AGRICULTURAL EXTENSION SERVICE

NORTH CAROLINA STATE UNIVERSITY AT RA[illegible]

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

OFFICE OF EXTENSION POULTRY SCIENCE
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September 8, 1972

I am enclosing the final summary of the Thirteenth 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 test 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. With this report and the Twelfth test report, two-year comparisons may be made.

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

Very truly yours,

Grady A. Martin

Grady A. Martin
Extension Poultry Specialist

FINAL SUMMARY REPORT
THIRTEENTH NORTH CAROLINA RANDOM SAMPLE LAYING TEST
March 26, 1971 through August 6, 1972

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 13-4A-I, II, III and IV, 13-4B-I, II, III and IV, 13-4C-I, II, III and IV, and 13-4D-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 1.5 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 birds were vaccinated at day-old for Marek's. Maag and Easterbrooks, Inc., Raleigh, N. C., provided the herpes virus of turkeys grown in duck cells and Dr. Easterbrooks assisted in its proper administration. We express our appreciation to this organization and its personnel. Marek's mortality during the growing period has been less than one-tenth of one percent.

All birds were debeaked at seven days; vaccinated for Newcastle and bronchitis in the water at four days, four weeks, and 16 weeks of age; vaccinated for Pox via wing-web at 12 weeks; and vaccinated for Avian encephalomyelitis at 14 weeks. Birds exposed to litter were given 6-species coccidiosis vaccine at five days with a low level of coccidiostat used for eight weeks.

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.

Commercial all-mash rations were purchased on contract. Starting mash (20% protein) was fed for eight weeks and growing mash (16% protein) was fed until housing at 150 days, except that about 1.7 pounds per bird of laying mash was fed beginning when the pullets were 18 1/2 weeks old, due to railroad strike's effect upon ingredient supplies. During the laying period either 20%, 18% or 16% all-mash layer ration was fed, dependent upon average production rate and feed consumption of the entire flock. On March 31, 1972, the feed supplier delivered 14% protein grower mash by accident. The error was not discovered until egg production, egg quality and mortality had been severely affected. The increased mortality was largely due to reproductive disorders. Normally this problem concentrates early in the laying period but with this flock, 64% of losses due to this cause were in the last half of the year. Layers in the 2-bird cages were on growing feed longer than the other groups. In this house, feed consumption dropped 33%, rate of lay dropped 27%, Haugh Units were 16% below the Twelfth Test, and specific gravity score was 36% below the Twelfth Test. The layers on litter were least affected with comparable drops of 14%, 7%, 13% and 20%. Other management was as nearly commercial procedures as practical.

RESULTS

Part 1 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 1969, 1970 and 1971.

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 North Carolina Department of Agriculture who provided candling service on one day of production each month. Market values of all eggs were 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 North Carolina 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.

Shell Score (specific gravity) was secured by using salt solutions to determine the specific gravity of eggs. The eggs with specific gravity below 1.068 were given a score of 0; those between 1.068 and 1.072, a score of 1; etc., with those exceeding 1.100 receiving a score of 9. One day's production from each group of birds was classified in the months indicated.

Part IV of Tables

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

Causes of Mortality were assigned from autopsy findings. Birds were held in a freezer as mortality occurred and examined at the North Carolina Department of Agriculture Diagnostic Laboratory once each week. We express our appreciation to Dr. W. W. Clemmons for providing this service to the test. The 10-point classification system recommended by the Council of American Official Poultry Tests was used on autopsy reports. Some categories which accounted for little mortality were combined under "Miscellaneous" in the interest of saving space. Two sub-divisions were made. Since lesions of Marek's and Lymphoid Leukosis can be distinguished only by histological studies in some individuals, such cases are listed under "Marek's or Lymphoid Leukosis". Mortality due to "Reproductive Disorders" has been separated into that occurring during the first 180 days of lay and that occurring during the last 170 days of lay.

Part V of Tables

This section of the tables is presented only for the average performance of the entries in all types of housing and for only the four characteristics listed.

The Range column indicates those entries which are in the most desirable half of the range above the mean by 1, those between this point and the mean by 2, those in the least desirable half of the range below the mean by 4, and those between this point and the mean by 3.

Entry No. indicates which stock from earlier listing in the tables attained the average performance value shown.

The Duncan Test may have little meaning to those who are not accustomed to statistical procedures. Basically, this test indicates that differences greater than those spanned by any one of the vertical lines would not be expected to occur more than five times out of 100 comparisons if all stocks had the same ability to produce. Few of us can insure 19 to 1 odds in our favor on daily business transactions. Observing the stock in more than one test and more than one year can help ascertain the margin of economic feasibility in stock selection.

BREEDER	STOCK IDENTIFICATION	SAMPLING PROCEDURE*	SOURCE OF SAMPLE
George M. Anthony & Sons Strausstown, Pa. 19559	Anthony W. Leg. WL SX	B	George M. Anthony & Sons Plt Farm, Strausstown, Pa. 1955
Babcock Poultry Farm, Inc. Box 280, Ithaca, N. Y. 14850	Babcock B-305 WL 4wIN	A	Beamsdale Farm, Route 2 Lawndale, N. C. 28090
Babcock Poultry Farm, Inc. Box 280, Ithaca, N. Y. 14850	Babcock B-390 RIRxBPR BX	A	Beamsdale Farm, Route 2 Lawndale, N. C. 28090
Carey Farms, Inc., 3252 Mt. Olive-Agosta Rd., Marion, Ohio 43302	Carey Nick WL IN	B	Carey Farms, Inc. Marion, Ohio 43302
Joe K. Davis Hatchery Box 27, Earl, N. C. 28038	Davis Combiner RIRxBPR BX	A	Joe K. Davis Hatchery Box 27, Earl, N. C. 28083
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
Experimental A	WL SX	-	Submitted by the breeder
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 Far 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 Fa 4255 Hammett Rd., Modesto, Ca. 95351
Ghostley Enterprises, Inc. Box 290, Anoka, Mn. 55303	Ghostley Pearl WL SX	A	Altamaha Poultry Farms, Bo 626, Hazelhurst, Ga. 31539
Hubbard Farms, Inc. Walpole, N. H. 03608	Hubbard Gld. Comet NHxSYN BX	A	Rocky Ford Hatchery Lincolnton, N. C. 28092
Ideal Poultry Breeding Farms, Inc. Box 591, Cameron, Texas 76520	Ideal 236 SYNxWL BX	A	Ideal Poultry Breeding Far Cameron, Tx. 76520
Ind. Fm. Bu. Coop. Assn., Inc. Indianapolis, Indiana 46204	Duchess 60 WL SX	B	Co-op Breeding & Res. Farm Rt. 2, W. Lafayette, In. 47906
N. Central Poultry Breeding Lab. Lafayette, Indiana 47907	Cor-Kent. RB (CKRB) WL RBX	-	Selected at Lafayette, In.
Parks Poultry Farm, Route 4 Box 118, Altoona, Pa. 16601	Keystones WL 4wX	B	Parks Poultry Farm, Rt. 4 Box 118, Altoona, Pa. 1660
Shaver Pltry. Br. Fm., Ltd. Box 400, Galt, Ontario, CANADA	Starcross 288 WL SX	A	Delta Hatchery Lake City, Fl. 32055
Tatum Farms, Route 3 Dawsonville, Georgia 30534	Tatum T-100 WL SX	B	Tatum Farms, Rt. 3 Dawsonville, Ga. 30534
Tatum Farms, Route 3 Dawsonville, Georgia 30534	Tatum T-111 RIRxBPR BX	B	Tatum Farms, Rt. 3 Dawsonville, Ga. 30534
Welp's Breeding Farm, Box 366 Bancroft, Io. 50517	Welp Line 971 WL IN	B	Welp's Breeding Farm, Box Bancroft, Io. 50517

