

AGRICULTURAL EXTENSION SERVICE
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

SCHOOL OF AGRICULTURE AND LIFE SCIENCES
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OFFICE OF EXTENSION POULTRY SCIENCE
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I am enclosing the final summary of the Twelfth North Carolina Random Sample Laying Test which you have requested. We believe that the information contained herein is a useful guide for evaluating egg production stocks and management systems. Please circulate this report among your associates so that they too may study its contents.

This is the first test which compared half litter-half slat floor with 8-bird cages during the growing phase and with 2-bird cages and 7-bird cages during the laying phase. All pullets housed in 2-bird cages were grown in 8-bird cages. These data provide both a comparison of the three management systems with identical birds and an opportunity to observe any stock interactions with a specific management system. The comparisons are being repeated in the Thirteenth Test.

Requests for reports from this test should be sent to PIEDMONT RESEARCH STATION, ROUTE 6, BOX 420, SALISBURY, N. C., 28144.

Very truly yours,

Grady A. Martin
Grady A. Martin
Extension Poultry Specialist

FINAL SUMMARY REPORT
TWELFTH NORTH CAROLINA RANDOM SAMPLE LAYING TEST
March 27, 1970, through August 8, 1971

The North Carolina Random Sample Laying Tests are conducted under the auspices of the Agricultural Extension Service of North Carolina State University and the Division of Research Stations of the North Carolina Department of Agriculture. Mr. T. R. Burleson, Jr., Route 6, Box 420, Salisbury, N. C., 28144, is Resident Manager of the tests and Dr. G. A. Martin, Department of Poultry Science, N. C. State University, Raleigh, N. C., 27607, is Project Leader. The purpose of the project is to assist poultrymen in evaluating stocks and management systems. A committee representing various poultry interests in the State advises the Steering Committee in establishing policies and practices which best serve this purpose.

Data are presented as Tables 12-4A-I, II, III and IV, 12-4B-I, II, III and IV, 12-4C-I, II, III and IV, and 12-4D-I, II, III and IV. Tables carrying the letters A, B, C and D in their numbers contain performance data for birds housed in 7-bird cages, on combination of litter and slats, in 2-bird cages and averaged across all three housing schemes, respectively. Due to the large number of items reported, each of the tables is divided into Parts I, II, etc., for the final report. These data



are for one year at one location. The ARS 44-79 series of publications summarizes all laying tests in the United States and Canada over two years and may be obtained from the USDA. It provides an excellent basis for comparing the performance of different stocks.

INFORMATION CONCERNING DATA REPORTED

Chicks for each entry were hatched at the test site from a 1080-egg sample which was taken by public employees in agriculture. The sample was taken as the eggs were gathered at a randomly chosen supply flock, except when nest sampling was not feasible, as shown in the stock list later. A maximum of 360 sexed pullets were divided into six equal lots. Two lots were reared on half slats-half litter over concrete floors at 1½ sq. ft. per pullet, and the other four lots were reared in randomly assigned blocks of seven 20-inch x 24-inch cages with 8 or 9 pullets per cage. First week mortality, sexing errors and accidental deaths were not charged against the entry. All pullets were debeaked at seven days of age and were vaccinated for Newcastle, bronchitis, pox and Avian Encephalomyelitis. The pullets which had access to litter were inoculated with coccidiosis oocysts and fed a coccidiostat at a low level. Commercial starting mash was fed during the first 56 days and commercial growing mash was fed for the following 94 days.

At 150 days of age, a maximum of 50 randomly chosen pullets were retained in the pens where they were grown at about 1.7 sq. ft. per pullet, a maximum of 50 randomly chosen pullets from each of two lots of cage-grown pullets were retained in the cage blocks where they were grown with seven pullets per 20-inch x 24-inch cage, and a maximum of 104 randomly chosen pullets from the other two cage-grown lots were assigned to four blocks of 10-inch x 18-inch cages in another house. Three commercial laying rations were fed during early, mid and late laying periods. Other management was as nearly commercial procedures as practical.

RESULTS

Part I of Tables

Entry No. is assigned at random to the particular entry.

Type Housing. 1 = 7-bird cages, 2 = slats and litter, 3 = 2-bird cages, 0 = average of three types.

Breeder is the name used to distinguish entries. Full information about the stock and source is listed elsewhere in this report.

Average bird weight is recorded in pounds at housing and at end of test.

Egg size distribution (%) was obtained by crediting each week's production to size classes in proportion to those observed in the total production of one day. Individual eggs weighing between 23 and 26 oz./doz. are classified as large. Other size classes are scaled up or down from large in blocks of 3 oz./doz.

Average egg weight was obtained by crediting all eggs for each week at the average size observed on one day by mass weight.

Age at 50% Production was the age of pullets on the first day of the first two consecutive days on which production reached or exceeded 50%.

Hen-Day Production Percentages represent the daily average number of eggs produced per 100 hens of the entry during the specified periods.

Eggs per Pullet Housed is the total number of eggs produced divided by the number of pullets housed.

Part II of Tables

Entry No. and Type Housing are the same as above.

No. of Birds are the net pullets or hens retained at the specified times. Sexing errors, first week mortality and accidental deaths are excluded.

Mortality is the percentage of birds that died during growing and laying periods and the average days per bird housed that were lost to mortality during the laying period.

Feed Consumed is average feed consumed for the 150 days of the growing period per 100 birds per day in laying period, per pound of eggs produced in laying period, and per dozen eggs laid.

Chick Price is the average of prices quoted for this stock in March of 1968, 1969 and 1970.

Values per Pullet Housed are the amounts charged and credited to the entry at 3-year monthly average feed prices quoted by North Carolina Department of Agriculture, at 3-year weekly egg prices quoted for Raleigh market by the Federal-State Market Service, and 3-year average fowl prices at Raleigh for the week in which the test terminated. IOFCC is income over laying feed cost and growing chick and feed cost. This does not represent net return since many other costs are involved in egg production.

Part III of Tables

Entry No. and Type Housing are the same as above.

% Loss (downgrades) was the percentage by which total egg value was reduced below Grade A value due to downgrades detected by candling. We express our appreciation to the personnel of the N. C. Department of Agriculture who provided candling service on one day of production each month. Market values of all eggs was calculated on the basis of these candling reports.

% Inclusion (Breakout): Blood spots and colored meat spots were observed by breaking one day's production from each pen at about 30-day intervals throughout the year. Spots exceeding 1/8 inch were classified as large and those of lesser size as small. Breakout data were not used for egg value calculations.

Candled Quality Percentages: Official egg graders from the N. C. Department of Agriculture candled the production of one day each month. The percentages reported are a summary of their findings and were used to determine egg value.

Haugh Units were measured one day each quarter of the year. Since this factor undergoes seasonal change, the quarterly averages and the annual average are given.

