

AGRICULTURAL EXTENSION SERVICE
NORTH CAROLINA STATE UNIVERSITY | AT RALEIGH

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

September 24, 1971

OFFICE OF EXTENSION POULTRY SCIENCE
SCOTT HALL
Box 5307 ZIP 27607

Enclosed is the report of the growing period for the Thirteenth North Carolina Random Sample Laying Test which you have requested. Please circulate it among your associates in order that maximum use of it may be made. If additional copies are needed, the request should be sent to Mr. T. R. Burleson, Jr., Piedmont Research Station, Route #6, Box 420, Salisbury, N. C., 28144.

Very truly yours,

Grady A. Martin

Grady A. Martin
Extension Poultry Specialist

THIRTEENTH NORTH CAROLINA RANDOM SAMPLE LAYING TEST

Growing Report

March 26, 1971, through August 22, 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 North Carolina Department of Agriculture. Mr. T. R. Burleson, Jr., is Resident Manager of the Tests and Dr. G. A. Martin is Project Leader. The purpose of the tests is to assist poultrymen in evaluating stocks of commercial layers and management systems.

Beginning with the Twelfth Test, two cage management systems are compared to a combination half-litter and half-slat management system.

Samples of 1,080 freshly gathered eggs were taken at randomly selected supply flocks, or by random sampling from egg rooms when nest sampling was not feasible. Public employees in agriculture selected the samples, sealed the cases, and sent them to the test site where all eggs were incubated; 360 sexed pullets (when available) were placed for each entry. Two pens of 60 birds each were placed on pine shavings litter-hardwood slat floors at 1.4 sq. ft. per bird for 150 days. Four groups of 60 each were placed in 24"x20" wire cages. Floor space was 24 sq. in. for the first five weeks and 56 sq. in. from five weeks to 150 days. At 150 days, the litter-slat grown birds were randomly reduced to 50 birds and kept in the same pens at 1.67 sq. ft. per bird for the laying period (Table L). At the same time, two groups of the cage grown birds (Table K1) were randomly reduced to 50 birds each and housed in 24"x20" cages at 7 birds per cage. The other two groups were randomly reduced to 52 birds each and housed in two blocks of 10"x18" cages at two birds per cage (Table K3).



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS. NORTH CAROLINA STATE UNIVERSITY AT RALEIGH. 100 COUNTIES AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING

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 18½ weeks old, due to the railroad strike's effect upon ingredient supplies. Commercial laying mash is being fed during the laying period.

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.

The tables list the combined data for the entry (Table 13G-C), the data for the litter-slat housing (Table 13G-L), cage growing for two-bird laying cages (Table 13G-K3), and cage growing for seven-bird laying cages (Table 13G-K1). The entry number was drawn at random. The breeder is fully identified later, with stock identification, availability of flock list, number of birds in flocks sampled, sampling procedure, and source of sample listed. Net pullets at 1 wk. excludes first week mortality, sexing errors, and accidental deaths. Mortality 8 through 150 days is average of group data. Average feed per pullet for 150 days is based on bird-days and does not charge against survivors the feed consumed by birds that died. Average body weight at 150 days is average weight of survivors. Feed and chick cost per pullet housed distributes the total cost of the net pullets at one week and the feed which they consumed equally among survivors and, therefore, includes the cost of mortality. Feed costs are based upon three-year averages of monthly price quotations from the N. C. Department of Agriculture. Chick prices are the three-year average price per 10,000 quoted by distributors. Average eggs per pullet at 150 days indicates general maturity level of the entry at housing.

ANNOUNCEMENT OF CHANGE

Major changes have been made in the rules and procedures of this test to become effective with the Fourteenth North Carolina Random Sample Laying Test. A committee will select those stocks which it believes to be distributed in the Southeast in sufficient quantity to require testing. The breeders will be invited to provide hatching eggs from the Southeast drawn as nest samples from random flocks (and an entry fee if they wish). Provisions are made for purchasing the eggs if the breeder does not wish to participate. It is anticipated that several entry spaces will not be filled by this category of stocks. These entry spaces will be available for assignment to commercial and experimental stocks for which applications are received by the committee. A larger entry fee will be charged for this category. Experimental stocks will be identified in reports, including the breeder and his stock designation.