* A = nest sample; B = egg room sample; C = incubator tray sample

Table 13-4A-I - Bird Weight, Egg Size, Maturity and Production Data

Entry No.	Type Housing	Breeder	Average Body Weight		% Egg Size, Distribution					Average Egg Wt. oz./doz.	Age at 50% Production	Egg Production Rate						Eggs per Pullet Housed
			150 Days	500 Days	Pee Wee	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	
1	1	Anthony (W.Leg)	2.9	4.1	0.0	0.3	3.8	11.8	84.1	27.4	178.0	60.7	76.4	66.4	57.3	54.2	70.4	194.9
2	1	Carey (Nick)	3.2	4.3	0.0	0.4	3.9	17.7	77.9	26.5	182.0	59.0	77.6	72.5	67.8	67.6	74.0	225.2
3	1	Tatum (T-100)	2.7	3.9	0.0	0.3	4.3	18.3	77.1	26.4	180.0	58.1	74.1	67.3	66.3	66.7	70.7	222.0
4	1	Garber (G-200)	2.9	4.1	0.0	0.2	3.9	16.9	79.0	26.5	182.5	57.0	76.1	66.2	63.9	63.9	70.8	208.3
5	1	Fisher (105)	2.8	3.8	0.0	0.7	5.6	16.5	77.1	26.4	180.0	58.8	77.0	69.0	64.8	65.2	71.4	220.1
6	1	Ghostley (Pearl)	3.0	4.2	0.1	0.6	6.3	20.7	72.3	26.3	171.5	66.3	73.4	65.9	62.0	59.9	69.3	212.4
7	1	Davis (Combiner)	3.8	5.3	0.0	0.2	1.3	7.8	90.7	28.5	194.5	42.4	66.0	55.7	51.4	49.1	59.6	177.0
8	1	Babcock (B-390)	3.7	5.1	0.0	0.1	1.8	9.8	88.4	28.1	187.5	47.8	67.0	52.9	52.5	56.0	60.3	181.5
9	1	Parks (Keystone)	3.1	4.1	0.1	0.2	4.5	15.9	79.3	27.0	178.5	60.4	76.8	67.5	66.3	65.8	71.7	229.5
10	1	Ind.Fm.Bu.(D.60)	3.1	4.1	0.0	0.6	4.6	16.7	78.0	26.9	176.0	63.2	74.9	64.5	62.2	61.8	69.9	202.0
11	1	Babcock (B-305	3.0	4.0	0.1	0.8	4.3	10.0	84.8	27.2	171.0	73.8	80.7	72.8	66.0	64.7	75.5	250.5
12	1	Davis (Reds)	3.8	5.3	0.0	0.1	2.1	10.5	87.3	28.2	199.0	37.4	53.7	49.2	47.9	47.0	52.7	157.5
13	1	Tatum (T-111)	3.9	5.5	0.0	0.1	2.3	9.3	88.3	28.4	196.5	41.1	66.8	56.8	55.0	54.1	61.4	177.8
14	1	NCRPB (CKRB)	3.1	4.4	0.0	0.7	4.5	20.6	74.2	26.3	184.0	52.1	67.2	59.2	55.5	56.6	62.7	193.9
15	1	Welps (971)	3.1	4.2	0.1	1.0	6.3	17.6	75.0	26.4	168.0	70.7	74.9	64.7	61.7	60.5	69.9	234.4
16	1	Hubbard (Gld.Com)	3.5	4.7	0.0	0.2	2.3	5.7	91.8	29.2	181.5	58.8	71.3	58.8	50.9	45.3	65.2	187.9
17	1	Garber (G-291)	3.2	4.6	0.2	1.1	5.9	16.4	76.4	26.6	175.5	64.2	75.6	66.9	57.0	54.4	69.7	219.1
18	1	Ideal (236)	3.2	4.5	0.0	0.5	3.6	12.6	83.3	27.4	176.0	61.0	74.1	67.9	64.4	63.4	70.7	215.2
19	1	Experimental A	2.9	4.1	0.0	0.5	3.7	18.5	77.3	26.7	183.5	55.7	73.3	66.2	59.9	58.2	68.3	214.8
20	1	Shaver (*X-288)	3.0	4.2	0.0	0.3	2.0	10.9	86.9	27.5	178.0	63.2	82.4	73.4	71.6	69.6	77.6	246.9
0	1	Average	3.2	4.4	0.0	0.4	3.9	14.2	81.5	27.2	181.2	57.6	73.0	64.2	60.2	59.2	68.1	208.5

Table 13-4A-II - Birds, Mortality, Feed Use, and Cost and Income Data

Entry Number	Type Housing	Number of Birds			Mortality			Feed Consumed					Value per Pullet Housed					
		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 (One day)	Per Pound of Eggs	Per Dozen Eggs	Chick Price	Growing Feed Cost	Laying Feed Cost	Total Feed & Chick Cost	Value of Eggs	Value of Meat	IOFCC
1	1	110.	100.	57.	3.6	43.0	53.9	16.1	23.4	2.49	4.27	.34	0.69	3.02	4.06	5.52	.14	1.597
2	1	113.	100.	81.	3.7	19.0	24.6	16.5	24.5	2.56	4.25	.34	0.71	3.48	4.54	6.40	.20	2.061
3	1	116.	100.	91.	0.0	9.0	15.7	15.3	22.2	2.43	4.01	.34	0.65	3.24	4.23	6.05	.21	2.029
4	1	118.	100.	84.	2.5	16.0	33.0	15.2	23.1	2.55	4.23	.30	0.65	3.21	4.17	5.91	.20	1.948
5	1	116.	99.	83.	2.6	16.2	23.1	14.5	22.3	2.42	3.98	.34	0.62	3.18	4.16	6.26	.19	2.294
6	1	115.	100.	81.	2.6	19.0	33.9	15.8	22.7	2.49	4.09	.30	0.68	3.13	4.12	5.93	.20	2.004
7	1	119.	100.	83.	3.3	17.0	21.3	17.5	24.9	3.12	5.55	.33	0.75	3.57	4.66	4.84	.35	0.523
8	1	115.	100.	85.	4.4	15.0	20.9	17.7	25.2	3.13	5.50	.31	0.77	3.63	4.72	5.13	.29	0.706
9	1	76.	74.	68.	2.6	8.0	11.4	16.9	23.0	2.41	4.08	.34	0.72	3.41	4.47	6.51	.22	2.261
10	1	114.	98.	77.	5.4	21.4	45.4	16.1	22.9	2.47	4.16	.33	0.70	3.05	4.09	5.65	.18	1.736
11	1	116.	100.	88.	0.9	12.0	9.9	15.3	23.7	2.28	3.89	.31	0.65	3.52	4.49	6.99	.20	2.701
12	1	109.	99.	85.	4.5	14.2	16.4	17.0	25.8	3.72	6.56	.33	0.75	3.76	4.85	4.22	.36	-0.270
13	1	109.	100.	83.	5.4	17.0	25.2	18.1	25.5	3.15	5.60	.36	0.78	3.62	4.77	4.82	.32	0.371
14	1	111.	100.	88.	2.7	12.0	19.3	16.4	23.6	2.94	4.83	.30	0.70	3.41	4.42	5.41	.22	1.218
15	1	119.	99.	94.	2.5	5.1	6.5	16.2	23.1	2.47	4.10	.32	0.70	3.47	4.50	6.69	.24	2.427
16	1	118.	99.	57.	4.2	42.3	41.7	17.2	24.3	2.63	4.80	.31	0.74	3.28	4.34	5.24	.16	1.055
17	1	119.	100.	87.	1.7	13.0	19.5	16.0	24.2	2.64	4.40	.30	0.68	3.50	4.49	5.96	.24	1.711
18	1	111.	97.	79.	1.8	18.5	28.4	17.2	24.2	2.54	4.34	.29	0.74	3.40	4.43	6.08	.22	1.861
19	1	111.	100.	90.	1.8	10.0	13.7	15.7	22.2	2.51	4.18	.31	0.67	3.27	4.26	5.94	.22	1.901
20	1	118.	99.	92.	0.8	7.0	10.0	15.6	24.3	2.34	4.02	.36	0.66	3.61	4.64	6.89	.23	2.479
0	1	113.	98.	82.	2.9	16.7	23.7	16.3	23.7	2.67	4.54	.32	0.70	3.39	4.42	5.82	.23	1.631

Table 13-4A-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	B	C	Chex and Cracks	Loss Eggs	Sept.	December	March	June	Average	October	January	April	July	Average
1	1	5.1	1.1	2.7	0.3	0.3	92.2	2.4	0.3	4.1	1.0	86.9	80.4	73.9	70.1	77.8	2.32	1.60	1.21	0.88	1.50
2	1	3.7	1.2	0.9	0.5	1.2	94.9	1.1	0.1	3.0	0.9	83.3	79.3	75.8	65.7	76.0	3.90	2.56	2.85	1.73	2.76
3	1	7.3	1.8	1.2	0.3	0.4	89.7	3.7	0.0	5.0	1.6	85.6	79.2	72.9	67.8	76.4	2.79	1.52	1.61	0.55	1.62
4	1	4.0	0.4	0.7	0.0	0.3	94.3	1.4	0.9	2.8	0.6	87.2	82.5	73.9	70.7	78.6	4.56	3.21	3.15	1.75	3.17
5	1	3.2	0.9	0.7	0.1	0.3	95.1	1.4	0.3	2.9	0.3	89.7	82.1	74.5	71.4	79.4	4.31	2.72	2.96	1.59	2.90
6	1	5.1	1.3	1.3	0.4	0.7	92.6	2.4	0.2	3.6	1.3	85.8	79.2	72.6	66.3	76.0	2.96	1.51	1.68	1.11	1.81
7	1	8.2	3.3	5.0	9.1	5.0	88.3	2.7	0.0	6.5	2.6	86.2	77.4	70.1	62.1	73.9	1.80	1.24	1.57	0.63	1.31
8	1	5.3	4.0	3.1	7.2	5.7	92.4	1.0	0.0	5.7	0.8	87.3	76.7	70.5	67.2	75.4	2.29	1.48	1.79	1.34	1.73
9	1	3.8	0.8	1.2	0.2	0.5	94.5	1.9	0.0	3.2	0.4	86.9	79.2	73.6	65.1	76.2	3.29	2.75	2.94	1.25	2.55
10	1	5.2	0.4	0.8	0.1	0.7	92.4	1.8	0.3	3.9	1.6	96.2	85.6	79.4	73.5	83.7	3.00	2.13	2.05	1.03	2.05
11	1	5.1	0.5	0.7	0.4	0.6	92.6	2.6	0.4	4.0	0.5	84.4	77.1	69.0	66.9	74.4	3.11	2.25	2.09	0.91	2.09
12	1	9.8	3.2	3.9	5.3	5.1	86.6	3.2	0.4	8.3	1.5	89.0	78.7	71.4	66.0	76.3	2.47	1.27	1.51	1.27	1.63
13	1	8.9	3.2	4.0	8.8	4.2	87.8	2.5	0.2	7.3	2.1	88.9	77.6	71.5	66.1	76.0	2.22	1.31	1.56	0.95	1.51
14	1	5.5	2.7	1.1	0.3	0.4	91.6	3.5	0.3	3.0	1.6	86.1	79.3	71.4	65.8	75.7	3.18	2.63	2.33	1.72	2.47
15	1	2.5	0.6	0.9	0.5	0.7	96.5	0.7	0.0	2.2	0.7	85.7	77.8	69.4	61.8	73.7	2.83	2.21	2.09	0.93	2.01
16	1	7.6	4.1	4.8	10.7	6.7	89.9	1.3	0.2	5.6	3.1	88.8	79.7	71.9	67.4	76.9	1.96	1.36	1.05	0.99	1.34
17	1	7.3	0.4	0.8	0.5	0.3	90.4	1.5	0.0	6.2	1.9	85.7	79.0	70.3	66.3	75.3	3.12	1.58	1.88	0.89	1.87
18	1	4.3	1.0	0.4	0.4	0.4	94.0	2.4	0.3	2.2	1.1	82.7	76.4	68.5	63.0	72.7	3.44	2.58	2.06	1.44	2.38
19	1	6.2	0.7	1.0	0.3	0.4	91.1	1.7	0.1	5.8	1.3	93.6	82.6	75.0	72.9	81.0	3.19	1.92	2.17	1.06	2.08
20	1	5.6	0.7	1.2	0.0	0.3	91.8	2.0	0.0	4.9	1.3	86.7	81.9	72.7	68.5	77.4	2.60	2.80	2.81	1.45	2.42
0	1	5.7	1.6	1.8	2.3	1.7	91.9	2.1	0.2	4.5	1.3	87.3	79.6	72.4	67.2	76.6	2.97	2.03	2.07	1.17	2.06

