



**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-Fourth North Carolina Layer Production and Management 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.

Budget limitations made it necessary to leave the high-rise laying house vacant for this flock. In order to retain our sample size, the number of entries was reduced from 12 to 8 and 6 reps were placed in each of two laying houses rather than 4 reps in each of three houses. The design deficiencies in the curtain-side growing house were corrected and only 1.1% first week mortality occurred in it this year.

To the present time, disruption of production in the laying houses has been much less severe for this flock than for the previous flock. We hope that the condition holds for the rest of the laying cycle.

Very truly yours,

Grady A. Martin
Extension Poultry Specialist

TWENTY-FOURTH NORTH CAROLINA LAYER PRODUCTION AND MANAGEMENT TEST
Growing Report
March 31, 1982 through August 24, 1982

The North Carolina Layer Production and Management 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. Mr. B. N. Ayscue is Superintendent of the Piedmont Research Station near Salisbury, North Carolina, where the flock is maintained. 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 (LAC) house with three decks of 24" X 20" (.610 X .508 meters) cages are compared with birds grown in a well-insulated curtain-side (CS) house with 48" X 40" (1.219 X 1.016 meters) 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, 480 sexed pullet chicks were banded and 240 were placed in the LAC house with the remaining 240 placed in the CS growing house. Approximately 48 sq. in. of cage space per bird was provided (32.3 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, Keenum, Inc., P. O. Box 1706, Anniston, Alabama 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. Precision 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 14.6% 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 hours per day for 3 days and then 9 hours per day in the LAC house to 19 weeks followed by step-up light. In the CS house the three 23-hour days were followed by constant day length equal to June 21 until that date, natural day length to 20 weeks and then step-up lighting.

At 21-weeks of age, 210 pullets (when available) were placed in each of the LAC and the flush-waste laying houses used for the 23rd 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 six available laying rations phased on feed consumption, rate of production and condition during each 2-week period of lay.

Entries had to be restricted to Category I, having extensive distribution in the southeast, stocks to fill the 8 available spaces. Complete identification and entry information is carried on another page. We express our appreciation to DeKalb AgResearch, Inc., Pilch, Inc., Shaver Poultry Breeding Farms, Ltd., their distributors, and other helpful individuals for providing extra hatching eggs. The extra chicks are used in stress physiology, growing cage space, growing ration, and grow vs lay environment exchange research. These data will be published elsewhere.

Data Tables

The average performance of the replicates of each stock is shown in Table 24G-LAC for the light and air controlled house and in Table 24G-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 (\$.40857) and feed prices are based on a three-year average of prices quoted by the NCDA Crop Reporting Service.

24TH FLOCK - GROWING

TABLE 24G-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	DeK. (Sex-Sal-Link G)	237	1.71	17.19	3.748	0.00	2.055
2	H & N (p.g./two)	232	2.98	15.08	3.045	0.21	1.937
3	DeKalb (XL Link)	231	1.61	12.82	2.946	0.09	1.660
4	Shaver (Starcross 288A)	231	3.04	12.28	2.972	0.18	1.627
5	Euribrid (Hisex Br.)	236	3.80	17.07	3.844	0.00	2.082
6	Euribrid (Hisex Wh.)	227	1.82	12.49	2.981	0.69	1.664
7	Hubbard (Golden Comet)	236	0.85	17.45	3.923	0.06	2.052
8	Hy-Line (W-36)	239	3.34	14.16	2.963	0.04	1.795
AV		234	2.39	14.82	3.303	0.16	1.859

TABLE 24G-CS

CURTAIN SIDE HOUSE

1	Dek. (Sex-Sal-Link G)	239	1.67	18.76	3.982	0.01	2.198
2	H & N (p.g./two)	229	2.22	16.33	3.172	0.35	1.986
3	DeKalb (XL Link)	236	2.14	16.79	3.187	0.23	2.050
4	Shaver (Starcross 288A)	237	3.79	16.77	3.188	0.18	2.056
5	Euribrid (Hisex Br.)	238	0.83	19.14	4.162	0.17	2.218
6	Euribrid (Hisex Wh.)	234	0.84	16.48	3.122	1.59	2.014
7	Hubbard (Golden Comet)	238	1.26	18.87	4.129	0.43	2.217
8	Hy-Line (W-36)	238	1.25	15.24	3.094	0.14	1.877
AV		236	1.75	17.30	3.504	0.39	2.077

TWENTY-FOURTH NORTH CAROLINA LAYER PERFORMANCE AND MANAGEMENT TEST

Breeder	Stock Identification	Entry Category*	Source of Sample
DeKalb AgResearch, Inc. Sycamore Road DeKalb, IL 60115	DeKalb XL-Link WL 4w INX	I-A YES	Clay's Hatchery Route 1 Blackstone, VA 23824
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 P.O. Box 1170 Quincy, FL 32351

Breeder	Stock Identification	Entry Category*	Source of Sample
Euribrid B.U., Entry by Pilch, Inc., Box 438 Troutman, NC 28677	Hisex Brown RIR x SYN BX	I-A YES	Grimes Poultry and Egg Co. Route 3 Monroe, GA 30655
H & N, Inc. 15305 N.E. 40th St. Redmond, WA 98052	H & N p.g./two WL 4w SX	I-A YES	Walter E. Wheelock Hatchery 2170 Wayne Road Chambersburg, PA 17201
Hubbard Farms Walpole, NH 03608	Hubbard Golden Comet NH x SYN BX	I-A YES	Bowers Brothers Hatchery Route 4 Albemarle, NC 28001
Hy-Line International Johnston, IA 50131	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	Martin's Hatchery P.O. Box 299 Gettysburg, OH 45328

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



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