Breeder	Stock Identification	Sampling Procedure*	Source of Sample
Geo. M. Anthony & Sons Strausstown, Pa. 19559	Anthony W. Leg. WL SX	B	Geo. M. Anthony & Sons Poultry Farm Strausstown, Pa. 19559
Babcock Poultry Farm, Inc. Box 280, Ithaca, N.Y. 14850	Babcock B-305 WL 4W IN	A	Harrold's Chicks, Inc. Winterville, Ga. 30683
Babcock Poultry Farm, Inc. Box 280, Ithaca, N.Y. 14850	Babcock B-390 RIRxBPR BX	B	Beamsdale Hatchery Lawndale, N. C. 28090
Joe K. Davis Hatchery Box 27, Earl, N. C. 28038	Davis Reds RIR 3wX	A	Joe K. Davis Hatchery Box 27, Earl, N. C. 28038
Fisher Poultry Farm, Ltd. Ayton, Ontario, Canada	Fisher 105 WL 3wX	A	Fisher Poultry Farm, Ltd. Ayton, Ontario, Canada
Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca. 95351	Garber G-200 WL SX	B	Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca. 95351
Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca. 95351	Garber GX-291 CGxWL BX	B	Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca. 95351
Hubbard Farms, Inc. Walpole, N.H. 03608	Hubbard 101 WL 3wX	B	Hubbard Farms, Inc. Walpole, N. H. 03608
Hubbard Farms, Inc. Walpole, N. H. 03608	Hubbard Gld. Comet NHxSyN BX	A	J. C. Castlebury Poultry Farm Apex, N. C. 27502
Ideal Plty. Br. Farms, Inc. Box 591, Cameron, Tx. 76520	Ideal 236 SYNxWL BX	A	Ideal Poultry Breeding Farms, Inc., Box 591, Cameron, Texas 76520
Ind. Fm. Bu. Coop. Assn., Inc. Indianapolis, Indiana, 46204	Princess 55 WL SX	B	Co-op Breeding & Research Farm R#2, Lafayette, In. 47901
Kimber Farms, Inc., Box 2008 Fremont, Ca. 94536	Kimber K-137 WL SX	B	Nichols Plty. Farm, Inc., R#2, Jefferson City, Tn. 37760
A. C. Lawton & Sons, 70 North St. Foxboro, Mass. 02035	Lawton's Buff Sx.Lk. B RIRxWPR BX	B	Burling Hatchery, 38 S. 5th St. Oxford, Pa. 19363
N. Central Poultry Breeding Lab. Lafayette, In. 47900	Cornell RB (CRB) WL RB	-	Selected at Lafayette, Indiana
N. Central Poultry Breeding Lab. Lafayette, In. 47900	Cor.-Kent RB (CKRB) WL RBX	-	Selected at Lafayette, Indiana
Parks Poultry Farm R#4, Box 118, Altoona, Pa. 16601	Keystone B-1 WL 4wX	B	Parks Poultry Farm R#4, Box 118, Altoona, Pa. 16601
Shaver Poultry Breeding Farm,Ltd. Box 400, Galt, Ontario, Canada	Starcross 288 WL SX	B	Shaver Poultry Breeding Farm, Ltd. Box 400, Galt, Ontario, Canada
Tatum Farms Dawsonville, Ga. 30534	Tatum T-100 WL SX	A	Tatum Farms Dawsonville, Ga. 30534
Thornber Bros., Ltd., Mytholmroyd Halifax, Yorkshire, England	Thornber 808 WL 4wX	C	Thornber Bros., Ltd., Mytholmroyd Halifax, Yorkshire, England
Welp's Breeding Farm Bancroft, Io. 50517	Welp Line 937 WL 3wX	B	Welp's Breeding Farm Bancroft, Io. 50517

*A = Nest sample; B = Egg room sample; C = Incubator tray sample 12th Test

Table 12-4A-I - Bird Weight, Egg Size, Maturity and Production Data

Entry No.	Type Housing	Average Body Weight	% Egg Size, Distribution						Egg Production Rate	After 50% Production	Eggs per Pullet Housed						
			150 Days		500 Days		Pee Wee	Small	Medium	Large	Extra Large and Over	Av. Egg Wt. oz./doz.	Age at 50% Production				
Breeder																	
1	I Davis (Reds)	3.9	5.2	0.1	0.4	6.8	22.5	70.2	26.8	196.5	38.4	56.5	52.9	55.3	60.2	55.8	161.8
2	I Garber (GX 291)	3.4	4.5	0.1	0.9	10.6	22.9	65.5	26.4	174.5	58.9	67.8	58.1	47.1	45.0	62.1	146.3
3	I Ind. Fm. Bu. (Pr. 55)	3.1	3.3	0.1	0.4	6.7	22.0	70.8	26.8	172.0	61.4	61.7	57.3	54.0	53.3	61.2	189.6
4	I Welp's (937)	3.2	4.0	0.0	0.5	7.8	23.4	68.2	26.6	169.0	63.9	65.8	57.8	54.6	56.4	62.3	196.1
5	I Parks (Key. B-1)	3.3	4.3	0.0	0.3	5.0	18.6	76.1	27.2	176.5	61.7	70.9	60.2	59.2	58.3	66.8	195.6
6	I Babcock (B-390)	3.8	5.1	0.0	0.2	2.2	15.0	82.6	28.0	189.0	42.9	61.0	55.0	57.2	58.3	59.2	165.1
7	I Shaver (#X-288)	3.2	3.8	0.0	0.2	5.3	22.4	72.0	26.7	175.0	60.7	70.4	64.1	59.1	62.1	67.0	208.2
8	I Hubbard (Gld.C.)	3.7	4.6	0.0	0.1	3.3	11.6	85.0	28.5	181.0	53.4	63.6	60.1	55.4	58.2	61.9	182.1
9	I Babcock (B-305)	3.0	3.7	0.1	0.8	7.4	20.9	70.9	26.7	164.5	70.3	72.0	68.6	61.3	63.2	69.5	210.5
10	I Tatum (T-100)	3.0	3.8	0.1	1.1	7.8	21.6	69.4	26.3	165.0	70.3	72.5	70.5	63.0	61.4	70.9	202.4
11	I Thornber (808)	3.0	3.8	0.1	0.6	13.3	32.3	53.7	25.2	171.5	64.3	66.1	67.4	63.4	65.2	69.5	193.8
12	I Hubbard (101)	2.8	4.1	0.0	0.3	5.1	20.1	74.5	26.9	180.0	52.2	56.9	56.3	52.1	49.7	58.5	156.1
13	I Fisher (105)	2.8	3.8	0.0	0.2	5.4	18.6	75.8	27.4	175.5	57.1	64.2	61.3	57.3	55.7	63.7	176.2
14	I CNRPB (CRB)	3.3	4.7	0.2	2.2	12.3	32.0	53.3	25.4	185.0	45.6	54.6	54.5	51.8	55.3	56.2	137.1
15	I Lawton (Buff S.L)	4.0	5.6	0.0	0.1	2.1	10.2	37.6	28.6	197.0	34.7	53.8	45.3	51.5	53.1	50.9	139.7
16	I Ideal (236)	3.1	4.4	0.1	0.4	4.5	18.8	76.2	27.4	180.0	52.9	68.0	63.1	57.9	59.9	65.5	143.2
17	I NCRPB (CKRB)	3.1	4.5	0.1	0.7	8.7	27.1	63.4	26.2	179.5	47.5	61.3	56.5	54.7	51.0	59.5	141.5
18	I Garber (G-200)	3.2	4.1	0.0	0.1	6.0	22.9	71.0	26.5	179.5	53.6	62.2	60.9	62.3	61.2	64.4	177.6
19	I Anthony (W.Leg.)	3.1	4.0	0.1	0.2	4.3	20.3	75.1	26.9	181.5	52.6	63.4	61.4	61.5	63.7	64.1	170.3
20	I Kimber (K-137)	3.0	3.8	0.0	0.5	8.8	25.7	65.0	26.2	179.0	52.8	69.4	62.8	58.3	62.4	62.2	151.3
21	Average	3.3	4.3	0.1	0.5	6.7	21.4	71.3	26.8	178.6	54.8	64.3	59.7	56.8	57.7	62.6	172.2