Table 13-4A-IV - Causes of Mortality

Entry Number	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neopl.		Reproductive Disorders 151-330 da.	Reproductive Disorders 331-500 da.	Miscellaneous		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Lay	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
1	1	-	-	-	-	-	4.0	-	-	9.0	23.0	1.8	7.0	-	-	-	-	1.8	43.0
2	1	-	-	-	-	-	1.0	-	-	3.0	12.0	2.7	3.0	-	-	0.9	-	3.7	19.0
3	1	-	1.0	-	-	-	-	-	-	3.0	5.0	-	-	-	-	-	-	0	9.0
4	1	-	1.0	-	3.0	-	4.0	-	-	2.0	5.0	2.5	1.0	-	-	-	-	2.5	16.0
5	1	-	-	-	-	-	-	-	2.0	4.1	7.1	1.7	2.0	-	1.0	0.9	-	2.6	16.2
6	1	-	-	-	1.0	-	2.0	-	-	5.0	3.0	1.7	7.0	-	1.0	0.9	-	2.6	19.0
7	1	-	1.0	-	1.0	-	1.0	-	-	1.0	3.0	2.5	10.0	-	-	0.8	-	3.3	17.0
8	1	-	-	-	-	-	1.0	-	-	2.0	3.0	2.6	6.0	-	3.0	1.8	-	4.4	15.0
9	1	-	-	-	-	-	5.3	-	-	-	1.3	2.6	1.3	-	-	-	-	2.6	8.0
10	1	0.9	1.0	-	4.1	-	5.1	-	-	6.2	2.0	1.8	2.0	-	-	2.7	1.0	5.4	21.4
11	1	-	-	-	-	-	-	-	-	1.0	8.0	0.9	3.0	-	-	-	-	0.9	12.0
12	1	-	-	-	-	-	-	-	-	1.0	5.0	4.5	6.1	-	2.0	-	-	4.5	14.2
13	1	-	-	-	1.0	-	1.0	-	-	5.0	5.0	2.7	2.0	1.0	2.0	1.8	1.0	5.4	17.0
14	1	-	1.0	-	1.0	-	2.0	-	-	2.0	4.0	2.7	2.0	-	-	-	-	2.7	12.0
15	1	0.8	-	-	-	-	-	-	-	1.0	1.0	1.7	3.0	-	-	-	-	2.5	5.1
16	1	-	-	-	1.0	-	-	-	1.0	14.1	21.2	1.7	5.0	-	-	2.5	-	4.2	42.3
17	1	-	1.0	-	5.0	-	1.0	-	-	1.0	3.0	1.7	2.0	-	-	-	-	1.7	13.0
18	1	-	2.1	-	1.0	-	1.0	-	-	3.1	8.2	1.8	3.1	-	-	-	-	1.8	18.5
19	1	-	1.0	-	-	-	-	-	2.0	-	2.0	0.9	4.0	-	-	0.9	1.0	1.9	10.0
20	1	-	-	-	-	-	-	-	-	-	3.0	0.8	4.0	-	-	-	-	0.8	7.0
Av.	1	0.1	0.5	0	0.9	0	1.4	0	0.3	3.1	6.2	2.0	3.7	0	0.4	0.6	0.2	2.8	16.7

Table 13-4B-I - Bird Weight, Egg Size, Maturity and Production Data

Entry No.	Type Housing	Breeder	Average Body Weight		% Egg Size, Distribution							Egg Production Rate						
			150 Days	500 Days	Pee Wee	Small	Medium	Large	Extra Large and Over	Av. Egg Wt. 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 per Pullet Housed
1	2	Anthony (W. Leg.)	3.1	4.2	0.1	0.1	4.1	17.5	78.3	26.7	178.5	63.4	79.1	66.7	62.8	61.6	72.6	217.6
2	2	Carey (Nick)	3.3	4.5	0.0	0.5	5.4	25.0	69.0	26.0	180.0	65.3	85.4	71.4	66.8	64.0	77.2	243.6
3	2	Tatum (T-100)	2.9	4.1	0.0	0.6	8.0	28.5	62.9	25.3	174.0	65.2	67.8	61.6	56.1	53.2	65.7	218.4
4	2	Garber (G-200)	3.3	4.4	0.1	1.0	10.9	31.3	56.7	25.1	167.0	70.3	75.1	51.8	46.3	44.0	63.6	193.0
5	2	Fisher (105)	3.0	4.0	0.2	1.4	9.2	26.7	62.5	25.5	169.5	74.1	78.0	64.9	57.8	57.7	71.0	233.5
6	2	Ghostley (Pearl)	3.1	4.3	0.1	0.4	5.6	18.7	75.2	26.3	171.0	71.0	78.4	67.0	59.5	57.6	71.8	233.6
7	2	Davis (Combiner)	4.0	6.0	0.0	0.3	4.4	17.4	77.9	26.9	185.0	53.6	77.9	70.8	63.4	59.5	71.6	227.8
8	2	Babcock (B-390)	3.9	5.4	0.0	0.3	3.9	15.4	80.4	26.8	174.0	67.1	86.9	78.5	73.9	71.1	80.6	266.3
9	2	Parks (Keystone)	3.3	4.6	0.0	0.1	4.2	18.6	76.9	26.6	183.0	67.1	89.8	77.3	60.7	56.6	78.9	259.4
10	2	Ind.Fm.Bu.(D.60)	3.1	4.3	0.1	0.8	8.4	26.4	64.3	25.8	171.0	71.8	77.8	64.6	61.7	59.5	71.9	220.3
11	2	Babcock (B-305)	3.0	4.1	0.1	0.6	5.8	17.4	76.2	26.6	168.0	78.2	86.7	79.1	70.7	67.0	81.1	267.7
12	2	Davis (Reds)	3.9	5.5	0.0	0.2	3.9	18.0	77.9	27.0	184.0	55.8	78.7	73.7	66.4	62.7	74.8	238.8
13	2	Tatum (T-111)	3.9	6.0	0.0	0.2	2.9	16.7	80.1	27.3	182.5	58.4	79.8	71.3	63.5	61.0	73.6	235.9
14	2	NCRPB (CKRB)	3.2	4.5	0.1	0.7	8.6	30.5	60.2	25.4	177.5	61.8	74.1	60.5	53.2	49.5	66.1	217.4
15	2	Welps (971)	3.1	4.2	0.1	0.6	8.2	22.0	69.2	26.0	169.0	74.5	75.7	63.3	59.4	56.6	70.0	237.0
16	2	Hubbard (Gld. C.)	3.8	5.1	0.0	0.1	1.9	6.0	92.0	29.3	175.5	66.1	72.9	63.4	57.7	54.3	68.2	225.1
17	2	Garber (G-291)	3.7	4.7	0.4	2.5	11.1	27.3	58.6	25.1	158.0	82.0	78.8	64.9	54.3	50.6	70.7	236.1
18	2	Ideal (236)	3.3	4.5	0.1	0.6	7.6	23.1	68.7	26.2	169.0	72.6	83.2	73.7	66.9	65.5	76.8	247.4
19	2	Experimental A	3.0	4.5	0.1	0.5	6.9	26.3	66.3	25.8	172.5	73.6	78.7	64.0	53.1	49.3	70.2	234.4
20	2	Shaver (*X-288)	3.2	4.3	0.0	0.3	3.5	21.4	74.8	26.4	174.5	70.4	88.9	75.3	66.4	64.1	79.5	261.8
C	2	Average	3.4	4.7	0.1	0.6	6.2	21.7	71.4	26.3	174.2	68.1	79.7	68.2	61.0	58.3	72.8	235.8

