



**AGRICULTURAL
EXTENSION
SERVICE**

*North Carolina State University
School of Agriculture and Life Sciences*

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The enclosed report is the Growing Report for the Twenty-Third 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, NC 28144.

This is the first flock that was placed in the curtain-side, well-insulated brood-grow house at 1 day of age. Design deficiencies of lighting on water cups and heat control caused higher than normal first week mortality. During the first week all entries experienced some mortality in the curtain-side house and averaged 4.5%. At the same time only 5 of 12 entries experienced mortality in the closed house where the average was 0.9%.

We expect to regain a more nearly current status of reports during the next few months. Thank you for your patience.

Very truly yours,

Grady A. Martin
Extension Poultry Specialist

TWENTY-THIRD NORTH CAROLINA RANDOM SAMPLE LAYING TEST
Growing Report
April 1, 1981 through August 25, 1981

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 flock is maintained at the Piedmont Research Station near Salisbury, North Carolina. The purpose of the tests is to assist poultrymen in evaluating stocks of commercial layers and management systems for them.

In this flock birds grown in a light and air controlled house with three decks of 24" X 20" (.610 X .508 meters) cages are compared with birds grown in well-insulated house with 48" X 40" (1.219 X 1.016 meter) flat deck cages.

Samples of 1260 fresh hatching eggs were taken at selected flocks under the supervision of public employees in agriculture. All eggs were shipped or delivered to the test site and assigned at random to incubator trays for hatching. When available, 456 sexed pullet chicks were banded and 152 were placed in the LAC house with the remaining 304 placed in the CS growing house. Approximately 50 sq. in. of cage space per bird was provided (30.7 birds/M²).

All chicks were vaccinated at day-old for Marek's with cell associated live turkey herpes virus vaccine. We express our appreciation to Mr. Ben Rood, Kennum, Inc., P. O. Box 1706, Anniston, AL for providing this vaccine for the flock and to Mr. Mike Williams in the Department of Poultry Science at NCSU for supervising the storage and administration of the vaccine. Percision debeaking of all pullets at 1-week of age, with touch up at 12 weeks of age if needed, was applied. All pullets were vaccinated for Newcastle at seven days (B1), four weeks (La Sota) and 16 weeks (La Sota) and for bronchitis at seven days and 16 weeks via water; vaccinated for pox via wing web at 12 weeks; and vaccinated for Avian encephalomyelitis at 14 weeks of age. The flock has remained M.G. negative.

All-mash rations were purchased on contract from a commercial feed manufacturer. Starting mash (20.7% protein, 1307 Kcal/lb) was fed at the rate of 2.25 lbs. per bird. Two growing rations were available - one had 17.4% protein, 1328 Kcal. ME/lb. and one had 14.8% protein, 1329 Kcal. ME/lb. Pullet growth curves were held as close as possible to the breeder's recommendation by selecting between these rations each two weeks for ad lib feeding. Lighting was 23 hrs. per day for 2 days and then 9 hours per day in the closed house to 19 weeks followed by step-up light. In the CS house the two 23-hour days were followed by constant day length equal to June 21 until that date, natural day length to 19 weeks and then step-up lighting.

At 21-weeks of age, 420 pullets (when available) were placed in the three laying houses used for the 22nd test. They were equally divided between houses, between shallow and deep cages, and between 54 and 72 sq. in. per bird cage space. Each strain within house block was fed one of 6 available laying rations phased on feed consumption, rate of production and condition during each 2-week period of lay.

Entry policy remains unchanged, with both Category I, having extensive distribution in the southeast, and Category II, having less extensive distribution in the southeast, stocks comprising a list of 12 commercial strains. Complete identification and entry information is carried on another page. We express our appreciation to Shaver Poultry Breeding Farms, Ltd., H & N, Inc., DeKalb AgResearch, Inc., Babcock Poultry Farm, Inc., their distributors, and other helpful individuals for providing extra hatching eggs. The extra chicks are used for research in stress physiology, growing cage space, beak trimming and layer feed energy in the present flock. These data will be published elsewhere.

Data Tables

The average performance of the replicates of each stock is shown in Table 23G-LAC for the light and air controlled house and in Table 23G-CS for the curtain-side house. Entry number was drawn at random. Breeder is a short stock identification with more complete entry information shown on another page. Mortality 8 through 147 days is the average percent loss of the groups with first week mortality, sexing errors, and accidental deaths excluded. Av. Lbs. Feed/Pullet - 147 days is the bird-day feed consumption to 21 weeks of age. Av. 147-Day Body Weight is the average live weight of survivors at housing. Av. Eggs/Pullet to 147 Days indicate general maturity level of the entry at housing. Feed and Chick Cost/Pullet Housed distributes the value of net pullets at 1 week and of feed consumed by these birds equally among survivors of the entry. Chicks are charged at the average price per chick for all entries (\$.39545) and feed prices are based on a three-year average of prices quoted by the NCDA Crop Reporting Service.