Table 12-4A-II - Birds, Mortality, Feed Use and Cost and Income Data

Table 12-4A-III - Egg Quality Data

Entry Number	Type Housing	Loss % (Downgrades)	% Inclusion (Break-Out)			Candled Quality Percentages			Haugh Units			Shell Score (specific gravity)									
			Large Bloods	Small Bloods	Large Meats	Small Meats	A or Better	'n	C	Chex & Cracks	Eggs	Sept.	Dec.	Mar.	June	Average					
1	1	3.8	2.5	4.6	9.7	8.6	94.3	0.7	0.2	4.2	0.7	87.2	83.5	81.7	74.4	81.7	3.20	2.39	1.44	1.83	2.21
2	1	3.7	0.6	0.2	0.0	0.0	94.3	0.6	0.0	3.9	1.2	84.4	78.1	78.7	75.7	79.2	3.14	2.93	1.65	1.42	2.29
3	1	5.9	0.8	1.7	0.2	0.5	90.6	1.5	0.3	6.5	1.1	91.6	86.8	85.3	85.1	87.2	3.82	3.37	1.86	1.83	2.72
4	1	3.3	0.2	1.2	0.0	0.2	95.2	0.7	0.1	2.9	1.0	82.8	79.2	77.5	71.8	77.8	3.40	3.25	1.82	1.86	2.58
5	1	3.8	0.6	1.5	1.1	0.7	93.7	0.3	0.0	5.5	0.5	85.5	81.9	82.0	77.4	81.7	4.03	3.51	2.51	1.58	2.91
6	1	5.2	1.9	5.6	11.8	12.5	91.4	1.2	0.0	6.8	0.7	87.2	79.6	78.7	76.1	80.4	3.24	2.38	1.52	1.07	2.05
7	1	4.2	1.1	1.6	0.3	0.7	93.3	0.8	0.0	4.6	1.3	85.9	82.9	80.0	78.0	81.7	3.85	3.36	2.34	1.48	2.76
8	1	3.5	2.0	2.5	12.1	13.6	94.4	1.3	0.5	3.2	0.7	89.9	85.0	81.3	80.3	84.1	2.24	2.00	1.26	1.10	1.65
9	1	4.0	0.9	1.3	0.0	0.3	93.0	1.3	0.1	5.2	0.4	80.9	75.9	73.6	72.8	75.8	3.37	3.18	1.74	1.22	2.38
10	1	3.9	1.4	1.3	0.3	0.0	93.7	1.1	0.0	4.3	0.8	81.7	77.1	77.8	71.6	77.1	2.97	3.42	1.48	1.44	2.33
11	1	2.5	0.4	1.1	0.1	0.3	95.7	0.8	0.1	2.9	0.4	82.8	78.8	73.1	74.8	77.4	3.59	2.85	2.09	1.42	2.49
12	1	6.1	1.2	1.5	0.0	0.2	89.7	1.6	0.5	7.5	0.7	86.7	84.1	84.5	78.9	83.5	3.65	3.44	2.18	1.57	2.71
13	1	3.7	1.2	0.9	0.2	0.5	93.8	0.9	0.2	5.0	0.1	88.3	86.2	86.0	83.0	85.9	3.77	3.66	2.25	2.30	3.00
14	1	4.0	1.8	1.6	0.0	0.7	94.8	0.7	0.4	2.9	1.1	84.1	79.9	79.6	71.2	78.7	4.05	3.22	2.13	1.65	2.76
15	1	2.4	5.3	2.9	13.7	11.1	96.2	0.4	0.4	2.4	0.6	89.3	85.0	78.7	79.5	83.1	3.41	2.26	2.00	1.99	2.41
16	1	4.9	0.4	0.6	0.2	0.0	91.2	2.4	0.0	6.1	0.4	82.5	76.7	74.5	72.5	76.6	3.09	2.78	2.03	2.07	2.49
17	1	5.3	1.3	2.0	0.7	1.0	91.4	1.5	0.0	6.3	0.8	83.8	80.2	77.7	71.7	78.4	4.04	3.16	2.19	1.58	2.74
18	1	2.6	0.2	0.2	0.0	0.3	96.4	0.8	0.2	1.6	1.1	88.7	84.0	83.3	81.1	84.3	4.37	4.13	2.60	2.58	3.42
19	1	2.8	0.2	0.4	0.0	0.5	95.2	0.2	0.2	4.0	0.5	86.9	83.5	81.7	78.5	82.7	3.03	2.72	1.43	1.29	2.11
20	1	2.6	0.6	1.1	0.2	0.0	2.4	0.3	0.3	88.5	87.0	88.2	84.7	87.1	5.01	4.01	2.88	2.10	3.50		
0	1	3.9	1.2	1.7	2.5	2.6	93.7	1.0	0.2	4.4	0.7	85.9	81.8	80.2	77.0	81.2	3.56	3.10	1.97	1.67	2.58

Table 12-4A-IV - Causes of Mortality

	Entry Number	Type	Housing	Marek's	Lymphoid Leukosis	Other Neopl.	Reproductive Disorders	Kidney Disorders	Miscel- laneous	No Visible Lesions	No Necropsy Report	Total
1	1	1	0.8	2.0	-	-	8.0	-	-	2.8	5.0	0.8
2	2	1	1.8	26.0	-	1.0	-	-	7.0	-	1.8	7.0
3	3	1	2.6	2.0	-	2.0	-	-	7.0	-	0.9	4.0
4	4	1	2.6	6.0	-	-	-	-	2.0	-	1.9	4.0
										-	3.0	-
5	5	1	2.0	7.5	-	3.2	-	-	7.5	-	3.1	2.1
6	6	1	3.3	4.0	-	3.0	-	1.0	5.0	-	1.7	6.0
7	7	1	-	5.0	-	2.0	-	-	7.0	-	2.7	2.0
8	8	1	0.9	3.0	-	1.0	-	-	21.0	-	1.7	2.0
										-	3.0	-
9	9	1	2.6	8.0	-	2.0	-	-	7.0	-	2.7	5.0
10	10	1	0.9	6.0	-	1.0	-	-	11.0	-	1.0	0.9
11	11	1	0.8	9.0	-	1.0	-	-	10.0	-	0.9	3.0
12	12	1	-	13.0	-	-	-	-	14.0	-	1.8	2.0
										-	1.8	-
13	13	1	1.7	9.0	-	2.0	-	-	13.0	-	0.8	6.0
14	14	1	9.0	19.8	1.3	-	1.7	4.3	1.3	-	6.5	-
15	15	1	1.9	6.0	-	1.0	-	-	9.0	-	3.0	-
16	16	1	1.0	26.0	-	6.0	-	-	10.0	0.9	-	1.0
										-	5.0	-
17	17	1	0.9	21.7	-	4.0	0.9	-	6.9	0.9	2.6	4.0
18	18	1	-	12.0	-	1.0	-	-	10.0	-	1.7	1.0
19	19	1	0.9	7.0	-	1.0	-	-	17.0	0.9	0.9	8.0
20	20	1	1.8	16.0	-	2.0	-	-	13.0	-	1.8	3.0
										-	0.8	-
Av.	1	1.8	10.5	0.1	1.7	0.0	0.1	9.5	0.2	0.0	1.5	4.4
										-	0.2	-
										-	0.6	-
										-	0.5	-
										-	1.6	-
										-	4.4	-
										-	28.3	-

Table 12-4B-I - Bird Weight, Egg Size, Maturity and Production Data

Average Body Weight	% Egg Size, Distribution						Egg Production Rate											
	150 Days		500 Days		Pee Wee	Small												
Entry Number	Type	Housing	Breeder	Medium	Large	Extra Large and Over	Average Egg Weight oz./doz.	Age at 50% Production	151-240 Days	241-330 Days	331-420 Days	421-500 Days	471-500 Days	After 50% Production	Eggs Pullet Housed			
1	2 Davis	(Reds)	3.9	5.1	0.0	0.6	13.8	30.9	54.7	25.4	174.0	60.1	83.3	76.5	65.7	63.5	74.9	243.6
2	2 Garber	(GX 291)	3.5	4.6	0.2	2.1	15.2	28.6	54.0	25.4	163.0	70.0	69.2	65.2	56.7	53.9	66.6	203.5
3	2 Ind. Fm. Bu. (Pr.)	(Pr. 55)	3.2	4.1	0.3	1.4	11.2	26.2	61.0	25.7	164.0	71.5	77.4	70.1	61.9	58.7	71.7	221.4
4	2 Welp's	(937)	3.0	4.0	0.2	1.2	13.1	25.5	60.1	25.8	162.5	71.7	73.1	58.4	55.6	54.1	66.2	208.5
5	2 Parks	(Key. B-1)	3.3	4.5	0.0	0.5	5.5	22.3	71.6	26.8	167.5	74.5	79.0	66.2	62.8	62.2	73.6	217.9
6	2 Babcock	(B-390)	3.9	5.0	0.0	0.4	7.8	24.9	66.9	26.4	169.0	70.7	74.5	75.7	68.5	66.1	75.1	248.7
7	2 Shaver	(*X-288)	3.2	4.2	0.1	0.2	6.3	23.0	70.5	26.6	169.5	68.3	82.1	74.0	66.0	64.6	75.9	247.1
8	2 Hubbard	(Gld.C.)	3.5	4.6	0.0	0.7	6.2	17.5	75.5	27.7	171.5	67.1	75.8	65.4	60.3	58.3	70.1	214.8
9	2 Babcock	(B-305)	3.0	3.9	0.2	1.4	13.4	23.3	61.8	26.0	159.0	80.5	82.8	65.8	52.7	51.2	71.7	224.0
10	2 Tatum	(T-100)	3.0	4.0	0.3	2.0	12.8	25.6	59.3	25.9	163.5	73.8	71.0	59.1	46.7	41.9	64.3	196.9
11	2 Thornber	(808)	3.0	4.0	0.1	1.5	20.2	40.2	38.1	24.3	163.0	77.9	74.3	57.9	52.9	49.7	67.5	213.2
12	2 Hubbard	(101)	3.0	4.0	0.0	0.9	15.1	35.8	48.3	25.2	173.0	62.2	74.5	61.3	57.3	53.1	67.3	173.0
13	2 Fisher	(105)	3.0	4.1	0.2	1.5	12.0	28.5	57.9	26.0	164.5	63.9	71.1	64.9	58.9	55.3	67.1	163.4
14	2 CNRPP	(GRB)	3.2	4.4	0.5	3.8	19.3	33.8	42.6	24.2	177.0	50.1	73.8	64.1	55.8	56.0	65.3	137.5
15	2 Lawton	(Buff S.L.)	4.1	5.7	0.0	0.4	7.4	18.8	73.4	27.2	174.0	62.5	74.9	67.5	59.0	56.4	69.7	214.9
16	2 Ideal	(236)	3.2	4.3	0.1	0.7	7.9	23.7	67.6	26.6	167.0	69.9	75.3	65.9	59.9	56.9	70.9	209.5
17	2 NCRPB	(CKRB)	3.2	4.4	0.3	1.6	17.0	32.6	48.5	25.0	178.5	51.2	69.8	57.0	53.9	50.0	61.4	143.3
18	2 Garber	(G-200)	3.1	4.3	0.1	1.2	12.5	29.5	56.7	25.5	171.0	66.6	71.5	61.1	51.7	50.4	65.7	186.7
19	2 Anthony	(W. Leg.)	3.1	4.0	0.2	0.7	9.6	30.5	59.0	25.8	177.5	63.3	73.0	60.4	62.6	59.9	68.7	209.3
20	2 Kimber	(K-137)	3.1	4.1	0.1	1.2	13.3	35.3	50.0	25.1	166.5	70.6	77.3	60.6	54.0	49.9	67.8	209.4
0	2 Average		3.3	4.4	0.1	1.2	12.0	27.8	58.9	25.8	168.8	67.3	75.2	64.9	58.2	55.6	69.1	204.3

