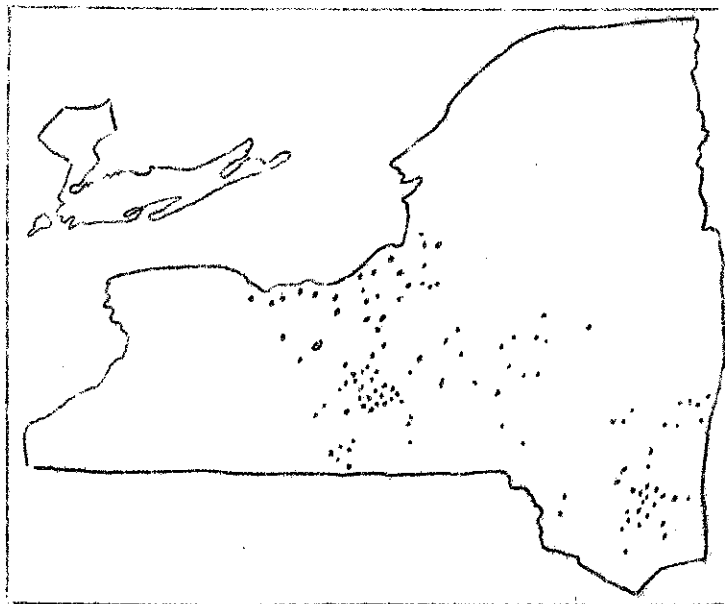# COMMERCIAL POULTRY FARMING IN NEW YORK

(Preliminary report of a
farm management survey)

By

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Location of the Poultry Farms Surveyed

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A. E. 398   July 1942

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COMMERCIAL POULTRY FARMING IN NEW YORK

Lawrence B. Darrah

A farm management survey of 120 poultry farms was made in New York State for the year ending September 30, 1941. Data needed to calculate the costs of producing eggs, raising pullets and hatching chicks, as well as the income of the entire farm business were obtained.

The purposes of this survey were (1) to indicate what factors are related to returns from poultry farming and (2) to obtain cost of production data for eggs and pullets, and the cost of hatching chicks on commercial poultry farms with either heavy or light breeds of chickens.

ECONOMIC SITUATION 1940-41

The average price of eggs in 1941 was considerably higher than the average price for 1940. Nevertheless, egg prices were still low as compared with the prices of all commodities (figure 1). This unfavorable relationship between egg prices and the prices of all commodities has existed for about ten years.

The egg-feed ratio (the pounds of feed one dozen eggs will buy) was more favorable for egg production in the October 1940 to September 1941 period than it was in the preceding one-year period (figure 2). Except for four months, the egg-feed ratio in the 1940-41 period was less favorable than the average monthly ratio in the five-year period 1934-38.

SIZE OF FARMS

Acres

In general, poultry farms are small insofar as acreage of land is concerned. The average number of acres operated per farm was 90 (table 1). Thirty-six farms, or about one-third of all the farms, operated less than 25 acres.

TABLE 1. ACRES OPERATED -- 120 poultry farms, New York, 1940-41

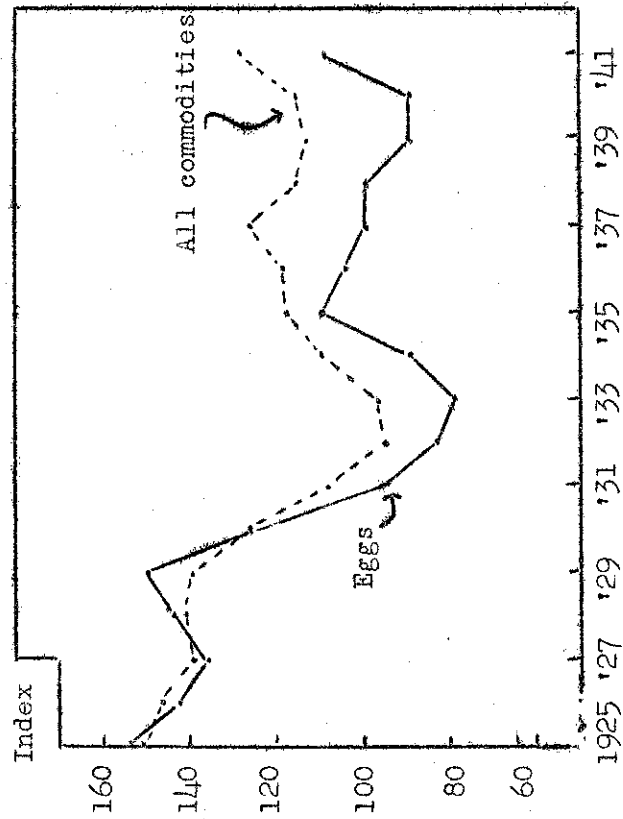| Area operated		Farms	Proportion of total farms
Range	Average		
Acres	Acres	Number	Per cent
Less than 25	10	36	30
25-74	48	25	21
75-124	98	24	20
125-174	145	18	15
More than 174	253	17	14
Total or average	90	120	100

