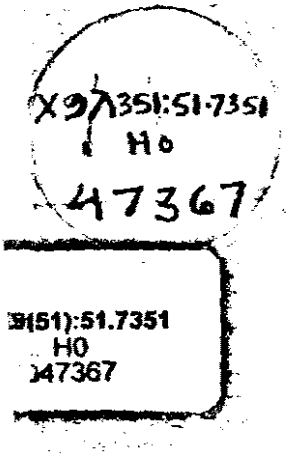
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ECONOMIC PROBLEMS AFFECTING POULTRY MARKETING IN CALIFORNIA

J. M. TINLEY and E. C. VOORHIES

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CONTENTS

ECONOMIC PROBLEMS AFFECTING POULTRY MARKETING IN CALIFORNIA[1,2]

J. M. TINLEY[3] AND E. C. VOORHIES[4]

INTRODUCTION

IN 1935 various organizations requested the Division of Agricultural Economics, College of Agriculture, University of California, to investigate poultry marketing in California, with a view to ascertaining the sources of supply of chickens marketed in the two major cities—San Francisco and Los Angeles—the trade channels for poultry, and factors influencing the supply, demand, and prices of different types and grades of poultry. The data on which this study is based were collected from the fall of 1935 through the spring and summer months of 1939. At the urgent request of turkey producers in southern California, the phase of this study dealing with turkey marketing was completed first and issued in bulletin form in August, 1937.[5] The part of the investigation reported in the present publication will be confined largely to the factors influencing chicken marketing.

While California is an important chicken-producing state, the bulk of chickens raised is of the White Leghorn breed, noted as heavy layers. Comparatively small numbers of heavy meat or dual-purpose (meat and eggs) chickens are raised in the state. Poultry-meat production is thus largely a by-product of the California egg-production industry. To meet the local demand for poultry meat, large quantities of chickens are shipped into California annually from states as far east as Illinois and Indiana. California thus comes into direct competition with the large consuming centers on the Atlantic seaboard for supplies of the heavier types of chickens produced in the midwestern and southwestern states. An investigation of poultry-meat marketing in California, in order to be complete, has to include an analysis of certain phases of the poultry industry in the United States as a whole.

[1] Received for publication August 31, 1939.

[2] Paper No. 89, the Giannini Foundation of Agricultural Economics.

[3] Associate Professor of Agricultural Economics, Associate Agricultural Economist in the Experiment Station, and Agricultural Economist on the Giannini Foundation.

[4] Professor of Agricultural Economics, Agricultural Economist in the Experiment Station, and Agricultural Economist on the Giannini Foundation.

[5] Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bul. 612:1–78. 1937.

DEVELOPMENT OF CHICKEN PRODUCTION IN THE UNITED STATES

Importance.—The 1935 Census of Agriculture* showed 6,812,350 farms in the United States, of which 5,832,000, or 85.6 per cent, reported having chickens. Probably no other form of farming activity is so widespread as chicken raising. In many sections farm flocks are very small, chickens being raised mainly for home consumption, or to supply a small cash income for the family.

TABLE 1

GROSS FARM INCOME OF ALL FARM PRODUCTS, LIVESTOCK, CHICKENS, AND EGGS BY GEOGRAPHIC DIVISIONS, 1937

Geographic division	Gross farm income					Chickens and eggs as a percentage of	
	Crops and livestock	Livestock	Chickens	Eggs	Chickens and eggs	Crops and livestock	Livestock
	1,000 dollars	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*per cent*	*per cent*
North Atlantic	1,079,807	704,849	57,802	130,926	188,728	17.5	26.8
East north central	1,952,274	1,392,938	87,818	146,181	235,996	12.0	16.8
West north central	2,099,927	1,557,366	94,068	128,933	223,991	10.6	14.3
South Atlantic	1,193,259	441,457	50,309	62,262	112,571	9.4	25.5
South central	2,071,172	891,840	65,053	95,682	160,740	7.8	18.0
Mountain	584,788	373,370	9,976	22,856	32,554	5.6	8.7
Pacific	1,002,133	386,505	15,567	64,656	80,223	8.0	20.8
Total or average	9,983,160	5,748,317	380,407	651,496	1,031,903	10.3	18.0

Source of data:
United States Department of Agriculture Bureau of Agricultural Economics. Gross farm income and government payments. p. 1–21. June 5, 1939. (Mimeo.)

