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WHOLESALE MARKETING OF LIVE POULTRY IN NEW YORK CITY
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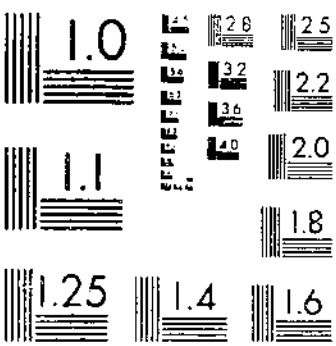

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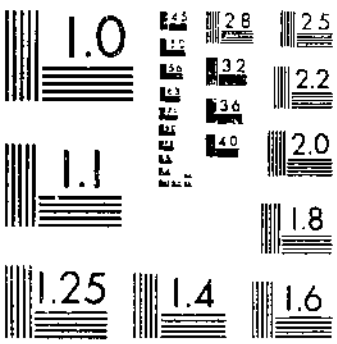

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TECHNICAL BULLETIN No. 107 MAY, 1929

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

WHOLESALE MARKETING OF LIVE POULTRY IN NEW YORK CITY

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CONTENTS

INTRODUCTION

The various factors in the live-poultry industry in New York City from time to time over a number of years have been subjected to severe criticism by both public and private agencies for alleged illegal and unethical practices in connection with the conduct of the industry. In some instances the criticism doubtless had a foundation of truth; in others it probably was influenced by motives not entirely commendable. The net result of the adverse criticism, whether true or false, has been such that the industry and those engaged in it have not enjoyed the respect and prestige which the importance of the industry to the public welfare deserves.

[1] Special acknowledgment is made to E. R. French, executive secretary of the New York Food Research Council, and to W. P. Hedden, chief analyst of the Port of New York Authority for valuable help received; and to S. L. Kedzierski, associate agricultural economist, for assistance in the quantitative analysis of prices. Credit is also due to Mrs. Beulah M. Cope and Miss Mabel Jordan, who assisted in the statistical work.

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To aid in the correction of this situation the Bureau of Agricultural Economics was requested by a joint representation of the New York Live Poultry Commission Merchants Association and the office of the attorney general of the State of New York to make a careful study of the economics of the entire industry. The bureau began the study in the fall of 1926. The most cordial cooperation was received from all agencies, both public and private, who were approached for information throughout the course of the study.

In November, 1926, the United States Department of Agriculture took charge of the work of inspecting live poultry for crop and health condition, and substantial progress toward a complete market news service for live poultry (inaugurated in February, 1927) has since been made. A statute was enacted March 30, 1927, in the State of New York authorizing the formation of a live-poultry exchange. Three committees of the trade began work in the spring of 1927: One to discover a suitable place for a union terminal, at which car-lot shipments of live poultry destined for the city would be concentrated preparatory to sale, and to enter into the necessary negotiations with the railroads; another to prepare suitable by-laws and rules and regulations for trading on the exchange; and the third to formulate a system of grades for live poultry. It is the consensus of opinion in the trade that these three angles of the problem must be worked out simultaneously if an exchange is to be effected and if the objectives of the industry are to be achieved.

Thus, although there are yet many problems to be solved, the industry now appears to be entering upon a new era which promises to be characterized by greater efficiency in marketing, improvement in the quality of product placed before the consumer, a consequent enlargement of the demand, and a resulting larger financial return to poultry growers.

SCOPE OF THE STUDY

This bulletin aims to present the economic situation of the live-poultry industry of New York City, including the sources of supply and of demand for this commodity, the growth and present size of the industry, and the different groups of people who are engaged in moving live poultry from the open country to the retail channels in New York City. Live poultry is a composite commodity made up of a number of different classes, each of which follows in a large measure an independent course with respect to movement to market and price. The receivers are shown to vary considerably in their business practices; some confine their activities mainly to express shipments, others to freight; some operate exclusively on a commission basis, whereas others may buy outright at the shipping point (either jointly with the shipper or independently) or at the terminal.

An analysis of the total costs per carload of marketing live poultry, by States, is included in this study as well as the costs per pound for each of the services rendered, together with net returns to shippers in the various States and from four cities which serve as reshipment points. The method of arriving at and quoting prices and the bearing the price quotation has upon the returns to shippers and the price paid by slaughterhouse men are considered. Attention is given to the determination of the factors which influence the prices of live poultry together with the measurement of these factors. The econo-

mies to be attained by a union terminal at which all live poultry might be concentrated preparatory to sale were studied in the course of this survey.

SOURCES OF DATA

The data upon which this bulletin is based were obtained chiefly from the books of live-poultry commission merchants of New York City. Daily records of the sales prices of each class of poultry, the volume, point of origin, and the marketing cost were obtained from the books of a number of these dealers. The sample chosen for this part of the investigation embraced about one-fourth of the total receipts of live poultry on the New York City market. The period covered by these daily records was the two years from November 1, 1923, to October 31, 1924, and from May 1, 1925, to April 30, 1926. The period intervening between the two years was omitted because it was the time of the invasion of the European fowl pest, during which time an embargo was placed upon live poultry from a large number of mid-Western States. Data taken during this period would not have been truly representative of normal conditions. To obtain more data on costs of marketing than those which could be abstracted from the books of the dealers, supplementary information was obtained by means of schedules mailed to shippers in all areas that contribute live poultry to the New York market. The information obtained from the shippers in all areas was complete for each car and covered nearly 800 cars.

In addition, the total daily volume of each class of poultry that entered this market during the two-year period was secured from the records of all the live-poultry receivers in the city.

The more general statistics used in the study were obtained from the files of the Urner-Barry Publishing Co. of New York, and those of the United States Department of Agriculture. These figures were used chiefly to show long-time trends in the industry. Prices of kosher beef, lamb, veal, and dressed poultry for the two-year period, used in the detailed quantitative price analysis, were also obtained from these sources. Since February, 1927, the daily receipts of live poultry at New York, by classes, have been reported by the market news service of the Bureau of Agricultural Economics.

SIZE AND GROWTH OF THE INDUSTRY

The live poultry shipped (by freight) into the New York metropolitan area represents an annual wholesale value of about $60,000,000 and a retail value estimated at about $100,000,000 on the basis of the prices which prevailed at the time of the study.

The freight shipments of live poultry to the New York market have increased from 2,200 cars in 1900 to 12,000 cars in 1927. (Fig. 1 and Table 14.) From 1900 to 1905 a slight downward trend occurred, but from the latter date the receipts assumed a strong upward trend which (if one brief interruption from 1907 to 1909 and another during the World War are excluded) characterized the movement up to 1923. During these 19 years, the freight shipments grew from 2,100 cars to 12,100 cars, and the average annual increase was about 9 per cent. The express shipments are at present equivalent to about 700 cars, or about 6 per cent of the total receipts.

During the two years after 1924 a slight decrease in the total receipts of live poultry on the New York market occurred. This may be accounted for, in part at least, by the embargo in the fall of 1924 and the winter of 1925, which discouraged many shippers from sending their poultry to the New York market, caused them to seek other markets for their product, and discouraged consumption by the New York consumer. There are indications, however, that the strong upward trend which prevailed from 1910 to 1924 is again being resumed, partially at least, and a substantial annual increase in the receipts of live poultry during the next 10 years may reasonably be expected.

These facts indicate that the live-poultry industry of New York is one of considerable magnitude, but the problems with which the industry has been confronted for a number of years and which have

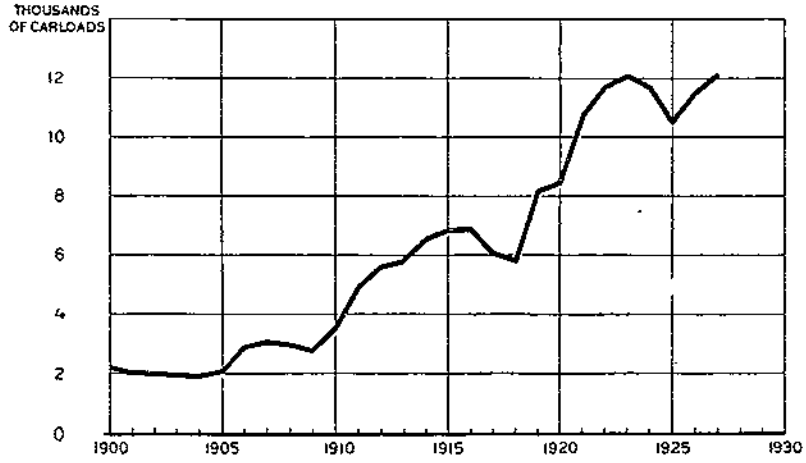

FIGURE 1.—FREIGHT RECEIPTS OF LIVE POULTRY AT NEW YORK CITY, 1900-1927

Freight shipments of live poultry to the New York market have increased from 2,000 cars in 1900 to 12,000 cars in 1927.

from time to time greatly agitated the trade, do not arise from its great size. The ills with which the trade has been afflicted in recent years have in a large measure arisen because the methods of carrying on the business of this industry have not kept pace with the rapid growth of the industry.

FACTORS IN THE TRADE

A large number of groups of individuals and of corporations participate in rendering the services that are involved in supplying New York City consumers with poultry: (1) The farmers distributed over about 30 States who furnish the product upon which the industry is based; (2) the shippers who serve as the connecting link between farmers in the country and the wholesale receivers in New York; (3) the transportation companies and related companies; (4) wholesale receivers; (5) buyers or slaughterhouse men; and (6) a number of other functionaries including a coop company and a cartage company. (Fig. 2.)

The transportation companies that own the principal live-poultry terminals (fig. 3) are the New York Central, the Erie, the Delaware, Lackawanna & Western, and the Pennsylvania. Associated with

FIGURE 2.—After the poultry is unloaded from the car it is placed in coops, weighed, and loaded on trucks for transportation to slaughterhouses

the transportation agencies are two car companies (the Live Poultry Transit Co. and the Palace Car Co.) which furnish steel cars built especially for hauling live poultry (fig. 4). These car companies

FIGURE 3.—The live-poultry terminals are widely scattered over the metropolitan area. Of the four principal terminals one is located in Manhattan and the other three are in New Jersey

have their own schedules of rates, independent of the railroad company which hauls the cars, based upon distance of haul and other factors. The interior of the car is composed of eight decks or layers, has a narrow central aisle running lengthwise of the car, and a space

between the doors in the center for the storage of feed and supplies and for the accommodation of the carman who accompanies the poultry and who feeds and cares for it while en route (sometimes several days) and at the terminal. The car is thus divided into four equal parts with 32 compartments in each part. A car may contain from 12,000 to 20,000 pounds net of poultry or from 4,000 to 8,000 birds, depending upon the class and weight of the poultry and the season of the year. About 94 per cent of the live poultry entering the metropolitan area by rail is shipped by freight. The remainder comes by express and truck.

The wholesale receivers are those to whom the shippers consign their poultry to be sold on commission or to whom they sell it outright at the shipping points, or with whom they join in the purchase of

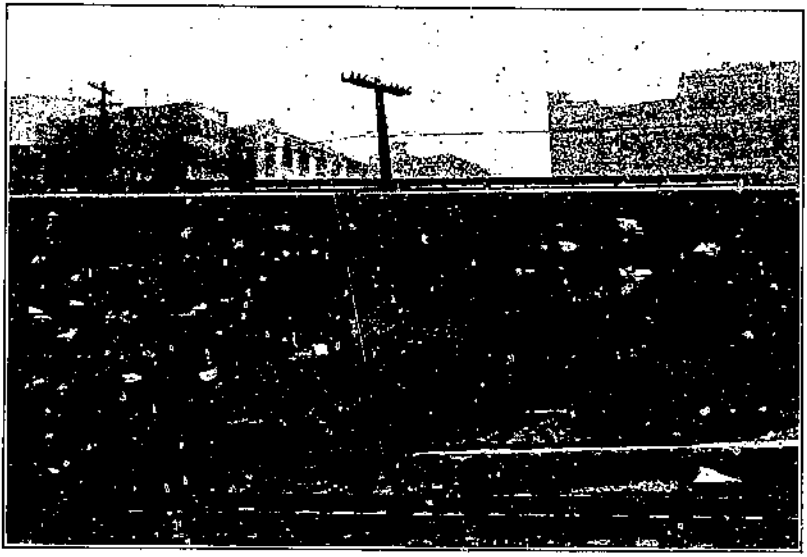

FIGURE 4.—The type of live-poultry car used for transporting poultry from producing sections to New York City

poultry in what is known as "joint account." The bulk of the freight shipments now come to about 23 receivers, most of whom are members of the New York Live Poultry Commission Merchants Association. These dealers receive most of their consignments by freight, but a few of them also receive express shipments, which come in small lots of 25 to 300 pounds each direct from farmers in the near-by States. In addition, a small number deal exclusively in express shipments. One firm receives about one-third of all the express shipments that come to New York.

The buyers (slaughterhouse men) purchase poultry from the receivers at the terminals or at West Washington Market. There are upward of 600 of these buyers whose establishments are distributed in groups in various parts of the metropolitan area for the slaughter of poultry preparatory to sale to retailers. (Fig. 5.) Those known as wholesale slaughterhouse men buy in relatively large quantities and slaughter the birds for sale to retail butchers and special chicken shops. Some of the wholesale slaughterhouse men also carry on a

limited retail business. Others, known as retail slaughterhouse men, both slaughter and retail their goods. A third type, of which there is at present but a single example, combines the services of receiving,

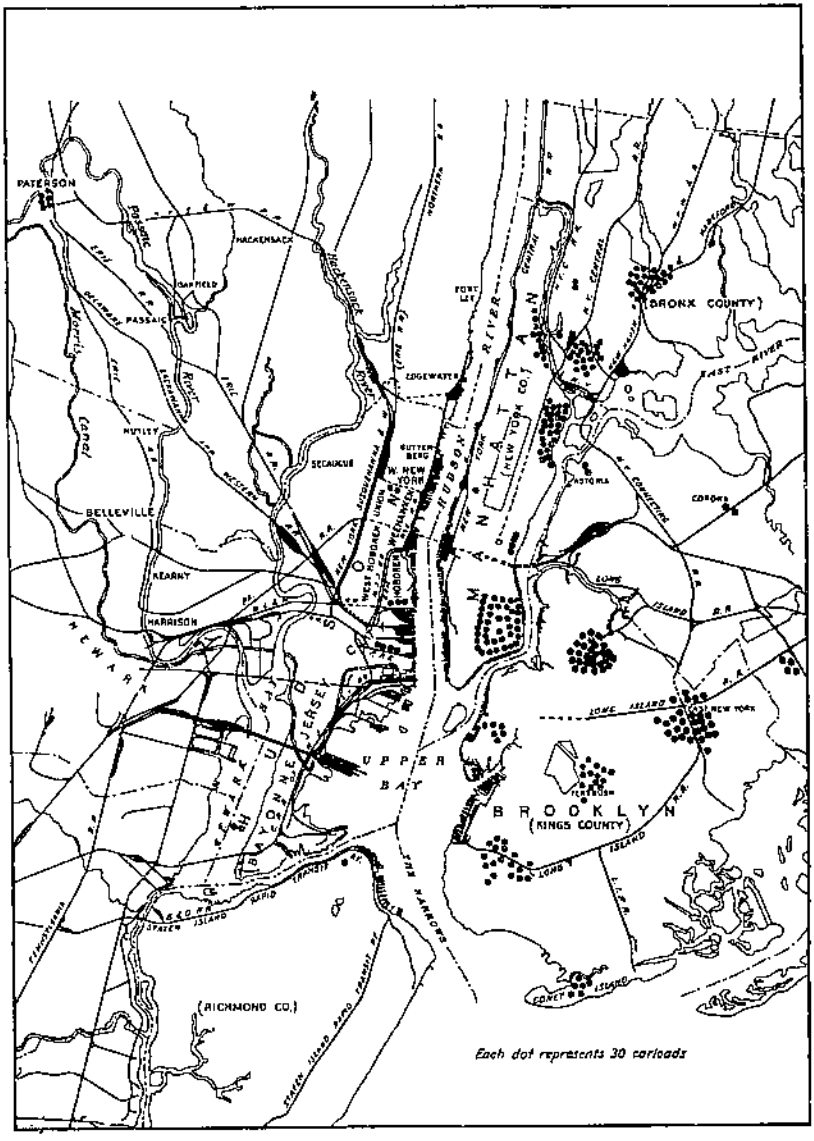

FIGURE 5.—DISTRIBUTION OF LIVE-POULTRY PURCHASES IN NEW YORK CITY AND VICINITY, 1926

There are upward of 600 buyers, whose establishments are distributed in groups in various parts of the metropolitan area for the slaughter of poultry preparatory to sale to retailers.

slaughtering, and retailing (to a certain extent) in a single integrated system. (Figs 6, 7, and 8.).

A number of other functionaries operate in the transfer of poultry from the terminals to the slaughterhouses or to West Washington

Market. (Fig. 9.) A coop company, for example, holds a contract for supplying the coops under a definite charge of $1 per coop each trip (until recently 85 cents per coop). Of this amount, 35 cents is

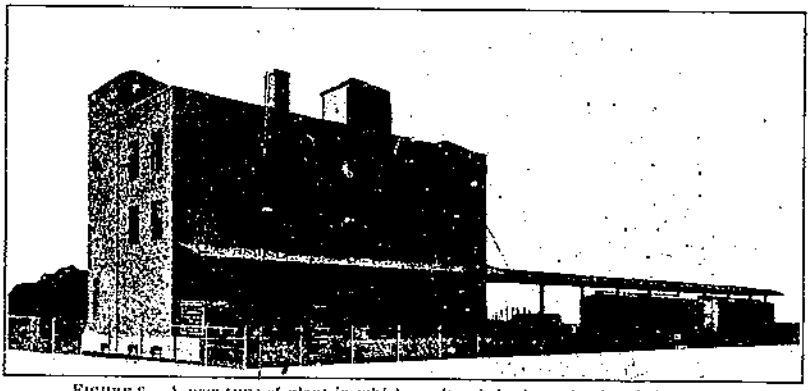

FIGURE 6.—A new type of plant in which poultry is both received and slaughtered

paid the buyer when he returns the coops to the coop company, but the entire amount is deducted as a charge against the shipper of the poultry. Another example is that of a live-poultry trucking corpora-

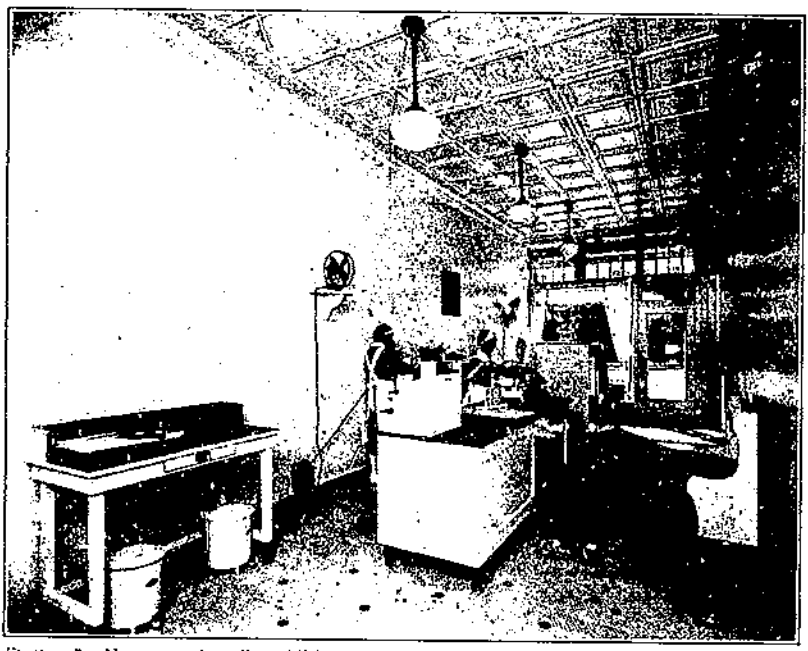

FIGURE 7.—New type of retail establishment connected with the receiving and slaughtering plant shown in Figure 6. Note the sanitary equipment and the generally neat appearance

tion which has a contract for moving the poultry from the terminals to West Washington Market. It receives a contract price of 50 cents per coop, which is obtained whether it hauls the poultry or not. As a matter of fact, it actually hauls an average of about 35 per cent of

the total arrivals. The remainder is transferred in the buyer's own trucks or by trucks hired by the buyers, some of which may be those of this trucking company itself and for which the latter receives an additional fee, the amount of which varies with the distance hauled.

FIGURE 8.—Interual view showing poultry being held in batteries for feeding in a new type of plant in which poultry is both received and slaughtered

The unloading is done by a crew of five men. The crew receives $50 for unloading the car (increased from $30 to $50 in the fall of 1926), which takes approximately two hours. In addition, the contractor who agrees to furnish the necessary man power for this work receives $3 per car for his services. Each receiver employs a weighmaster,

FIGURE 9.—Poultry not taken directly from the terminals to the slaughterhouses is brought to West Washington Market

who records the gross and net weights of each coop, in triplicate, as unloaded in the presence of the carman. The costs for coops, truckage, and unloading are paid by the shipper, and the costs of loading on trucks and the wages of the weighmaster are paid by the truck company and the receiver, respectively. (Fig. 10.)

Later in this bulletin a detailed discussion of marketing costs is given, the total marketing costs per pound are computed and tabu-

lated, the total cost is separated into its component parts, and the cost per pound for rendering each of these various services is shown for freight shipments, for each State or reshipment point from which poultry is received. The residual of the wholesale price after these costs are paid constitutes the net return to shippers.

SUPPLY OF LIVE POULTRY

STATES AND CITIES OF ORIGIN OF LIVE POULTRY

Dealers' records reveal the fact that about 30 States contribute to the supply of live poultry on the New York market. (Fig. 11.) In

FIGURE 10.—As poultry is unloaded from a car in the new type of plant it is weighed on the dial scale as shown

addition, four cities, Philadelphia, Chicago, Chattanooga, and Atlanta, although situated within these States, are listed separately because they constitute reshipping points. As much of the poultry shipped from them comes originally from surrounding States, the States in which they are located can not be credited with this entire quantity. It is impossible to allocate the exact point of origin of the poultry shipped from these cities.

Table 1 gives the State or city of origin, express receipts that come from each State or city of origin, and the percentage of the combined freight and express receipts coming from each State or city of origin. The bulk of the express shipments come from the Northeastern States,

including Maryland and Virginia. New Hampshire and New York together supply a considerable proportion of the express shipments. Freight shipments come chiefly from the mid-West and the South.

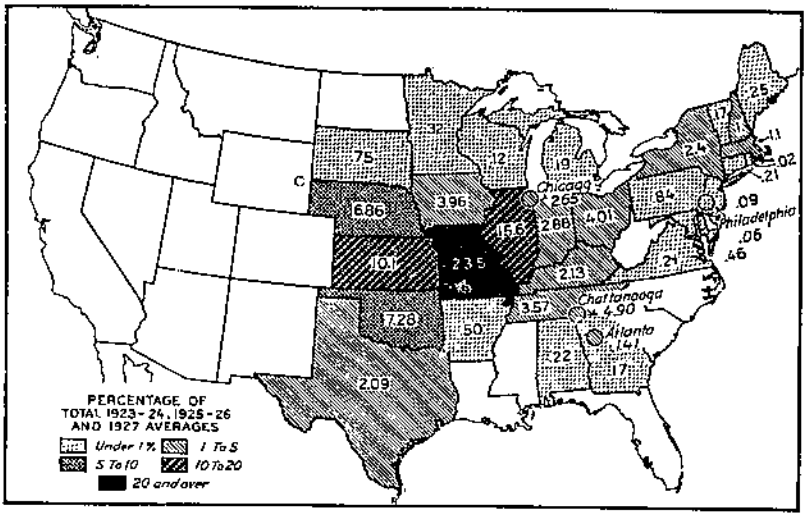

FIGURE 11.—ORIGIN OF RECEIPTS OF LIVE POULTRY AT NEW YORK CITY

Almost 50 per cent of the live poultry arriving at New York City by freight comes from Missouri, Kansas, and Illinois. The figures represent the percentage of New York receipts shipped from each State or city.

Of all shipments, both freight and express, nearly half come from the three States, Missouri, Kansas, and Illinois.

TABLE 1.—*Proportion of live poultry in carloads received at New York by freight and by express from the designated origins, average 1923-24, 1925-26, and 1927*

Origin	Percentage received			Origin	Percentage received		
	By freight	By express	By freight and express		By freight	By express	By freight and express
	Per cent	*Per cent*	*Per cent*		*Per cent*	*Per cent*	*Per cent*
Alabama	0.23	.....	0.22	Nebraska	7.23	.....	6.86
Arkansas	.53	.....	.50	New Hampshire	.....	20.18	1.04
Atlanta, Ga	1.49	.....	1.41	New Jersey	.....	1.73	.09
Chattanooga, Tenn	5.16	.....	4.90	New York	.17	43.60	2.41
Chicago, Ill	2.79	.....	2.65	Ohio	4.17	1.22	4.01
Connecticut	.14	1.37	.21	Oklahoma	7.68	.....	7.28
Georgia	.17	.32	.17	Pennsylvania	.59	5.31	.84
Illinois	16.42	.04	15.58	Philadelphia, Pa	.06	.....	.06
Indiana	3.02	.14	2.88	Rhode Island	.....	.46	.02
Iowa	4.17	.01	3.96	South Dakota	.79	.....	.75
Kansas	10.62	.....	10.07	Tennessee	3.76	.08	3.57
Kentucky	2.24	.09	2.13	Texas	2.20	.....	2.00
Maine	.03	4.35	.25	Vermont	.02	2.93	.17
Maryland	.09	7.23	.46	Virginia	.....	4.14	.21
Massachusetts	.78	6.70	1.08	Wisconsin	.13	.....	.12
Michigan	.20	.01	.19				
Minnesota	.34	.06	.32	Total	100.00	100.00	100.00
Missouri	24.78	.03	23.50				

It is interesting to observe the regularity with which seasonal changes in the receipts of the principal classes of poultry take place.

