AGRICULTURAL EXTENSION SERVICE
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH
SCHOOL OF AGRICULTURE AND LIFE SCIENCES

OFFICE OF EXTENSION POULTRY SCIENCE
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October 6, 1975

I am enclosing the final summary of the Sixteenth 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.

Again this year the North Carolina test has acquired those commercial stocks experiencing major distribution in this and adjacent states. These Category I stocks are again subdivided into: A. those stocks supported by the breeder or distributor; B. those stocks acquired with approval of the breeder or distributor but without financial participation; and C. those stocks acquired without approval of the breeder or distributor. ~~One category IV stock, the cross of the Cornell and Kentville Randombred Control lines, was included.~~ Half of the facility formerly used for the test is now utilized for management research and no Category II or III stocks were tested this year. The category of each entry is shown on the stock list and the cooperator column indicates if the breeder entered the stock and provided financial support (Yes), if the distributor made the entry (Dist.), or if the stock was acquired by the test management without breeder or distributor request (No).

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
SIXTEENTH NORTH CAROLINA RANDOM SAMPLE LAYING TEST
March 22, 1974 through August 24, 1975

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 Deparment 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 16-4A-I, II, III and IV, 16-4B-I, II, III and IV, 16-4C-I, II, III and IV, and 16-4D-I, II, III, IV, V and VI. 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 NE-21 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 litter over concrete floors at 1.5 sq. ft. per pullet, and the other four lots were reared in randomly assigned blocks of seven 24-inch x 20-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. We express our appreciation to this organization and its personnel.

All birds were debeaked at seven days; vaccinated by occular route for Newcastle (LaSota) and bronchitis at one day, by water at five weeks, and 16 weeks of age with LaSota vaccine; 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 seven weeks. Newcastle vaccine was boosted at 90-day intervals during the laying period.

At 150 days of age, a maximum of 50 randomly chosen pullets were retained in half slat-half litter 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 24-inch x 20-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 at 2 birds per cage.

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. 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 white or brown egg birds in the particular house. Other management was as nearly commercial procedures as practical.

Many producers believe that cracks detected by candling eggs at the test site and specific gravity scores do not provide an adequate indicator of how eggs will grade out when shipped to a processing plant. In this test all eggs from each stock were accumulated during the 34th, 47th, 59th, and 70th weeks and shipped to the FCX egg processing plant at Charlotte.

Mr. Allen Ashcraft processed eggs from each stock as a separate flock and gave us the grade-out data. These data are summarized in Table 16-4D-V. We express our gratitude to Mr. Ashcraft and FCX for this service.

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 Body 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 23 but less than 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 in 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 1972, 1973, and 1974.

Values per Pullet Housed are the dollar 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 average egg prices quoted for Raleigh market by the Federal-State Market Service, and adjusted to farm price, and 3-year average fowl prices in North Carolina 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, with no discount for stained or dirty eggs.

% Inclusion (Break-Out): 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. Break-out 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 a 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 "All Other" in the interest of saving space. 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".

Part V of Tables

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

Commercial Egg Gradeout was made by stocks during the weeks indicated at the FCX plant at Charlotte, N.C. %A and %B are consumer grades. %Breaker combines C quality, small B quality, small inclusions, and stains which constitute breaker stock with sound shells. % Crax are non-leakers with unsound shells removed for breaker stock. % Farm Loss is the percentage of unsound eggs removed before shipping and % Other Loss includes all other eggs shipped (large spots, addled eggs, leakers, lost in machines, etc.). Seasonal data are not combined.

Part VI 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.

Entries spanned by the same vertical line in the Duncan Test column have a greater than 5% probability that the indicated difference is due to sampling variation.

Table 16-4A-I - Body Weight, Egg Size, Maturity and Production Rate

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	
4	1	Arbor Acres (AA-26)	3.0	4.2	0.0	0.5	5.1	23.9	70.5	26.4	180.5	55.7	78.0	70.5	64.1	60.6	72.8	199.8
5	1	Babcock (B-380)	3.7	4.9	0.1	0.1	1.8	13.2	84.8	28.0	186.0	51.8	77.7	71.5	68.4	64.6	73.8	228.0
6	1	DeKalb (231)	3.1	4.1	0.1	0.3	2.7	12.7	84.1	28.1	178.5	60.1	77.7	70.2	67.3	66.0	73.1	218.6
7	1	Hy-Line (W-36)	3.1	3.9	0.2	1.5	9.7	26.7	61.9	25.8	177.5	62.5	77.9	67.7	66.0	61.3	73.0	216.4
8	1	H&N ("Nick Chick")	3.0	4.0	0.3	1.4	10.7	34.5	53.0	25.2	175.0	65.3	74.2	64.5	61.6	60.4	70.1	219.5
9	1	Davis (Combiner)	3.3	5.5	0.0	0.2	3.3	12.3	84.2	28.0	197.0	43.4	70.9	63.6	59.3	55.2	66.0	194.8
10	1	Babcock B-300)	3.3	4.2	0.5	1.6	5.8	23.1	68.9	26.3	166.5	70.6	76.6	69.4	64.6	63.1	72.5	239.8
11	1	Shaver (288)	3.2	4.3	0.1	0.7	3.2	18.6	77.4	27.1	178.0	62.7	83.6	79.6	76.5	74.1	80.9	255.8
12	1	DeKalb Warren (SSL)	3.6	4.9	0.0	0.1	1.5	11.4	86.9	28.7	196.0	41.1	70.7	66.7	69.0	66.8	68.9	209.7
13	1	Hubbard (Gld. Comet)	3.4	4.8	0.1	0.2	2.2	13.9	83.6	28.0	181.5	55.5	78.0	68.3	61.7	59.2	72.0	212.0
0	1	Average	3.3	4.5	0.1	0.7	4.6	19.1	75.5	27.2	181.6	56.9	76.5	69.2	65.8	63.1	72.3	219.5