In 1937 the gross farm income from all types of agriculture for the United States was 9,983 million dollars, of which 5,748 million dollars, or about 58 per cent, was from the production of livestock, including chickens (table 1). The income from chickens was about 380 million dollars and from eggs 651 million dollars, or 1,032 million dollars together. This was about 10.3 per cent of the gross farm income from all agricultural products, or 18.0 per cent of the gross farm income from livestock production only.

The relative importance of the chicken industry varies considerably in different parts of the United States. In the north Atlantic states, chickens and eggs accounted for approximately 17.5 per cent of the gross farm income from all farm products, in contrast to only 5.6 per cent in the mountain states and 8.0 per cent in the Pacific states. In the last named region over 20 per cent of the gross farm income for livestock only was from chickens and eggs.

* United States Department of Commerce Bureau of the Census. Census of Agriculture, 1935. vols. 1 and 2, 1936; vol. 3, 1937.

Trend of Production.—According to the various censuses, numbers of chickens on farms increased from 258,871,000 in 1890 to 409,291,000 in 1925 and have since declined to 371,603,000 in 1935 (table 2). These figures can be regarded only as a very rough measure of the trend of chicken production, first, because the dates on which the various censuses were taken are not the same and, second, because in some censuses chickens under 3 months old were not enumerated. Thus it is difficult to de-

TABLE 2

HUMAN POPULATION, CHICKENS ON FARMS, CHICKENS RAISED, AND EGG PRODUCTION IN THE UNITED STATES, 1890–1935*

Census	Human population	Chickens on farms	Chickens raised†	Dozen eggs produced†	Relative numbers (1890=100)		
					Human population	Chickens on farms	Dozen eggs produced
	thousands	*thousands*	*thousands*	*thousands*	*per cent*	*per cent*	*per cent*
1890 (June 1)	62,948	258,871	—‡	819,723	100.0	100.0	100.0
1900 (June 1)§	75,995	233,566	—	1,293,819	120.7	90.2	158.6
1910 (April 15)§	91,972	280,341	460,612	1,574,979	146.1	108.3	192.1
1920 (January 1)	105,711	359,537	473,302	1,654,045	167.9	138.9	201.8
1925 (January 1)	112,786	409,291	545,848	1,913,245	179.2	158.1	233.4
1930 (April 1)§	122,775	378,878	673,092	2,689,719	195.0	146.4	328.1
1935 (January 1)§	127,521	371,603	598,867	2,160,906	202.6	143.5	263.6

* Poultry on farms were first enumerated in the 1850 Census, which showed 102,272,000 barnyard fowls, excluding spring hatchings, and 456,911,000 dozen eggs produced during 1879. These figures have not been included in this table because of doubt as to their comparability.

† Year preceding the census.

‡ Dashes indicate data not available.

§ Excludes chickens under 3 months old.

Sources of data:

United States Department of Commerce Bureau of the Census. Censuses of 1890, 1900, 1910, 1920, and 1930, and Censuses of Agriculture of 1925 and 1935. Population data for the years 1925 and 1936 were taken from: United States Department of Commerce Bureau of Foreign and Domestic Commerce. Statistical Abstract for the United States. 1937: XVIII + 1–861. 1938.

termine just how much of the change from one census to the next was due to an actual increase or decrease in chicken numbers on farms and how much was due to seasonal variations in chicken numbers or to exclusion of young chickens.

A more accurate indication of the trend of chicken production would be the number of chickens raised. Unfortunately, however, such data for the year preceding the census are available only in the 1910 and subsequent censuses. This indicates that chickens raised increased from 460,612,000 in 1909 to 673, 092, 000 in 1929, with a decline to 598,867,000 in 1934.

Production of eggs increased from 819,723,000 dozen in 1889 to 2,689,-719,000 dozen in 1929, with a decline to 2,160,906,000 dozen in 1934.