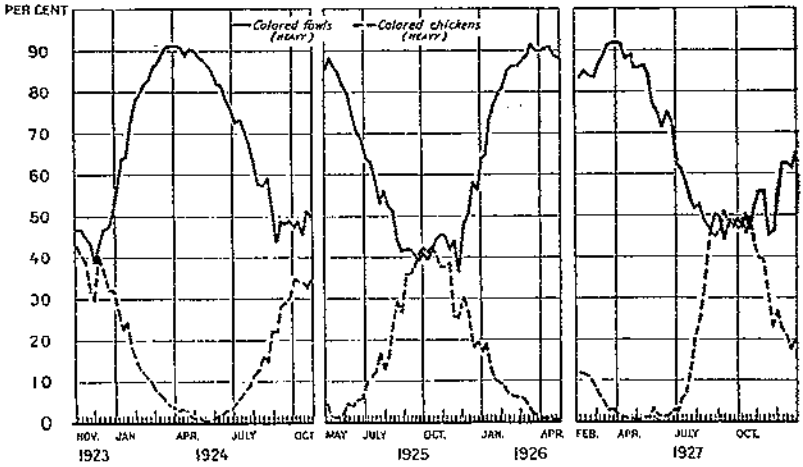

FIGURE 12.—RECEIPTS OF COLORED FOWL AND CHICKENS AT NEW YORK CITY. (EXPRESSED AS PERCENTAGES OF THE TOTAL WEEKLY RECEIPTS OF LIVE POULTRY)

As the season advances the percentage of fowl increases and the percentage of chickens steadily decreases until about April or May when the reverse holds true until about September. During the months of September and October the percentage of chicken is about as large as that of fowl.

This is clearly shown in Figures 12, 13, and 14 and in Tables 15 and 16. Comparing the relative receipts of each class of poultry on the New

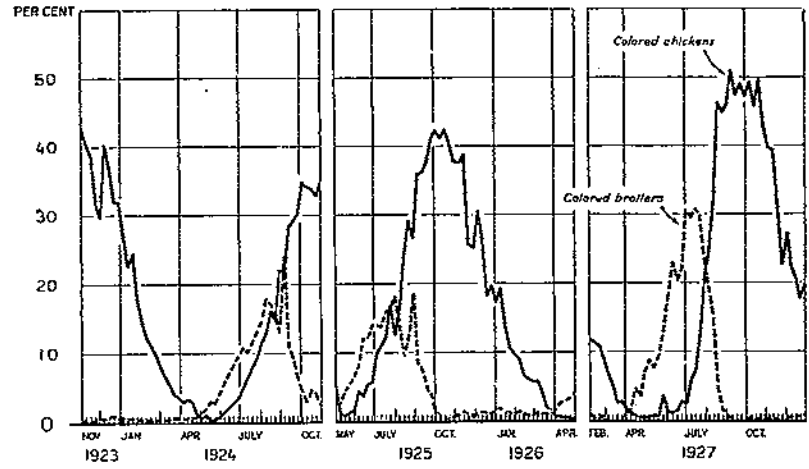

FIGURE 13.—WEEKLY RECEIPTS OF COLORED BROILERS AND CHICKENS AT NEW YORK CITY. (EXPRESSED AS PERCENTAGES OF THE TOTAL WEEKLY RECEIPTS OF LIVE POULTRY)

Most of the broilers arrive in June, July, and August. During the remainder of the year the percentage of broilers is relatively unimportant.

York market, each week during the three years under consideration (1927 is here included), the course of receipts for each class runs about the same for each of the three years. Assuming, therefore, that these

three years are representative, it becomes possible to anticipate what the probable proportion of each class of poultry will be throughout the entire year.

ORIGIN BY CLASSES OF POULTRY

Missouri furnishes more of each class of poultry than does any other State: Approximately one-fourth of each class comes from this source. (Table 2.) More than 51 per cent of the fowl [2] come from Missouri, Kansas, and Illinois. About 56 per cent of the broilers [3] are shipped from New Hampshire, Missouri, and Illinois. Four States—Missouri, Kansas, Illinois, and Oklahoma—contribute about 60 per cent of the chickens.[4] Nearly 84 per cent of the stags [5] are

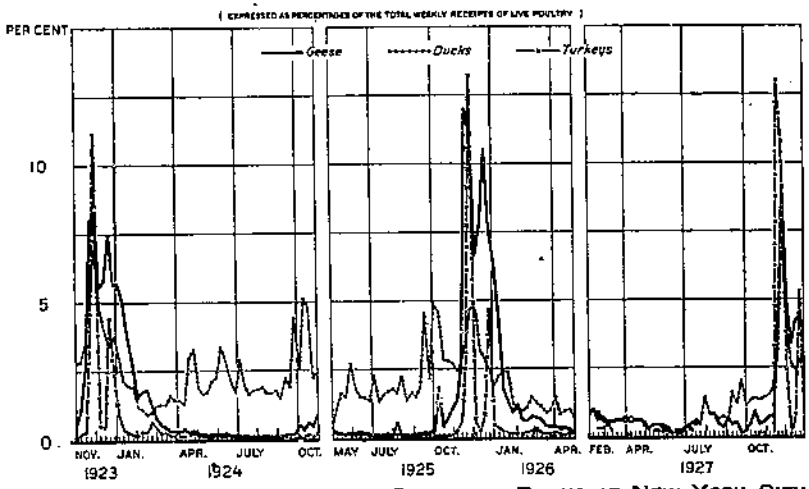

FIGURE 14. RECEIPTS OF TURKEYS, GEESE, AND DUCKS AT NEW YORK CITY. (EXPRESSED AS PERCENTAGES OF THE TOTAL WEEKLY RECEIPTS OF LIVE POULTRY)

Most of the turkeys, ducks, and geese arrive around the Thanksgiving and Christmas feast periods.

shipped from Missouri, Kansas, Illinois, Oklahoma, Kentucky, and from the city of Chattanooga, Tenn. Nearly three-fourths of the cocks [6] are supplied by Missouri, Kansas, Illinois, Oklahoma, Chattanooga, Tenn., and Nebraska. More than 71 per cent of the ducks originate in Missouri, Tennessee, Kansas, Illinois, Nebraska, and Chattanooga, Tenn. Geese come mainly from Missouri, Tennessee, Kansas, Illinois, Iowa, and Chattanooga, Tenn., 72 per cent of the total supply originating at these points. Of the live turkeys, 82 per cent come from seven points: Missouri, Tennessee, Illinois, Nebraska, Oklahoma, Chattanooga, Tenn., and Atlanta, Ga. The two cities mentioned are reshipping points.

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[2] Fowl, mature female chicken.
[3] Broilers, young, soft-meated chickens weighing not more than 2½ pounds.
[4] Chickens, young, soft-meated chickens, weighing more than 2½ pounds.
[5] Stags, male chickens showing considerable sexual development and hard-meated condition.
[6] Cocks, mature male chickens.

TABLE 2.—*Live poultry; percentage of each class received at New York City from reported origins, average 1923–24 and 1925–26*

Origin	Fowl	Broilers	Chickens	Stags	Cocks	Culls	Ducks	Geese	Turkeys
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Alabama	0.15	0.07	0.25	0.35	0.31	0.23	0.38	0.27	0.42
Arkansas	.41	1.20	.22	.35	.84	.22	.66	.27	.84
Atlanta, Ga.	1.16	1.40	1.17	2.82	2.32	.45	.75	.54	8.05
Chattanooga, Tenn.	3.99	2.21	2.75	17.92	8.57	2.05	6.05	8.10	8.89
Chicago, Ill.	3.24	.13	3.97	.35	.74	1.13	3.20	3.90	2.52
Connecticut	.20	.90	.23	-------	.11	.01	.09	.27	-------
Delaware	.01	.05	-------	-------	-------	.01	.01	-------	-------
Georgia	.11	.13	.22	-------	.27	-------	.00	-------	.84
Illinois	17.81	10.49	16.84	10.88	10.01	15.58	17.70	17.02	13.17
Indiana	3.52	1.01	3.05	.10	2.00	3.40	3.94	2.42	-------
Iowa	3.75	1.61	4.47	-------	3.54	8.18	5.52	6.07	.84
Kansas	10.63	5.63	12.21	11.60	11.70	11.12	7.61	5.66	4.23
Kentucky	2.20	.40	1.67	9.14	2.22	.45	2.36	4.72	2.96
Maine	.33	3.67	.15	.02	.10	.03	.01	-------	-------
Maryland	.20	.50	.06	-------	.06	.23	-------	-------	-------
Massachusetts	1.01	4.17	1.14	.35	.95	.36	.48	.27	-------
Michigan	.15	.07	.34	-------	.13	.22	.09	.27	-------
Minnesota	.17	-------	.40	-------	.32	.23	.47	.54	1.26
Missouri	22.73	28.44	21.14	24.61	23.62	22.74	24.94	27.48	22.45
Nebraska	6.01	6.37	6.84	1.39	9.35	7.40	8.45	4.45	8.87
New Hampshire	1.19	17.06	.21	.04	.22	.26	.07	.01	.05
New Jersey	.07	.27	.03	-------	.03	.01	.02	-------	.02
New York	.89	2.58	.30	.02	.13	.08	.29	.02	-------
Ohio	4.12	1.28	5.08	2.11	4.77	2.48	3.94	3.91	.84
Oklahoma	6.96	2.28	10.18	0.45	8.78	10.20	3.75	4.03	11.44
Pennsylvania	.67	.43	.71	1.04	.38	.46	.19	.80	1.70
Philadelphia, Pa.	.06	.07	.06	-------	.10	-------	-------	-------	-------
Rhode Island	-------	.02	-------	-------	-------	-------	-------	-------	-------
South Dakota	.71	-------	.99	.35	.79	1.14	1.22	.80	.42
Tennessee	3.25	1.08	2.62	6.32	4.97	1.83	5.54	6.33	9.31
Texas	3.32	.80	2.31	.70	.96	7.45	.47	.67	.84
Vermont	.87	4.43	.26	-------	.18	.05	.12	.01	.05
Virginia	.02	.35	.01	-------	.01	.01	.01	-------	.02
Wisconsin	.09	-------	.12	-------	.10	-------	.19	.27	-------
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Three-fifths of all the culls [7] on the New York City live-poultry market come from the four States of Missouri, Kansas, Illinois, and Oklahoma, but it must not be inferred that an abnormal percentage of the shipments from these States are culls, since a corresponding proportion of the total supplies also comes from these States. As a matter of fact, the States from which the greatest proportion of culls are shipped in comparison with the total shipments from these States are Texas, Iowa, and South Dakota. (Table 3.) The average marketing cost per pound for these States is 8.8, 5.2, and 6.5 cents, respectively, whereas the average wholesale price for culls quoted in New York City is 8 cents per pound. It is obvious that the wholesale price to the receiver of culls frequently is not sufficient to pay the cost of marketing them. Off-grade poultry should be consumed as near the point of production as possible.

[7] Culls, poultry which is fit for human food, but which may be thin, lacking vigor, or deformed or blemished in such a way as to render it salable only at a considerable discount from prevailing prices for live poultry of its class.

TABLE 3.—*Live poultry; percentage of all classes received by origins at New York City, average 1923–24 and 1925–26*

Origin	Fowl	Broilers	Chickens	Stags	Cocks	Ducks	Geese	Turkeys	Culls	All classes
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Alabama	22.68	3.21	25.89	3.21	19.12	13.04	6.43	3.21	3.21	100
Arkansas	26.10	24.58	9.61	1.36	21.94	9.61	2.72	2.72	1.36	100
Atlanta, Ga	27.26	10.58	19.21	4.06	22.22	4.04	2.03	9.60	1.00	100
Chattanooga, Tenn	26.90	4.78	12.95	7.41	23.54	10.75	8.73	3.05	1.89	100
Chicago, Ill	40.49	.53	34.77	.27	3.77	9.42	7.81	1.60	1.34	100
Connecticut	25.94	37.97	21.40		6.00	2.81	5.63		.16	100
Georgia	22.81	9.62	31.83		22.81	4.51		9.02		100
Illinois	37.77	7.14	24.05	1.42	9.42	8.60	6.08	1.42	3.20	100
Indiana	41.79	3.85	25.37	.14	9.70	10.73	4.59		3.83	100
Iowa	31.29	4.31	26.09		12.05	11.33	8.10	.36	6.47	100
Kansas	35.01	5.95	28.12	2.34	15.68	5.74	2.98	.70	3.48	100
Kentucky	34.07	1.99	18.07	8.70	14.06	8.39	11.72	2.34	.66	100
Maine	13.87	71.06	6.22	.07	2.57	.07			.14	100
Maryland	45.14	35.44	9.71		4.99				4.72	100
Massachusetts	27.02	35.78	21.27	.57	10.32	2.95	1.17		.92	100
Michigan	26.81	3.83	42.55		11.49	3.83	7.96		3.83	100
Minnesota	20.00		32.42		15.03	12.55	10.07	7.45	2.48	100
Missouri	31.93	12.82	20.78	2.12	13.51	8.03	6.18	1.60	3.03	100
Nebraska	28.99	9.85	23.07	.41	19.32	9.34	3.43	2.17	3.42	100
New Hampshire	18.52	79.58	2.02	.03	1.23	.23	.02	.03	.34	100
New Jersey	35.12	43.44	11.90		6.55	1.79		.60	.60	100
New York	41.54	32.66	9.73	.00	2.43	3.10	.17		4.31	100
Ohio	34.46	3.42	29.71	1.08	16.23	7.55	5.23	.30	1.90	100
Oklahoma	31.03	3.32	32.33	2.03	16.24	3.90	2.92	2.64	4.39	100
Pennsylvania	36.56	7.60	27.20	3.51	8.51	2.40	7.08	4.74	2.40	100
Philadelphia, Pa	37.50	12.50	25.00		25.00					100
Rhode Island		100.00								100
South Dakota	31.21	.05	30.28	.93	14.07	12.20	5.61	.93	4.72	100
Tennessee	30.21	3.20	16.99	3.60	18.81	11.79	9.40	4.39	1.61	100
Texas	50.54	3.92	24.62	.65	5.89	1.63	1.63	.65	10.47	100
Vermont	33.64	55.14	6.95		2.85	1.10	.05	.09	.18	100
Virginia	12.80	76.80	4.80		3.20	.80		.80	.80	100
Wisconsin	28.75		28.74		14.17	14.17	14.17			100
Average	33.07	10.61	23.13	2.03	13.47	7.58	5.29	1.08	3.14	100

SEASONAL VARIATION IN RECEIPTS OF DIFFERENT CLASSES

The seasonal changes in receipts vary greatly with the different classes of poultry. In the case of fowl the variation of receipts from month to month is not so marked as in some of the other classes, but a larger part of the total annual receipts of this class arrives during the winter and early spring months than during the remaining months of the year. (Fig. 12.) Broiler receipts attain a maximum between May and September, during which period approximately 75 per cent of the total annual sales of this class are made. (Fig. 13.) The receipts of chickens, on the other hand, are the reverse of fowl, as chickens arrive in the greatest quantity during the fall and early winter. (Fig. 12.) Ducks, geese, and turkeys arrive in greatest quantity in the fall and early winter. (Fig. 14.) Culls show but slight seasonal change, whereas practically all the stags come on the market during March, April, and May. (Tables 15, 16, and 17.)

CHANGES IN WINTER BROILER SUPPLY

During 1927 much was written about the apparent growth of specialized enterprises operated solely for the production of broilers during the entire year. Some of the writers entertained grave fears that this new industry would so increase the supply of this class of poultry, especially in the winter, as to throw the entire industry out of adjustment. As a matter of fact it has been impossible actually to locate many enterprises which devote all their resources to broiler produc-

tion. It seems more probable that increased broiler production will be a development incidental to commercial poultry production rather than a distinct industry by itself.

The data assembled in this study indicate clearly that a large development of express shipments of winter and early spring broilers has taken place in New Hampshire. Table 4 includes data assembled by the New Hampshire Agricultural Experiment Station, which is making a comprehensive study of the broiler industry in that State.

The express shipments of live winter broilers from New Hampshire increased from about 44,000 pounds in 1925 to about 224,000 pounds in 1926, or more than 400 per cent. Not only was the absolute increase of this class of poultry from New Hampshire very marked, but the proportion received from this State as compared with the total receipts on the New York market for the two years also shows a striking increase. In 1926 express shipments of this class of poultry from New Hampshire embraced 60, 84, and 57 per cent of the total receipts for this class of live poultry for January, February, and March, respectively.

In 1927 a considerable increase in the absolute quantity of this class of poultry over 1926 occurred. In the latter year the receipts were about 299,000 pounds, or an increase of about 33 per cent over the previous year. The percentage of express receipts from New Hampshire as compared with the total receipts on the New York market was, however, less than in 1926.

TABLE 4.—*Proportion of winter broilers received at New York City by express from New Hampshire, 1925–1927*

Week ending	1925	1926	1927	Week ending	1925	1926	1927
	Per cent	*Per cent*	*Per cent*		*Per cent*	*Per cent*	*Per cent*
Jan. 1	0	0	54.1	Feb. 26	69.2	91.6	73.8
Jan. 8	0	55.1	32.2	Mar. 5	72.5	81.3	67.1
Jan. 15	0	24.9	22.8	Mar. 12	74.5	62.5	53.4
Jan. 22	11.6	80.0	78.8	Mar. 19	39.1	59.4	73.8
Jan. 29	31.6	87.1	65.1	Mar. 26	82.2	56.7	60.1
Feb. 5	31.2	71.7	79.6	Apr. 2	55.7	43.3	57.4
Feb. 12	61.0	84.9	68.1				
Feb. 19	82.3	87.4	70.4	Average	57.9	64.2	62.5

Compiled from records of the New Hampshire Agricultural Experiment Station.

SPECIALIZATION AMONG DEALERS

Some receivers deal only in express shipments, whereas others secure their supplies exclusively by freight. In the remaining cases both methods are employed. Two wholesale receivers were found to have had consignments made to them by both freight and express, but the great bulk was received by freight. One receiver secured all of his supplies by freight and another received all of his supplies by express.

The manner of shipping the three main classes of poultry—fowl, broilers, and chickens—also shows considerable variation. Freight shipments of fowl embraced more than 98 per cent of the total, broilers 82 per cent, and chickens 99 per cent. Of the other classes all but a fraction of 1 per cent comes by freight.

The dealers vary considerably in the relative quantity of the different classes of poultry handled. Upward of 75 per cent of the receipts of three dealers (Table 5) consists of fowl, chickens, and

cocks, whereas one dealer received but 68 per cent of these classes, and another received less than 30 per cent. On the other hand, nearly 70 per cent of the total receipts of the latter dealer are broilers. For the other dealers the receipts of this class range from 3 to 16 per cent. Similarly, the different dealers vary considerably in the relative quantity of the different classes handled each month.

TABLE 5.—*Variations in the quantities of the classes of live poultry handled by five dealers, average 1923–24 and 1925–26*

Class	Percentages handled by —				
	Dealer 1	Dealer 2	Dealer 3	Dealer 4	Dealer 5
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Fowl	37.00	36.55	39.98	23.47	37.67
Broilers	7.94	4.96	5.37	69.28	14.74
Chickens	22.58	26.04	21.23	3.98	17.45
Stags	1.51	1.65	1.22	.04	1.55
Cocks	13.60	14.81	12.62	2.04	12.44
Ducks	7.87	6.70	8.77	.72	7.31
Geese	5.39	4.61	5.71	.04	5.46
Turkeys	1.44	1.64	1.89	.05	1.46
Culls	1.77	3.04	3.21	.38	1.92
Total	100.00	100.00	100.00	100.00	100.00

Some dealers operate exclusively on a commission basis, whereas others may deal on this basis, or may purchase outright from the shipper, or may join with him in the purchase of a car of poultry and share with him the profits or losses. The latter method is known in the trade as "joint account." Dealers who handle poultry on both consignment and f. o. b. basis vary somewhat in the relative quantity of the receipts which come on consignment or f. o. b. from month to month, but in a large way these types of transactions follow the same general course. Both kinds of dealers receive a considerable percentage f. o. b. in January, August, and September, but aside from these months they vary considerably in the relative quantity received in corresponding months in these two types of transactions. It is therefore difficult to explain why dealers who regularly engage in the two types of transactions vary from each other as much as they do in the time they choose for receiving goods under one plan or the other. Probably their judgment varies as to when it will be most profitable for them to receive goods on commission or on outright purchase.

DEMAND FOR LIVE POULTRY

Members of the live-poultry trade estimate that about 80 per cent of the live poultry that enters the metropolitan area of New York is consumed by the Jewish population. The growth of the industry corresponds rather closely with the growth of the Jewish population, which for the past 25 years has been as follows:[5]

1900	400,000	1920	1,643,012
1910	975,000	1925	1,750,000

[5] 1900 and 1910 figures were obtained from The American Jewish Year Book. 1920 and 1925 figures were based upon a survey of the Federal Council of Churches and a survey of the Bureau of Jewish Education, respectively.

Of the receipts, about 10 per cent is consumed by the Italian and 10 per cent by other groups of the gentile population. It is not surprising, therefore, to find that the live-poultry industry in this market is greatly influenced by Jewish customs and religion. As a matter of fact, many of the peculiarities of the industry are traceable to them, and they must necessarily be taken into account in any price analysis which may be undertaken.[9] For example, the orthodox Jewish church requires that poultry be kosher killed, that is, a deputy of the Jewish rabbi (shochet) must slaughter the bird.

The poultry is slaughtered in plants of various sizes, of which there are about 600, clustered in different parts of the metropolitan area of New York. (Fig. 15.) The smaller plants are crudely

FIGURE 15.—Interior of live-poultry slaughterhouse. This establishment is typical of the medium and larger sized plants. Note the shochet ready to kill a fowl in kosher manner, and women selecting poultry

equipped and unsanitary in appearance. It is believed that the modernization of slaughtering plants would result in a material expansion of the industry by opening up new sources of demand among both the gentile and the Jewish populations.

The day of largest Jewish consumption is ordinarily Saturday, the Jewish Sabbath. Supplies are accumulated during the early days of the week in order to take care of the unusual trade requirements for this day. In winter, preparations for Saturday consumption are made on Thursday; during the warmer months they are made on Friday.

The Jewish feast and fast days introduce another important factor in the demand for live poultry on this market. The principal Jewish holidays come during the early fall and the early spring months, and at these times the quantity consumed is much greater than usual.

[9] For more detailed discussion, see p. 48 et seq.

COST OF MARKETING

A detailed analysis of the costs of marketing live poultry from shipping point to slaughterhouse includes a number of factors. Costs per pound for each specific service have been computed in this study, such as costs incurred while the poultry is in transit from shipping point to terminal (including freight, carman, feed, and the like, and listed as transportation costs), coop rental, cartage, unloading, and commission. These costs have been summarized and tabulated to show the total cost per pound of live poultry coming from the various States and cities of origin.

TRANSPORTATION

The costs listed under transportation, which are compiled on both a per pound and per carload basis, vary with the distance of haul, length of time in transit, and the net weight of the poultry. The net weight varies with the season and the class of poultry. (Tables 6 and 8.)

TABLE 6.—*Average transportation cost per pound of live poultry shipped by freight and by express to New York City, by origin, average 1923–24 and 1925–26* [1]

Origin	Cost of shipments by [2]—		Origin	Cost of shipments by [2]—	
	Freight	Express		Freight	Express
	Cents	*Cents*		*Cents*	*Cents*
Alabama	4.541		Missouri	4.242	
Arkansas	5.152		Nebraska	4.571	
Atlanta, Ga	3.568		New Hampshire		2.486
Chattanooga, Tenn	3.822		New Jersey		1.850
Chicago, Ill	2.839		New York	1.786	2.461
Connecticut	2.939	1.990	Ohio	2.252	
Georgia	3.762		Oklahoma	5.367	
Illinois	3.300		Pennsylvania	2.797	2.569
Indiana	2.475		Philadelphia, Pa	1.900	
Iowa	3.172		Rhode Island		1.900
Kansas	4.931		South Dakota	4.409	
Kentucky	3.518	5.600	Tennessee	3.535	
Maine	2.557	3.301	Texas	6.505	
Maryland	3.007	2.482	Vermont		2.942
Massachusetts	3.788	2.364	Virginia		3.068
Michigan	5.640		Wisconsin	3.180	
Minnesota	4.851				

[1] Transportation costs include charges for freight, carman, feed, demurrage, stop-off, and reconsignment privilege.
[2] Based on the net weight of car in New York City.

It is probable that most, if not all, of the car-lot freight shipments credited to several of the New England States originated outside of these States. For example, reshipments from Boston to New York City are made when market conditions in New York City are more favorable or when off-grade stock can not be disposed of on the Boston market. The same situation prevails on the Philadelphia market. The express transportation costs are, therefore, much more significant for the near-by States than are the freight costs, and conversely, the freight transportation costs are more significant for the mid-Western States and the South than are the express costs, inasmuch as express shipments from these points are virtually negligible.

The variation in transportation costs measures the relative economic advantage some States have over others, resulting from greater

proximity to the New York City market, more favorable railroad rates, and other factors already mentioned. As between Indiana and Kansas or Nebraska, for example, the difference in these costs is more than 2 cents per pound. (Fig. 16.) Part of this difference is due to the fact that the poultry from these States is subject to a railroad tariff based on a 20,000-pound minimum rate as far as the Mississippi River, and on 18,000 pounds minimum from the Mississippi River to New York City. Indiana shipments, on the other hand, are based on an 18,000-pound minimum for the entire distance.