FIGURE 1. FARM PRICE OF EGGS IN NEW YORK STATE AND THE WHOLESALE PRICES OF ALL COMMODITIES IN THE UNITED STATES, 1910-14=100
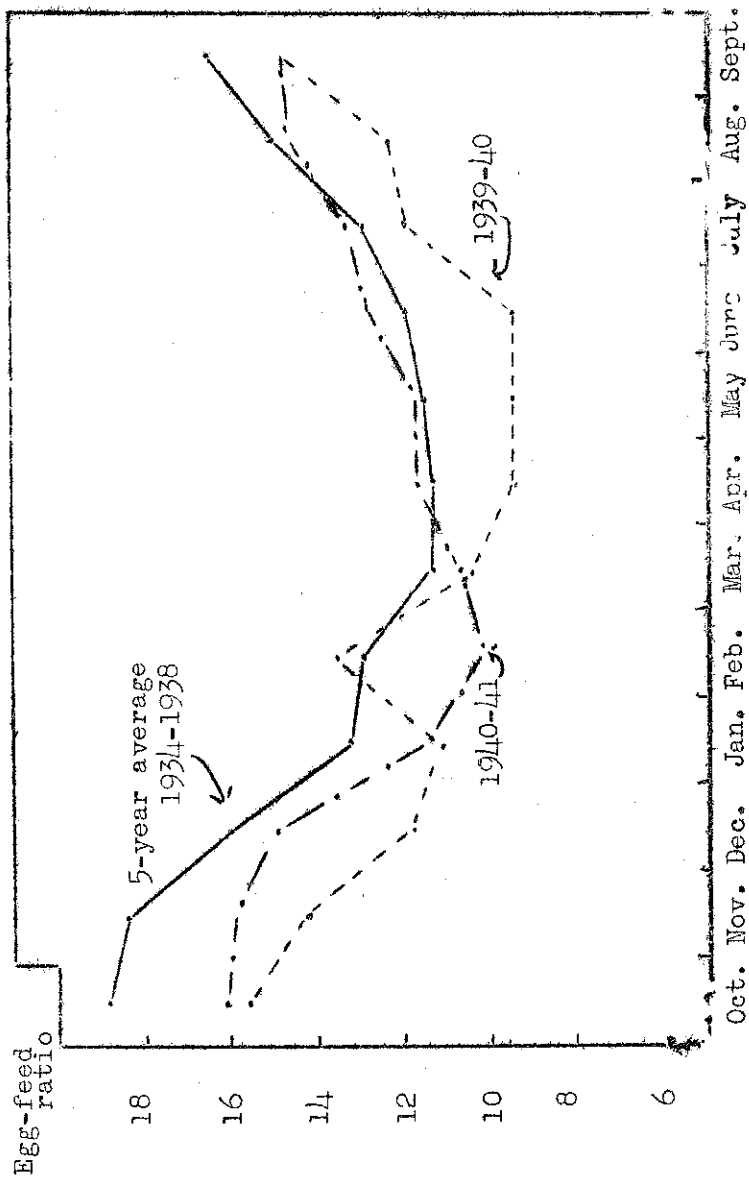
FIGURE 2. NEW YORK STATE EGG-FEED RATIO*

*Egg price: New York City white eggs, seasonally adjusted for grade.
 Feed price: Rochester-Syracuse zone.

Every poultryman visited in the survey owned most of the land that he operated. On the average, 87 acres of land were owned per farm (table 2). Of this amount, 3 acres were rented out to someone else for farming purposes. An average of 1 acre of land was share rented per farm and 5 acres cash rented, thus making the average acreage of land operated per farm 90 acres.

TABLE 2. TENURE - 120 poultry farms, New York, 1940-41

Form of tenure	Average area per farm
	Acres
Owned	87
Rented out	3
Owned acres operated	84
Share rented	1
Cash rented	5
Total	90

Use of land

The area of crop land was 39 acres per farm (table 3). Pasture land amounted to 25 acres per farm and woods 14 acres. There were 8 acres of waste land per farm and 4 acres of farmstead and roads.

TABLE 3. USE OF LAND - 120 poultry farms, New York, 1940-41

Item	Average area per farm	Proportion of total
	Acres	Per cent
Crops	39	43
Pasture	25	28
Woods	14	16
Waste	8	9
Farmstead, roads	4	4
Total	90	100

Number of layers

A good measure of the size of a poultry farm business is the average number of layers per farm. The average number of layers per farm was 1192 (table 4).

Of the total number of farms included in the survey, 43 per cent had between 500 and 999 layers. Thirteen per cent had less than 500 layers as an average for the year, while 15 per cent had more than 2000.

TABLE 4. NUMBER OF LAYERS - 120 poultry farms, New York, 1940-41

Layers		Farms	Proportion of total farms
Range	Average		
Number	Number	Number	Per cent
Less than 500	402	16	13
500-999	729	51	43
1,000-1,499	1,229	19	16
1,500-1,999	1,697	16	13
More than 1,999	2,717	18	15
Total or average	1,192	120	100

        The farms having a large number of layers were primarily
those which specialized in poultry. The smaller flocks were found
on farms having other important farm enterprises, or the operator
was employed in some other type of work.

Capital invested

        The average capital invested per farm amounted to $17,178.
The average value of dwelling houses per farm amounted to about
$3600, and represented about one-fifth of the total investment.
Total real estate amounted to about $11,000 or 66 per cent of the
capital invested.

TABLE 5. AVERAGE CAPITAL PER FARM - 120 poultry farms, New York,
                        1940-41

Item	Average capital per farm	Proportion of total
	Dollars	Per cent
Dwellings	3,598	21
Poultry buildings	2,858	17
Other buildings	1,812	10
Land	3,032	18
Total real estate	11,300	66
Poultry equipment	624	4
Other equipment	1,359	8
Poultry	2,059	12
Other livestock	1,126	6
Feed and supplies	710	4
Total capital	17,178	100

        Poultry buildings were valued at $2858. The total invest-
ment in poultry buildings, poultry equipment, and poultry amounted
to about $5500, and represented about one-third of the total farm
investment.

Work units

The best single measure of the size of a farm business is total work units. A work unit represents the average amount of productive work accomplished by a man in one day. It takes, on the average, one day to grow and harvest an acre of hay, and about 20 days a year to care for 100 hens. Thus, an acre of hay is considered to be one work unit, and 100 hens   20 work units. The total work units for a farm are found by adding together all the work units of the different enterprises which make up the farm business.

TABLE 6. WORK UNITS - 120 poultry farms, New York, 1940-41
==

Work units		Farms	Proportion of all farms
Range	Average		
Number	Number	Number	Per cent
Less than 250	174	17	14
250-499	385	45	37
500-749	619	26	22
750-999	883	20	17
More than 999	1,438	12	10
Total or average	594	120	100

==

On an average, the number of work units per farm amounted to 594 (table 6). There were a few small farms and a few very large ones. However, most of the farms were of medium size, that is, they had between 250 and 749 work units.

FARM INCOMES

Farm   receipts

Farm receipts averaged $8993 per farm (table 7). Average egg sales of $4596 per farm made up slightly over half of the total receipts. Poultry sales accounted for $972 or 11 per cent of the total sales. The receipts from eggs sold, baby chicks sold, and poultry sold made up about two-thirds of the total income for the year.

