AGRICULTURAL
EXTENSION
SERVICE

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This is the report of the growing period for the Twenty-Second 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.

Inclement weather during February and March, 1980 delayed completion of the new curtain-side brood-grow house until after this flock was hatched. Part of the chicks from each entry that were assigned to the new house were started in the closed house and part of them were started in the poorly insulated curtain side house that was used in prior years. The necessity for brooding in temporary facilities imposed extra moves of the birds and made records too irregular to fit the computor program. Consequently this report is regrettably late. Thank you for your patience.

When the brood-grow house was completed, two-thirds of the birds from each entry were placed in its flat-deck cages for the remainder of the growing period. All birds in each entry that were destined for laying in a particular house were given uniform management during the growing period and were randomly assigned to replicates for our phased feeding program and for a feeding program conforming to instructions of the breeder. Feed consumption and production data are calculated every 14 days and appropriate selection among the six available rations is made for feeding during the next two weeks. This is the final flock for this type of feeding program comparison.

We expect to become current on reports in the next few weeks.

Very truly yours,

Grady A. Martin

GRADY A. MARTIN
Extension Poultry Specialist

TWENTY-SECOND NORTH CAROLINA RANDOM SAMPLE LAYING TEST
Growing Report
April 2, 1980 through August 26, 1980

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.

This test compares 12 commercial laying stocks grown in curtain-side vs. closed cage housing. Birds grown in the curtain-side house will lay in either a curtain-side house with stair-step cages and flush-out waste management or in a curtain-side high-rise house with 3 and 4 deck cages. Those grown in the closed house will lay in a closed house with scrape-out waste management and 3 and 4 deck cages. In each laying house for each stock comparison of 72 vs. 54 sq. in. cage space, shallow vs. deep cages, and our phased feeding program vs. feeding according to pre-housing instructions of the breeder will be made.

Samples of 2520 freshly gathered hatching eggs were taken at selected supply flocks of cooperating breeders or from egg rooms when nest sampling was not feasible. Public employees in Agriculture supervised the sample selection and sealed the cases for shipment to the test site where all eggs were incubated; 924 sexed pullet chicks (when available) were placed for each entry. Six-hundred sixteen chicks were assigned to 14 reps @ about 44 sq. in. per bird in flat-deck cages in a curtain-side brood-grow house and 308 chicks were assigned to two reps in three-deck cages in a closed house @ about 44 sq. in. per bird after the brooding period.

All birds were vaccinated at day-old for Marek's with cell associated live turkey herpes virus vaccine. We express our appreciation to Keenum, Inc., P. O. Box 1706, Anniston, AL for providing this vaccine for the flock and to Mr. Larry Rose in the School of Veterinary Science and Mr. Mike Williams in the Department of Poultry Science at North Carolina State University for supervising the administration of the vaccine. No mortality was attributed to Marek's during the growing period of this flock.

All pullets were debeaked at between six and ten days of age with touch-up at about 12 weeks of age if needed. All pullets were vaccinated for Newcastle at seven days (B1), four weeks (LaSota) and 16 weeks (LaSota) 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 16 weeks of age. Mycoplasma gallisepticum status of the flock has been monitered and remains negative.

All-mash rations were purchased on contract from a commercial feed manufacturer and fed ad lib until housing. A 20.2% protein, 1315 Kcal. M.E./lb. starting mash was fed @ 2.5 lbs. per bird and either a 16.7% protein, 1307 Kcal. M.E./lb. grower or a 14.1% protein, 1309 Kcal. M.E./lb. developer was fed thereafter with the choice gaged by growth rate of the pullets. Light in the curtain-side house was held constant at maximum day length during the growing period and 9½ hours constant light period was maintained in the closed house.

At 147 days a maximum of 840 pullets were moved to the laying houses and distributed evenly in the comparison groups listed above.

Entry policy remains unchanged from the Twenty-First Test. The requirement of Mg. clean supply source precluded some Category II stocks that might otherwise have been tested. Complete entry identification and source information are included elsewhere in this report.

We express our appreciation to DeKalb AgResearch and Shaver Poultry Breeding Farms, Ltd., their distributors, and other helpful individuals for providing extra hatching eggs for birds to be used in layer nutrition, sexing system, physiological stress, and management interaction research in conjunction with this test.

Data tables: The average performance of cage-grown reps in light and air controlled (LAC) housing is shown in Table 22G-LAC and the average performance of reps completing the growing period in flat-deck cages in the curtain-side (CS) house is shown in Table 22G-CS. Since approximately twice as many birds are included in the latter table, no entry averages for the two types of housing were calculated.

The entry number was drawn at random. The breeder is fully identified on the page that gives stock identification, entry category, cooperator status, and source of sample for entries. Mortality, 8 through 147 days is the average percent loss of the groups with first week mortality, sexing errors, and accidental loss excluded. Average lbs. of feed per pullet for 147 days is based on bird-days. Feed and chick cost per pullet housed distributes the value of net pullets at one week and the feed consumed by these equally among survivors. The average price for all entries of $0.38364 per chick is used for each entry. Feed costs are based on three-year averages of monthly price quotations from NCDA. Average lbs. weight at 147 days is average weight of survivors. Average eggs per pullet at 147 days indicates general maturity level of the entry at housing.