In view of the fact that the average net weight of a car of live poultry is about 16,700 pounds, it is evident that shipments from the States farther west must bear a relatively heavy freight burden. To offset this disadvantage, in part at least, it would be necessary for shipments from these States to be of superior quality and, therefore,

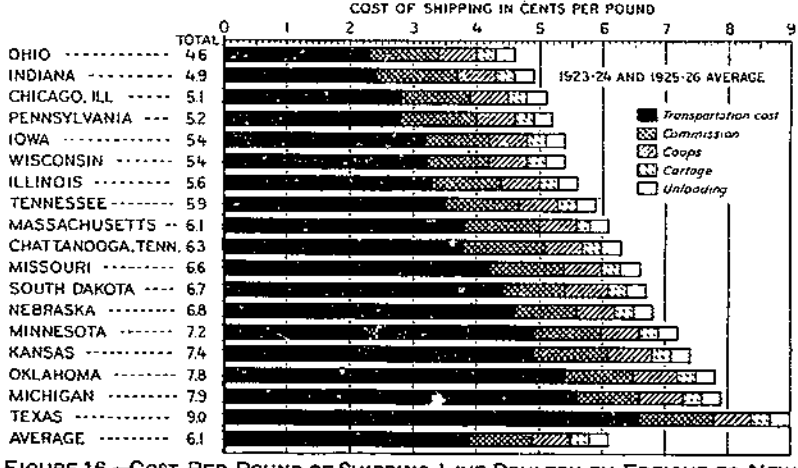

FIGURE 16.—COST PER POUND OF SHIPPING LIVE POULTRY BY FREIGHT TO NEW YORK ARRANGED BY SOURCE OF ORIGIN

Distance from the New York market is the most important factor in marketing costs.

of relatively high value. As compared with Indiana, however, which has attained such a high reputation for the quality of its live poultry that the term "Indianas" is synonymous with high quality, the more westerly States probably have no advantage in this respect. Other mid-Western States that lie west of the Mississippi River are, in varying degrees, subject to the same handicap as that of Kansas. However, the railroad company furnishes free transportation to the carman on the return trip when the car originates at certain points west of the Mississippi River. When the car originates east of the river, free return transportation is not furnished by the railroad company. This fact, in a measure at least, tends to offset the disadvantage suffered by the States west of the river, as a result of the 20,000-pound minimum.

Another factor that should be mentioned is that those instances in which a 20,000-pound minimum prevails from points west to the Mississippi River, a class rate is in force to the river and a commodity rate with an 18-000-pound minimum from the river to New York. From Texas, however, a commodity rate with an 18,000-pound

minimum prevailed throughout the entire distance in every case that was investigated.

The expense of the carman constitutes a considerable item in the transportation expenses, and this item varies with the length of haul. The carman, as a rule, receives a flat wage of $10 per day and certain perquisites, as for example, the receipt of a certain number of cents per pound for the actual gain in the weight of poultry which may be effected by judicious feeding while en route, and the returns he may receive for the eggs produced while the poultry is in transit. These eggs sometimes amount to three or four cases on a single trip; the number probably averages about one case. Instances occur in which gains in weight of poultry in transit amount to more than 1,000 pounds per car. One instance of more than 2,000 pounds of gain was reported. Gains of less than 500 pounds are much more frequent, however, and cases of loss of weight are more numerous than are instances of gains. (Table 7.)

TABLE 7.—*Net gain or loss in live weight of poultry shipped to New York City*

Net change in weight per car (pounds) [1]	Gain			Loss		
	Cars	Percentage	Cumulative percentage	Cars	Percentage	Cumulative percentage
Less than 200	91	39.05	39.05	110	23.76	23.76
200 to 399	60	25.75	64.80	101	21.81	45.57
400 to 599	40	17.17	81.97	73	15.77	61.34
600 to 799	22	9.44	91.41	74	15.98	77.32
800 to 999	11	4.72	96.13	36	7.78	85.10
1,000 to 1,199	1	.43	96.56	31	6.70	91.80
1,200 to 1,399	2	.86	97.42	20	4.32	96.12
1,400 to 1,599	1	.43	97.85	9	1.94	98.06
1,600 to 1,799	3	1.29	99.14	3	.64	98.70
1,800 to 1,999	1	.43	99.57	3	.65	99.35
2,000 or more	1	.43	100.00	3	.65	100.00
Total	233	100.00		463	100.00	

[1] Two hundred and thirty-three cars showed an average gain of 325 pounds per car. 463 cars showed an average loss of 500 pounds per car. 696 cars showed a loss averaging 224 pounds per car.

Current gossip indicates that losses in weight of cars occur, or gains are relatively smaller than they should be, because of the practice of some carmen of selling poultry en route or of giving it away in return for favors. The extent of this practice is difficult to determine, but that it costs in the aggregate large sums of money to the shipper is the opinion of those who expressed themselves on the subject.

At the terminals some carmen are said to engage in such practices as the sale of small lots of poultry for a nominal sum; the gift of poultry in return for special favors; the connivance with the weighman in the matter of weights to their mutual advantage; and the sale of remnants of feeds left in the car, the proceeds of which are not returned to the shipper. The extent of these malpractices can not be definitely determined, but their existence has a tendency to contribute toward lowering the morale of the industry and to arouse distrust even where it is not warranted. All agencies interested in promoting the welfare of this industry—among them the railroads and those in charge of terminal facilities—should assist in eradicating these evils.

COST OF COOPS

As has been stated, the coops for transferring live poultry from the railroad terminal to the slaughterhouse or to West Washington Market are furnished by a coop company at a rental charge of $1 per coop for each use. This amount is charged against the shipper and is deducted by the receiver when making returns to the shipper. Of this dollar, 65 cents is retained by the coop company, and 35 cents is paid by them to the buyer (slaughterhouse man) when he brings back the coops, in order, it is said, to insure their prompt return.

It is estimated that the price of making a coop, including costs of material and labor, is about $2.50, and the average life of a coop is variously estimated at from 25 to 200 trips. After every trip the

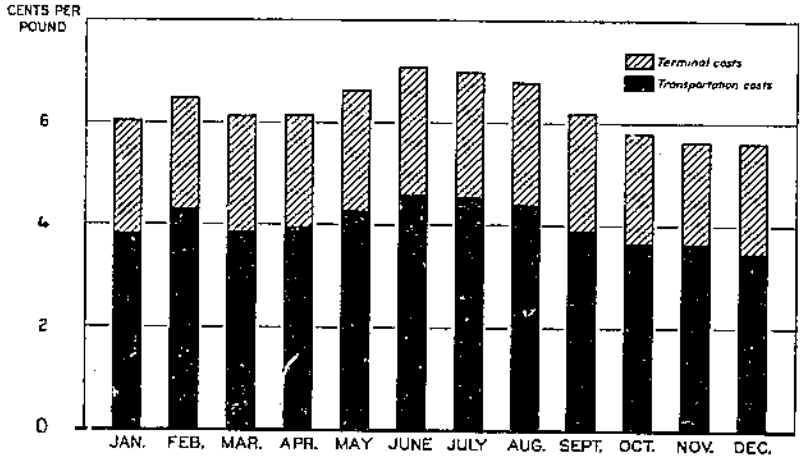

FIGURE 17.—AVERAGE COST PER POUND OF MARKETING LIVE POULTRY BY FREIGHT FROM POINT OF SHIPMENT TO SLAUGTERHOUSES IN NEW YORK CITY

The average costs per pound of marketing live poultry are greatest in summer. The sharp rise in transportation costs during midwinter is caused by the distance of haul and peculiarities of rate structure.

coop is repaired, for which a fixed rate of 6 cents is paid by the coop company to its regular corps of workers.

Although the cost for coops is constant, the cost per pound of poultry for this service varies somewhat during the different seasons of the year. Inspection of Figure 17 and Table 9 reveals that the average annual cost for this service is about 1 cent per pound and that it reaches a maximum during the summer. This is due to the fact that a fixed charge is made for this service, while the net weight of the poultry per coop is less in the summer than it is during the cooler seasons. This constant charge, distributed over varying weights, causes the changing costs per pound from month to month. Again, the net weight per coop for certain classes of poultry—broilers, for example, which normally come in greatest quantity during the summer months—is less than for other classes, which causes a relatively high cost per pound for this service for poultry of this class.

COST OF CARTAGE

Another company has a contract for carting poultry from the various terminals to West Washington Market. For this service a fee of

50 cents per coop is charged, which constitutes another deduction from the gross value of the poultry. The cartage company receives 50 cents per coop for moving the entire contents of the car, which normally consists of about 90 coops, whereas in reality they may be called upon, on the average, to move only about one-third of this quantity. The remaining two-thirds is trucked directly by the buyers from the terminals to their respective slaughterhouses. In case the cartage company is employed to move the poultry direct from the terminal to the slaughterhouse a fee in addition to the contract fee is charged, which varies with the length of the haul. Similarly, when the cartage company moves the poultry from West Washington Market to the slaughterhouse, a charge in addition to the contract price is made.

UNLOADING COSTS

The labor cost of unloading the poultry is $50 per car, and in addition $3 per car is paid to a contractor whose duty it is to see that sufficient crews of men are provided to render this service.

When the records upon which this study is based were taken from the books of the dealers, the cost per car for unloading, including the contractor's fee, was $33 instead of $53 as at present. In the fall of 1926 the "pullers," as they are called, went on strike and obtained an increase of $20 per car. Previous to this time each of the five men which constitutes a crew received $6 per car. It requires, on an average, about two hours for five men to unload a car. It is thus seen that wage adjustments for this service have been made with a view to providing a living income (about $160 per month) based upon from two to three hours' work per day for a 4-day-a-week job.

An interesting division of labor has been developed in this work of unloading. Two men pull the poultry from the different layers of the car and hand it to two others, who carry it from the interior of the car to the platform and deposit it in the coop which has been prepared by the fifth man, who determines when the coop is sufficiently loaded and who then nails on the slat preparatory to loading into the truck. The number of birds put into each coop varies with the class and time of year.

A different crew of men, which is provided by the cartage company, loads the poultry on the trucks to be moved either to West Washington Market or to the slaughterhouses. Inasmuch as these men are employed by the live-poultry cartage company, this expense requires no further comment as it is included in the cost of cartage.

Another service rendered at the terminal is that of weighing the poultry preparatory to loading on trucks for delivery to the slaughterhouses. As the receiver provides the weighmaster and pays for his services out of the proceeds of the commission, this service results in no further deduction from the returns made to the shipper, but there appears to be unanimous agreement among shippers that many evils have crept into the present method of weighing the poultry at terminals.

The sentiment of the shippers with reference to the costs of coops, cartage, and unloading, and with reference to the present method of

weighing, is well expressed in a resolution adopted in a recent conference of live-poultry shippers at Kansas City, which reads as follows:

> We deplore the present unloading expense in the New York City market and recommend the elimination of coop rental, trucking, and unloading charges, feeling that shipper's liability for expense should cease when the sale of car is consummated.
>
> We urge the appointment of a Federal Government weighmaster and the use of a dial scale for the weighing of poultry.

COMMISSION

The wholesale receivers of live poultry on the New York City market operate mainly on a commission basis. The amount of the commission is approximately 4 per cent of the gross price for freight shipments and 5 per cent for express shipments. Variations from this standard rate are frequent in practice on account of the peculiarities of the price-making mechanism (described later) which characterizes the live-poultry market in New York City.

The various marketing costs per pound are listed by representative States in Table 8, which shows that the commission cost averages slightly more than 1 cent per pound. Inasmuch as the commission is directly proportional to the price of the poultry, such variations as exist are dependent on the differences in price. During the winter and early spring months, when a very considerable percentage of the supply comes from the South and Southwest, some of the more important Jewish holidays occur. Before and during these holidays the prices of live poultry are likely to be relatively high. This probably accounts for the fact that the commission per pound for shipments from Chattanooga, Tenn. (at which place shipments from several of the surrounding States are concentrated), and other southern points, is considerably above the average. Another factor to be considered is that the fowl from this area is of medium weight, and, with the exception of the period immediately preceding the Jewish holidays, commands a premium.

TOTAL COST OF MARKETING LIVE POULTRY FROM REPRESENTATIVE STATES

The total cost per car from the different States varies greatly, from nearly $750 for Ohio to nearly $1,500 for Texas.[10] (Table 8.) It costs about $350 more to ship a carload of poultry from Nebraska than from Ohio; almost $400 more to ship one from Missouri than from Ohio, and nearly $500 more to ship one from Kansas than from Ohio. These are substantial figures and indicate the advantage enjoyed by Ohio by virtue of its greater proximity to the New York market.

[10] The cost per pound from Michigan is much less than the cost per pound from Texas, but the cost per car from Michigan is greater than cost per car from Texas, owing to the greater net weight of the car.

TABLE 8.—*Cost of shipping live poultry by freight to New York City, by origin, average 1923–24 and 1925–26*

Origin	Cost per pound as received in New York City						Average net weight of carload	Total cost per car
	Transportation cost [1]	Commission	Coops [2]	Cartage	Unloading [2]	Total		
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Pounds*	*Dollars*
Illinois	3.30	1.14	0.64	0.27	0.32	5.67	16,668	945.08
Indiana	2.48	1.20	.61	.26	.32	4.83	16,389	807.53
Iowa	3.17	1.04	.61	.26	.33	5.41	15,951	862.95
Kansas	4.93	1.21	.67	.28	.30	7.39	17,461	1,290.37
Massachusetts	3.70	1.18	.58	.24	.35	6.14	15,105	927.45
Michigan	5.64	.90	.74	.31	.27	7.92	19,428	1,538.70
Minnesota	4.85	1.14	.62	.26	.33	7.20	16,263	1,170.94
Missouri	4.24	1.20	.65	.27	.31	6.67	16,966	1,130.97
Nebraska	4.57	1.09	.61	.26	.33	6.88	15,943	1,093.69
Ohio	2.25	1.10	.63	.26	.32	4.56	16,419	748.71
Oklahoma	5.37	1.18	.70	.30	.29	7.84	18,417	1,443.89
Pennsylvania	2.80	1.24	.60	.25	.34	5.23	15,652	818.60
South Dakota	4.41	1.02	.67	.28	.30	6.68	17,417	1,163.46
Tennessee	3.54	1.24	.62	.26	.33	5.99	16,149	967.33
Texas	6.57	1.20	.64	.27	.31	8.99	16,830	1,513.02
Wisconsin	3.18	1.04	.61	.32	.27	5.42	19,590	1,061.78
Chicago, Ill	2.84	1.09	.64	.27	.32	5.16	16,668	860.07
Chattanooga, Tenn	3.82	1.33	.62	.26	.33	6.36	16,149	1,027.08
Average	3.88	1.02	.63	.27	.33	6.13	16,700	1,023.71

[1] Transportation cost includes freight, carman, feed, demurrage, stop-off, and reconsignment.
[2] Based on present rates, rates were changed as follows: Unloading, from $33 to $58 per car; coops, from 85 cents to $1 per coop.

When these marketing costs are compared with the value of the poultry, taking as the approximate average wholesale value $5,000 per car, the costs from shipping point to slaughterhouse are shown to amount, on the average, to about 20 per cent of the gross value; from Ohio they amount to about 15 per cent; and from Texas to about 30 per cent.

When the total costs per car were computed for each month of the year, as in Table 9, the average cost per car was more than $1,000 during the first seven months of the year and was $1,000 or less for the remaining five months. This may be accounted for by the predominance of southern and southwestern shipments for the first few months of the year, for which the transportation costs (freight, carman, feed, etc.) are high because of the long distance of the haul and, in some instances, because of the relatively higher freight rate which prevails from certain points west of the Mississippi River. The seasonal changes in the total cost per pound, as well as the changes for transportation costs, may be seen in Figure 17.

TABLE 9.—*Total cost of marketing a carload of live poultry in New York City, by months, 1923–24 and 1925–26*

Month	Total cost	Distribution of total cost					Average net weight per carload
		Transportation [1]	Commission	Coops	Cartage	Unloading [2]	
	Dollars	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Pounds*
January	1,044.77	63.44	18.02	9.70	3.77	5.07	17,300
February	1,156.21	66.34	16.63	9.02	3.43	4.58	17,800
March	1,091.56	63.00	19.12	9.43	2.59	4.86	17,750
April	1,077.16	64.14	17.56	9.62	3.76	4.92	17,450
May	1,096.75	64.20	17.87	9.01	4.09	4.83	16,300
June	1,083.77	64.41	16.64	9.74	4.23	4.98	14,950
July	1,040.98	64.97	15.06	10.56	4.32	5.09	14,850
August	1,009.92	64.50	15.00	10.81	4.44	5.25	14,800
September	977.47	62.86	15.68	11.24	4.82	5.42	15,750
October	979.84	62.94	15.61	10.96	5.09	5.41	16,850
November	1,083.83	64.33	14.78	10.69	4.92	5.28	17,750
December	926.20	61.58	17.00	10.45	4.35	5.72	16,450
Average	1,023.71	63.29	16.64	10.28	4.41	5.38	16,700

[1] Transportation cost includes freight, carman, feed, demurrage, stop-off, and reconsignment.
[2] The figures are on the basis of $53 per car.

Nearly two-thirds of the total costs are incurred in transporting poultry from shipping point to the terminal, including freight, car rental, carman, feed, and the various incidental expenses. The remaining, almost one-third, is paid for commission, use of coops, cartage, and unloading. (Table 9.) The transportation costs, as already noted (Table 8), vary widely as between the different sections of the country. The remaining costs are fairly uniform irrespective of source of origin. (Fig. 16.)

RETURNS TO SHIPPERS

The net financial return to the shipper is the difference between the wholesale price and the marketing cost. Tables 10, 11, and 12 show the net return per pound to shippers for colored fowl, chickens, and broilers according to point of origin and month of year.

FOR FOWL

The returns to shippers for colored fowl [11] follow the same course from month to month as do the wholesale prices for this class in corresponding months, which naturally results from the fact that returns to shippers are the wholesale prices minus the costs of marketing. The interesting fact to be observed is that the monthly returns per pound to shippers of fowl are the greatest in winter and spring, when supplies of this class of poultry are the greatest, and are lowest during the summer and early fall, when supplies of this class reach their lowest point. The net returns per pound to shippers in summer for this class of poultry are still further decreased because the marketing costs are greater in summer than in winter.

[11] In the terminology of the trade colored poultry includes all of the general-purpose meat breeds; Leghorn poultry includes all of the Mediterranean types.

TABLE 10.—*Colored fowl; average return per pound to shipper, by months, May, 1925, to April, 1926 (freight shipments)*

Origin	1925								1926			
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Alabama	23.8	22.3	20.3	20.3	22.9	21.0	18.0	23.3	25.4	24.7	26.5	27.0
Atlanta, Ga	24.9	23.9	20.7	19.8	20.0	20.9	19.4	22.0	25.0	25.0	28.0	28.8
Arkansas	21.1	21.9	20.5	19.0	19.5	17.6	18.4	22.3	24.4	24.5	27.1	28.3
Chattanooga, Tenn	23.6	22.3	19.1	18.6	21.1	19.7	19.3	22.0	26.6	26.0	27.6	28.5
Chicago, Ill	22.8	23.5	21.7	23.5	25.0	23.9	23.9	20.7	26.9	24.5	26.3	26.8
Connecticut				23.7	28.7	25.3	23.3	20.8	22.0			
Georgia	23.6	23.9	21.3				18.0					
Illinois	22.8	23.5	23.5	23.4	24.9	22.0	21.9	26.8	27.0	26.9	28.5	28.5
Indiana	23.8	24.2	22.7	23.9	24.6	25.0	21.8	25.5	29.4	30.9	30.0	28.4
Iowa	22.8	22.8	21.0	22.7	24.4	23.7	21.5	24.6	27.4	26.7	28.5	28.6
Kansas	21.8	23.3	21.4	22.7	20.7	19.9	21.7	23.8	24.3	25.8	26.8	27.2
Kentucky	24.5	25.4	23.7	22.1	22.1	20.2	20.1	25.0	27.4	26.2	28.1	28.7
Missouri	22.7	23.4	21.2	21.5	22.6	21.1	22.2	24.6	27.1	25.9	28.5	28.1
Maryland	25.7				24.0							
Massachusetts				23.7	22.2	20.6	20.1	25.2			27.8	32.3
Michigan						19.9	17.9	22.2	22.5			
Minnesota			19.0	19.2			24.5	23.2			27.2	
Nebraska	22.0	22.1	21.3	23.6	23.2	20.9	21.7	23.3	24.6	25.8	26.9	26.0
New York					24.3				26.4			33.3
Ohio	23.4	25.1	24.0	24.2	26.2	24.2	24.9	24.8	26.9	25.6	26.6	28.2
Oklahoma	21.4	22.1	19.0	20.4	22.2	20.8	20.5	25.2	25.2	24.9	27.5	27.7
Pennsylvania	23.5	24.5	22.8	20.3	19.4	17.5	20.1	28.4	21.8	25.9	28.2	28.1
Philadelphia, Pa	27.0	22.2				26.5						
South Dakota					22.6	20.6	16.5	22.9	20.7	25.8	24.5	
Tennessee	24.3	23.4	19.4	19.9	20.4	19.4	20.0	23.0	25.5	26.2	28.9	29.1
Texas	23.2	20.2	17.9	17.5	19.9	18.0	24.2	26.9	24.4	24.4	25.6	26.2
Wisconsin							20.3					

TABLE 11.—*Colored chickens; average return per pound to shipper, by months, May, 1925, to April, 1926 (freight shipments)*

Origin	1925								1926			
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Alabama	28.7	26.0	26.8				18.0					
Arkansas					19.5				21.1			
Atlanta, Ga	35.9	33.3	19.7	20.7	23.4	19.6	21.1	20.8	23.0	24.0	28.0	23.4
Chattanooga, Tenn	33.5	29.1	22.1	21.5	20.8	18.7	18.2	22.0	23.4	25.9	25.9	25.9
Chicago, Ill	39.5	34.7	26.3	24.2	21.0	20.3	22.4	25.5	23.0	25.7	26.9	28.2
Connecticut					25.9	19.3						
Georgia	37.8	33.5										
Illinois	30.1	34.2	26.5	23.8	23.2	20.6	20.0	24.2	25.3	25.1	28.0	28.8
Indiana	28.5	27.6	27.8	25.4	23.3	21.3	22.2	24.9	26.3	28.3	27.8	29.1
Iowa	35.4	34.4	24.8	22.3	22.6	21.3	18.9	23.2	24.0	24.2	25.4	26.7
Kansas	32.4	33.3	25.4	21.9	21.5	18.1	21.1	25.5	22.9	26.7	25.9	27.2
Kentucky	36.3	35.4	26.5	24.2	21.5	18.3	21.0	27.1	23.4	24.5	25.9	28.9
Massachusetts				23.5	21.4	18.0	21.0	22.5			30.0	
Michigan								20.2	27.7			
Minnesota			22.0	22.0			23.0	20.5			24.3	
Missouri	34.8	33.5	25.1	23.1	21.5	18.2	18.7	23.5	24.4	25.5	26.8	30.5
Nebraska	39.4	33.1	27.6	22.8	21.9	18.9	20.0	22.7	21.9	23.2	24.6	25.9
New York									20.9			
Ohio	34.6	34.5	28.0	26.1	24.0	21.1	22.1	22.9	23.0	25.8	27.0	28.4
Oklahoma	33.7	31.3	22.2	21.9	20.9	18.0	20.3	23.9	23.8	24.0	25.3	26.9
Pennsylvania	35.0	34.1	27.9	24.5	23.8	19.5	23.0	25.7	29.8	24.9	28.6	29.9
Philadelphia, Pa		27.9				21.7						
South Dakota	33.8	32.9	24.0	21.7	20.4	18.1	13.1	22.8	21.4	25.1	26.5	25.1
Tennessee	32.9	30.3	19.3	21.5	21.0	17.9	18.7	24.3	26.5	26.2	26.4	24.4
Texas	25.8	24.9	19.7	19.1	21.8	19.1	19.8	24.2	21.8	24.3	28.1	29.4
Wisconsin							17.3					

TABLE 12.—*Colored broilers; average return per pound to shipper, by months, May, 1925, to April, 1926 (freight shipments)*

Origin	1925								1926			
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Alabama	34.0	------	------	------	------	------	------	------	------	------	------	------
Arkansas	38.2	------	21.6	21.6	------	------	------	------	------	------	------	------
Atlanta, Ga	------	------	------	------	------	------	23.2	30.1	------	40.2	44.9	42.2
Chattanooga, Tenn	41.9	------	------	------	------	------	------	27.2	26.9	31.7	44.0	41.5
Chicago, Ill	------	------	------	------	------	------	------	------	25.4	38.9	------	------
Georgia	44.3	------	------	------	------	------	------	------	------	------	------	------
Illinois	40.9	35.1	27.9	24.8	23.7	23.6	24.3	29.1	26.9	25.8	38.3	42.2
Iowa	37.0	34.7	23.9	21.9	22.6	20.4	21.1	28.1	26.5	33.2	41.8	40.8
Kansas	42.0	35.5	25.4	25.1	21.6	22.3	23.0	31.4	33.6	38.1	43.2	41.1
Massachusetts	40.2	------	------	------	------	------	------	------	------	------	------	------
Michigan	------	------	------	------	------	------	18.9	------	------	------	------	------
Missouri	40.2	34.0	25.4	22.9	22.1	22.0	24.1	30.4	28.2	35.7	42.6	42.6
Nebraska	39.4	33.6	23.8	22.9	21.4	23.0	25.4	27.3	25.1	23.6	37.8	38.4
New York	------	------	------	------	24.2	------	------	------	------	------	------	------
Ohio	42.3	34.1	28.3	22.8	21.9	21.3	22.0	29.0	26.5	27.9	42.7	41.7
Oklahoma	41.8	35.9	25.5	23.5	22.6	22.0	22.2	30.9	31.3	39.9	30.0	38.5
Pennsylvania	------	------	------	------	------	------	------	------	------	42.2	------	37.7
Philadelphia, Pa	40.5	------	------	------	------	------	------	------	------	------	------	------
Tennessee	40.6	34.2	24.7	22.7	21.8	21.2	21.9	28.9	28.0	35.0	42.9	40.7
Texas	------	------	------	------	------	------	------	------	------	------	------	36.4
Kentucky	41.7	33.5	27.7	22.1	21.2	20.6	21.3	28.3	28.9	27.3	42.0	41.1

FOR CHICKENS

The returns to shippers for chickens obviously follow the same general course as the wholesale prices for chickens. The relationship between the price movement and volume of chickens is different from the relationship in the case of colored fowl. As the volume of chickens decreases during the winter and spring months, the price of this class rises, and the reverse holds true during the rest of the year. This same cycle, therefore, holds for returns to shippers.

The seasonal difference in marketing costs affects chickens as it does all other classes of poultry. That is to say, the marketing costs are greater in summer than at other seasons of the year and this makes the returns to shippers relatively lower during this season than would be the case if it were not for this seasonal increase in marketing costs.

FOR BROILERS

Broiler prices in relation to volume of receipts have been mentioned. It was noted that during the first four months of the year the average weekly prices of broilers increased as the volume slighly increased on the New York City market, reaching the peak price in April. About the latter part of April or the early part of May, when the volume arriving on this market increases rapidly, a corresponding decline in price takes place, continuing until September, when it reaches the lowest point and when receipts of this class of poultry are at a maximum.