TABLE 7. AVERAGE RECEIPTS PER FARM - 120 poultry farms, New York,
                                1940-41

==

Item	Average receipts per farm	Proportion of total
	Dollars	Per cent
Eggs sold	4,596	51
Baby chicks sold	378	4
Poultry sold	972	11
Crops sold	793	9
Other livestock sold	208	2
Other livestock products sold	975	11
Work off farm	214	2
Agricultural Conservation payment	28	*
Net increase in inventory	768	9
Other receipts	61	1
Total	8,993	100

==

*Less than one-half of one per cent

        Other livestock products, consisting primarily of milk and
milk products, averaged $975 per farm. Income from work off the farm
averaged $214 per farm and the Agricultural Conservation payments $28.

        The net increase in inventory amounted to $768 per farm,
or 9 per cent of the total farm receipts. This item reflects the
higher costs of raising pullets in 1941 as compared with 1940. Since
it cost more to raise pullets in 1941, most of the farmers valued
their pullets higher than in 1940, thus giving a fairly large in-
crease in inventory.

                            Farm expenses

        Farm expenses averaged $6533 dollars per farm, excluding the
value of the operator's time and interest on the money invested in the
farm (table 8).

        Poultry feed was the largest single item of expenditure on the
farms surveyed. It amounted to $3092 per farm or 47 per cent of the
total farm expenses. Other livestock feed purchased amounted to $348
per farm. The cost of hired labor was about four times greater than
the value of unpaid family labor. Hired labor cost $785 per farm while
unpaid family labor amounted to only $203. The cost of all feed and
all labor accounts for about two-thirds of the total farm expenses.

        Poultry purchased, which includes baby chicks, started pullets,
layers, and males purchased, amounted to $214 per farm. New buildings
and building repairs amounted to $334 per farm and new equipment and
equipment repairs were $261.

TABLE 7. AVERAGE RECEIPTS PER FARM - 120 poultry farms, New York,

TABLE 8. AVERAGE EXPENSES PER FARM - 120 poultry farms, New York,1940-41
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Item	Average expenses per farm	Proportion of total
	Dollars	Per cent
Poultry feed	3,092	47
Other livestock feed and hay	348	5
Hired labor and board	785	12
Unpaid family labor	203	3
Poultry purchased	214	3
Other livestock purchased	85	1
New buildings and building repairs	334	5
New equipment and equipment repairs	261	4
Auto, truck, and tractor cost	364	6
Taxes	143	2
Farm insurance	42	1
Lime and fertilizer	101	2
Seeds	47	1
Other farm expenses	514	8
Total	6,533	100

==

Auto (farm share only), truck, and tractor expenses were
$364 per farm. Taxes were $143 per farm, or 2 per cent of the total
expenses. Farm insurance amounted to $42 per farm, and lime and
fertilizer expenses amounted to $101.

Labor income

Farm receipts less the farm expenses equals the farm income,
which is the amount of money left to pay the farmer for his labor and
management, and for the use of the capital invested in the farm business.
Since some farmers have much more capital invested than do others, this
measure of profit gives an advantage to those with a large capital in-
vestment. To adjust for these variations and place the returns from the
different farm businesses on a comparable basis, an interest charge at
the rate of 5 per cent on the total average capital was deducted from
the farm income. The remainder is the return to the operator for his
labor and management for the year. This is called Labor Income, and it
was used as a measure of financial success in this survey.

The farm income was $2460 per farm (table 9). The interest
on the average capital of $17,178 amounted to $859, leaving the aver-
age return to the operator for his labor and management, or labor income,
of $1601.

TABLE 9. AVERAGE LABOR INCOME - 120 poultry farms, New York, 1940-41
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Item	Average per farm
	Dollars
Total capital	17,178
Total farm receipts	8,993
Total farm expenses	6,533
Farm income	2,460
Interest on average capital at 5 per cent	859
Labor income	1,601
Farm privileges	429
Operator's labor earnings	2,030

==

        In addition to the labor income, a farm provides the opera-
tor with a house in which to live, and eggs, milk, vegetables and
other products for the family living. These privileges are not con-
sidered in labor income, hence, they are added to the labor income
to get what the farm returned to the operator, both in money and
privileges, or Operator's Labor Earnings.

        The average estimated value of the privileges per farm was
$429. This $429 when added to the labor income of $1601 gives an
operator's labor earnings of $2030.