Table 16-4A-II - Birds, Mortality, Feed Use, and Cost and Income Data

Entry No.	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 & Chick Cost	Value of Eggs	Value of Meat	
4	1	118	99	71	0.0	28.3	51.1	15.1	24.1	2.64	4.36	0.32	0.97	5.07	6.36	8.52	0.38	2.538
5	1	118	100	93	1.7	7.0	10.5	16.9	27.9	2.73	4.78	0.33	1.10	6.38	7.81	9.50	0.58	2.271
6	1	120	99	80	1.7	18.2	32.5	15.3	23.8	2.45	4.30	0.34	0.95	5.48	6.82	9.15	0.43	2.752
7	1	116	100	83	2.6	17.0	34.1	15.6	21.8	2.40	3.87	0.32	1.02	4.88	6.24	9.25	0.41	3.421
8	1	117	99	86	0.9	12.1	20.7	14.9	21.6	2.58	4.06	0.31	0.97	5.18	6.46	9.26	0.44	3.248
9	1	119	100	88	0.0	12.0	20.3	16.0	26.2	3.11	5.44	0.33	1.04	6.19	7.56	8.26	0.72	1.410
10	1	117	100	94	6.0	4.0	9.7	16.3	24.3	2.58	4.25	0.33	1.08	5.92	7.35	9.91	0.51	3.066
11	1	113	99	90	2.7	9.1	11.1	16.3	25.4	2.37	4.02	0.33	1.06	6.01	7.41	10.78	0.50	3.869
12	1	120	100	91	0.8	9.0	9.2	16.1	25.0	2.72	4.88	0.34	1.05	5.97	7.36	8.71	0.62	1.972
13	1	120	100	80	2.5	20.0	28.5	15.9	23.3	2.63	4.62	0.30	1.00	5.70	7.01	9.11	0.49	2.580
0	1	118	100	86	1.9	13.7	22.8	15.8	24.3	2.62	4.46	0.33	1.02	5.68	7.04	9.24	0.51	2.713

Table 16-4A-III - Egg Quality Data

Entry No.	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	October	January	April	June	Average	November	February	May	July	Average
4	1	3.2	1.6	1.9	2.1	0.1	95.0	1.7	0.1	2.5	0.7	82.7	89.2	78.5	76.3	81.6	4.08	3.57	2.56	2.57	3.19
5	1	5.3	0.5	1.0	8.5	8.5	92.2	0.5	0.1	5.9	1.3	89.5	87.5	75.1	72.6	81.2	3.29	3.10	2.17	2.33	2.72
6	1	5.0	1.0	2.2	0.0	0.1	91.9	0.6	0.0	6.5	1.0	86.3	90.6	78.6	73.3	82.2	4.13	3.52	2.35	2.50	3.13
7	1	2.0	0.5	0.8	0.0	0.0	98.0	0.1	0.0	1.8	0.9	79.7	79.9	74.8	70.0	76.1	4.75	3.98	2.70	2.78	3.55
8	1	3.1	2.0	0.4	0.3	0.0	95.3	1.2	0.1	2.8	0.5	83.6	86.8	77.5	77.1	81.2	4.18	3.71	2.66	2.14	3.17
9	1	3.8	0.6	0.9	9.2	13.3	93.9	0.6	0.1	4.7	0.7	84.8	87.0	75.5	69.8	79.3	3.16	3.34	2.17	2.39	2.77
10	1	5.0	1.3	0.8	0.0	0.4	91.8	2.3	0.1	5.2	0.6	80.5	85.2	75.2	72.1	78.3	4.40	4.15	2.79	2.49	3.46
11	1	3.9	0.6	0.6	1.5	0.0	93.6	1.7	0.1	4.3	0.3	81.7	90.2	78.5	74.0	81.1	4.29	3.99	2.59	2.53	3.35
12	1	5.5	0.4	1.1	11.8	12.3	91.2	0.5	0.1	7.6	0.5	91.8	91.0	82.4	80.1	86.3	3.81	3.52	2.29	2.43	3.01
13	1	2.8	0.5	0.6	14.3	14.2	95.3	0.3	0.3	4.1	0.1	85.0	86.4	77.7	72.5	80.4	3.64	3.38	2.02	1.97	2.75
0	1	4.0	0.9	1.0	4.8	4.9	93.8	0.9	0.1	4.5	0.7	84.6	87.4	77.4	73.8	80.8	3.97	3.63	2.43	2.41	3.11