The relation between wholesale prices and returns to shippers is the same for broilers as for chickens and fowl. The returns are considerably higher during March, April, and a part of May than during January and February.

This would indicate that it takes a much smaller supply of broilers during January and February to satisfy the demand of consumers at prices which would be satisfactory to producers, than in March, April, and May. Even with the small supplies which now come to

the New York market during the winter months, the market is relatively oversupplied as compared with the early spring months, as is indicated by the lower prices which prevail at that time. It therefore appears that unless the demand for fresh broilers in the winter increases materially, poultrymen will make greater profits by marketing broilers during the early spring months than during the winter. (Returns to shippers for Leghorn poultry are found in Tables 18, 19, and 20.)

PRICE-MAKING MECHANISM

Before taking up the analysis of the factors influencing the price of live poultry on the New York market, together with the measurement of the relative influence of each of these factors, a brief survey of the present marketing mechanism for arriving at the price of live poultry in this market is given.

A considerable percentage of the total quantity of live poultry that enters the commercial channels of the country is consumed in New York City. For this reason the prices which prevail on the New York City market no doubt have considerable influence upon the level of prices of live poultry in the other important markets of the country. An important indirect relationship probably also exists between prices of live and of dressed poultry, inasmuch as many live-poultry shippers also operate dressing plants. Such dealers shift from live to dressed shipments as they see an advantage in marketing their product in one form or the other. Thus, it is likely that the New York City live-poultry market, to a marked degree, influences the prices of poultry for all parts of the country tributary to this market.

The market price of a farm commodity is ordinarily regarded as the resultant of the supply of and demand for the commodity in question at a given time and place. This would be the case if buyers and sellers were all possessed of full and detailed information regarding the supply and demand situation relative to that commodity, if they all knew how to use this information, and finally if they were to refrain from entering into illicit agreements with one another and were to allow competitive forces to freely work themselves out. It is doubtful if any of these conditions are fully met on the New York City live-poultry market at present. As a result, a method of arriving at poultry prices and making returns to shippers is in vogue which is often considerably at variance with the foregoing principle.

The method of arriving at wholesale price of live poultry on this market is briefly as follows:

A representative of a private price-reporting agency of high standing visits West Washington Market between 12 o'clock noon and 1 p. m. each day of the week except Saturday and Sunday for the purpose of obtaining from the members of the trade a report of their morning's transactions. He is usually met by a group of buyers and sellers who surround him, and the more aggressive ones immediately try to impress him with their ideas of what the price for the different classes of poultry should be. Sometimes the ardor manifested in making their point takes on near-mob proportions, but such extreme demonstrations are not frequent, and the dickering, although usually loud and boisterous, is ordinarily harmless. Each dealer is likely to have some personal motive for the position he takes in his interpretation

of the market or for the price he reports for the transaction which he may claim he has made. Because of his particular commitments he exerts himself to have the price of a given class of poultry quoted higher or lower as circumstances may suggest. If, for example, a buyer has made heavy purchases during the early part of the week, which he does not expect to work off until the latter part of the week, when most of the poultry is consumed, he will be interested in maintaining prices at a relatively high level. He will try to influence the reporter to quote the price he wishes, and to support his argument he will tell the reporter that he has purchased the poultry from a certain receiver (whom he will name) at a certain definite price. The reporter will ask this receiver for a confirmation of the alleged transaction, and such confirmation is almost invariably forthcoming. The facts of the case usually are that the alleged price is conditioned on what the subsequent quotation will be. The particular transaction in question is, therefore, used to influence a price which ultimately will itself form the basis of settlement.

The reporter then proceeds to question other buyers and sellers who gather closely about him, some whispering to him, and others, less accessible, shouting in a loud voice. He passes from one business place to another of the various receivers, followed by some of the dealers, and is met by new ones who gather about him until, in an hour or so, he has made the rounds of the market, which covers several blocks. In the course of his movements he has received the reports of prices paid by various buyers and has had these prices confirmed by the corresponding sellers, but frequently they are interspersed by denials of the bystanders, of reported sales and purchases. Insinuations are made that particular sales and purchases reported by certain dealers are fictitious and should not be considered. Upon this medley of affirmations and denials the reporter must exercise his best judgment, arrive at a price for the different classes of poultry, and issue a report. This is no easy task, and it may be said with all candor that it is being done remarkably well considering the difficulties of the situation. The reports of live-poultry prices, along with those of many other dairy and poultry products, appear later in the afternoon in The Producer's Daily Price Current, and the prices published there constitute the basis upon which returns are later made to the shippers. These price quotations are also the basis upon which settlement is made between buyer and receiver in New York City.

The illustration cited above, in which a buyer has purchased large supplies early in the week and therefore attempts to maintain the quotation on a high level until he has disposed of his stocks, is paralleled in the case of the receiver who may have guaranteed a price to the western shipper and, in order to safeguard himself, attempts with all the support he can muster to maintain the price until his commitments have been cleared. The result of such action is to maintain an artificially high price for a few days and thus stimulate an abnormally large flow of poultry to the market. This may be followed by a drastic drop in price, bringing heavy losses to the shipper who may have started one or more cars on the way. An illustration of this occurred during the month of March, 1926, in which such a situation developed and produced a drop in price of 4 cents per pound the following week.

At other times the predominant interests of the trade may be in the direction of an artificially low market which, as a matter of fact, would normally be the case following the type of situation mentioned above, in order that the accumulation of surplus stocks might be worked off.

Again it may happen that no sales or purchases are reported, which is almost invariably the case on Mondays. The market is said to be "left open"—that is to say, no quotation is issued. It frequently occurs that the market is "left open" on Tuesday as well, and occasionally on Wednesday and even Thursday. Thus a situation develops in which buyers take their supplies on Monday (the quantity varies from 30 to 70 carloads) and sell them at a definite price without knowing the price they must pay for them. The situation may be still further aggravated by the buyers taking additional supplies on Tuesdays, and on Wednesdays, and occasionally even on Thursdays, before the price has been determined. These accumulated supplies of two or three days have been delivered to the slaughterhouse plants, a large part of them sold to the retailers, and a considerable quantity of them consumed before the wholesale buyer knows how much he must pay. It is easy therefore to see how, under such conditions, dealers are tempted to use every known device to safeguard themselves.

It should perhaps be reemphasized that usually the prices reported to the price-reporting agency by the dealers (when its representative visits the market during the noon hour) are "conditional prices." Although the reporter accepts reports given him by the dealers as sales and purchases consummated at definite prices, as a matter of fact all sales and purchases of any consequence are conditional transactions; that is to say they are, in reality, all made with reference to the quotation, which, in its turn, was based upon these tentative transactions.

At best, the transactions reported to the price reporter represent the judgment of the dealers as to what prices should be, but rarely do they represent actual consummated transactions at a definite price. At worst these reported sales and purchases may conceal the true situation, causing prices to be considerably at variance with what they would be if supply and demand conditions were the sole controlling factors.

Under this arrangement it does not matter so much to the dealers in the New York City trade whether prices are out of line with what fundamental economic factors seem to warrant. The chief concern of the dealers is to make sure that all shall operate on the same basis and that none shall have an advantage so far as the basic price is concerned.

This situation is very disconcerting to the shipper, who frequently buys poultry from the farmers for several days without actual wholesale prices having been established on the New York City market to guide him in his purchases in the country. The natural effect of these circumstances is to cause him at times to take wider margins than would otherwise be necessary; thus the harmful influence of the system extends back to the farmers. Where competitive conditions make it impossible for the shipper to recoup himself in this manner, he suffers serious and often ruinous losses.

To give some degree of flexibility to a system in which only one price (instead of a price range) is quoted for a given class of poultry regardless of weight, quality, or other pertinent factors, adjustments are made by paying premiums or discounts based upon this quoted price, so that when purchases are made at the terminals in the morning, the terms of settlement are always either "at the quotation," or a certain number of cents "below" or "above the quotation." Thus "premiums" (payments in excess of the quoted prices) are paid for superior stock and "discounts" for inferior stock.

Receivers complain that buyers who may agree to pay a definite price for their stocks when they secure their goods at the terminal in the morning, fail to do so in case the quotation which appears later does not coincide with the price agreed upon. If the quotation should be lower, the buyer, according to the testimony of the receiver, insists upon the benefit of the lower price, and when he makes remittance will transmit a check only for such amount as corresponds to the quoted price. On the other hand, if the quotation should be higher, the buyer will insist upon the original agreement. In so far as this situation exists, it appears to be a result of the peculiar credit relationship between receiver and buyer and of the fear of the former that he will not only lose the immediate sale if he does not yield to the buyer's demand but that he may also lose the amount which may be due him from previous transactions.

The shipper, too, is greatly interested in the quotation, as he expects to receive his returns on the basis of it. Thus the receiver is not able to recoup himself for the losses incurred in his dealings with the buyers by making correspondingly lower returns to the shippers. This situation, according to the testimony of a large number of receivers, makes serious inroads upon their commissions and at times puts them out of business entirely. The credit relationship noted above between receiver and buyer exists also between receiver and shipper and contributes to the complication.

One of the greatest disadvantages of this method of trading is that it restricts the scope for the exercise of individual business judgment and initiative on the part of the strong men engaged in the business. So long as prices are established in this way, the dealers, weak and strong alike, are all on approximately the same plane. The men of the trade speak of the intense competition which exists in this industry, but as a matter of fact, the term "competition" does not correctly describe the situation. It has been more aptly described as "price paralysis." The usual concept of competition presupposes a number of traders buying and selling independently on the basis of their respective judgments and actually consummating their sales and purchases upon this basis.

In the live-poultry industry, however, a third party intervenes to crystallize the opinions of the dealers as to what prices should be, and not until this third party interprets these opinions in the form of a quotation are the transactions actually consummated. Although the price arrived at in this way may, in general, on the average, and in the long run, not vary much from what it would be were the goods sold on the basis of independent bids and offers, there is a chance that the current basic price, in terms of which the transactions are ultimately completed, may be considerably out of line with what it would be if real open-market trading prevailed. There is no doubt

that such a condition occurs with more or less frequency, and the possibility of it at all times is inherent in the system.

Another defect relates to the failure to pay a price corresponding to the quality of the product. It is recognized as a sound marketing principle that high-class goods should exchange for correspondingly high prices and vice versa. Although some recognition is given to quality by the system of "premiums" over the quotation, the plan is cumbersome and not sufficiently flexible. Each lot of goods should be sold on its merits, and both farmers and consumers would share in the advantages which would accrue if such a method of carrying on the business were adopted.

Another type of complaint which comes largely from shippers and buyers arises out of the alleged practice of requiring the buyer to purchase a class and a quantity of poultry which he frequently does not want in order to secure the kind and quantity of the class he needs. For example, a receiver may require a buyer to take a certain number of coops of heavy fowl, for which the demand may at the time be sluggish, as a condition for supplying him with medium-weight fowl if the demand for the latter is strong. This is a normal situation during much of the year, with the exception of the periods of two or three weeks immediately preceding important Jewish holidays.

Again, the situation may involve broilers. A special low price may be made on a relatively small quantity of broilers in order to move a much larger quantity of fowl at a higher price than supply and demand conditions for fowl might warrant. Inasmuch as broilers and fowls, or light and heavy fowl, as the case may be, may come from entirely different shippers, this practice tends to benefit one at the expense of another. The slaughterhouse man also complains that under such circumstances he is often obliged to sell a considerable portion of his supplies at a loss.

According to advices from slaughterhouse men, medium-weight fowl normally command a materially higher price than heavy fowl until a few weeks before the Jewish holidays, when the housewife begins to accumulate shortening for holiday baking. A single price for fowl regardless of weight or quality, therefore, does not attract the desired type of fowl in sufficient quantity, and it does not discourage the shipment of the heavy fowl that are not wanted. If wholesale prices of fowl were made so as to truly reflect consumer preferences, it would tend to reduce the shipment of heavy fowl during those parts of the year when the demand for poultry of this type is light. This would have the double effect of saving the feed which contributed to producing the superfluous weight [12] and of maintaining the wholesale level of fowl prices on a higher plane without an additional burden upon the consumer.

PRICE AND SUPPLY MOVEMENTS OF PRINCIPAL CLASSES OF POULTRY

The receipts of fowl, chickens, and broilers combined, constitute the bulk of the supply of live poultry on this market at all seasons of the year. Subsequent price analyses will, therefore, center about

[12] Heavy fowl come chiefly from Corn Belt States, where hens cease laying in early fall and thus produce no return. To insure maximum profits to the farmer these hens should be placed on the market soon after they stop laying.

these three classes. The characteristic price and supply movements of each of these classes are first considered, and later a more detailed analysis of prices is made, in which the various factors influencing the price are determined and the relative importance of each is measured.

COLORED FOWL

The monthly movement of prices of colored fowl (freight shipments) from 1920 to 1926, inclusive (Urner-Barry quotations), is presented in Figure 18. The seasonal changes for each of the years show a marked similarity. This fact makes it possible to generalize on the seasonal movement of the prices of live poultry and to represent the generalization graphically. (Fig. 19.) Here are shown the average prices for each month for the years 1920 to 1926, inclusive, and the peaks in March, September, and December are clearly por-

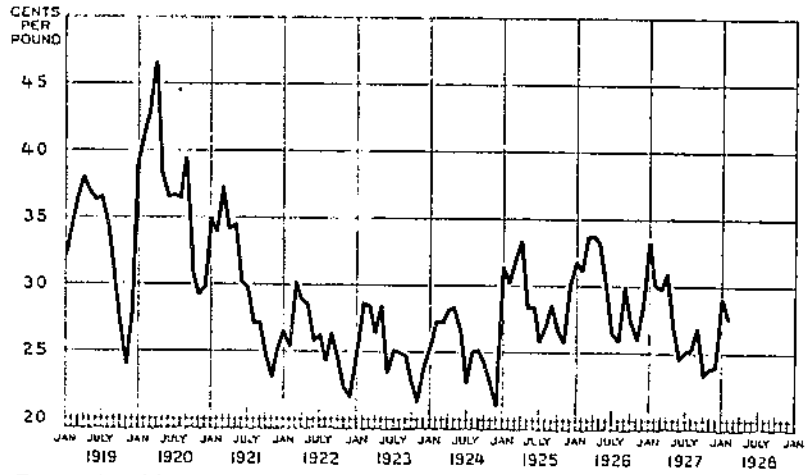

FIGURE 18.—MONTHLY PRICE QUOTATIONS OF COLORED FOWL IN NEW YORK CITY

There is a pronounced seasonal variation in monthly fowl prices.

trayed. The high prices during these months are caused by the Jewish-holiday demand, supplemented by gentile consumption.

Although average monthly prices may show the general course of prices throughout the year, greater detail is needed as a practical guide to the men in the industry. The relationship between weekly volume and price of colored fowl, chickens, and broilers is shown graphically in Figures 20, 21, and 22. The normal seasonal movements of prices of colored fowl (fig. 20) during both years is seen to be upward from January through March with a sharp rise in the latter month, and downward during the remainder of the year, with sharp upturns in September and December.

The volume of receipts of colored fowl increases during the months in which prices of fowl increase and decreases during the months in which prices of fowl decrease. On the other hand, as the total supplies of all classes of poultry increase, the price of fowl decreases. The week-to-week movement of both price and receipts of colored fowl presents, when plotted a saw-tooth effect with an apparent tendency for the volume of weekly purchases to move in the opposite

direction from average weekly prices. This tendency does not hold in every case, however, during the principal Jewish holidays.

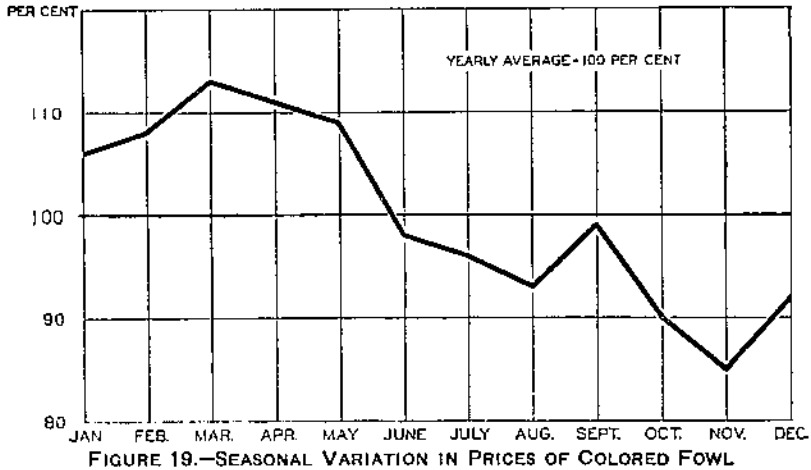

FIGURE 19.—SEASONAL VARIATION IN PRICES OF COLORED FOWL

Normal seasonal variation in the price of colored fowl, as determined for the period of 1920–1925, inclusive. Fowl prices usually rise from January to March, and then steadily decrease to November, but the decline is interrupted in September because of the Jewish festivities in the fall.

The similarity of movement of prices in relation to receipts during the two years is striking, and probably justifies both the conclusion that these movements of price and volume are characteristic of this

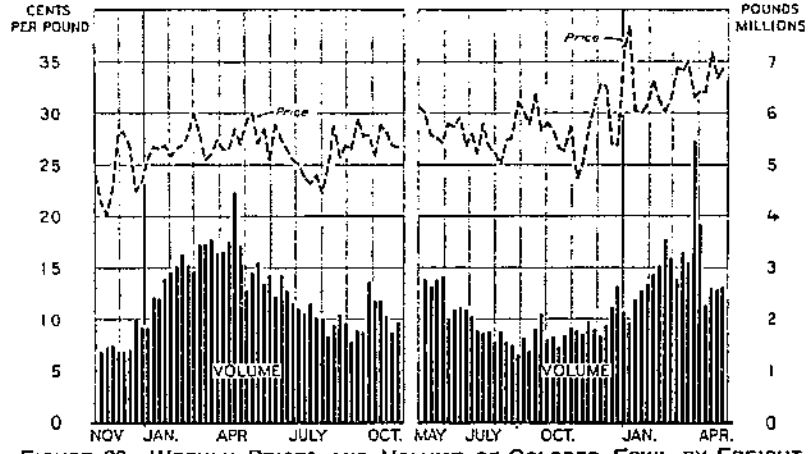

FIGURE 20.—WEEKLY PRICES AND VOLUME OF COLORED FOWL BY FREIGHT SHIPMENTS

In a general way fowl volume and prices move in the same direction.

class of poultry and the belief that it shows the general movements in other years.

COLORED CHICKENS

The class of poultry called colored chickens diminishes in volume from January to May, then increases until October, and remains about constant during November and December. The general

change in the price of chickens during the year is in the opposite direction from the change in volume of this class of poultry. (Fig.

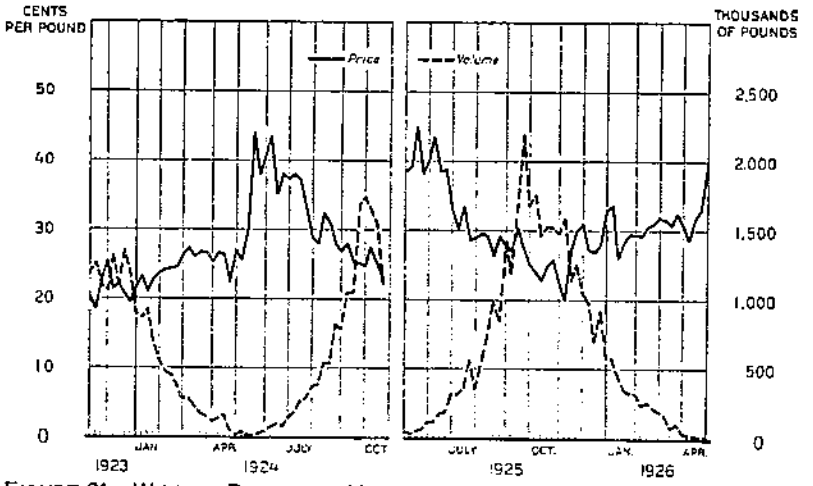

FIGURE 21.—WEEKLY PRICES AND VOLUME OF COLORED CHICKENS BY FREIGHT SHIPMENTS

During the first five months of the year, as the volume steadily decreases, prices steadily increase. In May there is a sharp rise in prices. During the remainder of the year the reverse holds true.

21.) The relationship is thus seen to be the reverse of that noted in the case of colored fowl. The tendencies observed in the relation

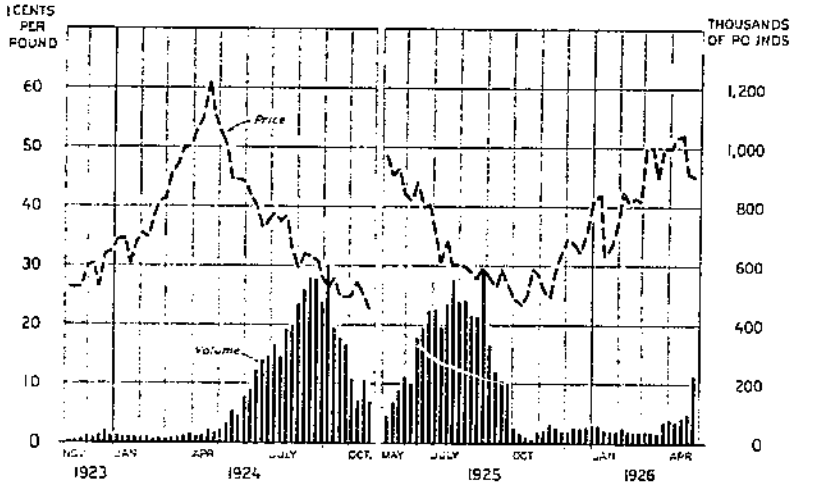

FIGURE 22.—WEEKLY PRICES AND VOLUME OF COLORED BROILERS BY FREIGHT SHIPMENTS

From November to April the volume is small and practically constant. During the early part of this period prices steadily rise, and after February show a sharp increase. Prices begin to drop soon after volume shows signs of increase. A lag of about seven weeks should be noted between the highest point in volume and the lowest point in price.

of volume and price of chickens is practically identical for the two years given, which indicates that the survey years are probably fairly

representative of price and volume movements of this class of poultry from year to year.

COLORED BROILERS

The movements of broiler prices in relation to receipts of this class of poultry are similar to those of colored chickens. (Fig. 22.) That is to say, during the seasons in which receipts of broilers are large, prices are low, and when receipts are small, prices are high. In this respect broilers and chickens are alike and each differs from colored fowl.

Certain biological factors relating to these three classes of poultry should be noted in passing. Broilers constitute the youngest birds, chickens represent the next stage, and fowl the mature bird. These classes merge one into the other as the season advances. Therefore broilers are found increasing in volume from April through August; then the numbers suddenly decline because the birds have become too heavy to be classed as broilers and have become chickens. From September through the end of the year and the early months of the new year chickens arrive in large volume, to decline rapidly in numbers in late winter and early spring, since, by that time, most of them have developed into mature classes of poultry. The period of greatest relative receipts of fowl is from January to June (at one period upward of 90 per cent of the total supply is of this class) although shipments of this class of poultry respond to the high prices in anticipation of the Jewish holidays in September. Unlike the other two classes of poultry involved in this comparison, a large potential supply of fowl exists in the country throughout the entire year, which may always be attracted to the market if prices become sufficiently favorable.

PRICE ANALYSIS

PRELIMINARY CONSIDERATIONS

In this discussion of the factors which influence wholesale prices of live poultry on the New York market, together with the measurement of their relative importance, only the results of the study will be presented. For the convenience of the readers who are actively engaged in the commercial aspects of the industry and, therefore, are interested solely in the findings of the study and not in the technical procedure involved in arriving at the results, the technic employed in securing these results will be omitted. Before entering upon the more detailed analysis, a few fundamental terms and assumptions should be made clear.

SUPPLY

The supply factor as a price determinant on this market should be understood to mean the "expected receipts for the week." This term includes the cars of poultry on the tracks at the terminal left over from the previous week, plus the expected new arrivals for the current week. A report of the expected receipts for the week is made each Tuesday morning and exerts a marked influence on the weekly level of prices. It should be pointed out that a very definite bias exists in this weekly report. Of the 85 weeks in the period under consideration (November 1, 1923, to October 31, 1924, and May 1, 1925, to April 30, 1926), the expected receipts were below actual arrivals plus cars on track 74 weeks, above 9 weeks, and in 2

weeks equal to the actual arrivals plus carry-over, or actual supply. The average difference between the expected receipts and the actual supply was about 27 carloads per week below the actual supply.[13] However, in spite of the tendency for the forecast for the week to underestimate actual supply, it exercises a greater influence on the price than does the actual supply during the week.

The total supply of live poultry in the country tributary to this market doubtless has an influence upon the prices of live poultry. This is evidenced by the extent to which the general level of dressed-poultry prices from year to year tends to vary with live-poultry prices. This indicates that both prices are responsive to changes in the general supply of poultry throughout the country. It would be of considerable value to the industry if it were more definitely known what changes were taking place in the total supply and the production from period to period. If these data were available it would then be possible to determine more accurately just how far the New York live-poultry price reflected the general supply situation. A study of the long-time relationship between country-wide supply and wholesale prices on the New York market will therefore have to be postponed until adequate basic statistics on poultry production are available.

CHANGES IN DEMAND

The term "changes in demand" will be understood to mean either changes in the quantity bought from day to day at the same price or the same quantity purchased at a higher price. The level of price is largely determined from the expected receipts for the week.

Of the quantity bought from day to day at the terminals, or at West Washington Market by slaughterhouse buyers, not all goes into immediate consumption. The tendency is for slaughterhouse men to purchase more during the early days of the week than is needed for their immediate trade and thus accumulate their supplies to take care of the large week-end demand of the ultimate consumer. These stocks which accumulate on the floors of the slaughterhouses are an unknown quantity, at present, to the general trade. It would be very desirable if this information were available, as stocks held on dealers' floors doubtless have some bearing on wholesale prices of colored fowl, since the portion of the floor stocks carried over constitutes part of the next week's supply. It is expected that this information will shortly become available in market news reports of the Bureau of Agricultural Economics.