                        Variations in labor income

        The average labor income was $1601. As between individual
farms, however, the labor income varied considerably; some made more,
some made less (figure 3). Each of the vertical lines in the graph
represents one farm, and the length of the line above or below the
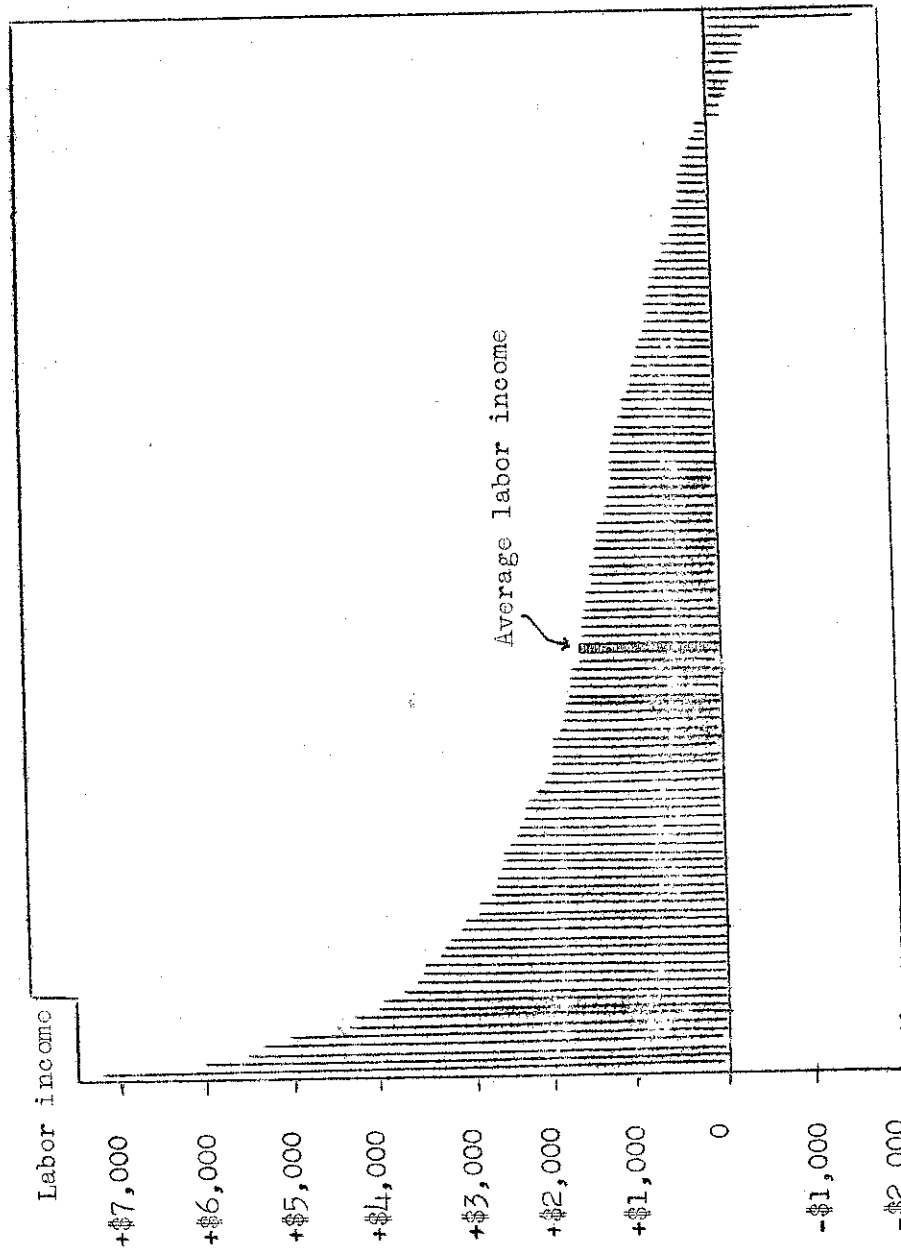"zero" line indicates the labor income of that farm.

FIGURE 3. VARIATION IN LABOR INCOME, 120 poultry farms, New York, 1940-41

REASONS FOR VARIATION IN LABOR INCOMES

Size of business

Number of layers

The average number of layers was used as one measure of the size of the farm business because poultry was the major source of income on the 120 farms studied.

The number of layers was related to the labor income for the three groups of farms (table 10).

TABLE 10.   NUMBER OF LAYERS AND LABOR INCOME - 120 poultry farms,
                New York, 1940-41

Layers	Farms	Average layers	Average labor income
Number	Number	Number	Dollars
Less than 700	40	530	798
700-1,299	40	931	1,531
More than 1,299	40	2,114	2,475
Total or average	120	1,192	1,601

For farms with less than 700 layers, the average labor income was $798, while for those having more than 1299, the average was $2475.

Frequently poultry farmers increase the size of their farm business by engaging in the incubation enterprise and selling baby chicks. The effect of this additional enterprise, in addition to number of layers, is shown in table 11.

TABLE 11. NUMBER OF LAYERS, CHICK SALES, AND LABOR INCOME -
              120 poultry farms, New York, 1940-41

Layers	Farms not selling chicks		Farms selling chicks	
	Farms	Labor income	Farms	Labor income
Number	Number	Dollars	Number	Dollars
Less than 700	36	843	4	388
700-1,299	29	1,538	11	1,514
More than 1,299	22	2,264	18	2,734

The incubation enterprise appears to be profitable only on the larger farms where a greater volume of business can be supported. Only a few of the small farms were selling chicks and they made a lower labor income than did those not selling chicks. With the large farms, those selling chicks had the largest labor incomes.

Work units

Since many of the poultry farms had other important enter-
prises, none of which are taken into consideration in the factor
"number of layers", another measure of size was used to study the re-
lation of size of business to the returns from farming.

The total number of work units per farm was used as a more
complete measure of size of business. The farms were divided into
three groups according to the number of work units per farm.

The farms having less than 400 work units had an average
labor income of $659 (table 12). As the number of work units in-
creased, the labor income increased rapidly, so that the farms with
more than 650 work units made an average labor income of $2587.

TABLE 12. WORK UNITS AND LABOR INCOME - 120 poultry farms, New York,
1940-41

Work units	Farms	Average work units	Average labor income
Number	Number	Number	Dollars
Less than 400	38	254	659
400-650	42	507	1,515
More than 650	40	1,009	2,587

Rates of production

Eggs per hen

The number of eggs produced per hen was a very important
factor affecting the labor income. The 44 farms producing less than
160 eggs per hen had an average labor income of $1289 (table 13).
As the rate of production increased the labor income increased. Thus,
for the farms producing more than 179 eggs per hen, the labor income
was $1905. The higher cost of producing more eggs was more than off-
set by the increased returns.

TABLE 13. EGGS PER HEN AND LABOR INCOME - 120 poultry farms, New York,
1940-41

Eggs per hen		Farms	Average labor income
Range	Average		
Number	Number	Number	Dollars
Less than 160	143	44	1,289
160-179	171	39	1,665
More than 179	195	37	1,905

Per cent lay, Oct.-Dec.

        In general, the farms having more than a 40 per cent lay in
the high-egg-price period of Oct.-Dec. made a larger labor income than
those with less than a 40 per cent lay in the same period (table 14).

TABLE 14. NUMBER OF LAYERS, PER CENT LAY OCT.-DEC., AND LABOR INCOME -
              120 poultry farms, New York, 1940-41

Layers	Less than 40 per cent lay Oct.-Dec.		More than 40 per cent lay Oct.-Dec.	
	Farms	Labor income	Farms	Labor income
Number	Number	Dollars	Number	Dollars
Less than 700	24	663	16	999
700-1299	21	1,431	19	1,642
More than 1,299	24	2,511	16	2,421

        The relationship is obscured in the flocks with more than
1299 layers because a large proportion of those farms are engaged in
the incubation enterprise and purposely give their breeders about a
two-month rest period in the fall. Hence, the added income from in-
cubation more than offsets the lower fall egg production.