From 1890 to 1935 the human population of the United States just about doubled, whereas chicken numbers on farms increased by less than

half (43.5 per cent). Even if allowance is made for the deficiency of the census data on chickens on farms, above referred to, it is evident that chicken production since 1890 has increased at a much less rapid rate

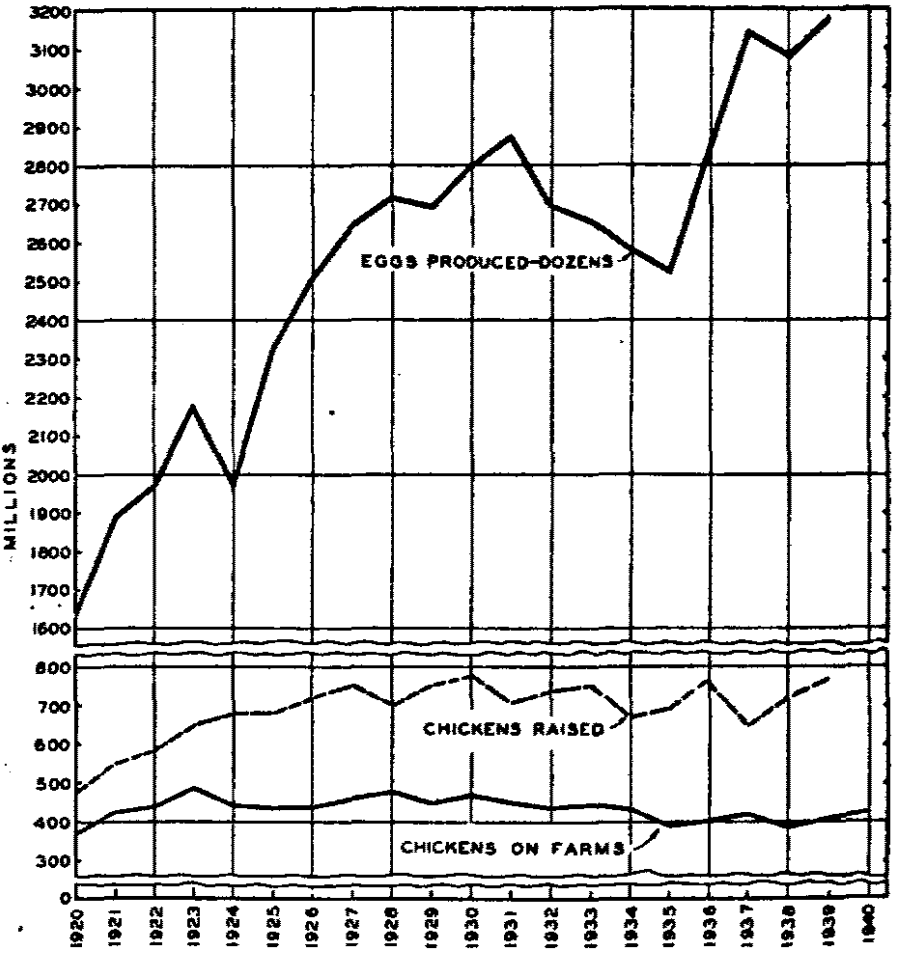

Fig. 1.—The number of chickens on farms, United States, January 1, 1920–1940, and chickens raised and eggs produced, United States, 1920–1939.

Data for 1920–1924 from: United States Department of Agriculture. Crops and Markets Supplement. p. 44. February, 1925. Data for 1925–1936 from: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1925–1937. p. 5, 12, 30, 31. December, 1938. (Mimeo.) Data for 1937 from: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1938–1939. Chickens on farms, January 1, 1938–1939. p. 3, 4, 6. March 1939. (Mimeo.) Data for 1938–1939 from: United States Department of Agriculture Agricultural Marketing Service. Farm production and income—chickens and eggs, 1938–1939. p. 3, 4, 6. May, 1940. (Mimeo.)

than the human population. Egg production in 1934 was more than two and a half times as great as in 1889 which indicates a marked increase in output of eggs per hen. Part of this increased output of eggs per hen is probably due to improved breeding and feeding practices applied