Table 16-4A-IV - Causes of Mortality

Entry No.	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neopl.		Reproductive Disorders	All Other		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
4	1	-	-	-	4.1	-	3.0	-	-	18.2	-	3.1	-	-	-	-	0.0	28.3
5	1	-	-	-	-	-	-	-	-	6.0	1.7	1.0	-	-	-	-	1.7	7.0
6	1	-	1.0	-	-	-	1.0	-	-	10.1	0.8	5.1	-	-	0.8	1.0	1.7	18.2
7	1	-	-	-	4.0	-	4.0	-	1.0	5.0	1.8	2.0	0.8	-	-	1.0	2.6	17.0
8	1	-	-	-	-	-	3.0	-	1.0	3.0	-	3.0	-	1.0	0.9	1.0	0.9	12.1
9	1	-	-	-	1.0	-	1.0	-	-	6.0	-	4.1	-	-	-	-	0.0	12.1
10	1	-	-	-	1.0	-	1.0	-	-	1.0	6.0	1.0	-	-	-	-	6.0	4.0
11	1	-	-	-	-	-	-	-	-	8.0	2.7	1.0	-	-	-	-	2.7	9.0
12	1	-	-	-	-	-	-	-	-	7.0	-	2.0	0.8	-	-	-	0.8	9.0
13	1	-	-	-	-	-	-	-	-	17.0	2.5	3.0	-	-	-	-	2.5	20.0
0	1	0.0	0.1	0.0	1.0	0.0	1.3	0.0	0.2	8.1	1.6	2.5	0.2	0.1	0.2	0.3	1.9	13.7

Table 16-4B-I - Body Weight, Egg Size, Maturity and Production Rate

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	
4	2	Arbor Acres (AA-26)	3.1	4.5	0.1	0.9	8.1	27.8	63.1	26.2	176.0	65.8	84.8	73.4	67.2	63.6	77.5	229.7
5	2	Babcock (B-380)	3.3	5.1	0.0	0.1	3.1	16.8	79.9	27.5	182.5	59.1	86.8	73.7	59.1	55.1	76.0	244.9
6	2	DeKalb (231)	3.1	4.5	0.3	0.9	4.7	18.4	75.7	27.3	167.0	71.7	83.3	74.0	69.5	66.5	77.0	252.1
7	2	Hy-Line (W-36)	3.0	3.8	0.1	1.8	14.6	30.0	53.4	25.2	170.5	66.1	82.1	71.5	59.3	51.1	73.0	221.2
8	2	H&N ("Nick Chick")	2.8	4.1	0.2	1.3	12.7	36.3	49.5	25.1	172.0	67.7	81.5	68.5	58.4	56.7	72.8	237.4
9	2	Davis (Combiner)	3.6	5.9	0.0	0.3	4.8	22.2	72.7	27.3	181.5	57.6	80.6	71.1	59.3	54.5	72.8	229.4
10	2	Babcock B-300)	2.8	4.6	0.3	1.6	7.8	25.1	65.3	26.2	167.5	73.8	84.1	74.5	69.6	67.5	78.5	263.2
11	2	Shaver (288)	3.0	4.5	0.1	0.5	6.4	25.1	67.9	26.6	172.5	70.5	93.1	84.5	73.7	71.8	84.9	281.0
12	2	DeKalb Warren (SSL)	3.3	5.3	0.0	0.1	2.4	13.4	84.0	28.2	185.0	57.3	86.5	77.3	70.1	66.7	79.5	254.8
13	2	Hubbard (Gld. Comet)	3.3	5.2	0.1	0.5	4.2	20.9	74.3	27.3	172.5	70.9	85.0	72.8	64.1	60.0	77.2	253.1
0	2	Average	3.1	4.7	0.1	0.8	6.9	23.6	68.6	26.7	174.7	66.0	84.8	74.1	65.0	61.3	76.9	246.7

Table 16-4B-II - Birds, Mortality, Feed Use, and Cost and Income Data

Entry No.	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 & Chick Cost	Value of Eggs	Value of Meat	
4	2	118	100	84	2.6	16.0	34.4	14.4	26.1	2.59	4.24	0.32	0.93	5.68	6.93	9.75	0.49	3.304
5	2	119	100	100	0.0	0.0	0.0	15.5	25.8	2.64	4.53	0.33	0.99	6.48	7.79	10.39	0.76	3.352
6	2	116	100	94	0.0	6.0	12.8	15.6	24.4	2.38	4.06	0.34	0.94	5.96	7.25	10.59	0.53	3.869
7	2	119	100	86	1.7	14.0	34.2	14.9	20.2	2.37	3.74	0.32	0.97	4.82	6.12	9.31	0.41	3.608
8	2	115	101	95	0.8	5.9	7.9	14.3	22.6	2.57	4.03	0.31	0.92	5.58	6.81	10.12	0.49	3.803
9	2	120	100	95	2.5	5.0	9.5	15.8	26.1	2.81	4.80	0.33	1.02	6.44	7.80	9.82	0.83	2.841
10	2	120	100	97	0.8	3.0	2.4	14.6	25.7	2.52	4.13	0.33	0.94	6.35	7.62	11.11	0.56	4.057
11	2	121	99	95	2.5	2.0	1.5	15.0	25.4	2.33	3.87	0.33	0.96	6.36	7.66	12.02	0.55	4.913
12	2	119	100	98	0.8	2.0	0.3	15.4	25.3	2.45	4.33	0.34	0.99	6.44	7.78	10.95	0.76	3.936
13	2	118	100	94	0.0	5.0	5.8	15.3	24.2	2.34	3.99	0.30	0.98	5.90	7.18	10.88	0.72	4.422
0	2	119	100	94	1.2	5.9	10.9	15.1	24.6	2.50	4.17	0.33	0.96	6.00	7.29	10.49	0.61	3.811