Table 12-4B-II - Birds, Mortality, Feed Use and Cost and Income Data

Number of Birds	Mortality	Feed Consumed	Value per Pullet Housed															
			Entry Number	Type Housing														
			At One Week	Housed														
0	2	112.	98.	79.	2.5	19.5	45.1	17.1	25.8	2.89	4.67	.34	0.70	3.35	4.40	6.43	.22	2.253
1	2	117.	100.	97.	0.0	3.0	9.4	18.0	26.1	2.76	4.38	.33	0.73	3.79	4.85	7.63	.40	3.181
2	2	114.	100.	82.	3.4	18.0	40.8	17.4	25.6	2.96	4.71	.31	0.71	3.38	4.41	6.34	.23	2.162
3	2	111.	100.	85.	1.8	15.0	36.2	17.3	25.2	2.68	4.31	.33	0.71	3.37	4.42	6.90	.21	2.688
4	2	121.	100.	84.	1.7	16.0	30.7	15.3	24.8	2.84	4.60	.35	0.63	3.38	4.36	6.59	.20	2.432
5	2	93.	90.	72.	3.3	19.7	43.7	17.8	27.8	2.80	4.69	.34	0.75	3.62	4.72	6.95	.22	2.447
6	2	119.	100.	92.	3.4	8.0	7.0	18.5	26.8	2.69	4.44	.31	0.75	3.91	4.99	7.84	.32	3.180
7	2	113.	100.	94.	0.0	6.0	10.9	16.9	26.0	2.57	4.28	.34	0.68	3.75	4.78	7.87	.24	3.323
8	2	120.	100.	83.	0.0	17.0	31.8	17.5	26.1	2.69	4.66	.33	0.71	3.54	4.58	6.83	.23	2.485
9	2	115.	100.	86.	1.8	14.0	35.8	16.7	25.8	2.69	4.38	.31	0.68	3.46	4.45	6.91	.20	2.664
10	2	112.	100.	82.	1.8	18.0	40.9	16.5	25.6	3.00	4.88	.37	0.68	3.37	4.42	6.01	.20	1.791
11	2	116.	100.	86.	0.9	14.0	28.2	16.4	24.8	2.96	4.50	.42	0.65	3.40	4.47	6.71	.21	2.450
12	2	115.	100.	68.	2.6	32.0	80.2	16.5	25.0	2.99	4.71	.31	0.68	2.88	3.89	5.50	.16	1.767
13	2	117.	100.	58.	4.3	42.0	98.6	16.6	25.6	2.92	4.75	.35	0.69	2.74	3.80	5.14	.14	1.486
14	2	81.	76.	42.	6.1	44.0	312.1	17.6	26.3	3.47	5.25	.42	0.76	2.55	3.75	4.21	.15	0.605
15	2	112.	100.	90.	0.9	10.0	25.9	19.4	27.9	2.98	5.06	.33	0.79	3.85	4.97	6.86	.41	2.299
16	2	113.	100.	79.	0.9	21.0	43.1	16.9	25.7	2.74	4.56	.32	0.69	3.36	4.38	6.62	.20	2.448
17	2	111.	100.	61.	7.2	39.0	102.1	17.2	24.9	3.34	5.22	.30	0.74	2.64	3.70	4.45	.16	0.916
18	2	119.	100.	78.	5.0	22.0	53.0	16.3	25.4	3.05	4.86	.31	0.68	3.21	4.22	5.87	.20	1.853
19	2	114.	100.	85.	0.9	15.0	27.4	16.2	24.5	2.81	4.53	.36	0.66	3.36	4.39	6.58	.20	2.392
20	2	115.	100.	85.	5.1	15.0	34.8	16.9	25.0	2.90	4.55	.32	0.71	3.36	4.41	6.70	.21	2.499

Table 12-4B-III - Egg Quality Data

	Entry Number	Type Housing	% Inclusion (Break-Out)	Candled Quality Percentages	Haugh Units			Shell Score (Specific Gravity)														
					% Loss (down grades)	Large Bloods	Small Bloods	A or Better	Chex & Cracks	Loss Eggs	September	December	March	June	Average	October	January	April	July	Average		
	1	2	2.6	2.3	3.6	10.4	9.6	95.1	1.4	0.1	3.2	0.2	89.0	84.3	76.3	70.6	80.1	3.26	2.35	1.07	0.42	1.77
	2	2	2.4	0.5	0.4	0.0	0.3	95.9	1.1	0.1	2.6	0.3	84.6	79.7	76.3	69.9	77.6	3.41	2.63	1.04	0.45	1.88
	3	2	3.1	0.8	0.7	0.1	0.1	94.6	2.0	0.3	3.1	0.0	91.8	86.8	83.8	78.6	85.3	3.64	2.59	1.64	0.70	2.14
	4	2	2.2	1.3	1.3	0.0	0.0	96.0	1.7	0.1	2.1	0.1	83.5	78.9	73.5	69.0	76.2	3.18	2.66	1.26	0.77	1.97
	5	2	2.9	1.2	1.0	0.0	0.1	95.1	1.6	0.0	2.4	0.9	85.1	80.6	77.4	71.0	78.5	3.90	3.00	1.82	0.78	2.37
	6	2	2.3	1.8	3.9	12.7	11.0	96.2	1.4	0.3	1.8	0.3	85.1	79.5	74.3	71.8	77.7	2.74	2.44	1.09	0.50	1.69
	7	2	2.5	0.9	1.5	0.1	0.3	95.8	0.9	0.0	2.9	0.5	87.5	81.8	78.4	75.1	80.7	3.70	2.90	1.65	1.34	2.40
	8	2	2.6	2.7	4.2	12.0	12.6	95.2	1.6	0.5	2.6	0.1	88.4	78.6	76.4	69.5	78.2	2.50	1.98	1.25	0.51	1.56
	9	2	4.8	1.0	0.4	0.0	0.4	92.3	2.0	0.4	4.9	0.4	81.7	76.2	73.9	72.5	76.1	3.92	2.73	1.57	0.74	2.24
	10	2	5.5	0.3	1.1	0.0	0.5	90.9	1.8	0.3	6.4	0.6	83.5	79.1	72.8	75.3	77.7	4.62	2.85	1.49	0.43	2.35
	11	2	2.4	0.0	0.3	0.1	0.4	95.7	1.8	0.1	2.0	0.3	81.8	73.7	75.4	69.3	75.0	2.55	2.29	1.55	0.51	1.73
	12	2	2.2	0.2	0.4	0.0	0.4	96.8	1.4	0.2	1.0	0.5	86.2	80.3	76.3	74.4	79.3	3.78	3.34	1.33	1.20	2.41
	13	2	2.8	0.2	0.7	0.0	0.2	95.1	3.3	0.2	1.2	0.2	88.4	83.5	80.4	80.3	83.2	3.81	3.24	1.57	0.91	2.39
	14	2	3.3	2.0	1.4	0.0	0.0	94.5	3.1	0.2	1.7	0.5	85.6	78.9	74.6	68.9	77.0	3.87	2.04	1.47	1.13	2.13
	15	2	2.2	4.3	3.3	13.2	12.9	96.6	0.7	0.1	2.1	0.5	88.1	79.9	75.1	73.6	79.2	3.10	2.53	1.54	0.73	1.97
	16	2	2.7	0.7	1.0	0.0	0.0	95.5	2.4	0.3	1.7	0.2	88.4	78.5	73.2	71.7	77.9	3.59	3.30	2.03	0.73	2.41
	17	2	3.7	1.1	1.4	0.0	0.0	93.6	2.9	0.2	3.0	0.2	85.1	78.2	76.8	74.9	78.8	3.04	2.86	1.70	1.03	2.16
	18	2	3.0	0.8	0.8	0.2	0.2	94.8	2.5	0.2	2.0	0.6	86.7	84.6	79.3	77.0	81.9	5.15	3.45	2.00	1.85	3.11
	19	2	3.2	0.9	1.2	0.0	0.1	94.7	1.8	0.1	3.4	0.0	87.7	81.9	77.9	74.2	80.4	2.64	2.00	0.97	0.69	1.57
	20	2	1.2	1.5	1.9	0.4	0.4	97.5	1.2	0.0	1.2	0.0	91.1	86.6	82.9	78.8	84.9	4.53	3.06	1.53	1.15	2.57
0	2	2.9	1.2	1.5	2.4	2.5	1.8	0.2	2.6	0.3	86.5	80.6	76.7	73.3	79.3	3.55	2.71	1.48	0.83	2.14		