TWENTY-SECOND NORTH CAROLINA RANDOM SAMPLE LAYING TEST

Breeder	Stock Identification	Entry Category*	Source of Sample
Babcock Poultry Farm, Inc. Box 280 Ithaca, NY 14850	Babcock B-300V WL INX	I-A YES	Babcock Southeast P. O. Box 671 Gainesville, GA 30501
Babcock Poultry Farm, Inc. Box 280 Ithaca, NY 14850	Babcock B-380 SYNxSYN IBX	II YES	Babcock Poultry Farm, Inc. Box 280 Ithaca, NY 14850
DeKalb AgResearch, Inc. Sycamore Road DeKalb, IL 60115	DeKalb XL-Link WL 4wSX	I-A YES	Clay's Hatchery Route 1 Blackstone, VA 23824
DeKalb AgResearch, Inc. Sycamore Road DeKalb, IL 60115	DeKalb Sex-Sal-Link "G" RIRxSYN 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 4wSX	I-A YES	Gulf Coast Hatchery Quincy, FL 32351
Euribrid B.U. Entry by Pilch, Inc., Box 438 Troutman, NC 28677	Hisex Brown SYNxSYN 4wBX	II YES	Pilch, Inc. Box 438 Troutman, NC 28677
H & N, Inc. 15305 N.E. 40th St. Redmond, WA 98052	H & N "P.g./two" WL 4wSX	I-A YES	Harrold's Hatchery Box 98 Winterville, GA 30683
Hubbard Farms, Inc. Walpole, NH 03608	Hubbard Golden Comet NHxSYN BX	I-A YES	Bowers Bros. Hatchery R#4, Albemarle, NC 28001
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, CANADA, NIR 5V9	Starcross 288 WL SX	I-A YES	Delta Hatcheries Box 769 Lake City, FL 32055
Tatum Farms, R#3, Dawsonville, GA 30534	Tatum T-100 WL SX	II YES	Tatum Farms, R#3, Dawsonville, GA 30534
Tatum Farms, R#3, Dawsonville, GA 30534	Tatum T-173 RIRxSYN BX	II YES	Tatum Farms, R#3, Dawsonville, GA 30534

*I-A = Extensive distribution in Southeast and entry requested. YES = supporting and fully cooperating with the test.

GROWING PERIOD - TABLE 22G-LAC

Entry No.	Breeder	Mortality 8 - 147 Days %	Ave. Lbs. Feed Per Pullet for 147 Days	Feed & Chick Cost/ Pullet Housed	Ave. Lbs. Weight at 147 Days	Ave. Eggs Per Pullet at 147 Days
1	Hy-Line (W-36)	2.10	14.23	1.55	2.92	0.16
2	DeKalb (XL Link)	0.98	13.94	1.51	2.84	0.34
3	Shaver (288)	0.47	15.36	1.61	3.10	0.85
4	DeKalb (Sex-Sal-Link G)	0.34	15.90	1.66	3.46	0.04
5	Babcock (B-300V)	1.33	14.19	1.57	2.82	1.40
6	Hubbard (Gld. Comet)	0.65	16.45	1.70	3.55	0.77
7	H & N (P.g./two)	1.96	15.27	1.62	2.75	0.72
8	Euribrid (Hisex Wh.)	2.66	14.72	1.58	2.73	2.75
9	Euribrid (Hisex Br.)	0.34	15.46	1.61	3.48	0.43
10	Babcock (B-380)	0.74	16.78	1.73	3.60	0.13
11	Tatum (T-173)	1.03	15.30	1.62	3.49	0.59
12	Tatum (T-100)	3.37	15.86	1.67	2.92	0.81
AV	Average	1.33	15.29	1.62	3.14	0.75

GROWING PERIOD - TABLE 22G-CS

1	Hy-Line (W-36)	2.78	15.09	1.62	2.77	0.02
2	DeKalb (XL Link)	2.73	15.41	1.64	2.93	0.07
3	Shaver (288)	4.92	16.11	1.72	2.95	0.19
4	DeKalb (Sex-Sal-Link G)	9.37	17.32	1.89	3.25	0.01
5	Babcock (B-300V)	1.33	14.69	1.61	2.80	0.23
6	Hubbard (Gld. Comet)	2.65	17.65	1.83	3.54	0.14
7	H & N (P.g./two)	2.35	15.29	1.63	2.87	0.21
8	Euribrid (Hisex Wh.)	2.72	15.01	1.61	2.79	0.75
9	Euribrid (Hisex Br.)	2.79	17.88	1.84	3.61	0.05
10	Babcock (B-380)	0.83	18.99	1.90	3.84	0.05
11	Tatum (T-173)	5.74	17.67	1.90	3.51	0.07
12	Tatum (T-100)	3.29	15.82	1.67	2.92	0.06
AV	Average	3.46	16.41	1.74	3.15	0.15