                          Labor efficiency

Work units per man

        Since total work units is a good measure of the size of a farm
business, work-units-per-man is a good measure of efficiency. It is
determined by dividing the average number of men employed on the farm
into the total work units.

        The less efficient farms, that is, those with less than 200
work units per man, made an average labor income of $759 (table 15).
On the other hand, the farms with the best labor efficiency made an
average labor income of $2082.

TABLE 15. WORK UNITS PER MAN AND LABOR INCOME - 120 poultry farms,
                        New York, 1940-41

Work units per man	Farms	Average labor income
Number	Number	Dollars
Less than 200	32	759
200-275	45	1,741
More than 275	43	2,082

Combination of
factors

Work units and eggs per hen

The combined effect of two important factors on labor income
is shown in table 16.

TABLE 16. WORK UNITS, EGGS PER HEN, AND LABOR INCOME. 120 poultry farms,
New York, 1940-41

	Number of farms	Average number of work units	Average number of eggs per hen	Average labor income
	Number	Number	Number	Dollars
Less than 400 work units and less than 160 eggs per hen	10	245	142	284
Average of all farms	120	594	168	1,601
More than 650 work units and more than 179 eggs per hen	13	1,060	193	2,681

The average labor income of the farms which were smallest in
size and lowest in the number of eggs per hen amounted to $284. Com-
pared with the average of all farms, they had less than half as many
work units, 2 dozen less eggs per hen and a labor income $1317 below the
average.

On the other hand, the farms having the largest size of business
and highest number of eggs per hen made an average labor income of $2681.
They were considerably above average in work units, and eggs per hen.
The labor income was about $1100 greater than the average of all farms.

COSTS AND RETURNS

Costs and returns per bird

The total cost of keeping one bird for the year of this survey was $3.93 (table 17). When the values of manure produced and miscellaneous receipts are deducted from the total cost, the net cost of producing eggs per bird was $3.85.

TABLE 17. COSTS AND RETURNS PER BIRD - 145,773 birds on 120 poultry farms, New York, 1940-41

Number of birds per farm — 1215

Item	Amount per bird	Value per bird	Proportion of total
		Dollars	Per cent
Costs:			
Feed	98 lbs.	1.99	50.6
Litter		0.04	1.0
Human labor	2.3 hrs.	0.87	22.1
Horse labor		0.01	0.2
Use of auto, truck and tractor		0.07	1.7
Use of buildings		0.21	5.5
Use of equipment		0.02	0.5
Depreciation on stock		0.53	13.6
Interest on stock		0.07	1.8
Miscellaneous		0.12	3.0
Total		3.93	100.0
Returns:			
Manure		0.08	2.0
Eggs sold - market		3.56	87.2
Eggs sold - hatching		0.22	5.3
Eggs incubated		0.19	4.7
Eggs eaten		0.04	0.8
Miscellaneous		0.00	*
Total		4.09	100.0
Gain per bird		0.16	

*Less than 0.05 per cent

The cost of 98 pounds of feed, which was consumed per bird, amounted to $1.99, or about 51 per cent of the total costs. Human labor amounting to 2.3 hours per bird was the second largest item of cost. The cost of this labor was 87 cents and represented about 22 per cent of the total costs.

Depreciation on stock amounted to 53 cents per bird. The use of buildings amounted to 21 cents per bird, or about 6 per cent of the total costs.

On an average, the value of all eggs produced per hen was
$4.01. This includes $3.56 for market eggs sold, 22 cents for hatch-
ing eggs sold, 19 cents for eggs incubated and 4 cents for eggs used
in the home. Since the net cost of keeping a bird was $3.85, and the
return for eggs $4.01, the gain per bird was 16 cents.

The cost of labor of 87 cents per bird plus 16 cents gain gives
a return for 2.3 hours of labor of $1.03, or 45 cents per hour.

Costs and returns per dozen eggs

The average net cost of producing one dozen of eggs for the
year was 28 cents after a credit of 1 cent for manure had been removed
(table 18).

Feed cost amounted to 14 cents per dozen or about 51 per cent
of the total cost. Labor cost amounted to 6 cents per dozen and depre-
ciation 4 cents. Feed, labor, and depreciation on the stock account for
86 per cent of the total cost of producing eggs.

TABLE 18. COSTS AND RETURNS PER DOZEN EGGS PRODUCED - 120 poultry farms,
New York, 1940-41

Dozens of eggs per farm		16,695	
Item	Amount per dozen	Value per dozen	Proportion of total
		Cents	Per cent
Costs:			
Feed	7.1 lbs.	14	50.6
Litter		*	1.0
Human labor	10 minutes	6	22.1
Horse labor		*	0.2
Use of auto, truck, and tractor		1	1.7
Use of buildings		2	5.5
Use of equipment		*	0.5
Depreciation on stock		4	13.6
Interest on stock		1	1.8
Miscellaneous		1	3.0
Total		29	100.0
Returns:			
Manure		1	2.0
Eggs sold - market		26	87.2
Eggs sold - hatching		2	5.3
Eggs incubated		1	4.7
Eggs eaten		*	0.8
Miscellaneous		*	+
Total		30	100.0
Net cost of eggs per dozen #		28	

* Less than one-half of one cent
+ Less than 0.05 per cent
# Net cost of eggs per dozen = total costs minus returns for manure
and miscellaneous.

Use of buildings amounted to 2 cents per dozen or about 6 per cent of the cost of producing eggs. Other costs, including litter, horse labor, use of auto, truck, and tractor, use of equipment, interest on stock, and miscellaneous items amounted to about 3 cents per dozen.

The value per dozen eggs produced amounted to 29 cents. Since the net cost of producing a dozen eggs was 28 cents, a gain of 1 cent per dozen was made on the eggs.

Cost of raising pullets

The total cost of raising a pullet amounted, on the average, to $1.47 (table 19). The returns other than pullets raised, which consisted primarily of cockerels sold, eaten, transferred and inventoried, amounted to 37 cents per pullet. If these returns are subtracted from the total costs, the net cost of raising a pullet to maturity amounts to $1.10.