Table 12-4B-IV - Causes of Mortality

Entry Number	Type	Housing		Marek's	Lymphoid Leukosis	Other Neopl.	Reproductive Disorders	Kidney Disorders	Miscellaneou	No Visible Lesions	No Necropsy Report	Total	
		Gro.	Lay										
1	2	-	2.0	-	-	-	-	-	-	1.0	-	-	
2	2	0.8	12.0	-	1.0	0.8	-	1.0	-	0.8	3.0	-	
3	2	0.9	9.0	-	1.0	-	-	4.0	-	1.0	-	0.9	
4	2	0.8	8.0	-	1.0	-	-	2.0	-	3.0	-	0.8	
5	2	1.0	6.6	-	3.4	-	-	4.3	-	-	-	3.2	
6	2	0.8	-	-	3.0	0.8	-	-	-	1.7	5.0	-	
7	2	-	3.0	-	-	-	-	1.0	-	2.0	-	-	
8	2	-	6.0	-	6.0	-	-	3.0	-	-	-	1.0	
9	2	0.9	11.0	-	1.0	-	-	1.0	-	0.9	1.0	-	
10	2	0.9	10.0	-	1.0	-	-	2.0	-	0.9	2.0	-	
11	2	-	6.0	-	2.0	-	-	1.0	-	0.9	2.0	-	
12	2	2.6	18.0	-	1.0	-	-	2.0	-	1.0	-	3.0	
13	2	3.4	25.0	-	-	-	-	3.0	-	1.0	0.9	-	
14	2	3.8	32.4	-	-	-	-	-	-	1.2	10.7	1.2	
15	2	0.9	7.0	-	-	-	-	-	-	3.0	-	-	
16	2	-	9.0	-	2.0	-	-	1.0	4.0	-	-	5.0	
17	2	5.4	23.0	-	2.0	-	-	5.0	-	1.8	7.0	-	
18	2	3.3	13.0	-	-	-	-	3.0	-	1.0	0.9	-	
19	2	0.9	4.0	-	2.0	-	-	6.0	-	3.0	-	-	
20	2	2.5	8.0	-	3.0	-	-	2.0	-	0.8	1.0	-	
Av.	2	1.5	10.6	0.0	1.5	0.1	0.1	2.2	0.0	0.2	0.5	3.6	0.2
										0.5	0.2	0.7	2.5
										0.9	1.7	1.0	19.5

Table 12-4C-I - Bird Weight, Egg Size, Maturity and Production Data

Entry Number	Type Housing	Breeder	Average Body Weight	Egg Size, Distribution						Egg Production Rate	After 50% Production	Eggs per Pullet Housed					
			150 Days	500 Days	Pee	Wee	Small	Medium	Large		151-240 Days	241-330 Days	331-420 Days	421-500 Days	471-500 Days		
1	3 Davis (Reds)	3.8	5.4	0.0	0.3	9.2	26.3	64.2	26.6	183.2	51.2	64.9	61.8	55.0	52.3	62.5	200.4
2	3 Garber (GX 291)	3.5	4.7	0.1	1.5	10.9	26.1	61.4	26.4	170.2	63.7	70.2	68.0	57.4	53.6	67.9	175.9
3	3 Ind. Frn. Bu. (Pr. 55)	2.9	4.0	0.0	0.3	5.2	21.8	72.7	27.2	173.7	59.9	67.2	68.4	63.4	63.2	68.1	195.6
4	3 Welp's (937)	3.0	4.1	0.0	0.7	7.8	21.4	70.1	27.3	167.5	62.6	59.5	56.7	52.5	49.5	59.6	184.3
5	3 Parks (Key. B-1)	3.5	4.4	0.0	0.8	6.2	18.6	74.4	27.3	167.7	67.3	71.9	72.1	67.9	67.9	72.2	219.1
6	3 Babcock (B-390)	3.8	5.3	0.0	0.2	3.3	15.3	81.2	28.2	180.5	53.8	71.4	63.6	60.0	57.2	66.9	204.9
7	3 Shaver (*X-288)	3.0	4.2	0.0	0.5	3.0	15.9	80.6	28.0	175.0	59.0	68.1	67.1	63.3	60.4	68.2	213.0
8	3 Hubbard (Gld. C.)	3.5	4.8	0.0	0.2	2.9	13.1	83.8	28.8	176.5	57.8	68.8	61.6	52.9	50.6	63.9	206.5
9	3 Babcock (B-305)	2.8	3.7	0.1	0.6	6.0	20.1	73.2	27.0	168.5	67.0	72.4	69.6	65.3	62.4	71.1	220.0
10	3 Tatum (T-100)	2.8	3.7	0.2	0.6	8.6	25.1	65.5	26.6	165.5	64.2	70.6	67.2	59.2	56.9	67.4	190.2
11	3 Thornber (808)	2.8	3.8	0.0	1.1	13.1	34.3	51.4	25.6	166.7	66.5	63.1	56.6	51.2	50.9	61.9	185.8
12	3 Hubbard (101)	2.6	3.7	0.1	0.3	5.0	19.4	75.2	27.2	179.2	52.8	65.7	60.9	59.9	59.4	63.9	189.2
13	3 Fisher (105)	2.8	3.8	0.1	0.9	7.6	19.4	72.0	27.4	170.0	60.5	60.6	59.9	54.0	52.6	61.3	172.8
14	3 CNR PB (GRB)	3.3	4.6	0.2	1.6	11.7	29.2	57.3	26.3	185.2	48.7	56.3	53.5	51.7	50.5	56.8	148.4
15	3 Lawton (Buff S.L.)	4.1	5.8	0.0	0.4	4.5	15.4	79.7	28.1	180.0	48.7	62.7	55.3	51.3	50.9	58.5	180.5
16	3 Ideal (236)	3.1	4.2	0.0	0.6	5.6	17.9	75.9	27.5	174.5	56.5	67.3	67.1	60.2	59.9	66.5	172.0
17	3 NCRPB (GKRB)	3.0	4.4	0.2	1.3	11.2	29.6	57.7	26.1	185.2	44.7	55.0	55.2	52.0	50.0	56.0	137.5
18	3 Garber (G-200)	2.8	4.0	0.0	0.4	6.1	25.7	67.8	26.8	180.2	51.2	65.3	64.9	57.9	56.7	64.1	178.6
19	3 Anthony (W. Leg.)	3.1	3.9	0.1	0.3	6.8	24.9	67.9	26.8	180.0	53.9	63.6	56.8	52.4	50.7	60.7	168.1
20	3 Kimber (K-137)	3.0	4.0	0.1	0.4	8.3	27.6	63.6	26.5	171.2	60.8	64.9	62.9	58.6	57.3	64.7	189.1
0	3 Average	3.2	4.3	0.1	0.6	7.2	22.4	69.8	27.1	175.0	57.5	65.5	62.5	57.3	55.6	64.1	186.6