MEASUREMENT OF FACTORS THAT INFLUENCE PRICE

GENERAL ASPECTS

In analyzing the price movements in the live-poultry industry in New York City it was necessary to consider the time unit in terms of which the trade is accustomed to think in arriving at a price. Almost all the live-poultry buyers in New York City go to the market with the thought of supplying their trade not only for a given day but for the entire week. With this in mind they bid for live poultry. Although a forecast of the expected weekly receipts is made on Tuesday,

[13] The difference between actual supply and expected receipts, as reported by the Bureau of Agricultural Economics since February, 1927, is considerably less.

the heavier trading is done on Wednesday and Thursday; but often a large volume is sold on Tuesday and occasionally on Friday. Figure 23 indicates the daily changes in purchases by slaughterhouse men during the week.[14] Wholesale receivers, it will be observed, have a greater opportunity of selling live poultry on Wednesday and Thursday than during the other days of the week. However, there are times when live-poultry receivers obtain a greater price either on Tuesday or on Friday than on Wednesday or Thursday, depending upon which days the Jewish holidays, and to a lesser extent the gentile holidays, fall. During the important Jewish holidays the demand is such that a supply from 25 to 50 per cent greater than usual will be taken without lowering the price and occasionally at a price higher than the prevailing one. In view of the fact that the volume sold on Wednesday and Thursday in most cases is much

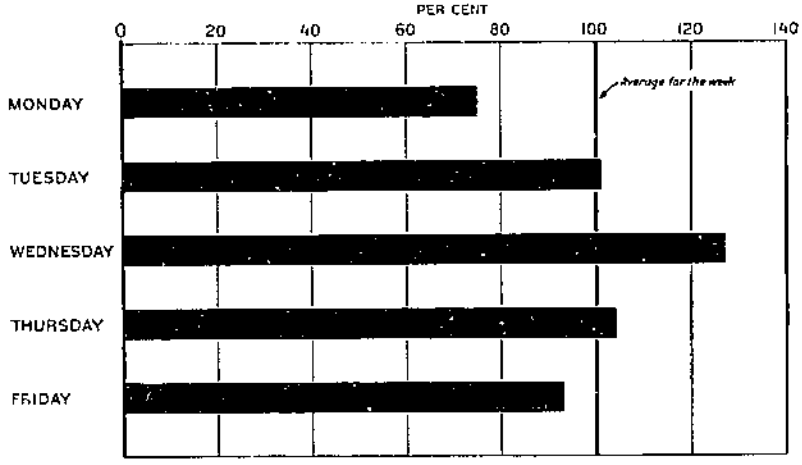

FIGURE 23.—DAILY VARIATION IN THE WHOLESALE SALES OF LIVE POULTRY IN NEW YORK CITY

Daily sales are expressed as percentages of the average for the week. Wholesale sales of live poultry are greatest on Wednesday.

greater than that sold on any other days during the week, it was felt that the average price paid on Wednesday and Thursday for live colored fowl is more representative of the prices prevailing during the week than is the simple average of prices on all five trading days of the week. Figure 24 shows the relation of the average weekly price of colored fowl to the Wednesday and Thursday prices. In practically every case the price on Wednesday and Thursday was nearly the same as the simple average for the week. Hereafter, therefore, in this bulletin, when the average weekly price is referred to, it will be understood to mean the average Wednesday and Thursday price.

One of the points which would ordinarily be considered would be the influence or effect the prices of goods in general have upon the price of colored fowl, for in many instances the increases in the price of a given commodity might be entirely attributable to the fact that

[14] This index was found by adding the volume sold by days and striking an average daily sale during the week and then finding the ratio of the quantity sold each day to the average.

the general price level is increasing. In this study, however, it was difficult to determine the effects of prices of other commodities on fowl prices because the period studied was too short and broken. Therefore no attempt was made to determine if poultry prices were influenced by changes in the general price level.

Colored-fowl prices were used as a basis in the price analysis, as this class of poultry constitutes the largest proportion of the total supply during the entire year. Leghorn-fowl prices tend to move in the same direction as colored-fowl prices. The price spread, however, between these two classes becomes greater during the fall and early winter months. This is primarily due to the fact that Leghorn fowl are shipped in greater quantities then than at other times of

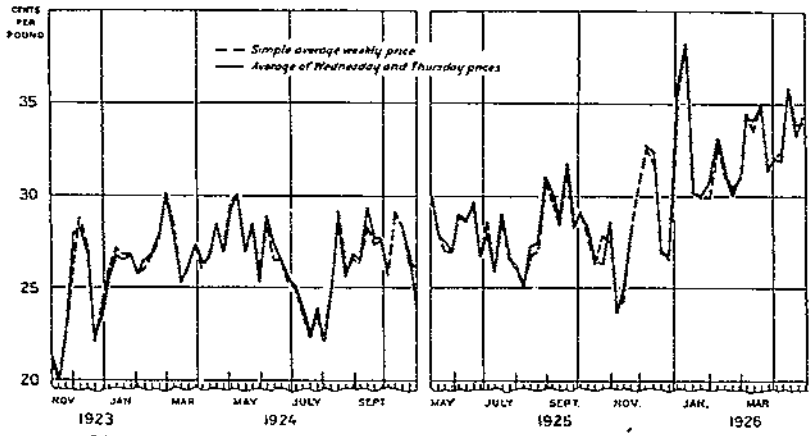

FIGURE 24.—AVERAGE WEDNESDAY AND THURSDAY PRICES OF COLORED FOWL AND SIMPLE AVERAGE WEEKLY PRICES IN NEW YORK CITY

Average Wednesday and Thursday price follows the same course as the simple average price for the week.

the year; but there was no evidence that at any time the price of Leghorn fowl affected the price of colored fowl.

The changes in percentage of supply of Leghorn fowl on the New York market throughout the year show the same general course as those of chickens, which are just the reverse of those of colored fowl.

Figure 25 shows the relation between the expected receipts of live poultry for the week and the price of colored fowl. In almost every case the price moves in opposite direction from the expected receipts for the week. The numbers on the chart indicate the weeks in which the Jewish holidays fall. In these weeks the supply and price tend to move in the same direction, and if in any case the price shows a movement opposite to that of supply, it is because the shippers and receivers overgauge the market. That is to say, even after allowing for the increased demand associated with the Jewish holidays, receipts are sometimes so much larger than requirements for the Jewish holiday that they depress prices. The influence that each of the important Jewish holidays exerts on the supply of the live poultry purchased at a given price will be explained in another section of this bulletin.

The factors which were finally used in the price study are as follows: Expected weekly receipts (including carry-over from the pre-

ceding week); price the previous week; maximum temperature (weekly average); kosher-veal prices; and colored-fowl prices.

RESULTS FOUND BY STATISTICAL ANALYSIS

The statistical analysis of the average weekly price (that is, the average for Wednesday and Thursday) of colored fowl covers the periods from November 1, 1923, to October 31, 1924, and May 1, 1925, to April 30, 1926. The analysis reveals that the following factors exert the greatest influence upon average weekly changes of fowl prices and account for 80 per cent of such changes:

1. Expected receipts for the week (including previous week's carry-over) which dealers use to judge as to the probable number of cars of live poultry which will be available during the week.

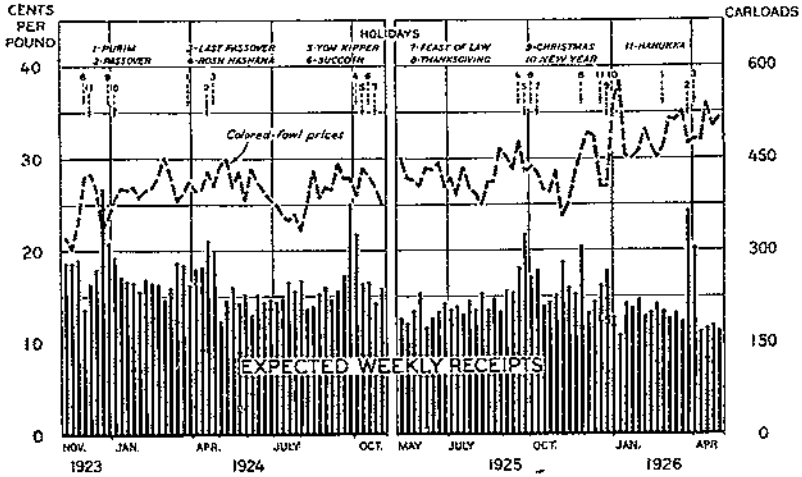

FIGURE 25.—EXPECTED WEEKLY RECEIPTS OF LIVE POULTRY IN NEW YORK CITY AND COLORED-FOWL PRICES

In most cases an increase in expected receipts for the week tends to depress fowl prices. Even during the Jewish holidays an unusual increase in expected weekly receipts sometimes depress prices.

2. The maximum temperature during the week.

3. Kosher-veal prices (veal is one of the important substitutes for live poultry).

4. Previous week's prices of colored fowl.

The prices of chickens, broilers, and alternative products other than veal, such as kosher beef and lamb, and the consumer's purchasing power in New York City as measured by the total pay roll (including the garment industry), exerted some influence although not enough to indicate any important effect on the price of colored fowl.

As noted before, 80 per cent of the variation in colored-fowl prices can be explained by changes in the factors measured in this study, and only 20 per cent of the variation remains unaccounted for. Of this remaining 20 per cent of variation unaccounted for, a part may be due to the following factors: (1) The practice among receivers of guaranteeing a price to shippers, a practice which occurs to such an extent that occasionally prices may be considerably distorted for several days at a time. (2) The practice of receivers of allowing

stocks to accumulate on track during February and March to a much greater extent than usual. This practice is doubtless caused by the fact that there is a normal tendency for colored-fowl prices to rise during this period in anticipation of the important Jewish holidays later in the season. (3) Lack of information regarding the accumulated stocks on the floors of slaughterhouses during the week. No doubt there is considerable variation in the quantities so held at different times of the year. (4) Failure to quote prices during the early part of the week.[15]

The relative importance of each factor as a cause of change in fowl prices is in a general way indicated by a mathematical measurement of the significance of each factor. In this way changes in fowl prices for the period studied can be statistically related to the variations in each of the other factors included in this study. These factors are the expected receipts for the week, price of the previous week, temperature, and kosher-veal prices.

Expected receipts for the week was the most important of the four factors and accounted for approximately 40 per cent of the variation in fowl prices. The next most important factor was found to be the price of fowl during the previous week. This factor was responsible for about 25 per cent of the variation in fowl prices. The remaining two factors—temperature and kosher-veal prices—accounted for about 8 per cent and 5 per cent, respectively, of the changes in fowl prices. Although the foregoing figures represent the relative importance of each factor when the effects of only these four factors on price are measured, the figures would be slightly modified if the effects of all the possible factors were measurable and were used in the computation. The extent of this modification is dependent upon the relative amount which remains unaccounted for, which in this case was about 20 per cent.

On the average, whenever, without changes in other factors, the expected receipts for the week increase or the temperature increases, the price of colored fowl tends to decrease. On the other hand, as between two different weeks when the expected receipts for the week, the temperature, and kosher-veal prices were the same, but the fowl price in one instance had been higher the preceding week than in the other instance, that usually tended to raise the price in the former case above what it would otherwise have been. Such sustaining effect of the price of the previous week upon the next week's price rarely exceeded 2 cents.

Similarly, as between two different weeks with the same supplies and temperature and with the fowl price the preceding week the same in both cases, but with kosher-veal prices higher in one week than in the other, the higher price for veal tended to cause a higher price for fowl.

RELATION OF PRICES FOR COLORED FOWL TO EACH IMPORTANT FACTOR

The following discussion includes, in some detail, the extent to which fowl prices change, on the average, with specific changes in each of the known factors which exert an influence on the prices of colored fowl. In measuring the response of fowl prices to changes in each of the price determinants taken alone, the influence of the other factors is held constant.

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[15] See p. 31.

EXPECTED RECEIPTS FOR THE WEEK AS A FACTOR

The relation between the expected receipts for the week of live poultry and the price received for colored fowl was found to be as indicated in Figure 26. In constructing this curve, allowance was made for the relation of colored-fowl prices to the other factors mentioned above. In other words, this curve indicates the relation between the expected receipts for the week and colored-fowl prices when no changes occur in the other factors, as determined by statistical means.

Fowl prices show about the same amount of change for each change in expected receipts when the expected receipts for the week range from about 220 to 300 carloads. (Fig. 26.) When the expected

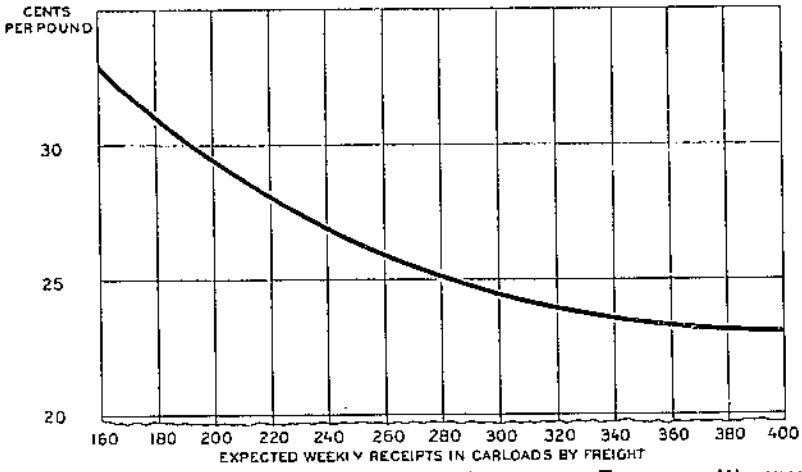

FIGURE 26.—RELATION OF COLORED-FOWL PRICES TO EXPECTED WEEKLY RECEIPTS OF LIVE POULTRY IN CARLOADS ARRIVING IN NEW YORK CITY

Variation in fowl prices for given variation in expected weekly receipts, after eliminating the effects of other factors which influence price. On the average, expected weekly receipts cause greater changes in price between 180 carloads and 360 than beyond the 360 mark, when the influence of further increases in supply is almost negligible.

receipts for the week are less than 220 carloads, on the average, an increase of 20 cars in the supply will cause a decrease of over 1.6 cents in price, which is a greater change in the price of colored fowl than in the supply-range previously noted. When the expected receipts for the week range from 200 to 360 carloads, an increase of 20 carloads in the expected supply will cause a reduction of 0.9 cent in the price, on the average. When the expected receipts exceed 360 carloads per week the corresponding change in price is much less. This does not necessarily mean that the supply factor beyond this point exerts no influence. The receivers refuse to unload whenever they consider that the price is too low to give a fair return to the shippers whom they represent and hold the poultry until prices become more favorable. That is the reason larger receipts do not depress the price still further. This of course holds true only during the periods in which no Jewish holidays occur and, to a lesser extent during the periods in which no gentile holidays occur.

KOSHER VEAL AS A FACTOR

The analysis indicates that fowl prices are to a considerable degree related to kosher-veal prices, with the influence of other factors held constant. The prices of colored fowl increase 8 cents on the average with each 5-cent increase in kosher-veal prices. In this study the relation between fowl prices and kosher-veal prices is the same at all price ranges. That is, with every 5-cent increase in kosher-veal price, the price of colored fowl on the average changes 8 cents (other factors remaining constant).

Although colored-fowl prices tend to move in the same direction as kosher-veal prices, the tendency is for any changes in kosher-veal prices to follow by a few days (but less than a week) changes in the price of colored fowl. According to the testimony of certain dealers, the underlying reason for this few days' lag is attributable to the buying habits of the ultimate consumer. The housewife, it is said, will go to a retail establishment to purchase live poultry, and when she finds that the prices of fowl have increased considerably over her previous purchase, rather than change immediately to some other kosher meat such as veal, she will purchase the live poultry, but next time she goes to the market she will take some substitute product instead of poultry. The shift from poultry to some other kosher product is mainly to veal and thus forces the price of this product up.

It is the consensus of opinion in the trade that kosher lamb does not serve as a substitute for fowl to any great extent because the difference in price between fowl and lamb is ordinarily considerably less than between fowl and veal, and under these circumstances the housewife chooses fowl rather than lamb.

According to the present study, the relation between colored-fowl prices and kosher lamb and beef prices is not a close one. Therefore it was decided to omit them in the final calculations.

TEMPERATURE AS A FACTOR

Temperature in New York City plays an important part in affecting week-to-week price changes of colored fowl. Figure 27 shows the net relation between maximum temperature [16] and colored-fowl prices in New York City at different seasons of the year. The curves indicate a marked inverse relation, that is, on an average an increase in maximum temperature of 10° tends to depress the price per pound of colored fowl by 0.5 cent.

The underlying causes of the relation between temperature and colored-fowl prices are the habits of consumers, who shift to a different type of diet as the thermometer registers higher, and vice versa. This statement is subject to the following modifications: During the period April to June, within the range of 50° to 70° F., an increase of 20° in temperature causes a decline in fowl prices of 3 cents per pound on the average. Figure 27 shows that beyond 70° the temperature does not cause quite as marked further decrease in price.

During the period January to March a rather striking relationship between temperature and price is to be observed. When the maximum temperature drops from 40° to 30° F., unlike the situation at

[16] Maximum temperature was used instead of the average of the range because it was felt that if temperature exerted any influence on the variation of fowl prices it would be in the extreme rather than the average.

other times of the year, fowl prices show an average decrease of 1 cent per pound. The probable reason is that temperature below 40°

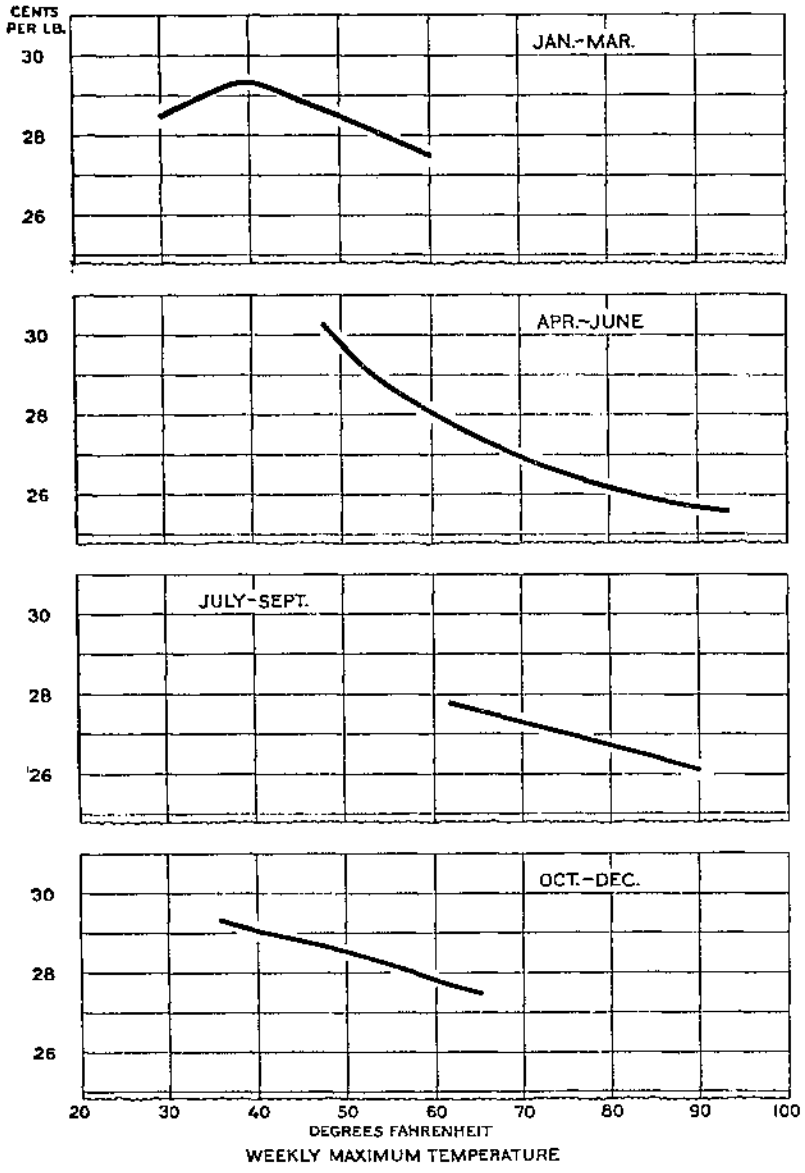

FIGURE 27.—RELATION OF COLORED-FOWL PRICES TO WEEKLY MAXIMUM TEMPERATURE NEW YORK CITY

After eliminating the effects of all other factors these curves show how colored-fowl prices varied with temperature during different seasons of the year. When weekly maximum temperature falls below 40° F. during winter months, fowl prices, unlike other times, decrease with each succeeding drop in temperature. Beyond 40° the reverse holds true. Fowl prices respond to temperature much more rapidly between 50° and 60° in May and through June than at any other time during the year.

is likely to be associated with relatively long periods of inclement weather, during which time the housewife may forego the purchase

of her usual supplies. This in turn would reduce the requirements of the wholesale buyer. This seems all the more probable because of the fact that live poultry, unlike most other commodities, is invariably purchased only after personal inspection. Above 40° the general relationship between temperature and price is followed.

PRICE DURING PREVIOUS WEEK AS FACTOR

Another factor which exerts considerable influence on the variation of colored-fowl prices is the price of this class of poultry during the previous week. The average live-poultry dealer at the beginning of each business week is guided in his ideas of prices of colored fowl by the price level of colored fowl during the previous week. This price of the previous week is the most concrete expression of value available to him, and whether it is done consciously or not the poultry receiver as well as the buyer uses this price as a point of departure in his estimates of value during the current week. This subconscious dependence upon the price of the previous week as a guide to estimating values for the current week is probably due to the fact that there is a certain price stability in most economic series from week to week and this principle applies to the live-poultry industry in New York City as well as to other industries. Prices of colored fowl during the current week, it should be noted, in their relationship to those of the previous week, reflect the cumulative influence of conditions during a period of several weeks. This is especially true in those seasons which include the important Jewish holidays.

As previously stated, in two separate weeks when the expected weekly receipts, the temperature, and the kosher-veal prices are the same, but when the fowl prices the preceding week have been higher in one instance than in the other instance, that fact tended to raise the price in the first instance above what it otherwise would have been. That is to say, as between two different weeks, in which conditions were otherwise identical, if the price of colored fowl the preceding week in one instance was, for example, 25 cents, the price during the given week on the average would be 26½ cents; and in the other instance if the price the preceding week was 30 cents the price in the given week on the average would be 28½ cents. (Fig. 28.)

Although (other factors remaining unchanged) the relationship between the price of fowl during a given week and that of the following week is as indicated above, the combined forces of the expected weekly receipts, the temperature, and the kosher-veal prices, operating at the same time, tend to modify the changes in price from week to week.

Figure 29 shows the difference between the prices of colored fowl for each week and those of the following week, in turn through the two survey years. It will be noted that the difference in price from week to week seldom exceeds 2½ cents per pound except where unusual conditions are injected, such as holiday requirements. The important holiday seasons which modify considerably the usual consumption of live poultry center around the early spring months, the early fall months, and the Thanksgiving-Christmas holiday season. During these periods the changes in fowl prices may be very violent from week to week on account of the difficulty of adjusting supply to the marked change in consumptive requirements. But even in-

cluding these rather violent fluctuations the average difference in price from week to week is only about 2 cents per pound.

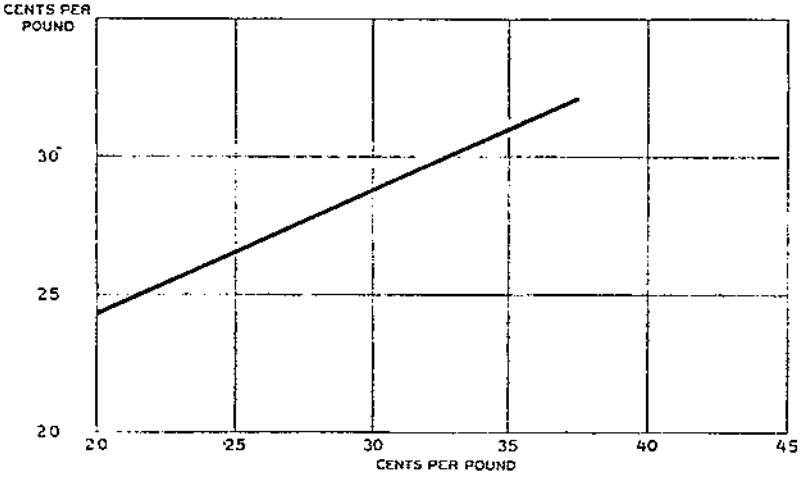

FIGURE 28.—RELATION OF COLORED-FOWL PRICES TO ITS PRICE OF THE PREVIOUS WEEK

After eliminating the influences of other factors this chart shows the influence of fowl prices in a given week on the price in the following week.

During the period studied it may be seen (fig. 29) that the difference in price of colored fowl from week to week was 2 cents or more in 32 instances (weeks in which Jewish and Christian holidays exert

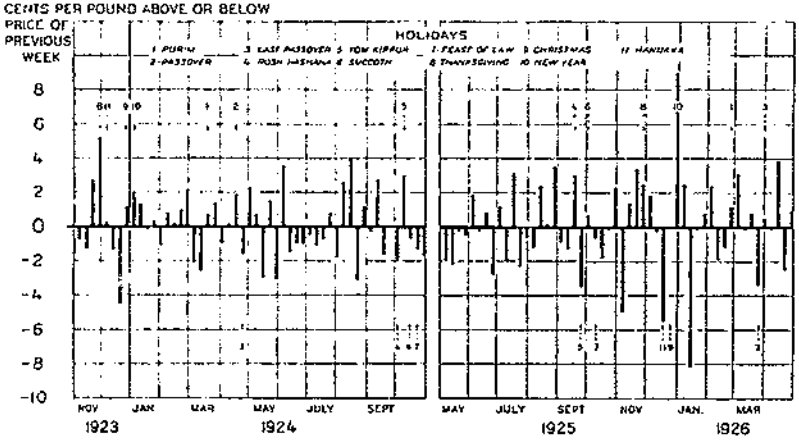

FIGURE 29.—DIFFERENCE BETWEEN THE PRICE OF FOWL FOR EACH WEEK AND THOSE FOR THE FOLLOWING WEEK, EACH IN TURN THROUGH THE PERIOD

The difference in price from week to week seldom exceeds 2½ cents per pound except when unusual conditions are injected such as holiday requirements.

an influence are omitted). In 22 of the 32 instances, when the price of fowl in a given week was 2 cents or more above that of the previous week, a decrease occurred in the following week, or when the price in a given week was 2 cents or more below that of the previous week,

an increase occurred in the following week. In 10 cases out of the 32, when the price changed 2 cents or more from that of the previous week, the change the next week was in the same direction. In the remaining 49 cases the difference in price from week to week was less than 2 cents per pound. It seems, therefore, that the business man in the live-poultry industry can, by excluding the holiday seasons mentioned, estimate quite closely the price of colored fowl during the current week, without considering other facts. That is to say, he can about two times out of three, estimate within 2 cents per pound what the actual price of colored fowl will be.