TABLE 19. COST OF RAISING PULLETS - 115 poultry farms, New York,1940-41*

Item	Cost per pullet	Proportion of total
	Dollars	Per cent
Costs:		
Feed	0.681	46.2
Litter	0.012	0.8
Man labor	0.256	17.4
Horse labor	0.002	0.1
Use of auto,truck, and tractor	0.029	2.0
Use of land	0.017	1.1
Use of buildings	0.057	3.8
Use of equipment	0.034	2.3
Interest	0.018	1.2
Chicks	0.319	21.7
Miscellaneous	0.049	3.4
Total	1.474	100.0
Returns, other than pullets raised:		
Cockerels sold and eaten	0.262	70.2
Cockerels added to laying flock or inventoried	0.093	25.0
Manure	0.014	3.7
Eggs produced	0.004	0.9
Miscellaneous	0.001	0.2
Total	0.374	100.0
Net cost per pullet raised	1.100	

* Five farms did not raise pullets in 1941.

The cost of feed per pullet raised was the largest single item of expense. It amounted to 68 cents per pullet or 46 per cent of the total cost. The cost of chicks per pullet raised amounted to 32 cents and man labor about 26 cents. Three items, feed, chicks, and labor, account for about 85 per cent of the total cost of raising a pullet.

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BREED COMPARISON

In the following analysis, the breeds have been divided into two groups, (1) the light breeds, which include only the white and buff leghorns, and (2) the heavy breeds, which include the Rhode Island Reds, New Hampshire Reds, Barred Plymouth Rocks, White Rocks, and the Rock-red and Red-rock crosses.

Rates of production

There is no significant difference between the light breeds and the heavy breeds insofar as the average number of eggs produced per layer is concerned. The average rate of lay for 109,520 light breed layers was 168 eggs per hen, and for the 33,518 heavy breed layers, 167 eggs (table 20). The average rate of lay for all layers in all breeds was 168 eggs per hen. Although there was no variation in egg production between the light and heavy breeds, there was considerable variation within the individual breed.

TABLE 20. EGG PRODUCTION PER LAYER AND PER FARM -120 poultry farms, New York, 1940-41

Breed	Layers	Eggs produced per layer	
		Average	Range
	Number	Number	Number
Light breeds	109,520	168	123 - 238
Heavy breeds	33,518	167	130 - 220
All breeds	143,038	168	123 - 238

Size of eggs produced

There is no significant difference in egg size between the light and heavy breeds. The size of egg produced is determined more by breeding than by the breed of chickens.

The percentage distribution of the eggs by size is practically the same for both the light and heavy breeds (table 21). About 62 per cent of all eggs was graded as large or jumbo. Medium eggs made up about 27 per cent of the eggs produced and pullet or small eggs about 7 per cent. Ungraded eggs were primarily the cracked eggs sold and eggs eaten.

TABLE 21. SIZE OF EGGS PRODUCED - 120 poultry farms, New York, 1940-41.

Grade	80 Light breed farms Per cent of total	40 Heavy breed farms Per cent of total
Large and jumbo	61.4	62.0
Medium	27.1	26.4
Pullet	6.6	7.1
Pewee	1.4	1.0
Ungraded	3.5	3.5
Total	100.0	100.0

Prices received for layers sold

The heavy breeds have a distinct advantage over the light breeds in regard to the disposal value of the layers.

When sold, the average heavy/layer (breed) weighed 5.8 pounds and brought 18.6 cents per pound, or $1.08 (table 22). Light breeds, on the other hand, weighed 4.2 pounds and brought 15.2 cents per pound, or $0.63 in total. The heavy breeds averaged 1.6 pounds more per layer, and brought 3.4 cents more per pound, or $0.45 more per layer sold.

TABLE 22. AVERAGE PRICE RECEIVED PER LAYER SOLD - 120 poultry farms,
New York, 1940-41

Breed	Weight per bird Pounds	Price per pound Cents	Price per layer Dollars
Light breeds	4.2	15.2	0.63
Heavy breeds	5.8	18.6	1.08

Prices received for eggs sold

The average price for all white market eggs sold was 28.8 cents per dozen. This was 1.2 cents higher than the average price of 27.6 cents received for all brown eggs.

Large white eggs sold for 1.6 cents more per dozen than the large brown eggs. The differences in prices received for jumbo and medium grades, although small, favored the white eggs. White pullet eggs sold for about a cent higher than the brown pullet eggs.

10:28   -20-

TABLE 23. AVERAGE FARM PRICE RECEIVED FOR MARKET EGGS SOLD*-
          120 poultry farms, New York, 1940-41

===

Grade	80 Light breed farms	40 Heavy breed farms
	Cents per dozen	Cents per dozen
Jumbo	33.1	33.0
Large	30.9	29.3
Medium	26.8	26.5
Pullet	23.3	22.5
Pewee	20.1	18.5
All market eggs	28.8	27.6

===

* Average farm price is after transportation charges to market have
been removed.

         This comparison is influenced by the fact that the brown
eggs were not sold in the same proportions as the white eggs were to
the different buyers (table 24). The higher proportion of brown eggs
sold at retail delivered, which returns a higher price per dozen,
tends to narrow the actual margin that exists between white and brown
eggs.

TABLE 24. DISPOSAL OF EGGS PRODUCED - 120 poultry farms, New York,
                    1940-41

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	80 Light breed farms	40 Heavy breed farms
	Per cent of total produced	Per cent of total produced
Sold to:		
City jobber or receiver	33	18
Commission receiver	6	1
Producers' cooperative	22	12
Auction	2	2
Retail delivered	14	33
House door	16	16
Miscellaneous	0	-
Incubated	3	4
Hatching eggs sold	2	11
Eaten	1	2
Unaccounted for	1	1
Total	100	100

===

         In table 25, the average prices received for white and brown
eggs from different buyers are shown. White eggs average about 2
cents higher per dozen than brown eggs for each of the different types
of buyer outlets.