Table 16-4B-III - Egg Quality Data

Entry No.	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	October	January	April	June	Average	November	February	May	July	Average
4	2	3.1	0.6	1.1	0.9	1.7	95.1	1.1	0.1	2.6	1.0	89.4	83.8	68.8	68.1	77.5	4.29	3.62	2.08	1.35	2.84
5	2	4.0	0.6	1.5	10.9	14.4	93.6	0.8	0.4	4.9	0.3	89.4	83.3	73.0	70.2	79.0	3.28	2.93	1.91	1.32	2.36
6	2	4.1	0.9	0.7	0.2	0.6	93.6	0.8	0.1	4.5	0.9	84.7	84.9	72.4	67.4	77.3	4.15	3.50	2.03	1.29	2.74
7	2	3.2	0.9	0.6	0.4	0.1	94.9	0.8	0.0	3.6	0.6	82.1	77.0	64.9	68.0	73.0	4.36	4.36	2.09	1.60	3.10
8	2	2.3	1.4	1.5	0.2	1.3	96.2	1.3	0.0	2.3	0.1	84.8	81.5	72.4	70.7	77.3	4.26	4.24	2.47	1.76	3.18
9	2	2.8	2.3	1.5	12.3	12.1	95.6	0.9	0.1	2.8	0.6	83.4	76.2	64.9	68.2	73.2	3.15	3.30	2.04	1.22	2.43
10	2	3.1	1.4	0.8	0.3	0.2	94.7	1.9	0.2	3.0	0.2	83.6	81.0	70.2	67.6	75.6	4.44	3.94	2.51	1.71	3.15
11	2	2.5	0.8	1.0	0.3	0.3	95.5	2.1	0.2	1.9	0.3	82.1	81.8	71.7	68.7	76.1	4.40	4.02	2.21	1.63	3.06
12	2	2.5	1.5	1.0	13.2	11.7	96.2	0.7	0.0	2.6	0.6	89.2	84.3	72.3	69.9	78.9	3.34	3.28	2.03	1.64	2.57
13	2	2.2	1.0	0.8	15.4	13.2	96.5	0.7	0.1	2.3	0.4	81.1	81.9	64.4	66.5	73.5	2.95	2.77	1.62	1.40	2.18
0	2	3.0	1.1	1.1	5.4	5.6	95.2	1.1	0.1	3.1	0.5	85.0	81.6	69.5	68.5	76.1	3.86	3.60	2.10	1.49	2.76

Table 16-4B-IV - Causes of Mortality

Entry No.	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neopl.		Reproductive Disorders	All Other		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
4	2	-	1.0	-	3.0	-	6.0	-	-	2.0	2.6	4.0	-	-	-	-	2.6	16.0
5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0
6	2	-	-	-	1.0	-	2.0	-	-	3.0	-	-	-	-	-	-	0.0	6.0
7	2	-	-	-	6.0	0.8	1.0	-	1.0	1.0	0.8	5.0	-	-	-	-	1.7	14.0
8	2	-	-	-	-	-	1.0	-	-	-	0.8	3.0	-	1.0	-	1.0	0.8	5.9
9	2	-	-	-	-	-	1.0	-	-	1.0	1.7	3.0	-	-	0.8	-	2.5	5.0
10	2	-	-	-	-	-	-	-	-	1.0	0.8	1.0	-	1.0	-	-	0.8	3.0
11	2	-	-	-	1.0	-	1.0	-	-	1.0	2.5	-	-	-	-	1.0	2.5	4.1
12	2	-	-	-	-	-	-	-	-	-	0.8	-	-	-	-	2.0	0.8	2.0
13	2	-	-	-	-	-	-	-	-	1.0	-	4.0	-	-	-	-	0.0	5.0
0	2	0.0	0.1	0.0	1.1	0.1	1.2	0.0	0.1	1.0	1.0	2.0	0.0	0.2	0.1	0.4	1.2	6.1

Table 16-4C-I - Body Weight, Egg Size, Maturity and Production Rate

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	
4	3	Arbor Acres (AA-26)	2.8	4.2	0.1	0.6	5.4	23.0	71.0	26.6	179.0	56.8	79.8	73.2	67.1	64.2	73.6	221.1
5	3	Babcock (B-380)	3.3	5.3	0.0	0.0	2.4	14.3	83.2	27.8	186.5	54.9	83.7	75.3	66.7	62.8	76.9	244.7
6	3	DeKalb (231)	2.8	4.2	0.1	0.4	2.7	14.9	81.9	27.9	173.0	64.7	77.9	72.4	67.5	65.7	74.9	235.0
7	3	Hy-Line (W-36)	3.0	3.9	0.2	1.4	10.0	27.5	61.0	25.9	173.0	62.4	76.8	68.7	60.4	58.0	71.0	224.6
8	3	H&N ("Nick Chick")	2.6	3.9	0.1	0.8	10.0	32.8	56.3	25.6	171.5	66.3	78.9	68.1	60.8	57.5	72.4	237.0
9	3	Davis (Combiner)	3.5	6.1	0.1	0.2	3.3	15.1	81.3	27.7	185.5	53.4	76.1	69.3	63.5	60.4	71.8	221.8
10	3	Babcock B-300)	3.0	4.4	0.2	1.3	6.3	20.8	71.4	26.8	168.0	68.1	78.2	72.6	65.5	62.2	74.0	238.3
11	3	Shaver (288)	3.1	4.3	0.1	0.4	3.6	17.7	78.2	27.1	174.0	68.3	87.2	83.4	76.7	74.2	83.4	267.4
12	3	DeKalb Warren (SSL)	3.4	5.4	0.0	0.1	1.6	9.2	89.1	28.9	191.3	47.4	78.4	73.3	68.6	65.7	74.1	233.5
13	3	Hubbard (Gld. Comet)	3.3	4.9	0.0	0.3	3.1	14.8	81.7	28.0	176.5	59.6	78.5	69.9	62.6	60.8	72.1	233.9
0	3	Average	3.1	4.7	0.1	0.6	4.8	19.0	75.5	27.2	177.8	60.2	79.5	72.6	65.9	63.2	74.4	235.7