Revised rules and procedures are being prepared. If you want a copy when they are ready, let us know and we will be pleased to include you in the mailing.

GROWING PERIOD - TABLE 13G-C

Entry No.	Breeder	Net pul-lets at one week	Mortality 8-150 da. %	Av. lbs feed/pullet 150 days	Av. body wt. at 150 da.	Feed & chick cost/pullet housed	Av. eggs per pullet to 150 days
1	Anthony (W. Leg.)	326	3.4	16.2	3.0	\$1.05	0.26
2	Carey (Nick)	342	3.2	16.5	3.2	1.06	0.20
3	Tatum (T-100)	337	2.1	15.5	2.9	1.02	0.26
4	Garber (G-200)	344	2.0	15.9	3.1	0.98	0.33
5	Fisher (105)	335	2.7	15.3	2.9	1.01	1.00
6	Ghostley (Pearl)	352	2.8	15.9	3.0	1.00	0.64
7	Davis (Combiner)	339	2.3	18.2	3.9	1.11	0.12
8	Babcock (B-390)	340	2.7	18.4	3.9	1.11	0.07
9	Parks (Keystones)	229	2.6	17.5	3.3	1.10	0.40
10	Ind.Fm.Bu. (Duchess 60)	326	4.4	16.2	3.1	1.04	0.95
11	Babcock (B-305)	344	0.9	15.4	3.0	0.98	1.86
12	Davis (Reds)	337	4.7	17.7	3.8	1.13	0.05
13	Tatum (T-111)	344	2.4	17.7	3.9	1.13	0.04
14	NCRPB (CKRB)	334	3.4	16.5	3.1	1.02	0.25
15	Welps (971)	354	1.7	16.2	3.1	1.02	1.55
16	Hubbard (Gld.Comet)	354	2.5	17.4	3.6	1.06	0.36
17	Garber (G-291)	348	2.3	16.6	3.4	1.02	1.09
18	Ideal (236)	333	4.0	16.9	3.3	1.03	0.53
19	Experimental A	324	1.9	16.5	3.0	1.03	0.64
20	Shaver (*X-288)	336	0.9	16.2	3.2	1.06	0.18
Av.		334	2.6	16.6	3.3	1.05	0.54

GROWING PERIOD - TABLE 13G-K1

1	Anthony (W. Leg.)	110	3.6	16.1	2.9	\$1.05	0.26
2	Carey (Nick)	113	3.7	16.5	3.2	1.06	0.37
3	Tatum (T-100)	116	0	15.3	2.8	0.99	0.22
4	Garber (G-200)	118	2.5	15.2	2.8	0.96	0.10
5	Fisher (105)	116	2.6	14.5	2.8	0.97	0.49
6	Ghostley (Pearl)	115	2.6	15.8	3.1	0.99	0.99
7	Davis (Combiner)	119	3.4	17.5	3.7	1.09	0.04
8	Babcock (B-390)	115	4.4	17.7	3.7	1.09	0.08
9	Parks (Keystones)	76	2.6	16.9	3.1	1.07	0.22
10	Ind.Fm.Bu. (Duchess 60)	114	5.4	16.1	3.1	1.04	0.77
11	Babcock (B-305)	116	0.9	15.3	3.0	0.97	2.05
12	Davis (Reds)	109	4.5	17.0	3.8	1.09	0.07
13	Tatum (T-111)	109	5.4	18.1	3.9	1.16	0.00
14	NCRPB (CKRB)	111	2.7	16.4	3.1	1.01	0.26
15	Welps (971)	119	2.5	16.2	3.1	1.02	1.54
16	Hubbard (Gld.Comet)	118	4.2	17.2	3.6	1.06	0.33
17	Garber (G-291)	119	1.7	16.0	3.2	0.99	0.67
18	Ideal (236)	111	1.8	17.2	3.2	1.03	0.37
19	Experimental A	111	1.9	15.7	2.9	0.99	0.29
20	Shaver (*X-288)	118	0.8	15.6	3.0	1.03	0.09
Av.		113	2.9	16.3	3.2	1.03	0.46

