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NORTH CAROLINA RANDOM SAMPLE EGG LAYING TEST

First year - Growing Report
February 13 through July 12, 1959

In response to the need of stock testing facilities for the rapidly expanding poultry industry in North Carolina, the 1957 Legislature appropriated funds for the construction and operation of a North Carolina Random Sample Poultry Test. Facilities have been constructed on the Piedmont Research Station at Salisbury and provide initially for twenty random sample egg production strain entries with replicated pens of fifty hens. The official tests are conducted under the auspices of the N. C. Department of Agriculture and the School of Agriculture of N. C. State College. Mr. S. J. Childs, Route # 6, Salisbury, N. C., is Resident Manager of the test and Dr. G. A. Martin, N. C. State College, Raleigh, N. C., is Project Leader.

The purpose of the test is to assist the commercial poultrymen of North Carolina in evaluating the productivity of stocks of chickens available to them in quantity. Flock management is in accord with good commercial management practices in North Carolina and the factors measured and reported are those of economic importance in this state. A committee representing the various poultry interests of the state advise the Steering Committee in establishing policies and practices that best serve the primary purpose of the test. Commercial stocks originating in North Carolina and a good representation of stocks originating outside the state are being tested.

Chicks were secured from a case of eggs selected by random procedure from at least ten cases of eggs at the participating hatchery. A representative of the official state agency and a local public employee in Agriculture served as a committee of two to make the selection and seal the sample for shipment to the test site. All eggs were incubated at the test site in trays assigned at random. Chicks were sexed and 120 pullets were wingbanded (when available) for growing in replicated pens of 60 pullets. The chicks were fed an all-mash starting ration for 8 weeks and an all-mash growing ration for the remainder of the growing period. The vaccination program was: intra-ocular Newcastle-Bronchitis at 1-day-old, Coccidiosis at 5-days-old, Newcastle dust at 34-days-old, Fowl Pox in wing web at 84-days-old and Newcastle-Bronchitis dust at 114-days-old.

First-week mortality, sexing errors, and obviously accidental deaths were deducted from chicks started to provide net pullets at one-week. Chicks that died after the first week were autopsied by a veterinarian and cause of death assigned as:

| | |
|-----------------|-----------|
| Respiratory | 24 |
| Coccidiosis | 19 |
| Circulatory | 11 |
| Picking | 3 |
| Heat exhaustion | 2 |
| Rickets | 2 |
| Pendulous Crop | 1 |
| Leucosis | 1 |
| Unknown | 11 |
| Total | <u>74</u> |

Average feed consumed during the first 150 days is based upon bird-days and does not charge feed consumed by birds that died against survivors. However, Feed and Chick cost per pullet at 150 days distributes the total cost of net pullets at one week and the feed they consumed equally among the survivors and, therefore, includes cost of mortality.

Feed cost was based on a three year monthly average as reported by the N. C. Department of Agriculture. Chick prices were obtained from the local distributor's price lists of the current and two preceding years. This three year average was determined from the price of pullets in quantities of 1000 chicks.

All entries had begun laying 150 days and the average eggs per pullet at 150 days is reported.

| lots Number | Breeder | Net Pullets at 1 wk. | Mortality 8 through 150 days | Average feed consumed first 150 days | Average body weight at 150 days. | Feed and chick cost per pullet at 150 days | Average eggs per pullet at 150 days |
|----------------|-----------------|----------------------------|------------------------------------|---|--|---|--|
| 1,34 | Parmenter | 118 | 14.5.9 % | 22.2 lbs. | 4.4 lbs. | \$ 1.45 | 0.31 |
| 2,38 | Fletcher | 104 | 7 1.0 2 | 19.6 | 3.5 | 1.38 | 0.16 |
| 3,37 | Ames | 116 | 18 6.9 4 | 22.9 | 4.9 | 1.74 | 1.30 |
| 4,36 | Hy-Line | 120 | 0.0 1 | 19.5 | 3.4 | 1.56 | 0.24 |
| 5,31 | Kimber | 118 | 0.0 1 | 19.8 | 3.6 | 1.45 | 0.41 |
| 6,40 | Heisdorf-Nelson | 117 | 17 6.0 4 | 19.2 | 3.5 | 1.46 | 0.32 |
| 7,33 | Babcock | 118 | 22.5 3 | 19.3 | 3.6 | 1.45 | 0.22 |
| 8,39 | DeKalb | 120 | 45.0 3 | 20.1 | 3.8 | 1.63 | 0.45 |
| 9,35 | Ghostley | 120 | 0.0 1 | 19.6 | 3.5 | 1.38 | 0.11 |
| 10,32 | Rapp | 119 | 0.0 1 | 19.1 | 3.5 | 1.36 | 0.02 |
| 11,25 | Beamsdale | 119 | 4 1.7 2 | 19.1 | 3.4 | 1.32 | 0.05 |
| 12,23 | Fox-Den | 120 | 5 0.8 1 | 22.4 | 4.6 | 1.47 | 0.32 |
| 13,21 | Hubbard | 120 | 45.0 3 | 24.0 | 4.9 | 1.61 | 0.46 |
| 14,29 | Cornell | 117 | 4 1.7 2 | 19.7 | 3.7 | 1.45 | 0.21 |
| 15,26 | Cashman | 120 | 5 0.8 1 | 20.4 | 3.9 | 1.45 | 0.37 |
| 16,28 | Colonial | 118 | 12 2.5 3 | 19.4 | 3.6 | 1.42 | 0.17 |
| 17,22 | Warren | 120 | 20 10.0 4 | 22.0 | 4.5 | 1.57 | 0.14 |
| 18,30 | Honegger | 118 | 4 1.7 2 | 19.1 | 3.4 | 1.42 | 0.09 |
| 19,27 | Mount Hope | 117 | 8 1.7 2 | 19.1 | 3.4 | 1.40 | 0.08 |
| 20,24 | Harco | 115 | 19 9.6 4 | 23.7 | 4.8 | 1.71 | 0.07 |
| | Average | 118 | 3.1 | 20.5 | 3.9 | 1.48 | 0.28 |