Table 16-4C-II - Birds, Mortality, Feed Use, and Cost and Income Data

Entry No.	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 & Chick Cost	Value of Eggs	Value of Meat	
4	3	119	104	88	0.8	15.4	29.1	15.2	23.2	2.63	4.37	0.32	0.98	5.63	6.93	9.33	0.45	2.853
5	3	119	104	103	0.8	1.0	1.5	16.0	24.6	2.66	4.64	0.33	1.03	6.62	7.98	10.34	0.78	3.130
6	3	117	104	94	1.7	9.6	17.7	14.3	21.7	2.38	4.16	0.34	0.93	5.69	6.96	9.71	0.48	3.227
7	3	117	104	89	3.4	13.5	16.9	15.3	19.4	2.41	3.91	0.32	0.99	5.12	6.45	9.64	0.43	3.613
8	3	120	104	100	0.0	3.8	5.5	15.0	20.6	2.53	4.05	0.31	0.96	5.60	6.87	9.81	0.47	3.416
9	3	119	104	94	3.4	9.6	12.0	16.0	24.7	2.93	5.08	0.33	1.10	6.57	8.01	9.54	0.81	2.338
10	3	116	104	94	2.6	9.6	15.7	14.9	22.6	2.50	4.19	0.33	0.96	5.81	7.10	9.90	0.51	3.312
11	3	115	104	96	1.7	7.7	11.2	15.6	23.8	2.34	3.96	0.33	1.00	6.18	7.52	11.22	0.51	4.209
12	3	119	104	103	0.0	1.0	0.8	15.5	24.7	2.64	4.77	0.33	0.99	6.50	7.83	9.96	0.80	2.918
13	3	120	104	99	0.8	4.8	5.2	16.3	23.5	2.56	4.49	0.30	1.06	6.13	7.49	9.90	0.65	3.053
0	3	118	104	96	1.5	7.6	11.6	15.4	22.9	2.56	4.36	0.32	1.00	5.99	7.32	9.93	0.59	3.207

Table 16-4C-III - Egg Quality Data

Entry No.	Type Housing	Loss % (Downgrades)	% Inclusion (Break-Out)				Candled Quality Percentages					Haugh Units					Shell Score (Specific Grav				
			Large Bloods	Small Bloods	Large Meats	Small Meats	A or Better	B	C	Chex and Cracks	Loss Eggs	October	January	April	June	Average	November	February	May	July	Average
4	3	3.7	1.7	2.0	0.5	0.4	93.9	1.6	0.1	4.1	0.2	87.6	87.5	75.5	75.6	81.5	4.40	4.15	2.33	2.05	3.23
5	3	4.2	0.7	1.0	10.2	11.0	93.1	0.4	0.3	5.8	0.3	89.0	85.0	75.5	71.2	80.2	3.53	3.06	2.15	2.00	2.69
6	3	6.1	0.9	1.3	0.3	0.2	90.0	2.2	0.0	7.4	0.4	87.1	87.7	77.6	74.7	81.8	3.84	3.70	1.96	1.93	2.86
7	3	1.6	0.3	0.7	0.3	0.6	97.5	0.6	0.0	1.9	0.0	82.4	82.0	72.3	69.7	76.6	4.07	3.88	3.14	2.36	3.36
8	3	5.2	1.5	1.4	0.4	0.1	91.5	1.9	0.5	5.5	0.6	86.9	87.0	77.9	75.1	81.8	4.09	3.90	2.32	2.13	3.11
9	3	2.3	2.1	1.4	10.5	12.0	96.3	0.4	0.2	3.0	0.1	87.3	85.6	73.5	70.4	79.2	3.39	3.35	2.12	1.82	2.67
10	3	4.9	2.6	1.3	0.1	0.3	91.9	2.6	0.7	4.3	0.5	85.9	83.0	74.2	71.1	78.6	3.97	3.97	2.67	2.01	3.16
11	3	4.4	0.8	1.0	0.2	0.3	92.4	1.5	0.1	5.6	0.3	87.4	86.8	77.3	75.3	81.7	4.21	4.05	2.36	2.07	3.17
12	3	3.2	0.6	1.8	14.0	9.9	94.8	0.2	0.0	4.8	0.2	89.0	89.7	78.0	73.8	82.6	3.36	2.98	2.25	2.03	2.66
13	3	4.0	1.0	1.1	13.4	14.5	93.4	1.0	0.4	4.9	0.2	87.9	85.7	75.0	71.0	79.9	2.95	3.09	2.26	1.87	2.54
0	3	4.0	1.2	1.3	5.0	4.9	93.5	1.2	0.2	4.7	0.3	87.1	86.0	75.7	72.8	80.4	3.78	3.61	2.36	2.03	2.95