Table 12-4C-II - Birds, Mortality, Feed Use and Cost and Income Data

Entry Number	Type Housing	Number of Birds	Mortality	Feed Consumed	Value per Pullet Housed		Value of Meat	IOFCC									
					At One Week Housed	At End of Test	% 8 - 150 Days	% 151-500 Days	Av. Days Lost/Hen Housed	Per Bird 1-150 Days	Per 100 Birds (1 Day)	Per Lb. of Eggs	Per Doz. Eggs	Chick Price	Growing Feed Cost	Laying Feed Cost	Total Feed & Chick Cost
1 3	109.	103.	98.	1.8	4.8	6.4	19.3	26.2	3.25	5.40	.33	0.79	3.83	4.97	6.26	.41	1.713
2 3	115.	104.	70.	3.5	32.7	79.3	17.0	25.4	2.85	4.70	.31	0.74	2.92	3.98	5.46	.21	1.689
3 3	112.	104.	84.	6.2	19.2	47.7	17.4	24.9	2.73	4.64	.33	0.72	3.21	4.29	6.10	.19	2.004
4 3	112.	104.	88.	1.8	15.4	34.5	16.7	23.9	2.86	4.99	.35	0.69	3.21	4.26	5.83	.21	1.775
5 3	95.	90.	76.	5.1	15.6	36.2	18.1	26.7	2.69	4.61	.34	0.76	3.57	4.69	6.88	.22	2.417
6 3	117.	104.	91.	3.4	12.5	21.0	19.1	27.7	3.03	5.34	.31	0.79	3.88	5.00	6.49	.37	1.862
7 3	116.	104.	95.	2.5	8.7	19.2	17.0	25.2	2.69	4.70	.34	0.71	3.54	4.61	6.73	.21	2.331
8 3	119.	104.	97.	0.8	6.7	8.8	18.3	25.4	2.80	5.04	.33	0.75	3.70	4.78	6.49	.26	1.973
9 3	124.	104.	90.	4.1	13.5	30.0	16.1	24.0	2.49	4.21	.31	0.68	3.28	4.28	6.80	.17	2.691
10 3	118.	104.	80.	11.7	23.1	59.7	16.7	25.7	2.84	4.73	.37	0.76	3.17	4.34	5.84	.17	1.676
11 3	117.	104.	84.	0.8	19.2	39.9	15.9	23.7	2.99	4.79	.42	0.66	3.13	4.21	5.82	.18	1.791
12 3	113.	104.	88.	3.5	15.4	32.7	16.8	24.0	2.85	4.84	.31	0.70	3.25	4.28	5.91	.19	1.822
13 3	115.	104.	80.	6.9	23.1	57.8	15.7	24.0	2.86	4.89	.35	0.66	2.98	4.02	5.41	.17	1.564
14 3	85.	81.	60.	4.6	25.8	67.1	18.2	26.3	3.68	6.04	.42	0.76	3.17	4.37	4.50	.21	0.329
15 3	106.	104.	93.	2.8	10.6	19.2	21.1	27.6	3.47	6.10	.33	0.88	3.90	5.12	5.77	.42	1.067
16 3	114.	104.	69.	2.6	33.7	75.9	16.6	25.3	2.83	4.87	.32	0.68	2.95	3.98	5.42	.17	1.616
17 3	116.	104.	70.	10.3	32.7	83.4	16.5	24.6	3.53	5.77	.30	0.73	2.79	3.85	4.22	.18	0.551
18 3	115.	104.	83.	5.2	20.2	51.0	16.7	24.0	2.90	4.85	.31	0.70	3.05	4.08	5.63	.19	1.747
19 3	106.	104.	79.	2.9	24.0	53.7	17.7	23.6	2.98	5.00	.36	0.74	2.97	4.08	5.28	.18	1.375
20 3	113.	104.	80.	5.3	23.1	44.9	16.3	23.4	2.74	4.55	.32	0.69	3.05	4.08	5.90	.17	1.982
0 3	112.	102.	83.	4.3	19.0	43.4	17.4	25.1	2.95	5.00	.34	0.73	3.28	4.36	5.84	.22	1.699

Table 12-4C-III - Egg Quality Data

	Entry Number	% Inclusion (Break-out)	Candled Quality Percentages	Haugh Units	Shell Score (Specific Gravity)																
					Type	Housing Loss grades)	Large Bloods	Small Bloods	Large Meats	Small Meats	A or Better	B	C	Checks & Cracks	Loss Eggs						
	1	3 3.2	3.2	3.8	9.0	7.6	95.2	1.0	0.0	2.6	1.2	87.6	83.5	75.7	74.9	80.4	3.33	1.77	1.45	0.80	1.84
	2	3 3.6	1.6	0.9	0.1	0.2	94.7	0.4	0.1	3.5	1.2	87.1	83.2	75.8	74.8	80.2	3.90	2.74	1.82	1.07	2.38
	3	3 4.0	0.6	1.2	0.3	0.3	94.2	0.8	0.3	3.4	1.2	92.1	88.4	82.0	81.7	86.1	3.46	3.27	2.04	1.29	2.51
	4	3 2.1	1.3	0.0	0.0	96.5	0.8	0.3	2.4	0.0	86.2	82.0	74.7	73.9	79.2	4.06	2.31	1.74	1.20	2.33	
	5	3 3.0	1.6	0.9	0.2	0.6	95.4	0.3	0.2	3.2	1.0	83.8	83.1	74.6	75.0	79.1	4.18	3.18	2.33	1.61	2.82
	6	3 3.2	1.8	5.2	9.0	8.5	94.6	1.0	0.1	3.6	0.6	87.8	81.2	73.4	75.3	79.4	3.07	1.69	1.28	0.78	1.71
	7	3 2.5	1.2	0.3	0.6	96.2	0.4	0.1	2.9	0.4	87.4	85.2	79.6	79.1	82.8	4.21	3.12	2.35	1.28	2.74	
	8	3 4.2	2.5	3.5	13.5	10.6	93.7	1.3	0.3	3.8	0.9	89.7	84.2	77.2	75.8	81.7	3.67	1.59	1.13	0.69	1.77
	9	3 4.6	1.2	1.1	0.1	0.1	92.7	1.7	0.1	4.2	1.3	83.6	81.1	74.3	78.3	3.94	2.58	1.81	1.09	2.36	
	10	3 4.9	0.5	0.3	0.2	0.6	92.0	2.5	0.0	4.7	0.9	82.6	80.1	72.8	72.8	77.1	3.92	3.01	2.18	0.77	2.47
	11	3 3.0	0.3	0.8	0.1	0.5	95.6	1.9	0.1	2.8	0.3	84.5	78.5	74.2	71.4	77.1	3.80	2.79	1.98	1.34	2.48
	12	3 3.9	0.3	1.1	0.4	0.3	93.8	1.3	0.1	3.7	1.2	87.9	83.3	77.2	80.1	82.1	4.60	3.13	2.12	1.65	2.88
	13	3 3.1	0.8	1.9	0.2	0.2	95.0	1.8	0.1	2.7	0.4	90.1	87.0	81.2	84.5	85.7	4.50	3.61	2.48	1.19	2.94
	14	3 5.6	1.9	1.1	0.5	1.1	91.6	1.4	1.0	4.0	2.0	85.5	80.4	74.6	74.2	78.7	4.21	3.18	2.40	1.63	2.85
	15	3 2.2	5.8	4.0	13.9	12.2	96.8	0.6	0.0	1.8	0.7	90.0	85.1	78.9	75.3	82.3	3.74	1.81	1.54	1.78	2.22
	16	3 3.4	1.7	0.9	0.0	0.1	94.4	1.1	0.2	3.9	0.4	87.1	82.0	73.8	74.0	79.2	4.28	3.27	2.29	1.44	2.82
	17	3 4.2	1.9	1.4	0.3	0.4	93.5	2.3	0.2	2.3	1.8	84.4	81.6	74.0	77.5	79.4	4.45	3.27	2.54	2.26	3.13
	18	3 2.6	0.4	1.2	0.0	0.1	96.1	0.8	0.3	2.4	0.4	89.5	86.7	80.0	81.0	84.3	4.32	3.57	2.73	2.24	3.21
	19	3 3.5	1.0	1.8	0.0	0.2	94.1	0.3	4.8	0.4	87.3	84.4	75.8	77.5	81.3	3.24	1.65	1.63	0.89	1.85	
	20	3 3.9	1.0	0.3	0.8	93.8	1.4	0.4	3.4	0.9	90.1	87.6	80.9	81.4	85.0	4.64	3.80	2.46	1.92	3.20	
0	3 3.5	1.5	1.8	2.4	2.3	94.5	1.2	0.2	3.3	0.9	87.2	83.4	76.5	76.7	81.0	3.98	2.77	2.01	1.35	2.53	