BUSINESS ACTIVITY

Besides measuring the more specific price-determining factors, it was decided to determine how the prices responded to the variation in business activity. In this study the total pay roll in New York City, including the garment industry, was used. The results show a very slight relationship.

A change of 5 per cent of the business index of New York City (other factors remaining unchanged) indicates an accompanying change of 0.4 per cent in colored-fowl prices. Apparently the prices of colored fowl are not very sensitive to the changes in general business in New York City. This may probably be explained by the fact that the Jewish population (especially the orthodox Jews) are very loath to give up the consumption of live poultry until economic conditions compel a change to substitute products, and, especially in recent years, periods of depression have rarely been prolonged enough seriously to curtail the consumption of this product.

HOLIDAY INFLUENCE

The foregoing discussion relative to the factors influencing the variation of colored-fowl prices was mostly centered on weeks in which no Jewish holidays occurred. The Jewish holidays tend to distort the factors which operate with considerable regularity during other times of the year, and therefore it was felt that their influence should be studied and measured separately.

Religious holidays affect sales in a somewhat variable manner, depending upon their importance and the day of the week on which they occur. When a Jewish holiday or any important holiday falls on Sunday, there is but little increase over the usual Sunday demand, and the influence is not so great on the weekly sales as it would have been if the holiday had occurred on some week day. During this study when the holiday came on a week day it was found that the ultimate consumer bought more live poultry than he usually did for normal requirements; namely, the usual week-end supply, plus the requirements for the additional holiday.

All the holidays do not exert the same influence on sales. Figure 30 shows the percentage influence, or the quantity consumed above normal requirements, at different seasons of the year. These percentages were found by taking the average of the two previous weeks as normal, and then finding the percentage increase in quantities sold on each of these holidays in comparison with the average for the two previous weeks. This was done for each of the three years and an average was made. Some correction had to be made so as to allow

for the holidays which fell on Sunday. It will be noted that Passover and Rosh Hashana (Jewish New Year) exert the greatest influence of all the Jewish holidays. Yom Kippur and Hanukka and Last Passover are next in importance. Purim, Feast of Law, and Succoth show very little evidence of causing any unusual increase in demand. Of the gentile holidays, Thanksgiving and Christmas exert the greatest influence.

The above figures are fairly good indexes by which both the shippers and the receivers may gauge, on the average, the increase in sales each holiday will bring, but it should be remembered that these figures are based on only three years' sales (including 1927) and are, therefore, subject to some error. It is felt that these figures may be

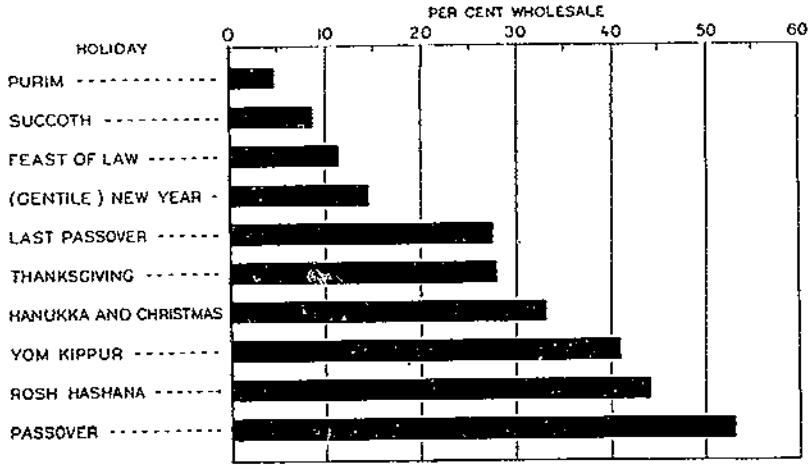

FIGURE 30.—INFLUENCE OF HOLIDAYS ON THE WEEKLY WHOLESALE SALES OF LIVE POULTRY IN NEW YORK CITY

Increases in wholesale sales are expressed as percentages of the average of two weeks prior to a given holiday. The most important Jewish feasts, Thanksgiving, and Christmas demand a larger quantity of live poultry

taken as illustrating what is to be expected in a general way during the holiday seasons. A shipper or receiver can, with some security, use these percentages and apply them to the weekly arrivals of the two previous weeks and get a fair idea of what a normal demand will be during a given holiday.

Figure 31 shows the actual price of colored fowl, weekly, from November 1, 1923, to October 31, 1924, and from May 1, 1925, to April 30, 1926, and through the year 1927.[17] The period included in the statistical analysis covered two years, or 104 weeks, but after eliminating the weeks in which the Jewish holidays occurred, the number of weeks was reduced to 87 during the two years. The broken line in the illustration is the reconstructed price computed from the results of the studies for the two survey years, from which data the relation of colored-fowl prices and other factors were found. The double line shows the influence that the Jewish holidays had on price. The dotted line from February 1, to December 31, 1927,

[17] Data not available for January, 1927.

shows the estimated price for the subsequent weeks. The double line shows the distorted price in 1927 caused by Jewish-holiday seasons. These estimates are obtained on the assumption that the influence of the various factors on fowl prices, as found during the two survey years, continued to exert the same influence in 1927. The chart shows a very close relation between the reconstructed and the actual price during the two survey years, with the exception of the weeks in which the Jewish holidays occur. Eliminating the Jewish holidays, the error was 3.5 per cent or about 1 cent variation. An inspection of the chart shows that the actual or estimated prices are likewise close in 1927, showing 6.4 per cent variation, or about 1.8 cents difference. In other words, on the basis of the factors considered in the final computations, the average difference between the estimated week-to-week price and the actual price was 1 cent for the two survey years and 2 cents for 1927.

Figure 32 is identical with Figure 31 except that it shows the relation between the actual and the reconstructed prices corrected for the Jewish holidays on the basis of the data shown in Table 13. After the corrections for the holiday seasons have been made, the actual and estimated prices run very close together, which indicates that the most important factors have been considered in measuring the variations in fowl prices. The inference to be gathered from this chart is that apparently the forces which operated during the two survey years on fowl prices had not materially changed in the subsequent period, that is, 1927. It seems, therefore, that the forces which were measured in this study tend to repeat themselves. The conclusion to be drawn is that under similar conditions the trade is always likely to react to these forces in the same way.

TABLE 13.—*Average increase in fowl price above usual price for the period studied in weeks of various holidays* [1]

Holiday	Average increase per pound	Holiday	Average increase per pound
	Cents		*Cents*
Rosh Hashana	6.0	Yom Kippur	3.0
Passover	5.0	Hanukka and Christmas	1.0
Last Day of Passover	4.0	Purim	0.5
Thanksgiving	4.0	Gentile New Year	0.0
Succoth	3.0		

[1] The "usual" price was an estimate of what the price would have been with such supplies, as determined by measuring the effect of supply and other factors upon price in weeks in which there were no holidays. This "usual" price is, therefore, an estimate of what the price would have been if the important Jewish holiday demand had not changed it.

FACTORS RELATED TO BROILER AND CHICKEN PRICES

In another section of this bulletin the general movement of both chicken and broiler prices as related to their respective volumes has been noted. The price relation between broilers and chickens is rather complex because of the biological factor to which reference has already been made. Broilers merge into the chicken class as the season advances. Broilers increase in volume from April through August, when they suddenly decline in volume because this class of poultry has become too heavy to be classed as broilers and has become chick-

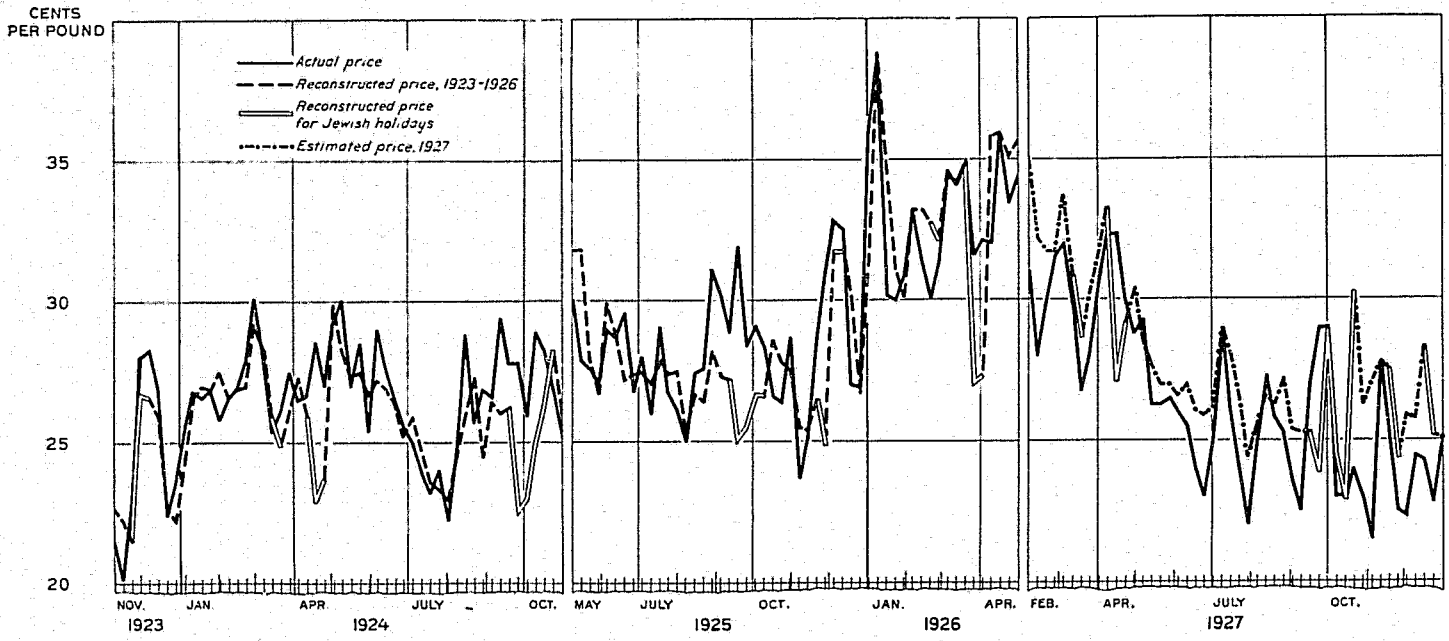

FIGURE 31.—ACTUAL AND RECONSTRUCTED COLORED-FOWL PRICES IN NEW YORK CITY

This figure shows the closeness with which fowl prices can be accounted for when all the factors considered in this study are statistically measured. The estimated fowl prices in 1927 were based on the relationship found in the two survey years. Double line shows the usual price around the Jewish holidays had the demand remained unchanged.

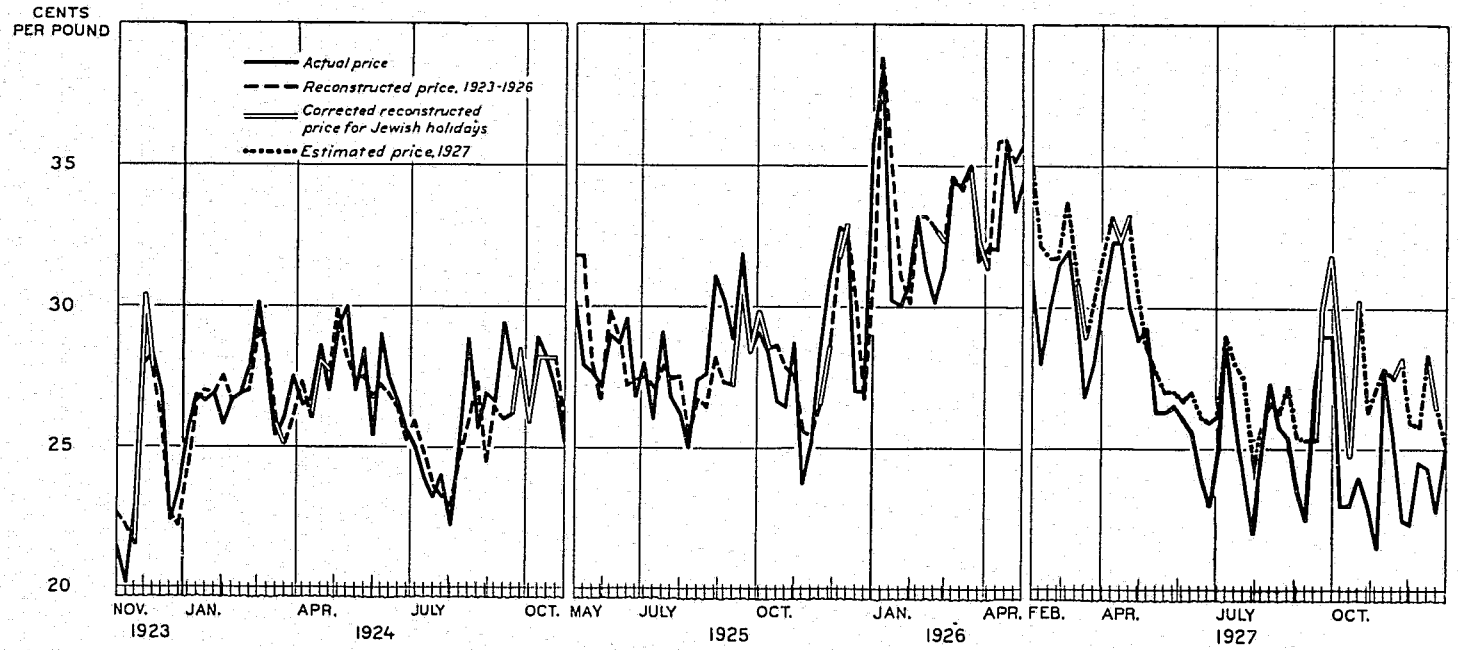

FIGURE 32.—ACTUAL AND RECONSTRUCTED COLORED-FOWL PRICES IN NEW YORK CITY

This chart is the same as Figure 31 after price corrections have been made because of the change in demand around the Jewish holidays. In 1927 the closeness between the estimated price and the actual price is not as pronounced as during the two survey years. This is mainly due to the downward trend of fowl price in the fall of 1927. The period covered by this study is too short to allow for the general direction of fowl prices but, as more statistical material accumulates, the trend will be measured.

ens. Beginning with the early part of winter and extending to the early part of spring, the volume of broilers is almost constant. Broiler prices, on the other hand, during this period tend to rise at a rapid rate, and this upward price movement is greatly accentuated during the early spring months. Apparently there are two causes: (1) The demand for broilers is rapidly rising and can not be met by the limited supply; and (2) the volume of chickens is steadily diminishing, creating a shortage for both broilers and chickens during which time the demand for both is about equally great. The peak of broiler prices is reached in April, or around the spring Jewish holidays. Thereafter the prices steadily decline, and this decline is accelerated by an increasing volume of broilers.

The price variation of broilers is pronounced during the year. The maximum price usually runs around 50 to 60 cents a pound, whereas

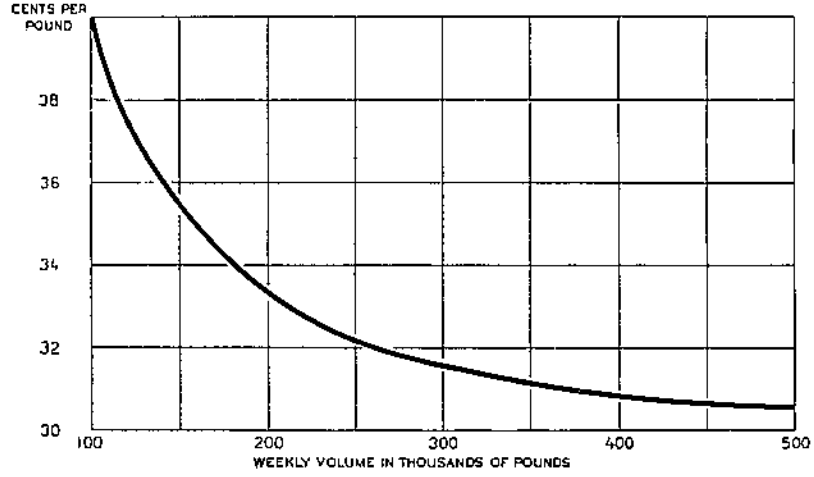

FIGURE 33.—RELATION OF BROILER PRICES TO VOLUME

The prices of broilers in New York City are highest when the volume is low, and the rate of change in broiler prices diminishes as the volume increases, other factors held constant.

the minimum is usually somewhere near 25 to 30 cents a pound. This range is largely influenced by three important factors: Supply of broilers, seasonal variations in demand (which is measured by price movements), and chicken prices. Of the three, broiler supply exerts the greatest influence. Seasonal variation is the next most important factor. After making simultaneous allowance for other factors, the net relation between supply and price of broilers is as noted in Figure 33. It will be seen that the relation is inverse and that the variation in the price of this type of bird is more pronounced when the supply is very small than when the volume is large. As the quantity of broilers increases beyond the 100,000-pound level, the price shows a gradual decrease. The outstanding reason why broiler prices show greater changes when relatively small quantities arrive on the market (as during the winter and early spring months) than for larger volumes which come during the summer months, is the demand around the spring Jewish holidays. The peak of demand for broilers is reached about the month of April, during which time the consumer is willing to pay a very high price to obtain broilers.

Since the price of broilers is unusually high around April, it is likely that a considerable increase in volume might be placed upon the market at this season without seriously depressing the price, but just how much more would be taken without greatly depressing prices to lower levels is rather problematical. The data indicate that the Jewish spring-holiday season offered a greater opportunity for the profitable marketing of broilers during the period covered by this study than was offered during any other part of the year.

From September through the end of the year and during the early months of the new year chickens arrive in large volume; the volume declines during late winter and the early spring season. During this annual cycle, the price of chickens rises from November to June and falls from June to November. After statistically measuring the factors which cause the changes in price of chickens, it was found that

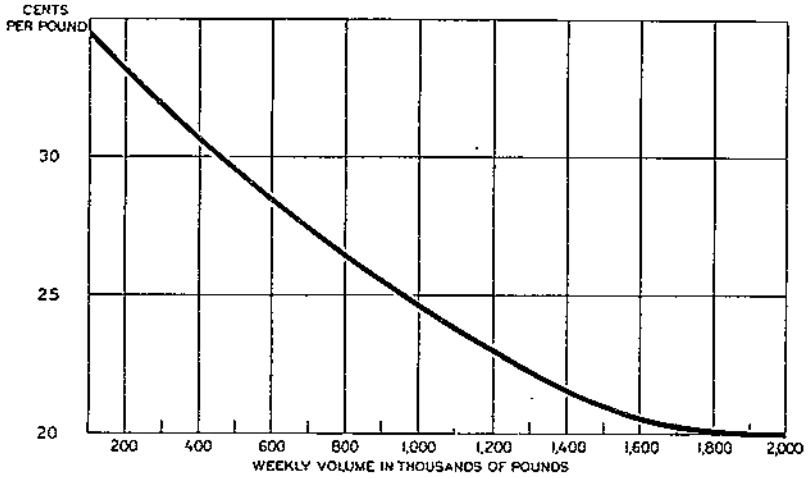

FIGURE 34.—RELATION OF CHICKEN PRICES TO VOLUME

After the influences of other factors are eliminated chicken prices generally decrease as the volume increases.

the supply of this type of bird, the seasonal factor, and broiler prices were the most important, with supply exerting the greatest influence and broiler prices the least. Figure 34 shows the relation between chicken volume and price after the influence of the other factors has been eliminated. The figure clearly indicates that the sensitiveness of chicken prices is much greater than that of broilers. (Fig. 33.)

At practically every point the change in price is the same for an accompanying change in volume, except at the extreme left of the curve, when a sharper increase is noted, and at the lower end of the chart, when an increase in supply will cause very little change in chicken prices. The major cause for a somewhat sharper change in the upper extremity of the curve is the fact that the supply of both chickens and broilers is relatively small during the spring months and the demand during the Jewish-holiday season is strong. This combination of factors forces chicken prices into a higher range. That is, they show a very marked increase in price and reach the peak of the season at this time (May and June), and from this point they

steadily move downward. (Fig. 21.) On the average an increase of 200,000 pounds (of chickens) will be accompanied by decrease of 1.8 cents per pound in price of chickens, assuming that no other factors are exerting an influence. The curve (fig. 34) indicates that on the average this holds true in practically every point on the curve with one exception, that is, an increase in volume of sales between the range of 1,600,000 pounds and 2,000,000 pounds would cause almost no change in price. Hence it is seen that the price of chickens shows a steady increase from week to week until it reaches a maximum about May or June and it then steadily declines until it reaches a minimum about October or November. The dealer should take this into account in estimating the probable price of this class of poultry from week to week. (See Tables 21, 22, and 23 for data used in the statistical analysis.)

UNION TERMINAL AND LIVE POULTRY EXCHANGE

The terminal costs of marketing live poultry, such as unloading costs, coop rental, cost of cartage, and commissions, have been discussed. The pilferage of poultry at the various terminals through the connivance of carmen and various groups of employees has been mentioned. Alleged irregularities in weighing the poultry as it is unloaded from the car and placed in coops preparatory to transfer to the slaughterhouses has been noted in passing.

The concentration of activity at one point would make it possible to reduce the costs of rendering legitimate terminal services under the present system of handling live poultry and make it much easier to eliminate the illicit practices which now prevail. Commission men could reduce the number of their salesmen and assume more personal control of the entire operation. The number of employees for unloading from the car and loading on the trucks could be materially reduced, and coop and cartage costs could be reduced through more intensive use of these facilities. Just how much can be saved it is difficult to estimate in advance, but the saving is certain to run into large figures.

Of equal advantage with the possibility of reducing terminal handling costs, selling costs, trucking costs, and of reducing shrinkage losses through less handling, the proposed union terminal might offer the proper setting in which to create a more suitable method of arriving at a price and a method of trading which will help to correct the questionable practices which now prevail. The present method of purchasing is characterized by inspection of the supply (by the buyer) at a number of scattered terminals, by selection, and by trucking away to slaughterhouses, all on the basis of a conditional price. Whatever price is indicated at the time that physical possession is transferred from commission merchant to buyer is subject to the announcement of a quotation which may appear later in the day in a well-known trade paper.

The judgment of the reporter in arriving at this quotation (according to the officials of this trade paper) is based upon values indicated by "sales from receivers to wholesale distributors, willingness and ability to sell, and willingness and ability to buy." The quotation is said to be based partly upon actual sales as reported by commission merchants and slaughterhouse buyers. However, signed statements collected from practically all commission merchants for a period of

approximately one month indicate that sales made before the reporter determines upon a price are, practically without exception, made conditional upon the subsequent quotation.

Notwithstanding the honest efforts of a number of commission men to sell outright at a price established by individual negotiation during the forenoon, the buyers insist on the quotation as the settling price. If prices established by individual negotiations are higher than the quotation subsequently announced, the buyers simply refuse to pay more than the published quotation, and the only alternative would be a suit for collection, which the commission merchants are loath to press. Both buyer and shipper are dependent upon this quotation, each buyer feeling that he is sure that his competitor is paying the same price as himself, and each shipper feeling that he is getting the top-market quotation. Aside from the desirability or undesirability of a uniform price in a supposedly competitive market, the question of whether that price represents a proper evaluation of the relative strength of the supply and demand from day to day is to be considered. As it now stands it is the judgment of one man based upon such transactions as the dealers may claim. Misrepresentation of sales and purchases and manipulation up or down according to the advantage of some group or of individuals in the market are always potentially, if not actually present.

In order that a mechanism for conducting open trading and for establishing a price truly representative of the opinions of individuals bargaining with each other may be realized, it has been proposed that a centralization of the physical receipts as well as of trading is necessary. On March 30, 1927, an act was passed by the New York State Legislature, which was prepared by the attorney general's office in conference with the trade bodies, chartering an exchange. It is asserted that such an exchange will function best if located at a point where physical receipts are centralized, and that the creation of a union terminal will be conducive to the development of a type of trading for live poultry which is both legal and economically sound. This benefit, together with the saving in cost of operations to shippers, commission men, and buyers, presents reason in favor of such union-terminal facilities.

The Port of New York Authority, through its corps of engineers and economists, has given considerable attention to the drafting of plans designed to meet the requirements of the trade for a union terminal. After a careful survey of the various sites which offered possibilities as a location for such a terminal, it was found that the present site of the Erie terminal at Weehawken, N. J., most nearly fulfills all the requirements, both physical and economic. A committee of the trade took up negotiations with the Erie Railroad; and the officials of this road have agreed to furnish the facilities called for in the plans and specifications submitted by the port authority, and to have the terminal ready for use within six months after the final details of the transaction have been completed.

By concentrating the bulk of the available supply (cars on track at terminals) at one point where it can be inspected freely by buyers, large and small, and where the receivers may show their entire

offerings, the necessity for conditional purchases may be eliminated. That is to say, the buyers not only may inspect the goods before bidding and the receivers display their entire offerings, but the entire transaction may be completed directly following inspection on the floor of the exchange. The price will thus have been established before the buyer has taken physical possession of the goods. This is not possible under present conditions when three or four terminals and West Washington Market frequently must be visited.

The aim should be to make the exchange such an attractive and efficient instrument for buying and selling poultry that a substantial part of the freight receipts would be sold upon its floors. If this were done, the prices of live poultry by grades and classes could be reported.

SUMMARY AND CONCLUSIONS

This study was undertaken by the Bureau of Agricultural Economics upon the request of the New York Live Poultry Commission Merchants Association and the office of the attorney general of the State of New York.

Daily records of volume by classes, costs of marketing within the city, and prices of live poultry were obtained from the books of New York live-poultry commission men for the two years November 1, 1923, to October 31, 1924, and May 1, 1925, to April 30, 1926. The intervening period was omitted because of the embargo resulting from an invasion of the European fowl pest.