Table 16-4C-IV - Causes of Mortality

Entry No.	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neopl.		Reproductive Disorders	All Other		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
4	3	-	-	-	4.8	-	4.8	-	-	2.9	0.8	2.9	-	-	-	-	0.8	15.4
5	3	-	-	-	-	-	-	-	-	1.0	0.8	-	-	-	-	-	0.8	1.0
6	3	-	-	-	1.0	-	1.9	-	-	5.8	1.7	1.0	-	-	-	-	1.7	9.6
7	3	-	-	-	1.9	-	3.8	-	-	2.9	2.6	5.8	-	-	0.8	-	3.4	14.4
8	3	-	-	-	-	-	1.0	-	-	1.0	-	1.9	-	-	-	-	0.0	3.8
9	3	-	-	-	1.9	-	-	-	1.0	4.8	0.8	1.0	1.7	-	0.8	1.0	3.4	9.6
10	3	-	-	-	-	-	1.0	-	-	8.7	1.7	-	0.9	-	-	-	2.6	9.6
11	3	-	-	-	1.0	-	2.9	-	-	3.8	1.7	-	-	-	-	-	1.7	7.7
12	3	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	0.0	1.0
13	3	-	-	-	-	-	1.0	-	-	-	0.8	3.8	-	-	-	-	0.8	4.8
0	3	0.0	0.0	0.0	1.0	0.0	1.6	0.0	0.1	3.1	1.1	1.7	0.3	0.0	0.2	0.1	1.5	7.7

Table 16-4D-I - Body Weight, Egg Size, Maturity and Production Rate

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	
4	0	Arbor Acres (AA-26)	3.0	4.3	0.1	0.7	6.2	24.9	68.2	26.4	178.5	59.4	80.9	72.4	66.1	62.8	74.6	216.9
5	0	Babcock (B-380)	3.4	5.1	0.0	0.1	2.5	14.8	82.6	27.8	185.0	55.3	82.7	73.5	64.7	60.9	75.5	239.2
6	0	DeKalb (231)	3.0	4.3	0.2	0.5	3.4	15.3	80.6	27.8	172.8	65.5	79.6	72.2	68.1	66.1	75.0	235.3
7	0	Hy-Line (W-36)	3.0	3.9	0.2	1.6	11.4	28.1	58.8	25.6	173.7	63.7	78.9	69.3	61.9	56.8	72.3	220.7
8	0	H&N ("Nick Chick")	2.8	4.0	0.2	1.2	11.1	34.5	52.9	25.3	172.8	66.4	78.2	67.0	60.3	58.2	71.8	231.3
9	0	Davis (Combiner)	3.4	5.8	0.0	0.2	3.8	16.5	79.4	27.7	188.0	51.5	75.9	68.0	60.7	56.7	70.2	215.3
10	0	Babcock B-300)	3.0	4.4	0.3	1.5	6.6	23.0	68.5	26.4	167.3	70.8	79.7	72.2	66.6	64.2	75.0	247.1
11	0	Shaver (288)	3.1	4.4	0.1	0.5	4.4	20.5	74.5	26.9	174.8	67.1	88.0	82.5	75.6	73.4	83.1	268.1
12	0	DeKalb Warren (SSL)	3.4	5.2	0.0	0.1	1.9	11.4	86.7	28.6	190.8	48.6	78.5	72.4	69.2	66.4	74.2	232.6
13	0	Hubbard (Gld. Comet)	3.4	5.0	0.1	0.4	3.2	16.6	79.9	27.8	176.8	62.0	80.5	70.4	62.8	60.0	73.8	233.0
0	0	Average	3.2	4.6	0.1	0.7	5.4	20.6	73.2	27.0	178.1	61.0	80.3	72.0	65.6	62.5	74.5	234.0

Table 16-14D-II - Birds, Mortality, Feed Use, and Cost and Income Data

Entry No.	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 & Chick Cost	Value of Eggs	Value of Meat	
4	0	394	335	265	1.1	19.9	38.2	14.9	24.5	2.62	4.32	0.32	0.96	5.46	6.74	9.20	0.44	2.898
5	0	395	336	326	0.8	2.7	4.0	16.1	26.1	2.68	4.65	0.33	1.04	6.49	7.86	10.08	0.70	2,918
6	0	393	335	295	1.1	11.3	21.0	15.1	23.3	2.40	4.18	0.34	0.94	5.71	7.01	9.81	0.48	3.283
7	0	391	336	285	2.6	14.8	28.4	15.3	20.4	2.40	3.84	0.32	0.99	4.94	6.27	9.40	0.42	3.547
8	0	389	336	308	0.6	7.3	11.3	14.7	21.6	2.56	4.05	0.31	0.95	5.45	6.71	9.73	0.47	3.489
9	0	398	336	307	2.0	8.9	13.9	15.9	25.7	2.95	5.11	0.33	1.05	6.40	7.79	9.20	0.78	2.196
.0	0	393	336	317	3.1	5.5	9.3	15.3	24.2	2.54	4.19	0.33	0.99	6.03	7.36	10.31	0.53	3.479
.1	0	389	333	311	2.3	6.3	7.9	15.6	24.9	2.35	3.95	0.33	1.01	6.18	7.53	11.34	0.52	4.330
.2	0	398	336	321	0.6	4.0	3.4	15.7	25.0	2.61	4.66	0.34	1.01	6.30	7.66	9.87	0.73	2.942
.3	0	397	336	298	1.1	9.9	13.2	15.8	23.7	2.51	4.37	0.30	1.01	5.91	7.23	9.96	0.62	3.352
0	0	394	335	303	1.5	9.1	15.1	15.4	23.9	2.56	4.33	0.33	1.00	5.89	7.22	9.89	0.57	3.243

