and should give good protection, while others give only partial protection.

We realize "every ranch is different" and that there is no perfect vaccination program to fit all conditions. However, there are certain principles to keep in mind on prevention and control of poultry diseases. Avoid short cuts and do not mix vaccines. The use of water vaccine for Newcastle is risky.

We have learned from both laboratory and field trials that it is advisable to complete as much of the vaccination program as possible while the chicks are in the brooder before the critical period of Chronic Respiratory Disease (CRD). CRD usually starts flaring up between 6 to 15 weeks of age. Vaccinating birds that are carrying a latent form of CRD with hot viruses may result in respiratory complications which are difficult to control and eradicate.

Laryngotracheitis (LT) and Fowl Pox are fully virulent viruses and therefore extreme caution should be taken in following directions for vaccinating and handling of these two vaccines.

The "vent-drop" method of vaccinating for LT is new. Its main advantage is the time saved and simplicity of application. The duration of immunity to LT with either the drop or brush method varies and is probably shorter with "vent drop" than with brush.

LT and Pox vaccines can cause an acute disease if they come in contact with the eyes or respiratory system. Never vaccinate birds unless they are healthy and free of colds.

The following vaccination program has been in use on many ranches in California for several years and has given satisfactory results when properly handled. It is an example of a sound vaccination program. It does not necessarily mean, however, that it is the only way to vaccinate.

Vaccine	Age	How	Where
Fowl Pox	1 day	Needle	Flank
Newcastle (<u>mild</u> live virus)	10 days	Drop	Eye
Bronchitis	2½ days	Drop	Eye
Newcastle (live virus - WW)	5 weeks	Needle	Wingweb
Tracheitis	8 weeks	Brush	Vent
Bronchitis*	12-14 weeks	Drop	Eye

* Vaccinate at least one month before birds start to lay.

Fowl pox vaccination may be given from one to ten days of age with satisfactory results or at 10 to 15 weeks. If, for example, one wishes to change the time of pox vaccination from one to five days of age, then the timing of other vaccinations as recommended above should be shifted accordingly.

Coryza immunization agents are being tried to help control the effects of infectious coryza. Depopulation, though often impractical, is the way to eradicate this disease, but the bacterins and vaccines may have a place in a control program. More research and time will tell -- they are definitely not the whole answer.

MANAGEMENT PRECAUTIONS

Any time a disease outbreak occurs on a poultry ranch it is important that three or four birds showing symptoms of the disease be taken to a qualified veterinarian or diagnostic laboratory for diagnosis. Don't Guess!

Where the immunity of Newcastle or Bronchitis in birds is in doubt, it is desirable to have a laboratory run a challenge on different age birds involved. Certain diagnostic tests, such as "HI" for Newcastle disease, challenge or "SN" for Bronchitis run at a veterinary laboratory can help eliminate guess work about the immune state of your flock.

For further information pertaining to poultry vaccination, consult University of California circular 455 entitled "Poultry Vaccination -- Why and How" by Dr. R. A. Bankowski, Professor of Veterinary Science at Davis and Dr. A. S. Rosenwald, Agricultural Extension Poultry Pathologist at Davis.

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