Table 12-4C-IV - Causes of Mortality

Entry Number	Housing								Reproductive Disorders	Kidney Disorders	Miscel- laneous	No Visible Lesions	No Necropsy Report	Total				
	Marek's		Lymphoid Leukosis		Other Neopl.													
	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay										
1	3	-	1.0	-	-	-	1.0	-	-	1.8	2.9	-	-	-	1.8	4.8		
2	3	2.6	19.2	-	3.8	-	2.9	-	-	0.9	4.8	-	1.0	-	3.5	32.7		
3	3	-	12.5	-	-	-	2.9	-	-	2.7	3.8	0.9	-	3.5	7.1	19.2		
4	3	0.9	3.8	-	1.0	0.9	-	3.8	-	-	6.7	-	-	-	1.8	15.4		
5	3	3.1	7.8	-	3.3	-	-	3.4	-	-	1.0	-	-	1.0	1.1	5.1	15.6	
6	3	0.9	2.9	0.8	1.0	-	1.0	-	-	1.7	7.7	-	-	-	3.4	12.5		
7	3	-	2.9	-	-	-	1.0	-	-	0.8	4.8	-	-	1.7	-	2.5		
8	3	-	1.0	-	-	-	1.9	-	-	0.8	2.9	-	1.0	-	0.8	6.7		
9	3	4.1	3.8	-	1.9	-	3.8	-	-	1.9	-	1.0	-	1.0	4.1	13.5		
10	3	7.5	12.5	0.9	1.9	-	2.9	0.9	1.0	1.7	3.8	-	1.0	0.8	11.8	23.1		
11	3	0.8	10.6	-	1.0	-	3.8	-	-	3.8	-	-	-	0.9	1.9	19.2		
12	3	0.9	5.8	-	1.0	-	4.8	-	-	1.8	1.9	-	-	0.9	1.9	3.5		
13	3	1.7	7.7	-	2.9	-	-	5.8	-	1.9	3.4	3.8	-	1.8	1.0	6.9	23.1	
14	3	1.2	15.9	-	5.1	-	-	-	-	1.2	4.8	2.3	-	-	4.6	25.8		
15	3	1.9	2.9	-	1.0	-	3.8	-	-	1.0	-	1.0	0.9	1.0	2.8	10.6		
16	3	-	21.2	-	2.9	-	3.8	-	1.0	0.9	3.8	-	-	1.8	1.0	2.6		
17	3	6.9	22.1	-	3.8	-	1.0	-	-	2.6	5.8	-	0.8	-	10.3	32.7		
18	3	2.6	12.5	-	3.8	-	1.9	-	-	0.9	-	-	1.7	1.9	5.2	20.2		
19	3	1.9	10.6	-	3.8	-	4.8	-	-	1.0	3.8	-	-	1.0	2.9	24.0		
20	3	2.6	11.5	-	2.9	-	4.8	-	-	1.8	3.8	-	-	0.9	5.3	23.1		
Av.	3	2.0	9.4	0.1	2.1	0.0	0.0	3.0	0.0	0.2	1.2	3.6	0.2	0.2	0.8	0.5	4.3	19.0

Table 12-4D-I - Bird Weight - Egg Size - Mating and Nesting

Entry Number	Type	Housing	Egg Size, Distribution			Avg. Egg Wt. oz./doz.	Age at 50% Production	Egg Production Rate
			150 Days	500 Days	Pee Pee Small Medium Large Extra Large and Over			
1	O Davis	(Reds)	3.9	5.2	0.0	0.4	9.9	26.6
2	O Garber	(GX-291)	3.5	4.6	0.1	1.5	12.2	25.9
3	O Ind. Fin. Bu. (Pr. 55)		3.1	4.0	0.1	0.7	7.7	23.3
4	O Welp's	(937)	3.1	4.0	0.1	0.8	9.6	23.4
5	O Parks	(Key. B-1)	3.4	4.4	0.0	0.5	5.6	19.9
6	O Babcock	(B-390)	3.8	5.1	0.0	0.3	4.4	18.4
7	O Shaver	(#X-288)	3.2	4.1	0.1	0.3	4.9	20.4
8	O Hubbard	(Gld.C.)	3.6	4.7	0.0	0.4	4.1	14.1
9	O Babcock	(B-305)	3.0	3.8	0.1	0.9	8.9	21.4
10	O Tatrum	(T-100)	3.0	3.9	0.2	1.2	9.8	24.1
11	O Thorner	(808)	2.9	3.9	0.1	1.1	15.5	35.6
12	O Hubbard	(101)	2.8	3.9	0.1	0.5	8.4	25.1
13	O Fisher	(105)	2.9	3.9	0.1	0.9	8.3	22.2
14	O CNRBP	(CRB)	3.3	4.6	0.3	2.6	14.4	31.7
15	O Lawton	(Buff S.L. 1/4-0)	5.7	0.0	0.3	4.7	14.8	80.2
16	O Ideal	(236)	3.2	4.3	0.1	0.6	6.0	20.1
17	O NCRPB	(CKRB)	3.1	4.4	0.2	1.2	12.3	29.7
18	O Garber	(G-200)	3.1	4.1	0.0	0.6	8.2	26.0
19	O Anthony	(W. Leg.)	3.1	4.0	0.1	0.4	6.9	25.2
20	O Kimber	(K-137)	3.0	4.0	0.1	0.7	10.2	29.5
0 0 Average			3.2	4.3	0.1	0.8	8.6	23.9
500 Days			151-240 Days	241-330 Days	331-420 Days	421-500 Days	471-500 Days	After 50% Production
Pee Pee Small Medium Large Extra Large and Over			151-240 Days	241-330 Days	331-420 Days	421-500 Days	471-500 Days	After 50% Production
Eggs per Pullet Housed			151-240 Days	241-330 Days	331-420 Days	421-500 Days	471-500 Days	After 50% Production