Table 13-4B-II - Birds, Mortality, Feed Use, and Cost and Income Data

Entry Number	Type Housing	Number of Birds: At One Week	Number of Birds: Housed	Number of Birds: At End of Test	Mortality: % 8 - 150 Days	Mortality: % 151-500 Days	Mortality: Av. Days Lost/Hen Housed	Feed Consumed: Per Bird 1 - 150 Days	Feed Consumed: Per 100 Birds (one day)	Feed Consumed: Per Pound of Eggs	Feed Consumed: Per Dozen Eggs	Chick Price	Value per Pullet Housed: Growing Feed Cost	Value per Pullet Housed: Laying Feed Cost	Value per Pullet Housed: Total Feed & Chick Cost	Value per Pullet Housed: Value of Eggs	Value per Pullet Housed: Value of Meat	IOFCC
1	2	110.	100.	79.	3.7	21.0	31.6	15.9	22.9	2.41	4.02	.34	0.69	3.18	4.22	6.21	.19	2.183
2	2	112.	99.	89.	2.7	10.1	13.7	16.8	24.3	2.48	4.04	.34	0.73	3.58	4.65	7.01	.24	2.600
3	2	116.	100.	96.	0.8	4.0	2.9	15.4	21.9	2.65	4.19	.34	0.66	3.32	4.32	6.17	.23	2.073
4	2	113.	100.	82.	2.6	18.0	37.6	16.7	22.0	2.73	4.29	.30	0.72	3.00	4.03	5.54	.21	1.724
5	2	108.	100.	93.	1.8	7.0	12.7	16.1	22.5	2.46	3.93	.34	0.70	3.31	4.35	6.60	.22	2.465
6	2	119.	100.	93.	4.2	7.0	13.3	16.2	23.3	2.46	4.04	.30	0.71	3.43	4.45	6.69	.24	2.479
7	2	116.	100.	95.	1.7	5.0	7.2	18.8	26.1	2.80	4.71	.33	0.81	3.90	5.04	6.52	.45	1.931
8	2	119.	100.	97.	0.8	3.0	2.6	18.4	25.8	2.41	4.04	.31	0.79	3.91	5.01	7.58	.42	2.980
9	2	77.	76.	76.	1.3	0.0	0.0	16.9	24.4	2.38	3.95	.34	0.73	3.73	4.81	7.48	.27	2.943
10	2	110.	100.	85.	0.0	15.0	32.6	16.3	22.5	2.43	3.92	.33	0.70	3.13	4.15	6.25	.21	2.308
11	2	114.	100.	92.	0.8	8.0	11.3	15.4	24.3	2.23	3.70	.31	0.66	3.59	4.57	7.57	.23	3.220
12	2	116.	100.	95.	3.4	5.0	5.1	18.0	24.6	2.53	4.26	.33	0.77	3.70	4.82	6.74	.41	2.339
13	2	120.	100.	97.	0.0	3.0	5.0	17.7	25.6	2.63	4.49	.36	0.76	3.86	4.97	6.80	.46	2.296
14	2	116.	100.	97.	0.9	3.0	3.4	16.5	23.5	2.84	4.51	.30	0.71	3.55	4.56	6.14	.26	1.838
15	2	119.	100.	98.	0.0	2.0	4.1	16.3	22.5	2.44	3.96	.32	0.70	3.40	4.42	6.77	.24	2.596
16	2	117.	100.	97.	1.7	3.0	5.3	18.1	24.3	2.44	4.48	.31	0.77	3.66	4.75	6.25	.39	1.890
17	2	112.	100.	91.	2.7	9.0	16.1	17.9	23.2	2.52	3.97	.30	0.77	3.38	4.46	6.65	.25	2.440
18	2	115.	100.	92.	3.5	8.0	17.4	16.4	23.5	2.32	3.80	.29	0.71	3.41	4.42	7.03	.24	2.846
19	2	109.	100.	96.	0.9	4.0	4.2	16.8	23.6	2.60	4.19	.31	0.72	3.56	4.60	6.77	.25	2.420
20	2	110.	100.	97.	0.9	3.0	3.2	16.6	23.9	2.30	3.80	.36	0.72	3.62	4.70	7.47	.25	3.012
C	2	112.	99.	92.	1.7	6.9	11.5	16.9	23.7	2.50	4.12	.32	0.73	3.51	4.57	6.71	.28	2.429

Table 13-4B-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	B	C	Chex and Cracks	Loss Eggs	September	December	March	June	Average	October	January	April	July	Average
1	2	3.9	1.1	0.8	0.3	0.7	94.4	1.5	0.1	3.4	C.5	86.6	79.7	74.7	65.1	76.5	3.42	2.13	1.47	0.20	1.80
2	2	2.3	0.6	1.0	0.1	0.5	96.6	1.5	0.1	1.5	C.2	84.9	79.3	67.9	62.2	73.6	3.95	3.00	2.66	0.87	2.62
3	2	3.3	0.8	1.1	0.5	1.1	94.9	3.3	0.1	1.6	C.1	87.6	78.9	72.8	64.1	75.8	3.55	2.41	1.61	0.48	2.01
4	2	3.0	0.3	0.7	0.3	0.4	95.5	2.3	0.2	1.7	C.5	89.4	81.7	72.5	66.4	77.5	5.08	4.44	3.68	1.44	3.66
5	2	3.3	1.0	1.8	0.4	0.6	94.8	2.6	0.2	2.3	C.C	88.6	84.1	74.2	71.4	79.6	4.09	3.56	2.60	0.97	2.80
6	2	2.9	0.8	1.9	0.3	0.8	95.5	2.7	0.1	1.7	C.C	86.5	78.5	68.6	62.3	74.0	3.57	2.09	1.65	0.58	1.97
7	2	2.6	3.5	4.4	9.2	12.2	96.4	1.9	0.0	1.5	C.2	85.8	75.1	69.C	62.0	73.C	3.38	1.41	1.26	0.30	1.59
8	2	3.2	2.5	3.4	7.8	8.0	95.1	2.8	0.1	1.9	C.1	86.2	89.1	69.C	60.1	76.1	3.35	2.02	1.36	0.36	1.77
9	2	2.5	0.8	0.6	0.5	0.3	96.2	2.1	0.0	1.7	C.C	85.5	78.7	69.9	63.0	74.3	4.62	3.09	2.30	1.16	2.79
10	2	3.4	1.7	1.2	0.1	0.3	94.9	2.9	0.0	1.7	C.5	93.4	84.3	72.6	71.2	80.4	3.95	3.07	2.08	0.76	2.46
11	2	3.7	0.9	0.4	0.4	0.8	94.8	2.4	0.1	2.2	C.5	86.C	76.3	67.8	6C.7	72.7	4.54	2.83	2.33	0.81	2.63
12	2	4.2	2.5	4.8	8.9	7.9	93.7	2.7	0.1	2.7	C.7	88.9	78.1	68.3	61.6	74.2	3.13	1.57	1.03	0.15	1.47
13	2	2.3	2.9	2.8	8.7	9.6	96.7	1.5	0.0	1.6	C.2	86.8	8C.C	69.C	63.0	74.7	3.12	1.84	1.83	0.48	1.82
14	2	4.0	0.9	0.7	C.8	C.8	93.6	4.8	0.C	1.3	C.3	85.7	76.9	7C.5	62.0	73.8	4.C4	3.35	2.22	1.01	2.66
15	2	2.6	0.3	1.4	0.5	0.8	96.C	1.6	0.1	1.8	C.4	84.1	75.5	68.9	59.1	71.9	3.95	2.59	1.83	C.83	2.30
16	2	6.4	4.2	4.3	13.3	10.8	9C.7	3.5	0.6	3.8	1.5	89.4	78.5	74.3	67.3	77.4	2.88	1.77	1.19	0.45	1.57
17	2	2.9	0.6	0.7	0.4	1.1	95.6	1.5	0.5	2.1	[illegible]	[illegible]	79.2	69.7	59.9	73.7	3.89	2.47	1.51	0.39	2.07
18	2	3.1	0.3	1.5	0.4	0.4	95.2	2.9	0.0	1.8	C.2	81.[illegible]	76.2	66.5	61.4	71.4	3.97	2.63	2.11	0.75	2.37
19	2	2.5	0.5	0.5	0.0	0.7	96.2	1.9	0.0	1.8	C.1	8C.8	83.9	73.5	68.8	79.2	3.88	2.14	2.12	C.64	2.19
2C	2	3.5	0.5	1.0	0.1	C.5	94.9	2.5	C.C	2.1	C.4	86.9	79.6	7C.5	6C.6	74.4	3.97	2.66	1.84	C.55	2.26
0	2	3.3	1.3	1.8	2.7	2.9	95.1	2.4	0.1	2.C	C.3	87.C	79.7	7C.5	63.6	75.2	3.82	2.55	1.93	0.66	2.24