GROWING PERIOD - TABLE 13G-L

Entry No.	Breeder	Net pullets at one week	Mortality 8-150 da. %	Av. lbs. feed/pullet, 150 da.	Av. body wt. at 150 days	Feed & chick cost/pullet housed	Av. eggs per pullet to 150 days
1	Anthony (W. Leg.)	110	3.7	15.9	3.1	\$1.04	0.09
2	Carey (Nick)	112	2.7	16.9	3.3	1.07	0.04
3	Tatum (T-100)	116	0.8	15.4	2.9	1.00	0.26
4	Garber (G-200)	113	2.6	16.7	3.2	1.03	0.59
5	Lisher (105)	116	2.6	14.5	2.8	1.04	1.35
6	Ghostley (Pearl)	119	4.2	16.2	3.1	1.02	0.48
7	Davis (Combiner)	116	1.7	18.8	4.0	1.14	0.15
8	Babcock (B-390)	119	0.8	18.4	3.9	1.10	0.08
9	Parks (Keystones)	77	1.3	16.9	3.3	1.08	0.27
10	Ind.Fm.Bu. (Duchess 60)	110	0	16.3	3.1	1.02	0.54
11	Babcock (B-305)	114	0.8	15.4	3.0	0.98	1.10
12	Davis (Reds)	116	3.4	18.0	3.9	1.11	0.07
13	Tatum (T-111)	120	0	17.7	3.9	1.11	0.12
14	NCRPB (CKRB)	116	0.9	16.5	3.2	1.01	0.20
15	Welps (971)	119	0	16.3	3.1	1.02	1.22
16	Hubbard (Gld.Comet)	117	1.7	18.1	3.8	1.09	0.48
17	Garber (G-291)	112	2.7	17.9	3.7	1.08	2.13
18	Ideal (236)	115	3.5	16.4	3.3	1.01	0.62
19	Experimental A	109	0.9	16.8	2.9	1.04	0.81
20	Shaver (*X-288)	110	0.9	16.6	3.2	1.08	0.23
Av.		113	1.8	16.8	3.3	1.06	0.54

GROWING PERIOD - TABLE 13G-K3

1	Anthony (W. Leg.)	106	2.8	16.6	3.1	\$1.07	0.42
2	Carey (Nick)	117	3.4	16.0	3.1	1.03	0.19
3	Tatum (T-100)	105	5.4	15.8	2.9	1.06	0.30
4	Garber (G-200)	113	0.9	15.7	3.0	0.96	0.29
5	Fisher (105)	111	3.6	15.3	3.0	1.01	1.18
6	Ghostley (Pearl)	118	1.7	15.6	2.9	0.98	0.44
7	Davis (Combiner)	104	1.9	18.3	4.0	1.12	0.16
8	Babcock (B-390)	106	2.8	19.0	4.0	1.13	0.04
9	Parks (Keystones)	76	3.9	18.7	3.5	1.16	0.71
10	Ind.Fm.Bu. (Duchess 60)	102	7.9	16.3	3.1	1.07	1.52
11	Babcock (B-305)	114	0.9	15.6	3.0	0.99	2.44
12	Davis (Reds)	112	6.2	18.1	3.8	1.14	0.02
13	Tatum (T-111)	115	1.7	17.4	3.8	1.11	0
14	NCRPB (CKRB)	107	6.6	16.6	3.1	1.05	0.27
15	Welps (971)	116	2.6	16.0	3.2	1.02	1.89
16	Hubbard (Gld.Comet)	119	1.7	16.8	3.4	1.03	0.27
17	Garber (G-291)	117	2.6	15.9	3.3	1.00	0.49
18	Ideal (236)	107	6.6	17.1	3.4	1.05	0.59
19	Experimental A	104	2.9	16.9	3.2	1.05	0.82
20	Shaver (*X-288)	108	1.0	16.5	3.3	1.07	0.22
Av.		109	3.4	16.8	3.3	1.06	0.61