Table 16-4D-III - Egg Quality Data

Entry No.	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	October	January	April	June	Average	November	February	May	July	Average
4	0	3.4	1.3	1.7	1.2	0.7	94.7	1.5	0.1	3.1	0.7	86.6	86.8	74.2	73.3	80.2	4.25	3.78	2.32	1.99	3.09
5	0	4.5	0.6	1.2	9.9	11.3	93.0	0.6	0.3	5.5	0.7	89.3	85.3	74.5	71.3	80.1	3.37	3.03	2.08	1.88	2.59
6	0	5.1	0.9	1.4	0.2	0.3	91.8	1.2	0.0	6.2	0.7	86.1	87.7	76.2	71.8	80.4	4.04	3.58	2.12	1.91	2.91
7	0	2.2	0.6	0.7	0.2	0.3	96.8	0.5	0.0	2.4	0.5	81.4	79.7	70.7	69.2	75.2	4.39	4.07	2.64	2.25	3.34
8	0	3.5	1.6	1.1	0.3	0.5	94.4	1.5	0.2	3.5	0.4	85.1	85.1	75.9	74.3	80.1	4.18	3.95	2.49	2.01	3.16
9	0	2.9	1.7	1.3	10.7	12.5	95.3	0.6	0.2	3.5	0.5	85.2	83.0	71.3	69.5	77.2	3.23	3.33	2.11	1.81	2.62
10	0	4.3	1.8	1.0	0.1	0.3	92.8	2.3	0.3	4.2	0.4	83.3	83.1	73.2	70.3	77.5	4.27	4.02	2.66	2.07	3.26
11	0	3.6	0.7	0.9	0.7	0.2	93.8	1.8	0.1	4.0	0.3	83.8	86.3	75.8	72.7	79.6	4.30	4.02	2.39	2.08	3.20
12	0	3.7	0.8	1.3	13.0	11.3	94.0	0.5	0.0	5.0	0.5	90.0	88.3	77.6	74.6	82.6	3.50	3.26	2.19	2.03	2.75
13	0	3.0	0.8	0.8	14.4	14.0	95.0	0.7	0.2	3.8	0.3	84.7	84.7	72.4	70.0	77.9	3.18	3.08	1.97	1.74	2.49
0	0	3.6	1.1	1.1	5.1	5.1	94.2	1.1	0.2	4.1	0.5	85.5	85.0	74.2	71.7	79.1	3.87	3.61	2.30	1.98	2.94

Table 16-4D-IV - Causes of Mortality

Entry No.	Type Housing	Marek's		Lymphoid Leukosis		Marek's or Lymphoid Leukosis		Other Neopl.		Reproductive Disorders	All Other		No Visible Lesions		No Necropsy Report		Total	
		Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay	Gro.	Lay
4	0	-	0.3	-	4.0	-	4.6	-	-	7.7	1.1	3.3	-	-	-	-	1.1	19.9
5	0	-	-	-	-	-	-	-	-	2.3	0.8	0.3	-	-	-	-	0.8	2.7
6	0	-	0.3	-	0.7	-	1.7	-	-	6.3	0.8	2.0	-	-	0.3	0.3	1.1	11.3
7	0	-	-	-	4.0	0.3	2.9	-	0.7	3.0	1.7	4.3	0.3	-	0.3	-	2.6	15.1
8	0	-	-	-	-	-	1.7	-	0.3	1.3	0.3	2.6	-	0.7	0.3	0.7	0.6	7.3
9	0	-	-	-	1.3	-	0.3	-	0.3	4.0	0.8	2.7	0.6	-	0.6	0.3	2.0	8.9
10	0	-	-	-	0.3	-	0.7	-	-	3.6	2.9	0.7	0.3	0.3	-	-	3.1	5.5
11	0	-	-	-	0.7	-	1.3	-	-	4.3	2.3	0.3	-	-	-	0.3	2.3	6.9
12	0	-	-	-	-	-	-	-	-	2.3	0.3	1.0	0.3	-	-	0.7	0.6	4.0
13	0	-	-	-	-	-	0.3	-	-	6.0	1.1	3.6	-	-	-	-	1.1	9.9
0	0	0.0	0.1	0.0	1.1	0.0	1.4	0.0	0.1	4.1	1.2	2.1	0.2	0.1	0.2	0.2	1.5	9.2