ENTRANTS IN FIRST NORTH CAROLINA RANDOM SAMPLE EGG LAYING TEST

| Stock Identification* | Breeder | Source of Sample |
|-------------------------------|---|---|
| IBX, # 505 | Ames In-Cross, 504½ Grand Avenue, Des Moines, Iowa | Suffolk Chick Hatchery Suffolk, Virginia |
| WL Str. X, Bessies | Babcock Poultry Farm, Inc. Box 286, Ithaca, N. Y. | Harrold's Hatchery, Inc. Winterville, Georgia |
| WL Str. X, # 66 | Beamsdale Farm, Route 2 Lawndale, N. C. | Beamsdale Farm Lawndale, N. C. |
| WL 3W Str. X, HI-Cash | Cashman Leghorn Farms Webster, Ky. | Bowers Brothers Hatchery Albemarle, N. C. |
| WL 4W Str. X, True-Line # 365 | Colonial Poultry Farms, Inc. Pleasant Hill, Mo. | Colonial Poultry Farms, Inc. Pleasant Hill, Mo. |
| WL, Random-Bred | Poultry Department, Cornell University, Ithaca, N. Y. | Cornell University Ithaca, N. Y. |
| IBX, # 131 | DeKalb Agricultural Assn., 111 State St., Sycamore, Ill. | DeKalb Hatchery York, Pa. |
| WL Str. X, F-X-100 | J. O. Fletcher & Son Leghorn Breeding Farm, Box 548, Concord | J. O. Fletcher & Son Hatchery Concord, N. C. |
| XB, Black Diamond | Fox-Den Farms Cary, N. C. | Fox-Den Farms Cary, N. C. |
| WL Str. X, Pearl | Ghostley's Poultry Farm Anoka, Minn. | Kelly Poultry Farm Garner, N. C. |
| RIR, (Pure Str.) | The Harco Orchards & Poultry Farms, Inc., South Easton, Mass. | Harco Orchards & Poultry Farms South Easton, Mass. |
| WL Str. X, Nick Chick | Heisdorf & Nelson Farms, Inc. Box 428, Kirkland, Wash. | J. C. Castlebury Hatchery Apex, N. C. |
| WL Str. X, Layers | Honegger Breeder Hatchery Forrest, Ill. | FCX Hatchery Wallace, N. C. |
| XB, # 496 | Hubbard Farms Walpole, N. H. | Hubbard Farms, Inc. Statesville, N. C. |
| IBX, # 934-C | Hy-Line Poultry Farms, 1206 Mulberry, Des Moines, Iowa | Belk Poultry Farm Monroe, N. C. |
| WL Str. X, K 137 | Kimber Farms, Inc., Box 8, Niles, Calif. | Asheville Hatcheries, Inc. Asheville, N. C. |
| WL Str. X, Queen | Mount Hope Poultry Farm, Inc. Williamston, Mass. | Farmers Federation Asheville, N. C. |
| RIR, (certified) | Parmenter Reds, Inc., 466 King St., Franklin, Mass. | Wake Farmer's Coop. Raleigh, N. C. |

WL Str. X, "Linecross" Rapp Leghorn Farm
Farmingdale, N. J.

Quinn Hatchery
Murphy, N. C.

XB, Sex-Sal-Link J. J. Warren
North Brookfield, Mass.

J. J. Warren, South, Inc.
Greenville, S. C.

WL = White Leghorn

RIR = Rhode Island Red

XB = Crossbred

IXB = Incrossbred

Str. X = Strain Cross

(3W = 3 way and 4W = 4 way)