BREEDER	STOCK IDENTIFICATION	# Birds & List	Sampling Procedure*	Source of Sample
George M. Anthony & Sons Strausstown, Pa. 19559	Anthony W. Leg. WL SX	28,000 Yes	B	George M. Anthony & Sons Pltry Farm, Strausstown, Pa. 19559
Babcock Poultry Farm, Inc. Box 280, Ithaca, N.Y. 14850	Babcock B-305 WL 4wIN	4,500 Yes	A	Beamsdale Farm, R#2, Lawn- dale, N. C. 28090
Babcock Poultry Farm, Inc. Box 280, Ithaca, N.Y. 14850	Babcock B-390 RIRxBPR BX	4,000 Yes	A	Beamsdale Farm, R#2, Lawn- dale, N. C. 28090
Carey Farms, Inc., 3252 Mt.Olive- Agosta Rd., Marion, Oh. 43302	Carey Nick WL IN	12,000 Yes	B	Carey Farms, Inc. Marion, Oh. 43302
Joe K. Davis Hatchery Box 27, Earl, N.C. 28038	Davis Combiner RIRxBPR BX	4,000 Yes	A	Joe K. Davis Hatchery Box 27, Earl, N. C. 28038
Joe K. Davis Hatchery Box 27, Earl, N.C. 28038	Davis Reds RIR 3wX	8,000 Yes	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	6,000 Yes	A	Fisher Poultry Farm, Ltd. Ayton, Ontario, CANADA
Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca. 95351	Garber G-200 WL SX	25,000 Yes	B	Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca.
Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca. 95351	Garber GX-291 CGxWL BX	25,000 Yes	B	Garber Poultry Breeding Farms 4255 Hammett Rd., Modesto, Ca. 95351
Ghostley Enterprises, Inc. Box 290, Anoka, Mn. 55303	Ghostley Pearl WL SX	9,000 Yes	A	Altamaha Poultry Farms, Box 626 Hazelhurst, Ga. 31539
Hubbard Farms, Inc. Walpole, N.H. 03608	Hubbard Gld. Comet NHxSYN BX	4,000 Yes	A	Rocky Ford Hatchery Lincolnton, N. C. 28092
Ideal Pltry. Br. Fms., Inc., Box 591, Cameron, Tx. 76520	Ideal 236 SYNWL BX	25,000 Yes	A	Ideal Poultry Breeding Farms, Inc. Cameron, Tx. 76520
Ind.Fm.Bu.Coop. Assn., Inc. Indianapolis, In. 46204	Duchess 60 WL SX	6,400 Yes	B	Co-op Breeding & Research Farm R#2, W. Lafayette, In. 47906
N. Central Poultry Breeding Lab. Lafayette, In. 47907	Cor-Kent. RB (CKRB) WL RBX	-	-	Selected at Lafayette, In.
Parks Poultry Farm, R#4, Box 118, Altoona, Pa. 16601	Keystones WL 4wX	3,000 Yes	B	Parks Poultry Farm, R#4, Box 118 Altoona, Pa. 16601
Shaver Pltry. Br. Fm., Ltd. Box 400, Galt, Ontario, CANADA	Starcross 288 WL SX	12,000 Yes	A	Delta Hatchery Lake City, Fl. 32055
Tatum Farms, R#3 Dawsonville, Ga. 30534	Tatum T-100 WL SX	10,000 No	B	Tatum Farms, R#3 Dawsonville, Ga. 30534
Tatum Farms, R#3, Dawsonville, Ga. 30534	Tatum T-111 RIRxBPR BX	8,000 No	B	Tatum Farms, R#3, Dawsonville, Ga. 30534
Welp's Breeding Farm, Box 366 Bancroft, Io. 50517	Welp Line 971 WL IN	15,000 Yes	B	Welp's Breeding Farm, Box 366 Bancroft, Io. 50517

*A = nest sample; B = Egg Room sample; C - Incubator tray sample.

13th Test