Table 13-4B-IV - Causes of Mortality

Entry Number	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neoplasms		Reproductive Disorders 151-330 da.	Reproductive Disorders 331-500 da.	Miscellaneous		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Lay	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
1	2	-	-	-	-	-	6.0	-	-	4.0	4.0	1.8	7.0	0.9	-	0.9	-	3.7	21.0
2	2	-	-	-	3.0	-	2.0	-	-	1.0	2.0	1.8	1.0	-	-	0.9	1.0	2.7	10.1
3	2	-	-	-	-	-	-	-	-	-	2.0	0.8	2.0	-	-	-	-	0.8	4.0
4	2	-	1.0	-	2.0	-	4.0	-	-	5.0	1.0	1.8	5.0	-	-	0.9	-	2.6	18.0
5	2	-	-	-	1.0	-	-	-	-	3.0	1.0	1.9	1.0	-	1.0	-	-	1.9	7.0
6	2	-	-	-	1.0	-	2.0	-	-	1.0	2.0	2.5	1.0	-	-	1.7	-	4.2	7.0
7	2	-	-	-	-	-	1.0	-	-	1.0	2.0	0.9	1.0	-	-	0.8	-	1.7	5.0
8	2	-	-	-	-	-	-	-	-	-	1.0	0.8	2.0	-	-	-	-	0.8	3.0
9	2	-	-	-	-	-	-	-	-	-	-	1.3	-	-	-	-	-	1.3	0
10	2	-	-	-	3.0	-	6.0	-	-	-	3.0	-	3.0	-	-	-	-	0	15.0
11	2	-	1.0	-	-	-	1.0	-	-	2.0	4.0	0.8	-	-	-	-	-	0.8	8.0
12	2	-	-	-	-	-	1.0	-	-	1.0	1.0	3.4	1.0	-	-	-	1.0	3.4	5.0
13	2	-	1.0	-	-	-	-	-	-	-	1.0	-	1.0	-	-	-	-	0	3.0
14	2	-	-	-	-	-	-	-	-	-	1.0	0.9	2.0	-	-	-	-	0.9	3.0
15	2	-	-	-	-	-	-	-	-	1.0	-	-	1.0	-	-	-	-	0	2.0
16	2	-	-	-	-	-	-	-	-	-	2.0	0.8	-	-	1.0	0.8	-	1.7	3.0
17	2	-	-	-	2.0	-	2.0	-	-	-	2.0	2.7	3.0	-	-	-	-	2.7	9.
18	2	-	-	-	2.0	-	3.0	-	-	1.0	=	3.5	2.0	-	-	-	-	3.5	8.
19	2	-	-	-	-	-	-	-	-	1.0	1.0	0.9	2.0	-	-	-	-	0.9	4.
20	2	-	-	-	1.0	-	-	-	-	-	1.0	0.9	1.0	-	-	-	-	0.9	3.
Av.	2	0	0.2	0	0.8	0	1.4	0	0	1.0	1.6	1.4	1.8	0	0.1	0.3	0.1	1.7	6.

Table 13-4C-I - Bird Weight, Egg Size, Maturity and Production Data

Entry No.	Type Housing	Breeder	Average Body Weight		% Egg Size, Distribution							Egg Production Rate						
			150 Days	500 Days	Pee Wee	Small	Medium	Large	Extra Large and Over	Av. Egg Wt. 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 per Pullet Housed
1	3	Anthony (W. Leg.)	3.1	3.9	0.0	0.5	5.1	13.5	80.9	27.2	173.2	63.3	73.9	65.4	60.0	57.6	68.9	215.7
2	3	Carey (Nick)	3.1	4.0	0.0	0.4	5.0	21.4	73.2	26.6	176.0	61.7	79.3	70.0	71.4	68.5	74.7	233.6
3	3	Tatum (T-100)	2.9	3.9	0.1	0.3	5.0	20.2	74.4	26.5	172.5	65.0	76.6	66.1	65.8	63.3	71.6	228.8
4	3	Garber (G-200)	3.0	4.3	0.1	0.6	4.6	16.5	78.2	26.6	177.5	56.7	72.1	60.2	55.5	52.9	65.3	189.2
5	3	Fisher (105)	3.0	3.7	0.1	1.1	7.2	21.6	70.0	26.1	172.2	71.0	78.4	66.7	66.6	62.4	73.4	236.8
6	3	Ghostley (Pearl)	2.9	4.0	0.1	0.8	5.2	17.1	76.8	26.9	170.2	67.5	77.7	67.7	68.1	67.5	73.2	225.3
7	3	Davis (Combiner)	4.0	5.5	0.1	0.1	3.2	10.2	86.4	27.9	183.0	50.5	68.8	62.1	60.9	58.6	65.2	203.1
8	3	Babcock (B-390)	4.0	5.2	0.0	0.1	2.2	9.6	88.2	28.1	180.5	59.4	77.4	66.6	63.2	61.3	71.6	232.4
9	3	Parks (Keystone)	3.5	4.3	0.0	0.4	4.9	15.3	79.3	27.1	173.0	67.9	78.6	66.7	65.6	63.9	72.4	240.5
10	3	Ind.Fm.Bu.(D.60)	3.1	4.0	0.0	0.7	4.8	20.2	74.3	26.6	170.7	64.7	74.7	61.7	62.0	58.3	68.3	220.2
11	3	Babcock (B-305)	3.0	3.8	0.1	0.6	5.2	13.8	80.3	27.2	169.7	75.7	81.4	70.5	67.2	66.0	75.5	243.2
12	3	Davis (Reds)	3.8	5.2	0.0	0.4	2.6	11.8	85.3	27.7	187.5	48.5	73.0	63.0	62.2	60.1	67.5	212.8
13	3	Tatum (T-111)	3.9	5.9	0.0	0.3	2.4	12.9	84.5	28.1	185.5	49.6	71.8	62.3	61.7	60.2	66.8	205.0
14	3	NCRPB (CKRB)	3.1	4.2	0.1	0.5	6.1	22.7	70.6	26.4	176.7	57.2	68.7	57.8	57.5	56.3	63.8	207.3
15	3	Welps (971)	3.2	4.1	0.2	1.2	6.7	17.6	74.4	26.5	163.2	71.9	75.4	62.9	59.4	54.5	68.7	226.7
16	3	Hubbard (Gld.C.)	3.4	4.7	0.0	0.1	2.0	5.6	92.3	29.8	179.7	58.9	72.2	60.3	54.6	51.6	65.6	209.3
17	3	Garber (G-291)	3.3	4.4	0.1	0.9	6.5	15.7	76.9	26.9	172.5	64.9	76.5	65.0	63.0	59.7	70.7	213.2
18	3	Ideal (236)	3.4	4.4	0.0	0.4	4.8	14.3	80.5	27.3	174.0	61.7	72.9	66.1	62.2	60.0	69.0	203.5
19	3	Experimental A	3.2	4.1	0.0	0.7	4.9	15.5	78.8	26.9	169.7	70.0	73.2	60.7	59.4	54.7	68.2	226.7
20	3	Shaver (*X-288)	3.3	4.1	0.0	0.2	3.0	12.9	83.9	27.6	172.5	66.2	81.6	67.6	66.0	63.9	73.9	244.2
0	3	Average	3.3	4.4	0.1	0.5	4.6	15.4	79.5	27.2	175.0	62.6	75.2	64.5	62.6	60.1	69.7	220.9

Table 13-4C-II - Birds, Mortality, Feed Use, and Cost and Income Data

Entry Number	Type Housing	Number of Birds			Mortality			Feed Consumed				Chick Price	Value per Pullet Housed					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 (one day)	Per Pound of Eggs	Per Dozen Eggs		Growing Feed Cost	Laying Feed Cost	Total Feed and Chick Cost	Value of Eggs	Value of Meat	
1	3	106.	104.	91.	2.8	12.5	22.6	16.6	23.0	2.47	4.15	.34	C.72	3.28	4.35	6.13	.20	1.990
2	3	117.	104.	95.	3.4	8.7	18.6	16.0	23.1	2.37	3.94	.34	C.69	3.35	4.38	6.74	.21	2.576
3	3	105.	104.	96.	5.4	7.7	16.1	15.8	21.9	2.32	3.85	.34	C.69	3.20	4.26	6.46	.21	2.417
4	3	113.	104.	83.	0.9	20.2	41.4	15.7	22.1	2.61	4.35	.30	C.65	2.98	3.94	5.48	.20	1.740
5	3	111.	104.	91.	3.6	12.5	16.1	15.3	22.3	2.32	3.79	.34	C.66	3.25	4.26	6.70	.19	2.628
6	3	118.	104.	88.	1.7	15.4	29.7	15.6	22.6	2.30	3.87	.30	C.67	3.16	4.14	6.38	.20	2.435
7	3	104.	104.	98.	1.9	5.8	14.2	18.3	25.0	2.85	4.97	.33	C.78	3.67	4.78	5.65	.41	1.285
8	3	106.	104.	102.	2.8	1.9	1.8	19.0	25.8	2.64	4.63	.31	C.81	3.92	5.05	6.68	.38	2.011
9	3	76.	72.	69.	3.9	4.2	6.5	18.7	24.2	2.48	4.20	.34	C.81	3.64	4.80	6.84	.25	2.285
10	3	102.	101.	89.	7.9	11.8	15.7	16.3	22.4	2.46	4.11	.33	C.71	3.27	4.34	6.27	.21	2.139
11	3	114.	104.	92.	0.9	11.5	21.7	15.6	23.2	2.23	3.80	.31	C.67	3.33	4.32	6.69	.20	2.573
12	3	112.	103.	99.	6.2	3.9	4.4	18.1	25.2	2.84	4.92	.33	C.79	3.81	4.95	6.04	.40	1.494
13	3	115.	104.	93.	1.7	10.6	15.3	17.4	25.8	2.89	5.06	.36	C.74	3.77	4.88	5.85	.41	1.382
14	3	107.	104.	95.	6.6	8.7	7.2	16.6	22.7	2.74	4.52	.30	C.73	3.40	4.44	5.87	.23	1.651
15	3	116.	104.	93.	2.6	10.6	15.2	16.0	22.3	2.40	3.98	.32	C.69	3.26	4.28	6.47	.22	2.412
16	3	119.	104.	96.	1.7	7.7	11.3	16.8	23.4	2.45	4.56	.31	C.72	3.46	4.50	5.82	.26	1.580
17	3	117.	104.	90.	2.6	13.5	33.7	15.9	23.6	2.51	4.22	.30	C.69	3.27	4.27	6.13	.22	2.078
18	3	107.	104.	81.	6.6	22.1	40.9	17.1	23.9	2.56	4.38	.29	C.74	3.23	4.27	5.83	.20	1.759
19	3	104.	104.	99.	2.9	4.8	7.0	16.9	22.9	2.48	4.18	.31	C.73	3.43	4.48	6.51	.23	2.255
20	3	108.	104.	102.	1.0	1.9	3.6	16.5	23.8	2.35	4.05	.36	C.71	3.60	4.67	7.02	.24	2.588
0	3	109.	102.	92.	3.3	9.8	17.1	16.7	23.5	2.51	4.28	.32	C.72	3.41	4.47	6.28	.25	2.064