23RD FLOCK - GROWING

TABLE 23G-LAC

CLOSED HOUSE

Entry No.	Breeder	Net Pullets 1 Wk.	% Mort. 8-147 Da.	Av. Lbs. Feed/Pullet 147 Days	Av. 147-Day Body Wt.	Av. Eggs/Pullet to 147 Days	Feed & Chick Cost/Pullet Housed
1	Shaver (Starcross 288A)	147	2.05	15.68	3.106	0.46	\$ 1.840
2	DeKalb (XL Link)	136	3.09	15.54	3.108	0.37	1.836
3	Hy-Line (W-36)	143	1.31	15.49	3.102	0.13	1.814
4	Babcock (B-300V)	142	1.79	15.27	2.997	0.92	1.819
5	H & N (p.g./two)	145	6.89	16.66	3.188	0.50	1.950
6	Colonial (365-S)	130	2.29	16.64	2.557	0.59	1.950
7	Haley (H-630)	151	3.42	16.36	3.238	0.61	1.954
8	Hardy (Concord)	152	3.28	16.96	3.605	0.01	1.984
9	DeK. (Sex-Sal-Link G)	150	0.00	16.49	3.615	0.00	1.884
10	Hubbard (Golden Comet)	152	0.61	17.83	3.609	0.50	2.038
11	Euribrid (Hisex Wh.)	134	2.26	17.22	2.888	2.30	2.003
12	Hubbard (Leghorn)	147	2.71	15.59	3.119	0.17	1.834
AV		144	2.48	16.31	3.178	0.55	1.909

TABLE 23G-CS

CURTAIN SIDE HOUSE

1	Shaver (Starcross 288A)	274	2.64	17.96	3.148	0.41	2.082
2	DeKalb (XL Link)	285	0.71	17.28	3.050	0.29	2.005
3	Hy-Line (W-36)	297	2.07	16.69	3.050	0.11	1.972
4	Babcock (B-300V)	291	4.10	17.10	2.881	0.21	2.053
5	H & N (p.g./two)	289	2.13	17.38	3.139	0.61	2.017
6	Colonial (365-S)	270	4.19	16.29	2.421	0.57	1.947
7	Haley (H-630)	276	4.01	17.99	3.353	0.64	2.084
8	Hardy (Concord)	288	8.01	18.76	3.574	0.02	2.232
9	DeK. (Sex-Sal-Link G)	271	7.01	19.07	3.688	0.02	2.233
10	Hubbard (Golden Comet)	293	6.22	18.26	3.720	0.29	2.152
11	Euribrid (Hisex Wh.)	283	4.88	17.38	2.980	1.27	2.086
12	Hubbard (Leghorn)	288	5.37	17.88	3.154	0.27	2.084
AV		284	4.28	17.67	3.263	0.39	2.079

TWENTY-THIRD NORTH CAROLINA RANDOM SAMPLE LAYING TEST

Breeder	Stock Identification	Entry Category*	Source of Sample
Babcock Poultry Farm, Inc. Box 280 Ithaca, NY 14850	Babcock B300V WL INX	I-A YES	Babcock Poultry Farm, Inc. Box 280 Ithaca, NY 14850
Colonial Poultry Farms, Inc. P. O. Box 89 Pleasant Hill, MO 64080	True-Line #365-S WL 4wINC	II YES	Colonial Poultry Farms, Inc. Effingham, IL 62401
DeKalb AgResearch, Inc. Sycamore Road DeKalb, IL 60115	DeKalb XL-Link WL 4w INX	I-A YES	Carolina Hatcheries P. O. Box 976 Clinton, NC 28328
DeKalb AgResearch, Inc. Sycamore Road DeKalb, IL 60115	DeKalb Sex-Sal-Link "G" RIR x SYN BX	I-A YES	Pee Dee Hatchery Box 156 Hartsville, SC 29550
Euribrid B.U., Entry by Pilch, Inc., Box 438, Troutman, NC 28677	Hisex White WL 4w INX	I-A YES	Gulf Coast Hatchery Quincy, FL 32351
H & N, Inc. 15305 N.E. 40th St. Redmond, WA 98052	H & N p.g./two WL 4w SX	I-A YES	Gulf Coast Hatchery Quincy, FL 32351
Haley Farms, Inc. Rt. #2 Canton, GA 30114	Haley 630 WL 2w INX	II YES	Haley Farms, Inc. Rt. #2 Canton, GA 30114
Hardy & Son, Inc. John Wise Ave. Essex, MA 01929	Hardy Concords RIR x RIW BX	II YES	Hardy & Son, Inc. John Wise Ave. Essex, MA 01929
Hubbard Farms Walpole, NH 03608	Hubbard Golden Comet NH x SYN BX	I-A YES	Bowers Brothers Hatchery Albemarle, NC 28001
Hubbard Farms Walpole, NH 03608	Hubbard Leghorn WL SX	II YES	Hubbard Farms Lancaster, PA
Hy-Line International 1206 Mulberry Des Moines, IO 50309	Hy-Line W-36	I-C	Not Applicable
Shaver Poultry Breeding Farms, Ltd., Box 400 Cambridge, Ontario, CANADA N1R 5V9	Starcross 288A WL SX	I-A YES	Owen Farms, Inc. Box 125 Dahlonega, GA 30533

- * I-A = Extensive distribution in the southeast and entry requested.
 YES = Supporting and fully cooperating with the test.
 I-C = Extensive distribution in the southeast and entry neither requested or supported.
 II = Less extensive distribution in the southeast and entry requested.