

ADVANCED REGISTRY POULTRY BREEDING PROJECT AT CORNELL UNIVERSITY

DEC. 1, 1920-NOV. 30, 1921

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All birds in the Advanced Registry Poultry Breeding Project were hens that were certified during the months of October and November, 1920. This means that all records are for the second or later laying years.

The main purposes of this project are: (1) to enable New York State poultrymen to secure official records of performance of "Cornell certified" stock. (2) to produce and distribute to the owners the pedigreed progeny from these birds. (3) to introduce new blood into the flock by mating birds (at the owner's option) to Cornell high line pedigreed males.

Since only "Cornell certified" fowls are accepted the entries are confined to New York State because "Cornell certification" is done only in this State. To be certified the birds must be examined by one of Cornell's extension specialists during the months of October and November and banded with a special Cornell certified sealed leg band. Only hens that have passed through at least one laying season and meet the requirements are certified.

The birds arrive at the college December 1 in various stages of molt, weight and condition. During December and early January the birds are gotten ready to lay. On this account production during the first two months is very low. Many eggs are not sought until the approach of the hatching season because this is primarily a breeding project.

A small amount of artificial illumination is used beginning sometime in January, discontinued when the days become normally longer and again started about October 1. The regular Cornell ration of dry mash and grain is fed and this is supplemented during late summer with a wet mash mixed with buttermilk. Green food consists of cabbage, sprouted grain and mangles when not on range.

There were 354 birds entered as follows:

	329 S. C. White Leghorns
	15 S. C. Rhode Island Reds
	10 Barred Plymouth Rocks
Total	354 hens

These were entered in units of 5, 10, 15 or 20, and were owned by 43 poultrymen from 28 counties.

In the spring all the birds are mated to a Cornell high line pedigreed male or to the owner's certified male. Stud mating is practised because the fowls of the various owners are kept together in general flocks of about seventy-five each.

The eggs laid during the breeding season (about six weeks) were incubated and the pedigreed chicks shipped to the owners. The owner has two options in regard to the chicks. (1) to receive the chicks weekly from his own eggs. (2) to pool his eggs with all the other cooperators who choose this option and receive one shipment of chicks during the breeding season (the order of shipment being determined by lot).

The records are considered chiefly from the standpoint of the individual. Following are some of the results obtained.

TABLE I
AVERAGE YEARLY PRODUCTION

Breed	No. hens alive at end of year	Ave. Egg Production
S. C. Rhode Island Reds	11	167.9
S. C. White Leghorns	262	151.1
B. P. Rocks	6	147.8

TABLE II
BEST INDIVIDUAL MONTHLY RECORDS

Month	Eggs	Variety
Feb.	24	S. C. R. I. R.
Mar.	25	S. C. W. L.
Apr.	30	B. P. R.
May	31	B. P. R.
June	29	B. P. R.
July	30	B. P. R.
Aug.	28	S. C. R. I. R.
Sept.	24	S. C. W. L.
Oct.	29	B. P. R.
Nov.	21	S. C. W. L.

An interesting record for continuous laying was made by a barred plymouth rock hen.

Began laying January 28
Laid 15 eggs Jan. 28-Mar. 7
Laid 98 eggs without a skip Mar. 8-June 13. Skipped June 14.
Laid 31 eggs more June 15-July 15. Skipped July 16.
Laid 15 eggs more July 17-31
Molted and did not lay Aug. 1-Sept. 26
Laid 53 eggs Sept. 29-Nov. 29
Total 212 eggs

Of the 354 birds entered and the 279 alive at the end of the year, seventy-six made the "Cornell Advanced Registry" and qualified for the "American Association of Poultry Instructors and Investigators Registry Record of Performance," meaning that this number laid 180 eggs or more. They performed as follows.

200—231 eggs	29 hens
190—199 "	20 hens
180—189 "	27 hens

TABLE III

INDIVIDUALS MAKING THE TEN HIGHEST RECORDS FOR THE YEAR

Cert. Band No.	Eggs	Variety	Owner
4702	231	S. C. W. L.	Willow Brook Farm, Odessa, N. Y.
10563	225	"	L. E. Harvey, Marathon, N. Y.
4660	225	"	Willow Brook Farm, Odessa, N. Y.
4676	221	"	Willow Brook Farm, Odessa, N. Y.
21594	220	"	Root Bros. Poultry Farm, Otego, N. Y.
18670	220	S. C. R. I. R.	West Neck Farm, Huntington, N. Y.
2497	219	S. C. W. L.	S. L. Purdie, Skaneateles, N. Y.
18669	218	S. C. R. I. R.	West Neck Farm, Huntington, N. Y.
5749	216	S. C. W. L.	Mt. Pleasant Poultry Farm, Berkshire, N. Y.
21595	216	"	Root Bros. Poultry Farm, Otego, N. Y.
2868	216	"	Quaker Acres, Glens Falls, N. Y.

The mortality was very high amounting to 21.2%. The causes were quite varied. Climatic conditions are responsible for some mortality. The severe winter conditions favor roup and chicken pox, while the heat of summer causes prostration, and also effects their condition.

TABLE IV

CAUSES OF MORTALITY

Roup	11	Ovarian tumor	1
Digestive trouble	9	Malignant tumor	1
Blowouts	4	Vent gleet	3
Prolapse of oviduct	2	Diseased Kidneys	3
Broken egg in oviduct	1	Paralysis	2
Oviduct tumor	1	Internal hemorrhage	1
Heat prostration	5	Chicken pox	1
Drowned	1	Liver trouble	1
Windpipe obstructed	1	Closed oviduct	1
Leg broken (killed)	1	Gowing light	7
Injured comb (bled to death)	1	No cause given	17

TABLE V

AVERAGE FEED CONSUMPTION

Grain	39.5 lbs.
Mash	43.1 "
Oyster Shell	3.1 "
Grit	0.6 "
Cabbage	10.9 "
Wheat (sprouted)	3.0 "
Semi-solid buttermilk	1.9 "

In order to get some idea of the size of the eggs produced a study was made of the egg weights for the month of May. This was the month of the heaviest production and will probably average the smallest for the weight of eggs. The general tendency was for egg weight to decrease with an increase in the number laid during the month.

TABLE VI
AVERAGE EGG WEIGHT (May)

Breed	Wt of Egg
S. C. Rhode Island Reds	60.55 Grams (2.14 oz.)
S. C. White Leghorns	59.83 " (2.11 oz.)
B. P. Rocks	57.17 " (2.02 oz.)

TABLE VII
RELATION BETWEEN PRODUCTION (year) AND SIZE OF
EGG (May) FOR LEGHORNS

Size of Egg	Production (Eggs)				Total No.
	Below 100	100-149	150-199	200-231	
Under 22 oz. per dozen 50-51 grams	1	1	3	0	5
22-24 oz. per dozen 52-56 grams	7	12	23	3	45
24-26 oz. per dozen 57-61 grams	10	46	69	16	141
26-28 oz. per dozen 62-66 grams	4	16	25	4	49
28-30 oz. per dozen 67-71 grams	4	6	11	1	22

TABLE VIII
AVERAGE WEIGHT OF HENS

Breed	Wt. May 1921	Wt. Nov. 1921
S. C. White Leghorns (262)	3.89 lbs.	4.15 lbs.
S. C. Rhode Island Reds (11)	5.61 "	5.98 "
Barred Plymouth Rocks (6)	6.07 "	5.90 "