TABLE 25. EGG PRICES RECEIVED FROM DIFFERENT BUYERS - 120 poultry farms,
New York, 1940-41

Grade	City jobbers and whole-salers		Sold through cooperatives		Retail de-livered		House door	
	White	Brown	White	Brown	White	Brown	White	Brown
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Large	30	28	30	27	35	32	31	29
Medium	26	25	26	24	30	29	28	26
Pullet	22	22	23	20	27	23	25	23
Pewee	20	17	20	16	21	19	19	19
All market eggs	28	26	28	26	33	30	29	27

Mortality

The average mortality for all breeds was 25 per cent of the average number of layers (table 26). The mortality of the light breeds was 26 per cent of the average number of layers while the heavy breeds averaged 21 per cent. Light breeds had a 5 per cent greater mortality than the heavy breeds.

TABLE 26. PER CENT MORTALITY OF AVERAGE NUMBER - 120 poultry farms,
New York, 1940-41

Breed	Mortality, proportion of average number
	Per cent
Light breeds	26
Heavy breeds	21
All breeds	25

Labor requirements

The labor requirements of the two classes of breeds are shown according to type of work in table 27. Heavy breeds required 2.6 hours of labor per layer while light breeds required 2.2 hours. The difference of 0.4 hour per layer is due (1) to the time required in delivering eggs and in dressing and delivering heavy birds, (2) to differences in the average number of layers per farm, since the light breed flocks were larger, and (3) to the fact that more light breed layers can be kept in a given amount of space than can heavy breed layers.

TABLE 27. LABOR REQUIREMENTS - 120 poultry farms, New York, 1940-41

Item	80 Light breed farms Hours per layer	40 Heavy breed farms Hours per layer
Chores	1.3	1.4
Cleaning	0.2	0.3
Handling eggs	0.6	0.6
Dressing and delivering	0.0	0.2
Other	0.1	0.1
Total	2.2	2.6

Feed consumption

Light breeds consumed 95.0 pounds of feed per layer and heavy breeds 107.8 pounds (table 28). Based on these averages, the heavy breeds consumed about 13 pounds more feed per layer than did the light breeds.

TABLE 28. FEED CONSUMPTION - 120 poultry farms, New York, 1940-41

Item	80 Light breed farms Quantity per layer	Quantity per dozen eggs produced	40 Heavy breed farms Quantity per layer	Quantity per dozen eggs produced
	Pounds	Pounds	Pounds	Pounds
Grain	46.0	3.3	49.9	3.7
Mash	44.7	3.3	54.6	4.0
Other feeds	4.3	0.3	3.3	0.2
Total	95.0	6.9	107.8	7.9

If feed consumption is compared on the basis of pounds of feed required to produce a dozen eggs, the light breeds require 1 pound less feed per dozen eggs produced than the heavy breeds. Light breeds required 6.9 pounds of feed per dozen eggs, and the heavy breeds 7.9 pounds.

Cost of raising pullets

The total cost of raising a light breed pullet to maturity amounted to $1.36 (table 29). If the returns which were received from sources other than pullets raised are deducted from this total cost, there remains a net cost per pullet raised to maturity of $1.06.

TABLE 29. COST OF RAISING PULLETS - 111 poultry farms, New York, 1940-41

Item	71 Light breed farms*		40 Heavy breed farms	
	Cost per pullet	Proportion of total	Cost per pullet	Proportion of total
Average number of pullets per farm	1,249		1,044	
	Dollars	Per cent	Dollars	Per cent
Costs:				
Feed	0.60	45	0.85	49
Litter	0.01	1	0.01	1
Man labor	0.24	18	0.28	16
Horse labor	0.00	0	0.00	0
Use of auto, truck, and tractor	0.03	2	0.03	2
Use of land	0.02	1	0.01	1
Use of buildings	0.05	4	0.07	4
Use of equipment	0.03	2	0.05	3
Interest	0.02	1	0.02	1
Chicks	0.32	23	0.34	20
Miscellaneous	0.04	3	0.06	3
Total	1.36	100	1.72	100
Returns other than pullets raised:				
Cockerels sold and eaten	0.20	67	0.40	74
Cockerels added to laying flock or inventoried	0.09	28	0.12	21
Manure	0.01	4	0.02	4
Eggs produced	0.00	1	0.00	1
Miscellaneous	0.00	0	0.00	0
Total	0.30	100	0.54	100
Net cost of raising one pullet	1.06	-	1.18	-

* Nine of the light breed farms were not used in this analysis because 5 raised no pullets and 4 had mixed rearing flocks.

      The total cost of raising a heavy breed pullet to maturity amounted to $1.72. Deducting the returns which were received from sources other than pullets raised, leaves a net cost of raising one heavy breed pullet to maturity of $1.18.

      The net cost of raising a light breed pullet to maturity was 12 cents less per pullet than for the heavy breed pullets.[1]

1/ Maturity, as used in this study, means the following: for light
  breeds 20 weeks of age, for heavy breeds 24 weeks of age.

The value of cockerels sold per pullet raised for the heavy breeds was twice as large as that for the light breeds. This is explained primarily by the fact that heavy breed farms kept more cockerels longer.

Costs and returns per dozen eggs

The net effect of all the foregoing breed comparisons is best shown in the following table of costs and returns per dozen eggs produced (table 30).

In this table, in order to remove the effect of size of flock on the costs, only the farms having flocks of between 500 and 2400 birds were used. The average number of birds per light breed farm was 1118, while on the heavy breed farms the average number was 1083 birds.

The total cost of producing a dozen eggs on light breed farms amounted to 26.8 cents. When the credit for manure produced is deducted, the net cost of producing a dozen eggs was 26.3 cents. For the heavy breed farms the total cost was 31.4 cents, and the net cost 30.5 cents. Accordingly, it costs about 4 cents more to produce a dozen brown eggs than a dozen white eggs. Practically all the increased costs of producing brown eggs is due to more feed and labor per dozen eggs, and fewer birds per unit of floor space area.

The return per dozen white eggs produced was 28.8 cents, and for brown eggs, it was 29.9 cents. This return considers all eggs sold (not market eggs alone as in table 23). The brown eggs are higher than the white eggs because a greater proportion of all the eggs were sold at retail delivered and for hatching purposes. Eggs sold in this manner return a considerably higher price than ordinary market eggs. However, the extra work involved in such sales is reflected in the labor cost.