Supplementary data were obtained by questionnaire from the shippers and more general data were secured from the reports of a well-known publishing company and from the United States Department of Agriculture.

Approximately 13,000 cars of live poultry, valued at about $65,000,000 on the basis of present wholesale prices (about 30 cents per pound), reach the New York market annually. About 94 per cent comes by freight, and the remainder comes by express.

The functionaries who render the various marketing services connected with the freight shipments are as follows: The shippers, distributed over about 30 States; 4 terminal railroad companies; 2 poultry-car companies; about 23 poultry commission firms; 1 coop company; a live-poultry cartage company; and about 600 slaughterhouse men.

The freight receipts have increased from about 2,000 cars in 1905 to 12,000 cars in 1927, with an average annual increase of more than 9 per cent. The average net weight of a car is nearly 17,000 pounds, and the average value nearly $5,000.

Members of the trade estimate that approximately 80 per cent of the live poultry is consumed by the Jewish population, 10 per cent by the Italian, and the remainder by various other gentile groups.

The different classes of live poultry show a high degree of regularity in the matter of seasonal changes in arrivals on the market.

Some receivers specialize in a particular method of shipments (express or freight) and in the special classes of poultry they handle. Some operate exclusively on a commission basis; other may intersperse outright purchases and "joint account" transactions with a commission business.

Missouri, Kansas, Illinois, and Oklahoma provide a large percentage of the total freight receipts, Missouri alone contributing about one-fifth.

Nearly 80 per cent of the winter broilers shipped by express come from New Hampshire.

Costs of marketing live poultry from shipping point to slaughterhouse only, computed on a per pound basis, are on the average for all States as follows: Transportation (freight, carman, feed, etc.), 3.88 cents; commission, 1.02 cents; coops, 0.63 cent; cartage, 0.27 cent, and unloading, 0.33 cent. The average is 6.13 cents per pound.

The average total marketing cost per car from shipping point to slaughterhouse is about $1,000.

The total marketing costs to slaughterhouse per pound, vary from about 9 cents for Texas to about 4.5 cents for Ohio, and the costs per car for these States are about $1,500 and $700 per car respectively.

The percentage distribution of these total costs per car from shipping point to slaughterhouse are approximately as follows: Transportation (freight, carman, feed, demurrage, stop-off, and reconsignment), 63.3 per cent; commission, 16.6 per cent; coops, 10.3 per cent; cartage, 4.4 per cent; and unloading, 5.4 per cent. That is to say, nearly two-thirds of the marketing costs are incurred in transit, and one-third is incurred at the terminals. Of the terminal costs more than one-half goes for coops, cartage, and unloading. This does not include the extra charge made by the cartage company for moving poultry to points other than West Washington Market.

The total of terminal marketing costs, excluding the additional charge by a carting company, is approximately $4,500,000 per year. Of this amount nearly one-half is for commission.

The marketing costs from shipping point to the slaughterhouse vary from about 30 per cent of the wholesale value per pound for Texas, to about 15 per cent for Ohio. The average net weight per car reaching this market is about 17,000 pounds. The minimum weight upon which freight is charged is 18,000 pounds from all points east of the Mississippi River and 20,000 pounds from points west of the Mississippi to the river, wherever a class rate prevails. Where a commodity rate prevails, a through rate based on an 18,000-pound minimum is in force west of the river also.

Prices of live poultry for quotation purposes are determined between 12 o'clock noon and 1 p. m. by a representative of a private price-reporting agency. The price quoted is the basis for settlement between commission men and buyers as well as the basis for return to shippers. The reporter bases his quotations upon conditional sales and purchases given him by buyers and sellers. These conditional or tentative sales and purchases are later consummated on the basis of the quotation which was itself determined by these reported sales and purchases.

More poultry is sold on Wednesday than on any other day in the week. The order of importance of the remaining days are Thursday, Tuesday, Friday, and Monday.

The day of greatest slaughter is Thursday in winter and Friday in summer.

A price quotation is rarely made on Monday, and often one is not until Tuesday or Wednesday. Instances occur when no quotation is issued until Thursday.

In the analysis of live-poultry prices it was found that the following factors (indicated in order of importance) exerted the major portion of the influence: (1) Expected receipts for the week; (2) price for the previous week; (3) temperature, and (4) price for kosher veal.

Measurement was made of the influence of other factors such as the following: (1) Purchasing-power index in New York City; (2) prices of kosher lamb and beef; (3) seasonal variation, both in prices and volume, of live poultry. These were found to have but little influence and were thus omitted in the final computations. Still other factors, such as dressed poultry, storage holdings, and the like, were considered and were omitted for the same reason.

The important Jewish holidays, both in the spring and in the fall, cause an additional demand of from 15 to 50 per cent above the average of the previous two weeks.

The average of the Wednesday and Thursday prices was found to be the best representation of the daily price during the week.

The expected receipts for the week (including the carry-over from the previous week) was taken as the weekly supply. This figure is reported each Tuesday morning. The biased error of this report was found to be an average of 27 carloads per week below the actual supply.

Fowl is the most important class of poultry dealt in, and it is the only one upon which a price is quoted every week.

Considerable deviation from a strict commission business among receivers exists. Outright purchases and purchases on "joint account" of shipper and receiver are common, especially among certain receivers and the practice engaged in by some receivers of guaranteeing the shipper, a definite price several days or a week in advance is not uncommon. These diverse practices may give the receiver a personal interest in the quotation distinct from the commission he will receive on the basis of the quotation and may cause him to take a position on the market at variance with his proper function as representative of the shipper. Receivers should either operate exclusively on a commission basis or exclusively on an outright-purchase basis. At present a few operate exclusively as commission men.

The alleged pecuniary relationship which is said to exist between certain receivers (who are supposed to be on a commission basis) and slaughterhouse operators may also distort the quotations whenever such combined interests are strong enough and the inclination exists to influence prices in accordance with their interests.

The price of live poultry should be established before physical possession of the goods is transferred from commission merchant to buyer. The market quotation should relate to the different grades of the various classes of poultry and should represent actual transactions that have been previously consummated.

Concentration of receipts at a single terminal will bring about many economies in terminal costs, such as the reduction in the number of salesmen, and cartage, coop, and unloading costs. It would enable the commission merchants to assume their proper function—that of giving personal supervision to the entire operation. Inaccuracies in weighing the poultry as it is unloaded from the car and the pilfering which is now said to prevail in the scattered terminals could be eliminated in a well-organized and properly supervised union terminal.

A live-poultry exchange in close juxtaposition to a union terminal which will enable buyers first to inspect the goods and then to bid for the quantity and quality of goods desired, would place the industry on a sounder basis. The price would thus be established before the buyer took possession of the goods, and the transactions could be reported every trading day.

The financial responsibility of the shippers should cease, in connection with marketing costs, when the poultry has been delivered and weighed out to the buyer at the terminal. This would serve as a stimulus for the dealers in New York City (receivers and slaughterhouse men) to reduce terminal costs by effecting economies wherever practicable. Under present conditions the terminal costs are paid by the shipper, who is a long distance away and who is not in a position to make an effective protest if, in his opinion, terminal costs are out of line with the services rendered. A modification of the present system in line with this suggestion would probably be reflected in the wholesale price of live poultry and in the rate of commission of the receiver. But with a union terminal and an exchange in close proximity to it, upon which goods are freely bought and sold on the basis of quality, wholesale prices would consistently reflect supply and demand conditions, and competition among receivers would tend to establish the rate of commission upon a fair basis.

To test the measurements which exerted the greatest influence on price during the two survey years, they were applied to the year 1927. The results show that the average error of estimate of 1927 was about 2 cents per pound, which was only slightly more than the average error of estimate during the two survey years. This seems to indicate that the same set of forces which caused price variations during the two survey years tend to operate every year. The additional statistical information on live-poultry receipts in New York City by classes, which is now being received through the market news service of the Bureau of Agricultural Economics will furnish a still sounder basis for estimating the probable price of live poultry at least a week in advance.

As a "rough and ready" guide to the trade, two indicators of probable prices, a week in advance, are readily available. These are the prices for the previous week and the report of expected receipts for the current week, both of which are available before much trading in the current week is done.

TABLES

TABLE 14.—*Car-lot freight receipts of live poultry at New York market by months, 1900-1927*

Month	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
	Cars	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*
January	187	180	159	138	125	130	210	258	283	207	210	322	455	432
February	157	119	123	115	110	105	192	193	229	178	175	270	380	394
March	150	150	123	140	181	142	200	185	272	259	237	347	412	384
April	180	159	223	191	153	201	254	254	272	260	233	337	442	509
May	159	154	110	135	131	135	254	184	162	176	211	373	408	330
June	143	127	171	162	149	150	218	197	229	215	237	352	405	401
July	153	171	158	131	127	146	237	258	211	207	225	359	466	469
August	177	147	160	154	172	178	240	232	217	203	342	447	441	472
September	233	227	221	240	255	196	268	370	287	201	384	555	540	594
October	250	218	210	203	153	271	293	300	271	253	493	519	512	625
November	192	202	176	158	174	213	213	295	280	271	402	530	520	572
December	219	193	167	179	151	200	260	329	266	255	339	464	626	624
Total	2,209	2,017	2,010	1,955	1,911	2,073	2,899	3,055	2,963	2,755	3,488	4,875	5,607	5,806
Monthly av.	183	171	168	163	159	173	239	255	247	230	291	406	467	484

TABLE 14.—*Car-lot freight receipts of live poultry at New York market by months, 1900–1927*—Continued

Month	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
	Cars	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*
January	477	517	605	539	349	629	604	722	889	1,069	1,036	441	776	762
February	382	474	512	395	306	544	556	679	829	844	892	618	816	825
March	443	584	553	425	70	592	701	702	885	998	935	744	1,009	988
April	517	548	624	530	43	688	477	807	953	974	1,097	920	877	1,019
May	424	444	499	479	394	521	571	737	896	951	898	703	803	911
June	460	512	526	436	425	570	640	873	832	849	863	814	905	1,017
July	492	501	518	505	481	652	638	815	820	901	955	911	848	868
August	501	540	638	503	603	687	718	972	965	1,038	908	874	954	1,003
September	734	735	586	576	747	810	984	1,091	1,136	1,227	1,084	1,285	1,161	1,105
October	686	646	677	537	725	859	780	1,107	1,057	1,017	1,305	1,024	1,032	1,130
November	570	738	629	566	824	777	863	1,079	1,210	1,094	1,071	1,003	1,139	1,108
December	748	689	604	575	833	883	922	1,063	1,169	1,207	633	1,001	1,187	1,151
Total	6,537	6,834	6,871	6,064	5,800	8,185	8,454	10,730	11,672	12,072	11,677	10,493	11,497	12,106
Monthly av.	545	570	573	505	483	682	705	894	973	1,006	973	875	958	1,009

TABLE 15.—*Distribution of live poultry receipts at New York City by class, and by weeks, 1923–24 and 1925–26*

Week ended	Fowl		Broilers		Chickens		Cocks	Ducks	Geese	Turkeys	Culls	Stags	Capons
	Colored	Leghorn	Colored	Leghorn	Colored	Leghorn							
1923	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
Nov. 3	46.57	4.07	0.24	0.05	42.80	0.36	2.48	2.78	0.56	0.07	0.02	------	------
10	46.82	5.38	.21	.20	40.31	.50	2.31	2.84	1.10	.23	.07	------	------
17	45.01	6.48	.25	.02	38.65	.27	2.02	3.53	2.61	.34	.22	------	------
24	43.34	4.37	.31	.01	31.68	.34	2.25	5.50	7.07	3.99	.21	0.03	------
Dec. 1	38.64	2.09	.58	.01	29.54	.19	2.40	6.94	8.20	11.12	.29	------	------
8	42.55	2.97	.49	.01	40.35	.16	2.47	4.83	5.60	.50	.06	------	0.01
15	46.05	2.70	.81	------	36.65	.46	2.48	3.92	5.79	.46	.05	------	.01
22	47.25	2.26	1.00	------	32.10	.16	1.89	3.39	7.42	4.41	.11	------	.01
29	50.94	2.20	.60	.01	32.03	.15	2.13	3.74	5.65	2.37	.12	------	.06
1924													
Jan. 5	57.00	2.01	.75	------	27.40	.38	2.36	3.15	5.66	.94	.15	.02	.09
12	64.96	2.45	.45	------	22.55	.36	2.23	2.16	5.04	.42	.13	------	.35
19	64.36	1.69	.52	------	24.60	.26	1.94	1.95	3.74	.27	.26	------	.41
26	72.32	1.57	.44	------	17.81	.23	1.76	1.94	2.80	.20	.15	------	.78
Feb. 2	78.18	1.42	.30	------	14.48	.38	1.77	1.20	1.53	.14	.13	------	.38
9	79.50	1.31	.38	------	12.26	.41	2.23	1.11	1.74	.30	.15	.05	.56
16	81.56	1.19	.25	------	11.20	.24	2.05	.90	1.84	.30	.09	.07	.31
23	83.15	.65	.35	------	9.90	.19	2.07	.99	1.32	.60	.12	.04	.56
Mar. 1	85.96	.22	.35	------	8.22	.14	2.02	1.26	.78	.41	.09	.05	.53
8	87.02	.09	.37	------	6.85	.21	2.29	1.28	.50	25.	.08	------	.46
15	89.23	.10	.40	------	5.54	.19	1.95	1.27	.44	.27	.13	.07	.35
22	90.82	.06	.57	.02	4.14	.14	1.68	1.60	.26	.14	.08	.19	.28
29	90.98	.09	.78	------	3.78	.18	1.85	1.35	.34	.14	.12	.22	.14
Apr. 5	91.14	.37	.56	.01	2.99	.16	2.57	1.45	.27	.14	.13	.10	.11
12	90.75	1.17	.60	.02	3.31	.11	1.92	1.28	.35	.14	.10	.08	.14
19	88.99	.93	.84	.03	3.07	.10	2.16	2.90	.24	.20	.13	.22	.10
26	90.18	.37	.85	.04	1.25	.04	2.12	3.31	.30	.21	.13	1.02	.18
May 3	90.08	.20	1.40	.11	.64	.18	3.05	1.88	.19	.14	.06	1.55	.52
10	88.45	.50	2.00	.10	1.19	.14	3.11	1.63	.17	.14	.12	2.17	.28
17	87.80	.20	3.02	.32	.13	.06	5.20	1.72	.15	.10	.12	.94	.24
24	86.48	.25	2.55	.40	.38	.18	6.00	2.10	.18	.10	.08	.40	.60
31	85.02	.16	4.54	.68	.76	.17	5.61	2.25	.19	.13	.07	.26	.16
June 7	81.99	.74	5.91	.97	1.33	.17	4.69	3.37	.15	.10	.11	.09	.38
14	81.02	.39	6.96	1.05	2.06	.35	4.35	2.75	.21	.09	.12	.02	.03
21	78.06	.66	8.48	1.75	2.93	.54	5.09	2.16	.12	.08	.08	.04	.01
28	76.04	1.38	9.49	1.98	3.22	.56	5.08	1.70	.15	.07	.05	.03	.05
July 5	72.73	.50	10.91	1.35	4.51	1.31	5.12	2.94	.11	.10	.08	------	.04
12	73.36	.09	10.01	1.52	6.04	.99	4.95	2.05	.16	.10	.09	------	.01
19	70.61	.70	11.80	1.08	7.94	1.65	3.05	1.61	.10	.06	.07	------	.05
26	67.50	1.55	13.24	1.89	9.17	1.51	3.20	1.78	.06	.03	.07	------	------
Aug. 2	63.25	1.70	14.81	2.64	11.63	1.49	3.50	1.81	.08	.02	.07	------	------
9	57.70	2.16	17.86	1.67	12.93	1.26	3.94	1.90	.09	.03	.10	------	.27
16	57.30	1.70	17.02	1.96	16.09	1.52	3.35	1.67	.13	.03	.13	------	------
23	59.23	3.08	15.70	.06	14.79	1.04	3.32	1.66	.06	.06	.10	------	------
30	52.27	4.08	12.93	1.30	22.08	1.34	3.30	1.76	.11	.02	.11	------	.01

TABLE 15.—*Distribution of live poultry receipts at New York City by class, and by weeks, 1923–24 and 1925–26*—Continued

Week ended	Fowl		Broilers		Chickens		Cocks	Ducks	Geese	Turkeys	Culls	Stags	Capons
	Colored	Leghorn	Colored	Leghorn	Colored	Leghorn							
1924	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
Sept. 6	43.71	3.42	24.11	1.24	21.77	1.09	3.03	1.46	0.10	0.04	0.10	------	0.02
13	48.64	4.52	16.66	.34	28.26	2.14	2.91	2.20	.15	.02	.17	------	------
20	48.49	5.48	9.92	.28	29.13	1.62	2.97	1.91	.17	.02	.11	------	------
27	48.92	5.79	5.97	.21	30.03	1.76	2.51	4.42	.17	.03	.19	------	------
Oct. 4	47.35	5.73	4.35	.15	34.84	1.44	2.75	2.58	.50	.05	.26	------	------
11	48.81	4.93	2.03	.13	34.23	1.19	2.04	5.12	.32	.06	.22	------	.02
18	45.46	6.52	4.68	.12	33.09	1.40	2.64	4.79	.57	.19	.23	------	.01
25	51.50	6.32	4.13	.16	32.76	1.11	2.05	2.18	.44	.09	.22	0.01	.03
31	50.00	5.88	2.34	.23	34.03	.98	1.69	2.50	.87	.22	.23	------	.04
1925													
May 2	85.30	.35	3.22	.13	4.44	.09	2.83	.47	.28	.23	.36	2.06	.15
9	88.46	.33	2.86	.30	1.21	.11	3.18	1.06	.20	.19	.23	1.00	.27
16	86.17	.11	4.41	.38	.94	.02	4.23	1.05	.17	.16	.17	1.51	.05
23	84.59	.53	5.43	.82	1.30	.18	4.38	1.52	.12	.13	.18	.80	.02
30	81.73	.18	6.42	1.15	1.78	.19	5.01	2.73	.18	.14	.25	.22	.03
June 6	79.04	.21	8.00	1.11	4.41	.71	3.54	1.79	.18	.11	.16	.13	.01
13	74.50	.26	12.04	2.82	3.80	.04	3.78	1.50	.21	.08	.20	.15	.02
20	70.17	.14	12.20	2.77	5.30	.82	6.47	1.46	.19	.16	.17	.04	.02
27	68.56	1.28	13.04	3.46	5.63	1.17	4.18	1.34	.16	.08	.21	------	.01
July 4	63.67	1.81	13.97	3.12	9.73	.70	4.16	2.27	.10	.12	.25	------	.01
11	63.06	2.39	13.82	3.16	10.98	1.42	3.53	1.28	.10	.09	.17	------	------
18	58.09	2.70	15.91	2.57	12.18	1.05	4.02	1.58	.12	.04	.24	------	------
25	52.07	2.61	16.61	3.32	16.78	1.76	3.82	1.70	.17	.04	.19	------	------
Aug. 1	55.00	3.20	18.13	2.86	12.01	1.32	3.89	1.80	.09	.04	.16	------	------
8	52.23	4.88	14.46	2.58	16.33	2.09	4.92	1.60	.12	.54	.23	------	.02
15	51.02	4.61	9.43	1.88	24.16	2.46	3.76	2.22	.12	.05	.27	------	.02
22	44.03	4.88	12.60	1.37	29.01	3.33	3.04	1.35	.09	.05	.25	------	------
29	41.18	4.06	18.43	2.39	26.57	2.82	2.50	1.61	.09	.07	.25	------	------
Sept. 5	41.70	4.38	8.43	1.51	35.06	3.27	2.76	1.48	.13	.04	.27	------	.01
12	41.82	5.18	7.36	1.38	36.16	3.09	2.68	1.82	.15	.05	.30	------	.01
19	40.62	4.93	4.74	.45	37.75	3.52	2.35	4.58	.18	.15	.41	------	.02
26	39.21	6.53	3.78	.45	41.00	3.72	2.50	2.15	.10	.04	.40	------	.03
Oct. 3	40.87	5.38	1.32	.11	42.26	2.30	2.07	4.91	.30	.05	.38	------	.05
10	39.35	6.19	.73	.02	41.27	3.49	2.02	4.58	1.85	.09	.49	------	.01
17	42.03	6.06	.53	.08	42.44	3.20	1.70	2.85	.39	.06	.58	------	.08
24	44.58	5.49	.28	.05	40.44	2.60	2.07	2.79	.70	.11	.75	------	.05
31	45.45	6.61	.86	.04	37.71	2.67	2.08	2.68	1.11	.11	.63	------	.05
Nov. 7	45.21	6.34	1.04	.03	37.61	2.97	1.89	2.44	1.46	.25	.60	.03	.10
14	41.74	6.15	1.47	------	38.73	2.85	1.90	2.73	2.75	.61	.80	.02	.25
21	44.13	5.41	1.12	.02	25.64	2.34	1.79	3.74	12.00	3.09	.65	.03	.04
28	36.41	4.66	.70	------	35.24	1.70	1.43	4.76	11.22	13.21	.40	.01	.08
Dec. 5	48.19	4.19	1.10	------	30.14	2.50	1.74	4.66	6.63	.51	.27	------	.07
12	50.55	4.48	1.41	------	28.49	2.43	1.92	3.14	8.71	.25	.50	------	.03
19	58.11	4.38	1.31	------	18.20	1.70	1.60	2.84	10.41	.84	.42	.01	.09
26	56.24	4.37	1.16	------	19.66	1.56	1.78	2.45	7.56	4.63	.44	.02	.13
1926													
Jan. 2	63.97	4.66	1.86	------	17.24	1.50	1.57	1.80	6.31	.44	.45	.03	.12
9	64.58	3.04	1.01	------	19.12	.93	2.44	2.24	4.45	.32	.48	------	.49
16	73.85	4.25	1.35	------	13.88	.86	1.73	1.45	1.74	.21	.43	.02	.45
23	77.19	5.17	1.17	------	10.42	.83	1.49	1.34	1.32	.12	.32	.09	.54
30	79.73	4.05	1.10	.01	9.68	.66	1.84	1.10	.89	.13	.50	.04	.18
Feb. 6	81.32	2.92	1.42	.05	8.91	.27	1.99	1.11	1.20	.13	.39	.06	.33
13	85.48	2.45	1.17	------	6.57	.25	1.75	.95	.63	.13	.21	.15	.26
20	86.33	2.42	.91	------	6.09	.26	1.65	1.06	.59	.19	.24	.01	.25
27	86.08	1.60	1.02	------	5.77	.18	1.76	1.48	.74	.22	.28	.04	.83
Mar. 6	87.73	.34	1.22	------	5.75	.22	1.71	1.24	.69	.26	.18	.38	.28
13	88.07	.27	1.05	------	4.22	.23	1.88	1.11	.61	.18	.26	.95	.27
20	91.40	.42	1.02	------	2.05	.08	1.93	.85	.39	.13	.18	1.34	.21
27	89.86	1.58	1.13	------	1.59	.10	1.79	.98	.37	.12	.23	2.15	.10
Apr. 3	88.94	.70	1.83	------	.72	.05	2.32	1.44	.36	.17	.39	1.99	.09
10	90.27	.81	2.75	.01	.64	.11	2.13	.84	.30	.08	.23	1.73	.10
17	90.79	.10	2.93	.03	.41	.08	2.08	.93	.33	.10	.17	2.01	.04
24	88.58	.72	3.31	.47	.26	.07	2.36	1.01	.24	.13	.19	2.22	.44
30	88.22	.66	4.22	.44	.33	.17	2.93	.67	.17	.16	.15	1.64	.24

TABLE 16.—*Distribution of weekly receipts of live poultry at New York City, by classes, 1927*

Week ended	Fowl	Broilers	Chickens	Cocks	Ducks	Geese	Turkeys	Pullets	Stags	Capons
1927	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Feb. 5	83.3	1.0	11.9	1.7	0.05	0.8	0.05	.....	.....	1.2
Feb. 12	85.0	.4	11.4	1.6	.....	1.0	.....	.....	.....	.6
Feb. 19	84.0	.2	10.8	2.0	.0	.6	.3	.....	.....	1.2
Feb. 26	83.5	.8	8.8	3.2	.5	.7	.3	.....	0.4	1.8
Mar. 5	86.9	.....	6.7	2.6	.6	.5	.4	.....	.5	1.8
Mar. 12	88.7	.....	5.0	2.2	.5	.5	.2	.....	1.1	1.8
Mar. 19	91.4	.....	2.6	2.2	.6	.6	.....	.....	1.6	1.0
Mar. 26	91.8	.2	2.8	1.8	.6	.6	.....	.....	1.2	1.0
Apr. 2	91.9	1.3	1.8	1.8	.5	.7	.1	.....	1.2	.7
Apr. 9	91.5	1.4	1.2	2.2	.7	.5	.1	.....	1.8	.6
Apr. 16	87.8	4.8	.8	3.0	.6	.6	.....	.....	1.8	.6
Apr. 23	80.4	3.5	.6	3.3	.6	.6	.....	.....	2.3	.....
Apr. 30	85.7	7.0	.4	4.5	.5	.5	.4	.....	1.0	.....
May 7	85.8	8.8	.5	3.8	.3	.3	.....	.....	.5	.....
May 14	86.3	7.6	.8	4.0	.4	.4	.2	.....	.3	.....
May 21	84.1	9.2	.8	4.8	.4	.4	.2	.....	.1	.....
May 28	77.0	13.0	3.7	5.4	.4	.3	.2	.....	.....	.....
June 4	74.9	17.9	1.2	5.2	.3	.3	.2	.....	.....	.....
June 11	71.3	23.2	1.2	4.0	.1	.1	.....	.....	.....	.....
June 18	75.2	20.2	1.5	2.6	.2	.2	.1	.....	.....	.....
June 25	72.4	22.0	2.8	2.3	.2	.2	.1	.....	.....	.....
July 2	62.2	30.7	2.5	3.7	.3	.3	.3	.....	.....	.....
July 9	60.1	23.5	5.8	3.6	.4	.4	.2	.....	.....	.....
July 16	57.9	30.8	7.0	3.3	.4	.6	.....	.....	.....	.....
July 23	53.6	29.8	12.6	3.2	.4	.4	.....	.....	.....	.....
July 30	51.6	33.4	21.0	2.6	1.4	.....	.....	.....	.....	.....
Aug. 6	52.4	19.0	24.8	2.2	.8	.8	.....	.....	.....	.....
Aug. 13	48.2	15.4	32.4	2.4	.8	.8	.....	.....	.....	.....
Aug. 20	46.0	4.3	46.2	2.5	.6	.4	.....	.....	.....	.....
Aug. 27	50.2	1.5	44.7	2.0	.7	.3	.....	.....	.....	.....
Sept. 3	49.7	.6	46.2	2.3	.6	.6	.....	.....	.....	.....
Sept. 10	44.6	.3	51.0	2.7	1.6	.4	.....	.....	.....	.....
Sept. 17	48.9	.....	47.4	1.9	1.2	.5	.....	0.1	.....	.....
Sept. 24	46.8	.....	49.0	2.0	2.0	.1	.....	.1	.....	.....
Oct. 1	49.5	.2	47.2	1.8	1.1	.2	.....	.....	.....	.....
Oct. 8	47.0	.3	49.3	1.7	1.3	.4	.....	.....	.....	.....
Oct. 15	50.3	.2	45.7	1.5	1.4	.9	.....	.....	.....	.....
Oct. 22	46.5	.2	49.7	1.9	1.3	.4	.1	.....	.....	.....
Oct. 29	52.7	.5	42.8	1.8	1.4	.5	.1	.4	.....	.....
Nov. 5	55.9	.2	39.7	1.4	1.5	.7	.....	.6	.....	.....
Nov. 12	56.0	.3	39.3	1.8	1.8	.7	.1	.....	.....	.....
Nov. 19	45.4	.3	39.8	1.5	3.0	4.5	13.2	1.3	.....	.....
Nov. 26	48.8	.....	22.8	1.8	7.2	0.2	10.8	2.4	.....	.....
Dec. 3	56.4	.3	27.0	1.3	3.8	5.0	2.4	3.8	.....	.....
Dec. 10	62.0	.5	22.4	1.8	2.6	3.4	.1	6.6	.....	.....
Dec. 17	62.6	.6	20.6	1.6	2.4	4.2	.6	7.0	.....	.4
Dec. 24	61.6	.6	17.6	1.2	2.8	4.4	5.3	5.6	.....	.9
Dec. 31	65.4	.9	10.8	1.0	2.2	3.8	1.6	5.0	.....	.9

NOTE.—This is the classification adopted by the market-news service which went into effect February, 1927.