Table 12-4D-II - Birds, Mortality, Feed Use and Cost and Income Data

Entry Number	Type Housing	Number of Birds	Mortality	Feed Consumed	Value per Pullet Housed		& Eggs	Total Feed Cost	Value of Eggs	Value of Meat	IOFCC						
					% At One Week Housed	% At End of Test	150 Days	151 - 500 Days	Av. Days Lost/Hen Housed	Per Bird 1-150 Days	Per 100 Birds (One Day)						
1 0	340.	303.	278.	2.7	8.3	14.9	18.6	26.2	3.25	5.35	.33	0.77	3.74	4.85	6.32	.39	1.854
2 0	342.	304.	211.	3.8	30.6	73.5	17.2	25.7	3.01	4.92	.31	0.73	3.02	4.07	5.47	.20	1.605
3 0	335.	304.	251.	4.4	17.4	37.4	17.1	24.8	2.79	4.64	.33	0.71	3.31	4.37	6.27	.20	2.095
4 0	349.	304.	261.	2.3	14.1	30.9	16.2	24.1	2.84	4.76	.35	0.67	3.28	4.31	6.26	.21	2.095
5 0	286.	273.	220.	4.5	19.3	40.6	18.1	27.0	2.82	4.78	.34	0.76	3.56	4.67	6.68	.22	2.219
6 0	356.	304.	255.	3.9	16.2	23.3	18.8	27.3	3.07	5.30	.31	0.78	3.79	4.89	6.48	.33	1.922
7 0	340.	304.	273.	1.8	10.2	17.8	16.5	25.3	2.69	4.56	.34	0.68	3.59	4.62	7.04	.21	2.638
8 0	356.	304.	250.	1.1	17.9	26.0	17.8	25.5	2.80	4.96	.33	0.73	3.52	4.58	6.38	.23	2.020
9 0	347.	304.	253.	4.0	16.8	36.3	16.5	25.0	2.61	4.34	.31	0.69	3.34	4.35	6.76	.18	2.590
10 0	341.	304.	235.	5.4	22.7	53.0	16.5	25.7	2.85	4.70	.37	0.70	3.24	4.34	6.04	.18	1.885
11 0	350.	304.	246.	1.1	19.1	42.2	16.3	24.6	2.95	4.61	.42	0.66	3.21	4.30	6.21	.19	2.093
12 0	339.	304.	226.	2.6	25.8	58.6	16.3	24.4	3.01	4.96	.31	0.68	3.03	4.03	5.39	.17	1.539
13 0	351.	304.	207.	5.1	32.0	71.0	16.0	25.0	2.92	4.92	.35	0.67	2.97	4.01	5.37	.16	1.516
14 0	244.	225.	149.	7.9	34.6	91.3	18.1	26.1	3.64	5.77	.42	0.79	2.86	4.11	4.30	.18	0.374
15 0	324.	304.	255.	1.9	16.2	29.8	20.1	27.8	3.52	6.15	.33	0.83	3.79	4.95	5.70	.38	1.130
16 0	337.	304.	199.	2.1	34.6	76.5	16.8	25.6	2.86	4.86	.32	0.69	2.98	4.01	5.51	.17	1.679
17 0	343.	305.	192.	7.8	37.1	92.4	17.1	25.3	3.47	5.60	.30	0.73	2.78	3.84	4.34	.17	0.669
18 0	348.	304.	236.	4.3	22.4	53.0	16.5	24.7	2.98	4.89	.31	0.69	3.13	4.13	5.71	.19	1.773
19 0	333.	304.	226.	2.4	25.7	48.1	17.2	24.4	2.94	4.87	.36	0.71	3.14	4.22	5.76	.18	1.722
20 0	344.	304.	230.	5.5	24.4	56.4	16.5	24.2	2.90	4.71	.32	0.70	3.03	4.07	5.86	.18	1.906
0 0	335.	298.	233.	3.7	22.3	48.6	17.2	25.4	3.00	4.98	.34	0.72	3.26	4.34	5.89	.22	1.766

Table 12-4D-III - Egg Quality Data

Table 12-4D-IV - Causes of Mortality

Entry Number	Causes of Mortality																			
	Type Housing		Marek's		Lymphoid Leukosis		Other Neopl.		Reproductive Disorders		Kidney Disorders		Miscel- laneous		No Visible Lesions		No Necropsy Report		Total	
	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
1	0	0.3	1.7	-	-	-	-	-	3.0	-	-	1.5	3.0	0.3	-	0.6	0.7	2.7	8.3	
2	0	1.7	19.1	-	1.9	0.3	-	3.6	-	-	1.2	4.9	0.3	0.3	0.3	0.7	3.8	30.6		
3	0	1.2	7.8	-	1.0	-	4.6	-	-	1.5	2.9	0.3	-	1.8	1.0	4.7	17.4			
4	0	1.4	5.9	-	0.7	0.3	-	2.6	-	-	4.2	-	-	0.6	0.7	2.3	14.1			
5	0	2.1	7.3	-	3.3	-	-	5.1	-	-	1.4	1.5	0.7	-	0.3	2.2	4.5	19.3		
6	0	1.7	2.3	0.3	2.3	0.3	0.3	2.0	-	-	1.7	6.2	-	2.3	-	0.7	3.9	16.2		
7	0	-	3.6	-	0.7	-	3.0	-	-	1.2	2.9	-	-	0.6	-	1.8	10.2			
8	0	0.3	3.3	-	2.3	-	0.3	8.6	-	-	0.9	1.6	-	0.3	-	1.3	1.1	17.9		
9	0	2.5	7.6	-	1.6	-	-	3.9	-	-	1.2	2.6	-	0.3	0.3	0.7	4.0	16.8		
10	0	3.1	9.5	0.3	1.3	-	-	5.3	0.3	0.7	1.2	3.9	-	1.0	0.6	1.0	5.4	22.7		
11	0	0.6	8.5	-	1.3	-	-	4.9	-	0.3	0.6	2.9	-	0.7	-	0.3	1.1	19.1		
12	0	1.2	12.3	-	0.7	-	-	6.9	-	0.3	1.2	3.6	-	-	0.3	2.0	2.6	25.8		
13	0	2.3	13.9	-	1.6	-	7.3	-	1.0	1.7	6.3	0.3	0.7	0.9	1.3	5.1	32.0			
14	0	4.6	22.7	0.4	1.7	-	0.6	1.4	0.4	-	0.8	7.3	1.2	0.4	0.4	0.4	7.8	34.6		
15	0	1.6	5.3	-	0.7	-	4.3	-	-	3.6	-	-	1.3	0.3	1.0	1.9	16.2			
16	0	0.3	18.7	-	3.6	-	0.3	5.9	0.3	0.3	0.6	4.6	-	-	0.9	1.0	2.1	34.6		
17	0	4.4	22.3	-	3.3	0.3	-	4.3	0.3	-	2.3	5.6	0.3	0.7	0.3	1.0	7.8	37.1		
18	0	2.0	12.5	-	1.6	-	5.0	-	0.3	1.2	1.7	-	0.7	1.2	0.6	4.3	22.4			
19	0	1.2	7.2	-	2.3	-	9.3	0.3	-	0.6	4.9	-	0.3	0.3	1.7	2.4	25.7			
20	0	2.3	11.8	-	2.6	-	6.6	-	1.5	2.6	0.3	-	1.4	0.7	5.5	24.4				
Av.	0	1.7	10.2	0.1	1.7	0.0	0.1	4.9	0.1	0.1	1.1	3.9	0.2	0.5	0.5	0.9	3.7	22.3		

Table 12-4D-V - Duncan Range Test and Range Groups

Range	En- try	Eggs Per Pullet	Duncan Test	Range	En- try	% Prod. After 50%	Dun- can can try Test	En- try	Feed Per Lb.Eggs	Duncan Test	Range	En- try	Days Lost to Mor- tality	Duncan Test	
1	7	222.8		1	5	70.9		1	9	2.61		1	1	14.9	
1	9	218.2		1	9	70.8		1	7	2.69		1	7	17.8	
1	5	210.9		1	7	70.4		1	3	2.79		1	6	23.3	
1	6	206.2		2	16	67.6		1	8	2.80		1	8	26.0	
2	3	202.2		2	10	67.5		2	5	2.82		1	15	29.8	
2	1	201.9		2	6	67.1		2	4	2.84		1	4	31.0	
2	8	201.1		2	3	67.0		2	10	2.85		2	9	36.3	
2	11	197.6		2	11	66.3		2	16	2.86		2	3	37.4	
2	10	196.5		2	2	65.5		2	20	2.90		2	5	40.6	
2	4	196.3		2	8	65.3		2	13	2.92		2	11	42.2	
3	20	183.3		3	20	64.9		2	19	2.94		2	19	48.1	
3	19	182.6		3	18	64.8		2	11	2.95		3	10	53.0	
3	18	181.0		3	19	64.5		2	18	2.98		3	18	53.0	
3	15	178.4		3	1	64.4		3	2	3.01		3	20	56.4	
3	2	175.3		3	13	64.0		3	12	3.01		3	12	58.6	
3	16	174.9		3	12	63.2		3	6	3.07		4	13	71.0	
3	12	172.8		3	4	62.7		3	1	3.25		4	2	73.5	
3	13	170.8		4	15	59.7		4	17	3.47		4	16	76.5	
4	14	141.0		4	14	59.4		4	15	3.52		4	14	91.3	
4	17	140.8		4	17	59.0		4	14	3.64		4	17	92.4	
Av.	187.7			Av.	65.3			Av.	3.00			Av.	48.6		