

## NORTH CAROLINA RANDOM SAMPLE EGG LAYING TEST

Piedmont Research Station, Route 6  
Salisbury, North Carolina

Fifth Year-Growing Report  
February 8 through July 7, 1963

The North Carolina Random Sample Poultry Tests are conducted under the auspices of the N. C. Department of Agriculture and the School of Agriculture of N. C. State. Mr. S. J. Childs, address above, is Resident Manager and Dr. G. A. Martin, Poultry Department, N. C. State, Raleigh, N. C., is Project Leader. The laying test is designed to assist commercial poultrymen of North Carolina in evaluating the productivity of stocks of layers that are available to them in quantity. A committee representing the various poultry interests of the state advises the Steering Committee in establishing policies and practices which best serve this purpose.

Chicks were incubated at the test site from a case of eggs for each entry. The samples were selected by random procedures from the nests or from at least 10 cases of eggs at the participating hatchery. Public Employees in Agriculture served as sample takers. Eggs were assigned to incubator trays at random. Chicks were sexed and 120 pullets (when available) were wing-banded for growing in replicated pens of 60 pullets. First week mortality, sexing errors, and accidental deaths were not charged against the entry and all effects of their inclusion were removed from pen data before summarization.

Feeds for the test were mixed by test personnel as all-mash rations. The starting mash (20% protein with 870 cal. productive energy per pound) was fed for 8 weeks, and the growing mash (16% protein with 860 cal. productive energy per pound) was fed for the remainder of the growing period. The vaccination program was: Intro-Occular Newcastle-Bronchitis at 1-day-old, Newcastle dust at 4-weeks-old, and Newcastle-Bronchitis dust at 17-weeks-old, coccidiosis vaccine at 5-days-old, and fowl pox in the wing web at 9-weeks-old.

In the data summary, the entry number was drawn at random. The breeder is fully identified elsewhere in the report. Net pullets at 1 week excludes first week mortality, sexing errors, and accidental deaths. Mortality, 8 through 150 days, is the average of accountable mortality in the two pens of the entry. Average feed per pullet--first 150 days is based upon bird-days and does not charge feed consumed by birds that died against survivors. Average body weight at 150 days is the average weight of all survivors. Feed and Chick cost per pullet at 150 days distributes the total cost of net pullets at one week and the feed which they consumed equally among the survivors and, therefore, included the cost of mortality. Feed costs are based on 3-year averages of monthly feed prices as reported by N. C. Department of Agriculture. Chick prices are obtained from local distributors price lists for the current and preceding two years in 1000 lots. Average eggs per pullet at 150 days indicates the general maturity level of the entry at housing.

During the growing period of this test losses from leukosis in one replicate reached epidemic proportions. No loss from leukosis and less than 1% loss from other causes had occurred in this replicate at the end of the 12th week.

## North Carolina Random Sample Egg Laying Test

During the 13th through 18th weeks, losses from leukosis in this replicate were 0.9%, 1.4%, 1.2%, 1.7%, 2.9%, and 3.0%. From this point losses from leukosis declined gradually. At 150 days, total mortality in this replicate was 22.9% as compared to 2.5% in the other replicate. 87.4% of the birds autopsied from this replicate died from leukosis as compared to 45.8% of the much lower losses in the other replicate. The replicates were in adjacent houses, were consuming feed from the same mixes, and were attended by the same personnel. All vaccinations were applied to both replicates at the same time although the reaction to the Newcastle booster seemed a bit more severe in the replicate which later developed leukosis. No explanation of the difference in losses from leukosis is apparent. Differential losses from the pens in the replicate caused number of pullets housed to vary from 32 to 50 birds. All pens of the other replicate had 50 pullets housed.