Table 16-4D-V - Commercial Egg Gradeout

Entry No.	Housing Type	34 Weeks Old - November						47 Weeks Old - February					
		% A	% B	% Breaker	% Crax	% Farm Loss	% Other Loss	% A	% B	% Breaker	% Crax	% Farm Loss	% Other Loss
4	0	89.3	0.1	4.8	3.8	0.8	1.1	72.7	9.1	14.3	1.0	0.9	1.9
5	0	85.7	1.6	1.4	9.5	0.7	1.0	75.1	12.7	3.2	2.8	3.2	3.0
6	0	80.6	1.7	3.6	5.7	6.8	1.5	69.7	9.3	11.4	4.1	0.6	5.0
7	0	90.3	1.8	5.0	1.1	0.5	1.3	78.1	5.3	12.1	1.3	1.2	2.0
8	0	87.2	1.8	4.5	1.7	3.6	1.2	79.9	5.2	8.5	1.5	2.4	2.6
9	0	89.3	1.8	1.5	6.0	1.2	0.2	80.6	6.8	3.4	1.2	1.6	6.2
10	0	86.9	1.7	5.4	5.1	0.0	0.9	70.2	10.1	14.0	2.1	1.5	2.2
11	0	87.3	4.7	3.4	2.3	0.0	2.2	69.0	10.6	11.0	3.4	4.4	1.6
12	0	88.0	1.7	1.8	5.8	0.9	1.8	76.1	14.3	3.1	2.6	0.5	3.4
13	0	86.3	1.7	1.5	6.2	1.0	3.4	81.1	9.5	5.1	0.8	1.2	2.3
0	0	87.1	1.9	3.3	4.7	1.6	1.5	75.2	9.3	8.6	2.1	1.8	3.0
		59 Weeks Old - May						70 Weeks Old - July					
4	0	79.4	1.5	6.7	5.1	1.1	6.2	66.6	0.4	18.8	4.0	2.1	8.1
5	0	74.6	13.8	1.0	3.8	2.1	4.7	74.2	0.0	4.5	11.7	3.1	6.5
6	0	76.2	8.1	2.9	3.4	4.5	4.8	70.6	0.0	15.0	4.6	2.7	7.1
7	0	86.3	5.6	2.9	0.9	3.1	1.3	81.8	0.0	11.9	1.6	3.2	1.5
8	0	84.1	5.7	4.7	1.9	2.0	1.7	73.1	0.3	13.2	5.3	4.8	3.4
9	0	69.9	16.1	2.8	7.2	2.1	2.0	78.8	0.0	2.1	8.3	4.1	6.7
10	0	78.9	4.7	8.0	2.1	1.0	5.3	63.1	0.0	19.3	2.6	1.7	13.3
11	0	78.1	5.8	5.9	3.2	2.9	4.0	65.9	0.0	16.0	9.1	4.0	5.0
12	0	79.9	8.6	0.5	3.2	2.9	4.9	72.6	0.1	3.3	8.2	2.6	13.2
13	0	84.4	9.3	0.9	2.2	0.4	2.8	77.0	0.0	3.5	7.8	1.0	10.6
0	0	79.2	7.9	3.6	3.3	2.2	3.8	72.4	0.1	10.8	6.3	2.9	7.5

Table 16-4D-VI - 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	268.1		1	11	83.1		1	11	2.35		1	12	3.4	
2	10	247.1		2	5	75.5		1	6	2.40		1	5	4.0	
2	5	239.2		2	6	75.0		1	7	2.40		1	11	7.9	
2	6	235.3		2	10	75.0		2	13	2.51		1	10	9.3	
3	13	233.0		2	4	74.6		2	10	2.54		2	8	11.3	
3	12	232.6		3	12	74.2		2	8	2.56		2	13	13.2	
3	8	231.3		3	13	73.8		3	12	2.61		2	9	13.9	
4	7	220.7		4	7	72.3		3	4	2.62		3	6	21.0	
4	4	216.9		4	8	71.8		3	5	2.68		4	7	28.0	
4	9	215.3		4	9	70.2		4	9	2.95		4	4	38.2	
Average		234.0		Average		74.5		Average		2.56		Average		15.1	

Breeder	Stock Identification	Entry Category*	Co-operation	Source of Sample
Arbor Acres Farm, Inc. Glastonbury, CN 06033	Arbor Acres 26 WL SX	I-C	No	Not Applicable
Babcock Poultry Farm, Inc. Box 280 Ithaca, NY 14850	Babcock B-300F WL INX	I-A	Yes	Harrold's Hatchery, Inc. P. O. Box 98 Winterville, GA 30683
Babcock Poultry Farm, Inc Box 280 Ithaca, NY 14850	Babcock B-380 RIRxSYN IBX	I-A	Yes	Babcock Poultry Farm, Inc. Ithaca, NY 14850
Joe K. Davis Hatchery Box 27 Earl, NC 28038	Combiner Sex Link RIRxBPR BX	I-A	Yes	Joe K. Davis Hatchery Earl, NC 28038
DeKalb AgResearch, Inc. Sycamore Road DeKalb, ILL 60115	DeKalb 231 IBX	I-C	No	Not Applicable
DeKalb AgResearch, Inc. Sycamore Road DeKalb, ILL 60115	DeKalb-Warren Sex-Sal-Link RIRxRIW BX	I-C	No	Not Applicable
H & N, Inc. Entry by Owens Hatchery, Inc. Dahlonega, GA 30533	H & N "Nick Chick" WL 4wX	I-A	Dist.	Owens Hatchery, Inc. Dahlonega, GA 30533
Hubbard Farms, Inc. Walpole, NH 03608	Hubbard Gold Comet NHxSYN BX	I-A	Yes	Rocky Ford Hatchery Box 26 Lincolnton, NC 28092
Hy-Line International 1206 Mulberry Des Moines, IO 50309	Hy-Line W-36 INX	I-C	No	Not Applicable
Shaver Poultry Breeding Farms, Ltd., Box 400 Galt, Cambridge Ontario, NIR 5W6, CANADA	Starcross 288 WL SX	I-A	Yes	Shaver Poultry Breeding Farms, Ltd., Box 400 Galt, Cambridge, Ontario NIR 5W6, CANADA

SIXTEENTH TEST

* Category I is commercial stocks available in North Carolina and adjacent states in quantity. Sub-category A indicates full cooperation of the organization making the entry, including voluntary financial assistance to the test. Sub-category C indicates that the breeder preferred not to have the stock entered in this test but that sales in this area are sufficient to require its inclusion under current test policy.