Table 13-4C-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	B	C	Chex and Cracks	Loss Eggs	September	December	March	June	Average	October	January	April	July	Average
1	3	3.7	1.5	2.4	0.1	0.3	94.8	1.0	0.1	3.2	0.9	81.9	76.8	72.1	65.1	74.0	3.30	1.71	1.00	0.64	1.66
2	3	1.7	0.4	0.6	0.1	0.8	97.6	1.0	0.0	0.8	0.6	81.6	77.4	71.0	62.2	73.1	4.08	2.82	2.18	0.97	2.51
3	3	4.1	2.2	1.4	0.2	0.0	94.2	2.4	0.1	2.5	0.8	82.9	76.8	71.3	65.0	74.0	3.13	2.02	1.31	0.71	1.79
4	3	2.2	0.6	1.3	0.2	0.3	96.9	1.2	0.3	1.0	0.6	89.4	83.7	73.3	65.6	78.0	4.89	3.09	2.09	1.56	2.91
5	3	3.5	1.3	0.8	0.2	0.3	94.9	1.6	0.2	2.8	0.5	87.6	83.7	72.9	70.1	78.6	4.61	3.22	1.43	0.59	2.46
6	3	3.9	2.0	2.0	0.1	0.1	94.5	1.2	0.1	3.6	0.6	86.2	80.5	74.5	67.4	77.1	3.33	1.69	1.28	0.65	1.74
7	3	5.4	2.7	3.1	9.7	6.4	92.3	3.8	0.3	2.6	1.1	83.8	76.2	69.1	59.7	72.2	2.94	1.06	0.96	0.75	1.43
8	3	2.9	3.1	3.2	6.0	5.1	95.5	1.2	0.1	3.2	0.0	83.9	75.7	71.0	59.9	72.7	3.05	1.28	1.27	0.86	1.62
9	3	3.6	0.9	0.4	0.2	0.2	95.0	1.7	0.1	2.0	1.1	82.8	76.9	74.3	60.2	73.5	4.17	2.56	1.62	1.02	2.34
10	3	3.6	0.9	1.1	0.1	0.4	94.9	1.3	0.0	3.2	0.6	91.1	84.5	78.7	72.8	81.8	4.50	2.55	1.57	0.87	2.37
11	3	6.7	1.0	0.8	0.3	0.5	90.5	2.6	0.1	5.6	1.2	81.3	74.4	70.4	61.3	71.8	4.44	2.65	1.67	0.67	2.36
12	3	3.9	2.6	3.2	8.2	5.9	94.6	1.3	0.3	3.3	0.5	84.0	78.2	71.4	60.9	73.6	2.99	1.21	1.23	0.69	1.53
13	3	3.7	4.1	4.3	9.7	6.1	94.7	1.2	0.3	3.0	0.8	85.2	77.6	71.4	64.8	74.8	2.88	1.65	1.22	1.12	1.71
14	3	3.9	1.9	1.9	0.0	0.5	94.5	1.7	0.7	2.8	0.4	82.6	76.0	71.7	63.6	73.5	4.52	3.07	2.00	1.41	2.75
15	3	2.7	1.4	0.7	0.1	0.5	96.2	1.0	0.1	2.2	0.5	83.0	75.5	67.7	63.0	72.3	3.78	2.08	1.30	0.41	1.89
16	3	6.7	3.6	3.6	12.5	7.8	90.5	3.5	0.3	4.4	1.3	85.3	77.7	73.0	68.5	76.1	3.51	1.21	1.10	0.74	1.64
17	3	2.0	0.6	0.8	0.3	0.2	97.1	1.1	0.3	1.2	0.2	82.6	77.9	71.4	60.5	73.1	4.21	2.57	1.15	0.70	2.16
18	3	3.0	1.8	1.8	0.0	0.1	95.9	0.9	0.1	2.4	0.7	79.8	72.1	70.1	59.3	70.3	3.69	2.47	1.48	0.94	2.14
19	3	2.7	0.2	0.6	0.5	0.2	96.4	0.7	0.1	2.4	0.4	89.6	82.0	77.4	65.7	78.7	3.51	2.08	1.83	0.61	2.01
20	3	2.9	1.0	0.7	0.1	0.2	95.8	1.0	0.2	2.4	0.6	86.2	78.0	73.5	66.1	75.9	4.16	2.84	1.49	1.21	2.43
0	3	3.6	1.7	1.7	2.4	1.8	94.8	1.6	0.2	2.7	0.7	84.5	78.1	72.3	64.1	74.8	3.78	2.19	1.46	0.86	2.07

Table 13-4C-IV - Causes of Mortality

Entry Number	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neopl.		Reproductive Disorders 151-330 da.	Reproductive Disorders 331-500 da.	Miscellaneous		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Lay	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
1	3	-	-	-	1.0	-	1.0	-	1.0	3.8	4.9	1.8	1.0	-	-	1.0	-	2.8	12.5
2	3	-	-	-	2.9	-	1.9	-	-	1.0	1.0	0.8	1.9	0.8	-	1.7	-	3.4	8.7
3	3	-	-	-	-	-	1.0	-	-	1.0	-	4.2	5.8	0.9	-	-	-	5.4	7.7
4	3	-	-	-	5.8	-	6.7	-	-	1.9	1.0	0.9	3.8	-	1.0	-	-	0.9	20.2
5	3	-	-	-	-	-	-	-	-	1.9	2.9	1.8	7.7	0.9	-	0.9	-	3.6	12.5
6	3	-	2.9	-	1.0	-	-	-	-	2.9	3.8	1.7	4.8	-	-	-	-	1.7	15.4
7	3	-	1.0	-	1.0	-	1.9	-	-	-	-	1.9	1.0	-	1.0	-	-	1.9	5.8
8	3	-	-	-	-	-	-	-	-	-	1.9	1.8	-	-	-	1.0	-	2.8	1.9
9	3	-	-	-	1.4	-	-	-	-	-	1.4	2.6	1.4	-	-	1.3	-	3.9	4.2
10	3	-	2.0	-	1.0	-	-	-	-	2.9	1.0	5.8	5.0	1.0	-	1.0	-	7.9	11.8
11	3	-	-	-	-	-	-	-	-	2.9	-	0.9	7.7	-	1.0	-	-	0.9	11.5
12	3	-	-	-	-	-	-	-	-	1.0	2.0	4.4	1.0	0.9	-	0.9	-	6.2	3.9
13	3	-	1.0	-	1.0	-	1.9	-	-	0.9	2.9	1.7	2.9	-	-	-	-	1.7	10.6
14	3	-	-	-	1.0	-	1.0	-	-	1.0	1.9	3.7	3.8	0.9	-	1.9	-	6.6	8.7
15	3	1.7	1.9	-	-	-	-	-	-	1.9	1.9	0.9	4.8	-	-	-	-	2.6	10.6
16	3	-	-	-	-	-	-	-	-	2.9	1.9	0.8	1.9	-	1.0	0.8	-	1.7	7.7
17	3	1.7	-	-	2.9	-	6.7	-	-	1.0	-	0.9	2.9	-	-	-	-	2.6	13.5
18	3	1.0	1.9	-	1.0	-	6.7	-	-	1.9	2.9	1.8	7.7	-	-	3.8	-	6.6	22.1
19	3	-	-	-	-	-	1.0	-	-	-	-	1.0	3.8	-	-	1.9	-	2.9	4.8
20	3	-	-	-	-	-	-	-	-	1.0	1.0	-	-	-	-	1.0	-	1.0	1.9
Av.	3	0.2	0.5	0	1.0	0	1.5	0	0	1.5	1.6	2.0	3.4	0.3	0.2	0.9	0	3.4	9.8