## Growing Period - Test 5-G, 1963

Entry No.	Breeder	Net Pullets at 1 wk.	Mortality - 8 through 150 days (%)		Av. Feed Per Pullet for 150 days	Av. Body Wt. at 150 days	Feed & Chick Cost/ Pullet Housed	Av. Eggs/ Pullet at 150 days
			Leuk.	Total				
1	DeKalb	120	5.8	7.5	20.8	3.6	\$1.57	0.43
2	Babcock	118	19.2	23.3	20.7	3.7	1.78	0.96
3	Cashman	119	11.7	13.4	22.3	4.1	1.61	1.02
4	Cameron	114	10.3	13.8	21.7	3.6	1.45	0.34
5	Eby	120	5.0	9.2	20.8	3.5	1.37	0.52
6	Demler	115	10.4	15.6	20.4	3.4	1.46	0.48
7	Garrison-Stever	117	3.5	7.0	20.0	3.4	1.33	0.43
8	Arbor Acres	114	4.5	5.3	20.3	3.3	1.28	0.18
9	Beamsdale	109	10.9	12.7	20.7	3.4	1.44	1.07
10	Davis	120	9.2	13.3	25.4	5.1	1.63	0.79
11	Shaver	116	16.6	20.1	21.4	3.7	1.69	0.38
12	Ideal	117	9.5	12.0	20.3	3.4	1.42	0.42
13	Ghostley	113	8.0	13.4	20.8	3.5	1.49	0.22
14	Hubbard	118	6.8	9.3	23.9	4.5	1.51	0.76
15	Kimber	120	15.0	15.8	21.0	3.6	1.62	1.07
16	Harco	116	10.5	14.0	24.9	4.9	1.69	0.10
17	Honegger	119	9.2	12.5	21.0	3.6	1.50	0.64
18	Hy Line	120	4.2	5.8	20.9	3.5	1.54	1.11
19	Heisdorf-Nelson	119	11.9	16.1	20.3	3.5	1.59	0.38
20	Pa. Farm Bureau	113	9.8	13.3	20.4	3.6	1.44	0.56
	Average	117	9.6	12.6	21.4	3.7	1.52	0.59

LIST OF ENTRANTS IN FIFTH N. C. RANDOM SAMPLE LAYING TEST

<u>BREEDER AND ADDRESS</u>	<u>STOCK DESIGNATION</u>	<u>SOURCE OF SAMPLE</u>
Arbor Acres Farm, Inc. Glastonbury, Conn.	WL StrX Queens	Arbor Acres Farm, Inc. Concord, N. C.
Babcock Poultry Farms Ithaca, N. Y.	WL 3wX B-300	Harrolds Hatchery Winterville, Ga.
Beamsdale Farm Lawndale, N. C.	WL StrX 66	Beamsdale Hatchery Lawndale, N. C.
Cameron Leghorn Research Farm Beaver Springs, Pa.	WL StrX 924	Cameron Leghorn Research Farm, Beaver Springs, Pa.
Cashman Leghorn Farm Webster, Ky.	WL 3wX Hi-Cash	Cashman Leghorn Farm Webster, Ky.
Joe K. Davis Hatchery Earl, N. C.	X B RIR X BPR Davis Combiner Sex-Link	Joe K. Davis Hatchery Earl, N. C.
DeKalb Agricultural Assoc. Sycamore, Ill.	INX 151	Lancaster's Hatchery Windsor, N. C.
Demler Farms, Inc. Anaheim, Calif.	IB Regals	Raleigh Hatchery Raleigh, N. C.
Eby's Poultry Farm Carrollton, Texas	IBX 681 Hybrids	Eby's Poultry Farm Carrollton, Texas
Earl W. Garrison, Inc. Bridgeton, N. J.	WL StrX Garrison- Stever X300	Joe Stever Farm Huntingdon, Pa.
Ghostley's Poultry Farm Anoka, Minn.	WL 3wX Pearls	All Star Assoc. Farms Albemarle, N. C.
Harco Orchards & Poultry Farms, Inc., South Easton, Mass.	RIR PS Group I	Harco Orchards & Poultry Farms, Inc., S. Eaton, Mass.
Heisdorf & Nelson Farms, Inc. Kirkland, Wash.	WL StrX "Nick Chick"	J. C. Castleberry Hatch. Apex, N. C.
Honegger Farms Co., Inc. Forrest, Ill.	WL StrX Layers	FCX Hatchery Wallace, N. C.
Hubbard Farms, Inc. Walpole, N. H.	XB Comet	Hubbard Farms Statesville, N. C.
Hy-Line Poultry Farms Des Moines, Iowa	INX 934-H	Tar Heel Chicks Hatchery Monroe, N. C.
Ideal Poultry Breeding Farm Cameron, Texas	WL StrX H3W-2	Ideal Poultry Breeding Farm, Cameron, Texas
Kimber Farms, Inc. Fremont, Calif.	WL 3wX K-137	Hubbard Farms, Inc. Statesville, N. C.
Pa. Farm Bureau Harrisburg, Pa.	WL StrX L.S.C. 55	Pa. Farm Bureau Hatchery Grantville, Pa.
Shaver Poultry Breeding Farms, Ltd., Galt, Ontario, CANADA	WL 3wX Starcross 288	Grieder Leghorn Farms, Inc., Mount Joy, Pa.