The gain per dozen white eggs produced amounted to 2.5 cents per dozen. Producers of brown eggs lost 0.6 cents per dozen of eggs produced.

Some of the farmers now keeping heavy breeds formerly kept light breeds, but when their mortality became excessive, they shifted to the heavy breeds. Although, on the average, brown eggs are produced at a slight loss per dozen, these farmers are better off than they were with high mortality on the light breeds.

TABLE 30. COSTS AND RETURNS PER DOZEN EGGS - 91 poultry farms with
flocks 500-2400 birds, New York, 1940-41

Item	64 Light breed farms	27 Heavy breed farms
Average number of birds (layers and males)	1,118	1,083
Average number of layers	1,104	1,051
Eggs produced per layer	171	168
	Cents	Cents
Costs:		
Feed	13.5	16.7
Litter	0.3	0.3
Human labor	6.1	7.0
Horse labor	0.1	0.1
Use of auto and truck	0.4	0.7
Use of tractor	0.0	0.1
Buildings	1.4	1.8
Equipment	0.1	0.2
Depreciation	3.6	3.0
Interest	0.5	0.6
Miscellaneous	0.8	0.9
Total	26.8	31.4
Returns:		
Manure	0.5	0.9
Eggs sold and eaten	28.8	29.9
Miscellaneous	0.0	-
Total	29.3	30.8
Net cost of eggs	26.3	30.5
Gain	2.5	-
Loss	-	0.6

HOW DO YOU COMPARE
WITH THE AVERAGE

The tables which follow will enable each farmer who gave a record in this survey to study his farm business in relation to the average of all the farms included and to locate the strong and weak points of his business. Any other farmer may supply his own figures and make the same kind of analysis of his business.

TABLE 31. IMPORTANT ITEMS OF RECEIPTS AND EXPENSES - 120 poultry farms, New York, 1940-41

Items	Your farm	Average per farm
Receipts:		
Eggs sold		$4,596
Baby chicks sold		378
Poultry sold		972
Crops sold		793
Other livestock sold		208
Other livestock products sold		975
Expenses:		
Poultry feed		$3,092
Other livestock feed and hay		348
Hired labor and board		785
Unpaid family labor		203
Poultry purchased		214
Other livestock purchased		85
Taxes		143
Farm insurance		42
New buildings and building repairs		334
New equipment and equipment repairs		261

The income or the financial results of the farm business was measured in terms of labor income and operator's labor earnings.

Labor Income is what a farmer receives for his year' work and management after all expenses have been paid and an interest charge on the farm capital has been deducted.

In addition to labor income, the farm provides the operator with a house in which to live, and eggs, milk, meat, vegetables and other farm products for the family living. When the value of these privileges is added to the labor income, the resulting figure is what the farmer received both in money and privileges for his labor and management. This is called Operator's Labor Earnings. How do you compare with the average?

TABLE 32. INCOME SUMMARY - 120 poultry farms, New York, 1940-41

Item	Your farm	Average per farm
Total capital	_____	$17,178
Total farm receipts	_____	$8,993
Total farm expenses	_____	6,533
Farm income	_____	$2,460
Interest on average capital at 5%	_____	859
LABOR INCOME	_____	$1,601
Farm privileges	_____	429
OPERATOR'S LABOR EARNINGS	_____	$2,030

TABLE 33. IMPORTANT FARM BUSINESS FACTORS - 120 poultry farms, New York, 1940-41

Item	Your farm	Average per farm
Size of business:		
Total man work units		594
Number of layers		1,192
Total capital		$17,178
Man equivalent		2.3
Acres of crops		39
Number of pullets raised to maturity		1,160
Number of baby chicks sold		3,196
Use of labor:		
Layers per man		515
Dozens of eggs per man		7,214
Work units per man		257
Rates of production:		
Eggs produced per hen		168
Chicks hatched per 100 eggs incubated		66
Per cent mortality of layers (Ave.no.)		25.0
Per cent mortality of chicks		15.6
Costs and returns:		
Cost of producing a dozen eggs		$0.28
Cost of raising one pullet to maturity		$1.10
Returns per hour of labor on all poultry		$0.59
Other factors:		
Pounds of feed per dozen eggs produced		7.1
Pounds of feed per bird		98.0
Per cent lay Oct., Nov., and Dec.		38.3
Hours of labor per layer		2.3
Average price received per dozen eggs produced		$0.29

Table 34 shows variations in farm business factors for commercial poultry farms in New York State. They represent the range in the actual experience of farmers.

For each factor the farms were arranged in order. They were then divided into ten equal groups and a median average taken for each group. The figures between the parallel lines across the center of the table are the median averages for all farms. The columns are independent of each other.

The red lines show how your farm compared with the other farms included in the survey.

Based on averages? *Beginning?*

TABLE 34. VARIATION IN IMPORTANT FARM BUSINESS FACTORS - 120 poultry farms, New York, 1940-41

Size of business				Use of labor		Rates of production				Labor income
Layers	Work units	Total capital	Man equiva-lent	Layers per man	Work units per man	Eggs per hen	Per cent lay, Oct.-Dec.	Per cent morta-lity of layers	Per cent morta-lity of chicks	Labor income
Number	Num-ber	Dol-lars	Num-ber	Num-ber	Num-ber	Num-ber	Per cent	Per cent	Per cent	Dol-lars
2,900	1,310	34,000	4.0	1,200	410	207	60	9	4	4,300
2,100	920	23,000	3.6	875	340	190	49	12	6	2,900
1,600	820	20,000	3.0	700	300	183	45	16	8	2,300
1,200	640	18,000	2.4	600	280	178	42	17	9	1,800
1,000	570	17,000	2.2	500	260	174	38	20	12	1,500
900	480	16,000	2.1	475	250	170	36	22	13	1,400
800	450	15,000	2.0	425	230	165	35	23	14	1,200
700	420	13,000	1.8	375	210	158	34	26	15	1,000
600	330	11,000	1.5	325	190	148	32	29	19	700
500	260	8,000	1.2	250	150	141	28	34	22	300
400	150	6,000	1.0	200	120	132	22	42	31	-300