Table 13-4D-I - Bird Weight, Egg Size, Maturity and Production Rate

Entry No.	Type Housing	Breeder	Average Body Weight		% Egg Size, Distribution							Egg Production Rate						
			150 Days	500 Days	Pee Wee	Small	Medium	Large	Extra Large and Over	Av. Egg Wt. 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 per Pullet Housed
1	0	Anthony (W. Leg.)	3.0	4.1	0.0	0.3	4.3	14.3	81.1	27.1	176.6	62.5	76.5	66.2	60.0	57.8	70.6	209.4
2	0	Carey (Nick)	3.2	4.2	0.0	0.5	4.8	21.4	73.4	26.4	179.3	62.0	80.8	71.3	68.7	66.7	75.3	234.1
3	0	Tatum (T-100)	2.8	3.9	0.0	0.4	5.7	22.3	71.5	26.1	175.5	62.8	72.8	65.0	62.7	61.1	69.4	223.1
4	0	Garber (G-200)	3.1	4.3	0.1	0.6	6.5	21.5	71.3	26.1	175.7	61.3	74.4	59.4	55.3	53.6	66.6	196.8
5	0	Fisher (105)	2.9	3.8	0.1	1.1	7.3	21.6	69.9	26.0	173.9	68.0	77.8	66.9	63.1	61.7	71.9	230.1
6	0	Ghostley (Pearl)	3.0	4.2	0.1	0.6	5.7	18.8	74.8	26.5	170.9	68.3	76.5	66.9	63.2	61.7	71.4	223.8
7	0	Davis (Combiner)	3.9	5.6	0.0	0.2	2.9	11.8	85.0	27.8	187.5	48.8	70.9	62.9	58.6	55.7	65.5	202.6
8	0	Babcock (B-390)	3.9	5.2	0.0	0.1	2.6	11.6	85.7	27.7	180.7	58.1	77.1	66.0	63.2	62.8	70.8	226.7
9	0	Parks (Keystone)	3.3	4.3	0.0	0.3	4.5	16.6	78.5	26.9	178.2	65.1	81.7	70.5	64.2	62.1	74.4	243.1
10	0	Ind.Fm.Bu.(D.60)	3.1	4.1	0.1	0.7	5.9	21.1	72.2	26.4	172.6	66.6	75.8	63.6	62.0	59.9	70.0	214.2
11	0	Babcock (B-305)	3.0	4.0	0.1	0.7	5.1	13.7	80.5	27.0	169.6	75.9	82.9	74.1	68.0	65.9	77.4	253.8
12	0	Davis (Red)	3.8	5.4	0.0	0.2	2.9	13.4	83.5	27.6	190.2	47.2	68.4	62.0	58.8	56.6	65.0	203.1
13	0	Tatum (T-111)	3.9	5.8	0.0	0.2	2.6	12.9	84.3	27.9	188.2	49.7	72.8	63.5	60.1	58.4	67.3	206.2
14	0	NCRPB (CKRB)	3.1	4.4	0.0	0.6	6.4	24.6	68.3	26.0	179.4	57.0	70.0	59.2	55.4	54.1	64.2	206.2
15	0	Welps (971)	3.1	4.2	0.1	0.9	7.1	19.0	72.8	26.3	166.7	72.4	75.3	63.6	60.2	57.2	69.5	232.7
16	0	Hubbard (Gld.C.)	3.6	4.8	0.0	0.1	2.1	5.8	92.0	29.4	178.9	61.3	72.1	60.8	54.4	50.4	66.4	207.4
17	0	Garber (G-291)	3.4	4.6	0.2	1.5	7.8	19.8	70.6	26.2	168.7	70.3	77.0	65.6	58.1	54.9	70.3	222.8
18	0	Ideal (236)	3.3	4.5	0.0	0.5	5.3	16.7	77.5	27.0	173.0	65.1	76.7	69.2	64.5	62.9	72.2	222.0
19	0	Experimental A	3.0	4.3	0.0	0.5	5.2	20.1	74.1	26.5	175.2	66.4	75.1	63.6	57.5	54.1	68.9	225.3
20	0	Shaver (*X-288)	3.2	4.2	0.0	0.2	2.8	15.0	81.9	27.2	175.0	66.6	84.3	72.1	68.0	65.9	77.0	251.0
0	0	Average	3.3	4.5	0.1	0.5	4.9	17.1	77.4	26.9	176.8	62.8	76.0	65.6	61.3	59.2	70.2	221.7

Table 13-4D-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	At End of Test	% 8 - 150 Days	% 151-500 Days	Av. Days Lost/Hen Housed	Per Bird 1 - 150 Days	Per 100 Birds (one day)	Per Pound of Eggs	Per Dozen Eggs	Chick Price	Growing Feed Cost	Laying Feed Cost	Total Feed and Chick Cost	Value of Eggs	Value of Meat	IOFCC
1	0	326.	304.	227.	3.4	25.5	36.1	16.2	23.1	2.46	4.16	.34	C.7C	3.16	4.21	5.96	.18	1.923
2	0	342.	303.	265.	3.2	12.6	19.0	16.5	24.0	2.47	4.C7	.34	C.71	3.47	4.52	6.72	.22	2.412
3	0	337.	304.	283.	2.1	6.9	11.5	15.5	22.0	2.47	4.C2	.34	C.67	3.25	4.27	6.23	.21	2.173
4	0	344.	304.	249.	2.0	18.1	37.3	15.9	22.4	2.63	4.29	.3C	C.67	3.06	4.C5	5.65	.21	1.804
5	0	335.	303.	267.	2.7	11.9	17.3	15.3	22.4	2.40	3.9C	.34	C.66	3.25	4.26	6.52	.2C	2.462
6	0	352.	304.	262.	2.8	13.8	25.6	15.9	22.9	2.42	4.CC	.3C	C.68	3.24	4.24	6.33	.21	2.306
7	0	339.	304.	276.	2.3	9.3	14.3	18.2	25.3	2.92	5.C8	.33	C.78	3.72	4.83	5.67	.40	1.246
8	0	340.	304.	284.	2.7	6.6	8.4	18.4	25.6	2.73	4.72	.31	C.79	3.82	4.93	6.46	.36	1.899
9	0	229.	222.	213.	2.6	4.1	5.9	17.5	23.9	2.42	4.C8	.34	C.75	3.59	4.69	6.95	.25	2.496
1C	0	326.	299.	251.	4.4	16.1	31.2	16.2	22.6	2.45	4.C6	.33	C.7C	3.15	4.19	6.05	.20	2.061
11	0	344.	304.	272.	0.9	10.5	14.3	15.4	23.7	2.25	3.8C	.31	C.66	3.48	4.46	7.08	.21	2.831
12	0	337.	302.	279.	4.7	7.7	8.6	17.7	25.2	3.03	5.25	.33	C.77	3.76	4.87	5.67	.39	1.187
13	0	344.	304.	273.	2.4	10.2	15.2	17.7	25.6	2.89	5.C5	.36	C.76	3.75	4.87	5.83	.40	1.350
14	0	334.	304.	280.	3.4	7.9	9.9	16.5	23.2	2.84	4.62	.3C	C.71	3.45	4.47	5.81	.24	1.569
15	0	354.	303.	285.	1.7	5.9	8.6	16.2	22.6	2.44	4.01	.32	C.69	3.38	4.40	6.64	.23	2.479
16	0	354.	303.	250.	2.5	17.7	19.4	17.4	24.0	2.51	4.61	.31	C.74	3.47	4.53	5.77	.27	1.509
17	0	348.	304.	268.	2.3	11.8	23.1	16.6	23.7	2.56	4.2C	.3C	C.71	3.38	4.41	6.24	.24	2.076
18	0	333.	301.	252.	4.0	16.2	28.9	16.9	23.9	2.47	4.18	.29	C.73	3.35	4.37	6.31	.22	2.156
19	0	324.	304.	285.	1.9	6.3	8.3	16.5	22.9	2.53	4.18	.31	C.71	3.42	4.45	6.4C	.24	2.192
20	0	336.	303.	291.	0.9	4.0	5.6	16.2	24.0	2.33	3.96	.36	C.70	3.61	4.67	7.13	.24	2.693
0	0	334.	299.	266.	2.6	11.1	17.4	16.6	23.6	2.56	4.31	.32	C.72	3.44	4.48	6.27	.25	2.041