TABLE 17.—*Percentages of the several classes of live poultry received at New York City, by months, 1923–24, 1925–26 and 1927*

Month	Fowl	Broilers	Chickens	Stags	Cocks	Ducks	Geese	Turkeys	Culls
1923	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
November	6.06	0.51	18.41	.....	6.91	11.82	11.13	19.76	3.63
December	5.72	1.14	16.33	.....	6.49	16.77	25.90	18.06	3.69
1924									
January	7.90	.86	11.13	.....	5.91	14.81	24.82	13.03	13.44
February	9.81	.54	5.88	.....	5.80	6.13	13.81	8.40	3.60
March	10.68	.78	2.79	0.87	5.60	3.67	5.28	10.09	5.19
April	10.92	1.18	1.31	40.57	6.20	5.46	5.73	13.87	10.89
May	10.54	4.93	.31	52.56	13.12	3.23	2.81	7.13	3.63
June	9.63	14.62	1.33	.....	13.71	3.02	.90	2.93	7.23
July	8.63	30.98	3.07	.....	12.09	3.21	.46	1.70	3.66
August	7.27	27.23	8.00	.....	9.94	6.32	1.01	.42	6.72
September	6.28	21.09	13.73	.....	8.14	11.49	2.13	.83	14.53
October	6.52	6.14	16.81	.....	6.03	14.07	5.06	3.78	23.79
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 17.—*Percentages of the several classes of live poultry received at New York City, by months, 1923–24, 1925–26 and 1927*—Continued

Month	Fowl	Broilers	Chickens	Stags	Cocks	Ducks	Geese	Turkeys	Culls
1925	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
May	10.46	7.06	0.95	16.13	12.33	4.13	2.70	5.40	4.77
June	9.01	19.79	2.60	.64	14.12	4.56	1.95	2.25	1.51
July	7.88	25.47	6.41	.....	12.20	4.54	1.65	1.39	1.70
August	6.51	23.65	11.14	.....	11.42	5.79	1.65	2.25	3.40
September	5.64	9.87	19.00	.....	8.09	11.80	3.01	2.25	9.40
October	5.92	1.12	20.16	.....	6.26	12.29	5.70	7.21	17.51
November	5.81	1.56	15.81	.....	5.50	17.76	22.66	27.05	22.80
December	7.05	1.74	11.84	.....	5.60	18.89	29.28	19.82	13.64
1926									
January	9.30	2.68	0.93	.....	5.69	7.24	12.63	7.20	9.18
February	10.66	1.60	3.26	.....	5.64	1.03	2.40	1.36	2.60
March	11.03	1.56	1.64	39.67	5.73	0.91	11.41	15.31	9.23
April	11.03	4.50	.26	43.56	7.42	5.06	5.56	8.54	4.26
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1927									
January	9.31	.66	7.46	.....	5.59	7.58	8.70	1.08	.....
February	10.28	.66	4.15	12.12	6.99	7.58	8.70	2.15	.....
March	11.20	.79	1.66	30.30	5.24	3.03	2.61	1.08	.....
April	10.85	5.94	.53	54.55	12.24	2.27	1.74	2.15	.....
May	10.23	14.51	.30	3.03	16.08	2.27	1.74	1.08	.....
June	8.90	27.71	.87	.....	14.34	1.52	3.48	.....	.....
July	6.87	36.91	4.89	.....	12.59	0.81	.....	.....	.....
August	6.20	11.21	15.67	.....	8.39	4.54	1.74	2.15	.....
September	5.89	.13	20.72	.....	3.50	7.58	.87	.....	.....
October	6.25	.13	10.07	.....	5.50	10.60	1.74	.....	.....
November	6.20	.53	13.85	.....	4.90	26.52	34.78	67.73	.....
December	7.73	.79	10.86	.....	4.55	10.70	33.90	22.58	.....
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	.....

TABLE 18.— *Leghorn fowl; average return to shipper per pound, by months, 1925–26, freight shipments*

Origin	1925								1926			
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Alabama	.....	.....	17.2	.....	.....	13.0	11.9	20.0	.....	.....	23.3	.....
Atlanta, Ga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas	.....	.....	16.8	.....	.....	.....	.....	.....	21.0	26.5	.....	25.6
Chattanooga, Tenn	.....	.....	.....	.....	.....	.....	.....	.....	25.0	.....	.....	.....
Chicago, Ill	.....	.....	22.9	20.9	19.3	15.5	18.1	23.3	.....	.....	.....	.....
Connecticut	.....	.....	.....	.....	22.5	.....	15.0	.....	.....	.....	.....	.....
Illinois	.....	.....	20.7	20.0	18.7	14.9	15.6	23.2	25.1	25.7	26.7	.....
Indiana	19.5	.....	.....	.....	.....	16.8	.....	.....	.....	.....	.....	.....
Iowa	.....	.....	.....	20.0	18.8	15.0	14.4	20.0	27.4	.....	.....	.....
Kansas	.....	.....	19.3	19.8	18.6	13.7	16.4	23.8	19.9	.....	.....	.....
Kentucky	.....	.....	.....	.....	.....	.....	.....	.....	23.2	25.0	.....	.....
Missouri	.....	19.8	18.9	19.1	17.5	14.2	15.2	21.1	23.8	24.4	24.5	25.8
Maryland	.....	.....	.....	.....	15.3	.....	.....	.....	.....	.....	.....	.....
Michigan	.....	.....	.....	.....	.....	13.2	10.6	.....	.....	.....	.....	.....
Nebraska	.....	.....	.....	16.8	18.1	13.8	14.9	19.4	22.0	24.9	.....	.....
New York	.....	.....	21.7	23.6	17.5	.....	.....	.....	22.7	.....	.....	.....
Ohio	.....	.....	21.7	20.8	19.4	19.5	16.5	22.1	21.0	25.3	.....	.....
Oklahoma	.....	.....	.....	18.3	17.3	13.0	14.5	22.2	23.0	.....	.....	25.3
Pennsylvania	.....	.....	.....	.....	.....	17.4	.....	.....	.....	.....	.....	.....
South Dakota	.....	.....	.....	.....	14.5	13.2	10.2	19.3	21.4	.....	.....	.....
Tennessee	.....	.....	.....	.....	.....	16.9	12.5	.....	.....	.....	.....	.....
Wisconsin	.....	.....	.....	.....	.....	.....	25.3	.....	.....	.....	.....	.....

TABLE 19.—*Leghorn chickens; average return to shipper per pound, by months, 1925–26, freight shipments*

Origin	1925								1926			
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Arkansas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28.2	.....
Atlanta, Ga.	.....	30.1	12.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chattanoogn, Tenn	25.6	28.0	.....	.....	.....	14.9	.....	.....	.....	28.3	.....	.....
Chicago, Ill	.....	27.7	22.4	19.8	21.0	18.5	18.3	21.5	22.5	.....	.....	.....
Georgia	.....	34.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois	.....	.....	.....	20.0	19.5	15.8	17.9	21.7	24.2	26.5	20.6	.....
Iowa	.....	28.7	20.5	20.4	20.8	15.3	18.4	20.6	22.7	.....	.....	.....
Kansas	28.9	26.1	22.3	21.3	22.5	14.0	17.3	.....	23.0	28.0	.....	.....
Kentucky	.....	.....	.....	.....	.....	.....	.....	.....	.....	24.3	30.1	.....
Michigan	.....	.....	.....	.....	.....	.....	21.3	.....	.....	.....	.....	.....
Minnesota	.....	.....	18.6	19.2	.....	.....	.....	.....	.....	.....	.....	.....
Missouri	27.5	31.4	20.6	21.1	19.7	14.7	17.0	21.1	21.8	28.6	28.3	27.9
Nebraska	.....	28.3	19.7	19.8	15.4	14.3	17.8	18.6	20.0	19.5	.....	.....
New York	.....	.....	.....	22.7	.....	.....	.....	.....	.....	.....	.....	.....
Ohio	.....	.....	23.6	22.7	20.8	17.1	19.5	20.2	22.0	22.5	.....	.....
Oklahoma	27.4	27.7	19.4	19.6	19.1	13.3	18.1	19.1	22.9	24.8	.....	.....
South Dakota	.....	.....	.....	.....	.....	15.0	19.4	.....	19.5	.....	.....	.....
Wisconsin	.....	.....	.....	.....	.....	.....	15.1	.....	.....	.....	.....	.....

TABLE 20.—*Leghorn broilers: Average return to shipper per pound, by months, 1925–26, freight shipments*

Origin	1925								1926			
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Arkansas	.....	33.4	18.3	19.8	.....	.....	.....	.....	.....	.....	.....	.....
Atlanta, Ga.	29.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34.8
Chattanoogn, Tenn	30.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36.0
Georgia	30.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois	30.8	29.4	23.0	22.0	20.9	.....	.....	.....	.....	.....	.....	.....
Iowa	.....	27.0	.....	.....	18.9	.....	.....	.....	.....	.....	.....	.....
Kansas	20.5	.....	19.9	21.3	20.5	.....	.....	.....	.....	.....	.....	.....
Missouri	30.3	27.2	20.0	20.8	19.7	.....	.....	25.0	.....	.....	.....	.....
Nebraska	.....	27.4	18.8	20.6	19.5	.....	21.4	23.5	.....	.....	.....	33.7
New York	.....	.....	.....	.....	21.3	.....	.....	.....	.....	.....	.....	.....
Oklahoma	29.7	.....	.....	.....	.....	.....	.....	23.4	.....	.....	.....	33.9
Texas	27.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 21.—*Price per pound of colored fowl, broilers, and chickens, shipped by freight, by weeks, 1923–24 and 1925–26*

Week ended—	Fowl	Broilers	Chickens	Week ended—	Fowl	Broilers	Chickens
1923	*Cents*	*Cents*	*Cents*	1924	*Cents*	*Cents*	*Cents*
Nov. 3	21.1	23.9	22.2	Feb. 9	26.6	34.8	24.2
Nov. 10	21.4	26.4	20.2	Feb. 16	26.9	38.0	24.4
Nov. 17	20.1	26.3	18.4	Feb. 23	27.9	40.9	24.6
Nov. 24	22.8	26.3	22.7	Mar. 1	30.1	41.4	26.3
Dec. 1	28.0	30.0	25.5	Mar. 8	28.0	45.7	27.3
Dec. 8	28.3	30.3	21.4	Mar. 15	25.4	47.0	26.1
Dec. 15	26.9	26.3	22.1	Mar. 22	26.1	50.0	26.7
Dec. 22	22.4	32.0	20.6	Mar. 29	27.5	50.0	26.5
Dec. 29	23.5	32.5	19.5	Apr. 5	26.5	53.0	25.3
				Apr. 12	26.7	55.0	26.6
1924				Apr. 19	28.6	61.0	26.3
Jan. 5	25.5	34.5	21.7	Apr. 26	27.0	56.3	22.3
Jan. 12	26.8	34.6	23.2	May 3	29.3	52.5	27.0
Jan. 19	26.6	30.3	21.0	May 10	30.0	50.2	25.0
Jan. 26	26.9	33.8	22.7	May 17	27.0	44.5	30.0
Feb. 2	27.8	35.5	23.0	May 24	28.5	44.6	44.0

TABLE 21.—*Price per pound of colored fowl, broilers, and chickens, shipped by freight, by weeks, 1923–24 and 1925–26*—Continued

Week ended—	Fowl	Broilers	Chickens
1924	*Cents*	*Cents*	*Cents*
May 31	25.4	44.2	38.0
June 7	29.0	41.9	40.8
June 14	27.5	40.0	43.4
June 21	26.5	36.5	35.0
June 28	25.5	37.7	38.0
July 5	25.0	39.0	37.2
July 12	23.9	37.5	38.0
July 19	23.2	38.4	37.1
July 26	24.0	32.9	33.2
Aug. 2	22.2	26.7	28.6
Aug. 9	24.8	31.9	27.9
Aug. 16	28.8	31.6	32.3
Aug. 23	25.7	30.9	30.8
Aug. 30	26.9	28.0	27.6
Sept. 6	26.6	26.2	26.8
Sept. 13	29.4	28.6	27.9
Sept. 20	27.8	25.1	25.2
Sept. 27	27.8	24.7	25.1
Oct. 4	25.9	24.9	24.7
Oct. 11	28.9	27.3	27.4
Oct. 18	28.2	25.2	25.1
Oct. 25	26.9	22.6	22.8
1925			
May 2	30.6	50.7	
May 9	39.1	48.7	38.4
May 16	37.9	45.3	39.3
May 23	37.6	46.5	44.9
May 30	37.1	42.1	38.1
June 6	39.0	41.0	39.9
June 13	38.7	44.1	43.4
June 20	39.6	39.9	38.5
June 27	36.8	40.2	38.7
July 4	35.0	35.0	33.0
July 11	26.0	30.7	30.2
July 18	29.1	34.2	33.5
July 25	26.8	30.1	28.6
Aug. 1	26.2	30.2	30.0
Aug. 8	25.0	29.9	29.6
Aug. 15	27.4	28.9	29.0
Aug. 22	27.6	27.7	26.3
Aug. 29	31.4	29.7	29.1
Sept. 5	30.2	28.0	27.8
Sept. 12	28.9	26.5	27.3
Sept. 19	31.9	29.5	30.1
Sept. 26	28.4	27.0	27.3
Oct. 3	28.1	24.5	25.0
Oct. 10	28.4	23.5	23.9
Oct. 17	26.6	25.0	22.8
Oct. 24	26.4	26.6	24.9
Oct. 31	28.7	28.0	25.7
Nov. 7	23.7	25.8	23.5
Nov. 14	25.1	24.7	20.0
Nov. 21	28.5	29.8	27.2
Nov. 28	31.0	32.8	30.0
Dec. 5	32.8	34.6	30.9
Dec. 12	32.5	33.8	27.2
Dec. 19	27.0	32.2	20.8
Dec. 26	26.9	35.0	28.0
1926			
Jan. 2	35.9	41.1	32.8
Jan. 9	38.4	42.1	33.5
Jan. 16	30.2	31.0	26.0
Jan. 23	30.0	33.3	28.4
Jan. 30	30.8	35.5	29.5
Feb. 6	33.2	42.5	29.4
Feb. 13	34.3	40.7	29.3
Feb. 20	30.1	41.5	30.5
Feb. 27	31.3	41.0	30.9
Mar. 6	34.4	50.0	32.0
Mar. 13	34.2	50.0	31.6
Mar. 20	35.0	45.0	30.8
Mar. 27	31.6	50.0	32.5
Apr. 3	32.1	49.8	30.7
Apr. 10	32.0	51.8	28.0
Apr. 17	35.9	52.1	31.7
Apr. 24	33.4	45.7	33.0
Apr. 30	34.4	45.2	39.0

TABLE 22.—*Price per pound of colored fowl, broilers, and chickens, shipped by freight by weeks, 1927*

Week ended	Fowl	Broilers	Chickens
1927	*Cents*	*Cents*	*Cents*
Jan. 1	32.5	40.0	30.0
Jan. 8	35.0	40.0	30.0
Jan. 15	32.3	32.0	24.0
Jan. 22	33.0	35.0	23.0
Jan. 29	33.0	35.0	27.0
Feb. 5	31.0	38.0	28.0
Feb. 12	28.0	36.5	27.0
Feb. 19	30.0	38.0	26.0
Feb. 26	31.5	38.0	25.0
Mar. 5	32.0	45.0	27.0
Mar. 12	29.8	45.0	26.0
Mar. 19	26.8	40.0	25.0
Mar. 26	28.0	45.0	26.0
Apr. 2	30.5	45.0	26.0
Apr. 9	32.3	42.5	26.0
Apr. 16	32.3	42.5	26.0
Apr. 23	30.0	42.5	25.0
Apr. 30	28.8	34.0	
May 7	29.3	37.5	
May 14	26.3	40.5	
May 21	26.3	40.0	
May 28	26.5	35.5	
June 4	26.0	31.5	
June 11	25.5	29.5	
June 18	24.0	35.3	
June 25	23.0	31.8	
July 2	25.0	32.5	
July 9	29.0	30.5	
July 16	26.0	27.0	
July 23	24.0	29.5	
July 30	22.0	26.5	
Aug. 6	25.0	26.0	
Aug. 13	27.3	26.0	
Aug. 20	25.8	23.5	
Aug. 27	25.3	25.3	
Sept. 3	23.5		24.5
Sept. 10	22.5		26.0
Sept. 17	27.0		29.5
Sept. 24	29.0		28.0
Oct. 1	29.0		27.5
Oct. 8	23.0		26.0
Oct. 15	23.0		25.5
Oct. 22	24.0		26.0
Oct. 29	23.0		23.5
Nov. 5	21.5	26.0	25.0
Nov. 12	27.8	32.0	28.0
Nov. 19	25.3	32.0	23.0
Nov. 26	22.5	32.0	22.0
Dec. 3	22.3	32.0	20.0
Dec. 10	24.5	32.0	20.5
Dec. 17	24.3	32.0	23.5
Dec. 24	22.8	35.0	26.0
Dec. 31	25.0	30.5	25.0

Compiled from Statistical Review of the New York Market—New York Produce Review.

TABLE 23.—*Data used in the statistical analysis*

Year and week ended—	Expected weekly receipts in New York	Wholesale price of kosher veal per pound in New York	Weekly average of maximum temperature in New York
1923	*Cars*	*Cents*	*°F.*
Nov. 10	270	15.2	51.3
Nov. 17	280	13.7	50.8
Nov. 24	285	14.0	51.3
Dec. 1	304	13.9	51.8
Dec. 8	245	15.6	52.0
Dec. 15	270	17.0	48.5
Dec. 22	400	15.7	48.7
Dec. 29	313	15.5	41.8
1924			
Jan. 5	289	18.4	40.5
Jan. 12	258	21.5	45.8
Jan. 19	250	19.3	45.3
Jan. 26	249	18.9	34.2
Feb. 2	235	18.5	43.7
Feb. 9	254	18.5	36.3
Feb. 16	248	19.5	33.2
Feb. 23	246	19.0	32.7
Mar. 1	230	17.5	40.2
Mar. 8	240	16.1	45.0
Mar. 15	281	16.0	39.0
Mar. 22	278	17.3	45.8
Mar. 29	246	18.0	52.7
Apr. 5	271	18.0	48.2
Apr. 12	273	17.5	53.2
Apr. 19	317	16.4	56.3
Apr. 26	207	14.6	58.8
May 3	185	13.5	60.2
May 10	219	15.4	61.2
May 17	241	17.0	63.3
May 24	215	16.9	63.5
May 31	230	15.6	65.0
June 7	195	15.0	71.7
June 14	227	15.0	65.0
June 21	216	17.0	78.0
June 28	219	15.4	79.3
July 5	215	14.4	73.8
July 12	223	16.0	82.7
July 19	251	17.5	78.2
July 26	235	15.5	82.7
Aug. 2	252	14.2	81.3
Aug. 9	206	15.0	88.3
Aug. 16	211	16.8	77.8
Aug. 23	230	18.5	74.0
Aug. 30	241	18.4	82.5
Sept. 6	220	17.5	77.0
Sept. 13	235	18.9	69.8
Sept. 20	200	18.8	67.8
Sept. 27	376	17.8	67.0
Oct. 4	320	17.5	67.7
Oct. 11	246	17.2	68.3
Oct. 18	249	17.2	64.7
Oct. 25	214	16.6	59.3
Oct. 31	239	16.6	63.0
1925			
May 9	180	15.4	62.2
May 16	180	18.0	65.5
May 23	292	17.5	74.0
May 30	231	17.0	65.7
June 6	175	16.5	92.0
June 13	100	14.2	75.5
June 20	200	15.0	81.8
June 27	214	17.4	77.8
July 4	205	18.5	75.8
July 11	209	18.3	83.7
July 18	196	17.6	79.2
July 25	218	17.2	78.2
Aug. 1	203	17.5	76.3
Aug. 8	231	18.6	80.2
Aug. 15	204	19.5	81.7
Aug. 22	222	18.1	78.5
Aug. 29	200	17.6	77.7
Sept. 5	234	18.5	81.5
Sept. 12	231	18.5	79.2
Sept. 19	273	19.4	73.2
Sept. 26	326	20.5	66.2
Oct. 3	256	22.0	60.3
Oct. 10	267	22.1	56.8
Oct. 17	208	18.7	64.7
Oct. 24	216	16.5	51.5
Oct. 31	227	17.4	47.0
Nov. 7	282	17.4	52.7
Nov. 14	240	16.7	52.2
Nov. 21	228	16.5	52.0
Nov. 28	308	16.9	43.3
Dec. 5	198	18.4	47.3
Dec. 12	216	20.3	44.0
Dec. 19	244	19.6	38.7
Dec. 26	267	19.5	37.2
1926			
Jan. 2	192	19.5	36.0
Jan. 9	162	20.8	40.7
Jan. 16	214	21.8	34.5
Jan. 23	207	21.3	46.0
Jan. 30	221	20.8	33.0
Feb. 6	193	21.6	34.2
Feb. 13	199	22.0	39.5
Feb. 20	213	21.6	41.5
Feb. 27	201	20.8	39.5
Mar. 6	190	19.8	36.2
Mar. 13	199	20.5	37.0
Mar. 20	185	20.5	47.0
Mar. 27	364	19.8	52.3
Apr. 3	303	19.7	44.7
Apr. 10	168	19.1	52.7
Apr. 17	174	18.5	48.5
Apr. 24	180	18.5	62.2
Apr. 30	170	18.5	57.2
1927			
Feb. 5	194	14.8	44.2
Feb. 12	215	15.9	43.7
Feb. 19	201	14.8	44.3
Feb. 26	210	15.2	45.3
Mar. 5	200	15.0	38.2
Mar. 12	230	13.8	51.8
Mar. 19	225	14.3	64.3
Mar. 26	215	13.8	43.8
Apr. 2	210	13.3	48.7
Apr. 9	206	14.3	49.8
Apr. 16	315	13.3	60.0
Apr. 23	250	13.9	65.2
Apr. 30	221	10.5	54.8
May 7	220	11.3	65.3
May 14	240	11.7	66.2
May 21	235	11.7	64.3
May 28	235	11.9	64.3
June 4	243	13.8	67.3
June 11	208	11.7	77.8
June 18	243	14.3	69.8
June 25	225	14.8	75.2
July 2	220	14.8	75.8
July 9	195	14.8	76.5
July 16	225	16.5	86.5
July 23	225	9.4	75.8
July 30	240	9.9	84.7
Aug. 6	225	16.5	77.3
Aug. 13	228	17.0	77.2
Aug. 20	260	15.8	72.8
Aug. 27	230	18.3	69.7
Sept. 3	260	16.9	74.8
Sept. 10	245	17.4	76.5
Sept. 17	240	17.4	77.0
Sept. 24	350	17.8	69.0
Oct. 1	225	18.4	74.8
Oct. 8	370	18.3	73.7

TABLE 23.—*Data used in the statistical analysis*—Continued

Year and week ended—	Expected weekly receipts in New York	Wholesale price of kosher veal per pound in New York	Weekly average of maximum temperature in New York	Year and week ended—	Expected weekly receipts in New York	Wholesale price of kosher veal per pound in New York	Weekly average of maximum temperature in New York
1927	*Cars*	*Cents*	°*F.*	1927	*Cars*	*Cents*	°*F.*
Oct. 15	310	18.3	62.5	Nov. 26	324	16.9	55.3
Oct. 22	191	18.3	57.7	Dec. 3	250	16.9	57.3
Oct. 29	240	17.9	67.7	Dec. 10	267	17.3	45.0
Nov. 5	230	17.9	59.7	Dec. 17	226	16.8	49.7
Nov. 12	210	16.3	50.8	Dec. 24	321	16.8	36.0
Nov. 19	255	16.9	59.8	Dec. 31	284	16.8	46.2

NOTE.—Fowl, broiler, and chicken prices are found in Table 21.

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