Table 13-4D-III - Egg Quality Data

Battery 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	B	C	Chex and Cracks	Loss Eggs	September	December	March	June	Average	October	January	April	July	Average
1	0	4.2	1.2	2.0	0.2	0.5	93.8	1.6	0.2	3.6	0.8	85.1	79.0	73.6	66.8	76.1	3.01	1.81	1.23	0.57	1.66
2	0	2.6	0.7	0.8	0.2	0.8	96.3	1.2	0.1	1.8	0.6	83.3	78.7	71.6	63.4	74.2	3.98	2.79	2.56	1.19	2.63
3	0	4.9	1.6	1.2	0.3	0.5	92.9	3.1	0.1	3.0	0.9	85.4	78.3	72.3	65.7	75.4	3.16	1.99	1.51	0.58	1.81
4	0	3.1	0.4	0.9	0.2	0.3	95.6	1.6	0.4	1.9	0.5	88.7	82.6	73.2	67.6	78.0	4.84	3.58	2.97	1.58	3.24
5	0	3.3	1.1	1.1	0.2	0.4	94.9	1.9	0.2	2.7	0.2	88.6	83.3	73.9	70.9	79.2	4.33	3.17	2.33	1.05	2.72
6	0	4.0	1.3	1.7	0.3	0.5	94.2	2.1	0.1	2.9	0.6	86.2	79.4	71.9	65.3	75.7	3.28	1.76	1.54	0.78	1.84
7	0	5.4	3.2	4.2	9.3	7.9	92.3	2.8	0.1	3.5	1.3	85.3	76.2	69.4	61.3	73.0	2.71	1.24	1.26	0.56	1.44
8	0	3.8	3.2	3.2	7.0	6.3	94.4	1.7	0.1	3.6	0.3	85.8	80.5	70.2	62.4	74.7	2.90	1.60	1.47	0.86	1.71
9	0	3.3	0.8	0.7	0.3	0.3	95.2	1.9	0.0	2.3	0.5	85.1	78.3	72.6	62.8	74.7	4.02	2.80	2.29	1.14	2.56
0	0	4.1	1.0	1.1	0.1	0.5	94.0	2.0	0.1	2.9	0.9	93.6	84.8	76.9	72.5	82.0	3.82	2.58	1.90	0.88	2.30
1	0	5.2	0.8	0.6	0.4	0.6	92.6	2.5	0.2	3.9	0.7	83.9	75.9	69.1	63.0	73.0	4.03	2.57	2.03	0.80	2.36
2	0	6.0	2.8	4.0	7.4	6.3	91.6	2.4	0.3	4.8	0.9	87.3	78.3	70.4	62.8	74.7	2.87	1.35	1.26	0.70	1.54
3	0	5.0	3.4	3.7	9.1	6.6	93.1	1.7	0.1	4.0	1.1	87.0	78.4	70.6	64.7	75.2	2.74	1.60	1.54	0.85	1.68
4	0	4.5	1.8	1.2	0.3	0.6	93.2	3.3	0.3	2.4	0.8	84.8	77.4	71.2	63.8	74.3	3.91	3.02	2.18	1.38	2.62
5	0	2.6	0.8	1.0	0.4	0.7	96.2	1.1	0.1	2.1	0.5	84.3	76.3	68.7	61.3	72.6	3.52	2.30	1.74	0.72	2.07
6	0	6.9	4.0	4.2	12.2	8.4	90.4	2.8	0.3	4.6	2.0	87.9	78.6	73.1	67.7	76.8	2.78	1.44	1.11	0.73	1.52
7	0	4.1	0.5	0.8	0.4	0.5	94.4	1.4	0.3	3.2	0.8	84.7	78.7	70.5	62.2	74.0	3.74	2.21	1.52	0.66	2.03
8	0	3.5	1.0	1.3	0.3	0.3	95.1	2.1	0.1	2.1	0.7	81.4	74.9	68.4	61.2	71.5	3.70	2.56	1.88	1.05	2.30
9	0	3.8	0.5	0.7	0.2	0.5	94.6	1.5	0.1	3.3	0.6	91.3	82.8	75.3	69.1	79.6	3.53	2.05	2.04	0.77	2.10
0	0	4.0	0.7	1.0	0.1	0.4	94.2	1.8	0.1	3.1	0.8	86.6	79.8	72.2	65.0	75.9	3.58	2.76	2.05	1.07	2.37
0	0	4.2	1.5	1.8	2.5	2.1	94.0	2.0	0.2	3.1	0.8	86.3	79.1	71.8	65.0	75.5	3.52	2.26	1.82	0.90	2.12

Table 13-4D-IV - Causes of Mortality

Entry Number	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neopl.		Reproductive Disorders 151-330 da.	Reproductive Disorders 331-500 da.	Miscellaneous		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay			Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
1	0	-	-	-	0.3	-	3.7	-	0.3	5.9	10.3	2.4	5.0	0.3	-	0.6	-	3.4	25.5
2	0	-	-	-	2.0	-	1.7	-	-	1.6	5.0	1.8	2.0	0.3	-	1.2	0.3	3.2	12.6
3	0	-	0.3	-	-	-	0.3	-	-	1.4	2.3	1.7	2.6	-.3	-	-	-	2.1	6.9
4	0	-	0.7	-	3.6	-	4.9	-	-	3.0	2.3	1.7	3.3	-	0.3	0.3	-	2.0	18.1
5	0	-	-	-	0.3	-	-	-	0.7	3.0	3.7	1.8	3.6	0.3	0.7	0.6	-	2.7	11.9
6	0	-	1.0	-	1.0	-	1.3	-	-	3.0	2.9	2.0	4.3	-	0.3	0.8	-	2.8	13.8
7	0	-	0.7	-	0.7	-	1.3	-	-	0.7	1.7	1.8	4.0	-	0.3	0.6	-	2.3	9.3
8	0	-	-	-	-	-	0.3	-	-	0.6	2.0	1.8	2.7	-	1.0	0.9	-	2.7	6.6
9	0	-	-	-	0.5	-	1.8	-	-	-	0.9	2.2	0.9	-	-	0.4	-	2.6	4.1
10	0	0.3	1.0	-	2.7	-	3.7	-	-	3.0	2.0	2.5	3.3	0.3	-	1.2	0.3	4.4	16.1
11	0	-	0.3	-	-	-	0.3	-	-	2.0	4.0	0.9	3.6	-	0.3	-	-	0.9	10.5
12	0	-	-	-	-	-	0.3	-	-	1.0	2.7	4.1	2.7	0.3	0.7	0.3	0.3	4.7	7.7
13	0	-	0.7	-	0.7	-	1.0	-	-	2.0	3.0	1.5	2.0	0.3	0.7	0.6	0.3	2.4	10.2
14	0	-	0.3	-	0.7	-	1.0	-	-	1.0	2.3	2.4	2.6	0.3	-	0.6	-	3.4	7.9
15	0	0.9	0.6	-	-	-	-	-	-	1.3	1.0	0.8	3.0	-	-	-	-	1.7	5.9
16	0	-	-	-	0.3	-	-	-	0.3	2.3	11.7	1.1	2.3	-	0.7	1.4	-	2.5	17.7
17	0	0.6	0.3	-	3.3	-	3.2	-	-	0.7	1.7	1.7	2.7	-	-	-	-	2.3	11.8
18	0	0.3	1.3	-	1.3	-	3.6	-	-	2.0	3.7	2.4	4.3	-	-	1.3	-	4.0	16.2
19	0	-	0.3	-	-	-	0.3	-	0.7	0.3	1.0	0.9	3.3	-	-	1.0	0.3	1.9	6.3
20	0	-	-	-	0.3	-	-	-	-	0.3	1.7	0.6	1.7	-	-	0.3	-	0.9	4.0
Av.	0	0.1	0.4	0	0.9	0	1.4	0	0.1	1.8	3.2	1.8	3.1	0.1	0.2	0.6	0.1	2.6	11.1

Table 13-4D-V - Duncan Range Test and Range Groups

Range	Entry	Eggs Per Pullet Housed	Duncan Test	Range	Entry	% Production After 50%	Duncan Test	Range	Entry	Feed Per Lb.of Eggs	Duncan Test	Range	Entry	Days Lost to Mortality	Duncan Test
1	11	253.8		1	11	77.4		1	11	2.25		1	20	5.6	
1	20	251.0		1	20	77.0		1	20	2.33		1	9	5.9	
1	9	243.1		1	2	75.3		1	5	2.40		1	19	8.3	
2	2	234.1		1	9	74.4		2	6	2.42		1	8	8.4	
2	15	232.7		2	18	72.2		2	9	2.42		1	12	8.6	
2	5	230.1		2	5	71.9		2	15	2.44		1	15	8.6	
2	8	226.7		2	6	71.4		2	10	2.45		1	14	9.9	
2	19	225.3		2	8	70.8		2	1	2.46		2	3	11.5	
2	6	223.8		2	1	70.6		2	3	2.47		2	7	14.3	
2	3	223.1		2	17	70.3		2	2	2.47		2	11	14.3	
2	17	222.8		3	10	70.0		2	18	2.47		2	13	15.2	
2	18	222.0		3	15	69.5		2	16	2.51		2	5	17.3	
3	10	214.2		3	3	69.4		2	19	2.53		3	2	19.0	
3	1	209.4		3	19	68.9		2	17	2.56		3	16	19.4	
4	16	207.4		3	13	67.3		3	4	2.63		3	17	23.1	
4	13	206.2		4	4	66.6		3	8	2.73		3	6	25.6	
4	14	206.2		4	16	66.4		4	14	2.84		4	18	28.9	
4	12	203.1		4	7	65.5		4	13	2.89		4	10	31.2	
4	7	202.6		4	12	65.0		4	7	2.92		4	1	36.1	
4	4	196.8		4	14	64.2		4	12	3.03		4	4	37.3	
[illegible]		2[illegible]		Av[illegible]		70.[illegible]		[illegible]		2.[illegible]		Av		[illegible]	