TABLE 3

CHICKENS ON FARMS IN THE UNITED STATES BY GEOGRAPHIC DIVISIONS, 1890–1935*

Geographic division	Chickens on farms							Percentage distribution of chickens on farms						
	1890	1900	1910	1920	1925	1930	1935	1890	1900	1910	1920	1925	1930	1935
	thousands	*thousands*	*thousands*	*thousands*	*thousands*	*thousands*	*thousands*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
North Atlantic	28,110	27,952	31,289	33,256	42,067	38,379	42,223	10.9	12.0	11.2	9.3	10.5	10.1	11.4
East north central	58,930	58,103	69,471	84,517	89,622	77,684	80,188	22.8	24.9	24.8	23.5	21.9	20.5	21.6
West north central	73,772	65,366	85,192	105,347	123,101	118,261	98,771	28.5	28.0	30.4	29 3	30.1	31.2	26.6
South Atlantic	33,774	22,294	25,627	36,407	41,120	33,423	38,761	13.0	9.5	9.1	10.1	10.0	8.8	10.4
South central	57,110	50,300	53,671	74,011	78,805	71,871	76,765	22.1	21.5	19.1	20.6	19.3	19.0	20.6
Mountain	1,710	3,116	5,468	9,525	12,300	12,372	11,907	0.6	1.3	2.0	2.6	3.0	3.3	3.2
Pacific	5,465	8,435	9,623	16,474	21,376	26,888	22,988	2.1	2.8	3.4	4.6	5.2	7.1	6.2
United States	258,871	233,566	280,341	359,537	409,291	378,878	371,603	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Data for 1890 and 1900 are for June 1; 1910 for April 15; 1920, 1925, and 1935 for January 1; 1930 for April 1. Data for 1900, 1910, 1930, and 1935 exclude chickens under 3 months old.

Sources of data:
United States Department of Commerce Bureau of the Census. Censuses of 1890, 1900, 1910, 1920, and 1930, and the Censuses of Agriculture of 1925 and 1935.

to all types of chickens; part, however, is probably due to the concentration in certain areas upon high egg-producing types such as White Leghorns. These are usually lighter in weight than the dual-purpose types. To the extent that the breeding of Leghorns has replaced the heavier dual-purpose birds, poultry-meat production has increased somewhat less rapidly than the census data on chickens on farms would indicate.

Since 1920 the United States Department of Agriculture Bureau of Agricultural Economics has issued annually estimates of chickens on farms, chickens raised, and eggs produced (fig. 1). These data indicate that while chicken numbers on farms and chickens raised have varied from year to year, there has been no marked increase or decrease of production since 1923. In contrast, egg production showed a distinct upward trend. During the four years 1920–1923, egg production per chicken raised averaged 40.9, whereas during the four years 1936–1939 the average was 50.6. This would indicate that the emphasis on high egg-producing types of chickens has continued.

Regional Trends of Production.—According to the 1890 census, 132,702,000 chickens on farms or just over half (51.3 per cent) of all chickens in the United States were in the east and west north central states (table 3 and fig. 2). The south central states had another 57,110,000, or 22.1 per cent. The north and south Atlantic states together had 61,884,000 chickens, or nearly 24.0 per cent. The mountain and Pacific states together had only 7,175,000 chickens, or only 2.7 per cent of all chickens on farms.

Since 1890, while the chicken numbers on farms have increased by about half, some change has taken place in the relative importance of the different geographic divisions. In 1930 the north Atlantic, east north central, south Atlantic, and south central states had declined somewhat in relative importance. In 1890 these four divisions together had 68.8 per cent of all chickens on farms; in 1930 only 58.4 per cent. The west north central states had 31.2 per cent in 1930 as compared with 28.5 per cent in 1890. The largest relative change occurred in the mountain and Pacific states. In 1930 the mountain states had 3.3 per cent of all farm chickens as compared with only 0.6 per cent in 1890. In the Pacific states the percentage had increased from 2.1 in 1890 to 7.1 in 1930.

In 1935 the position was somewhat different from that in 1930. The north Atlantic, east north central, south Atlantic, and south central states increased in relative importance. If comparisons are made between 1890 and 1935, only the north Atlantic, mountain, and Pacific divisions increased their percentages of chickens on farms.

The percentages of chickens raised in different geographic divisions since 1909 (table 4 and fig. 2) show much the same general tendencies

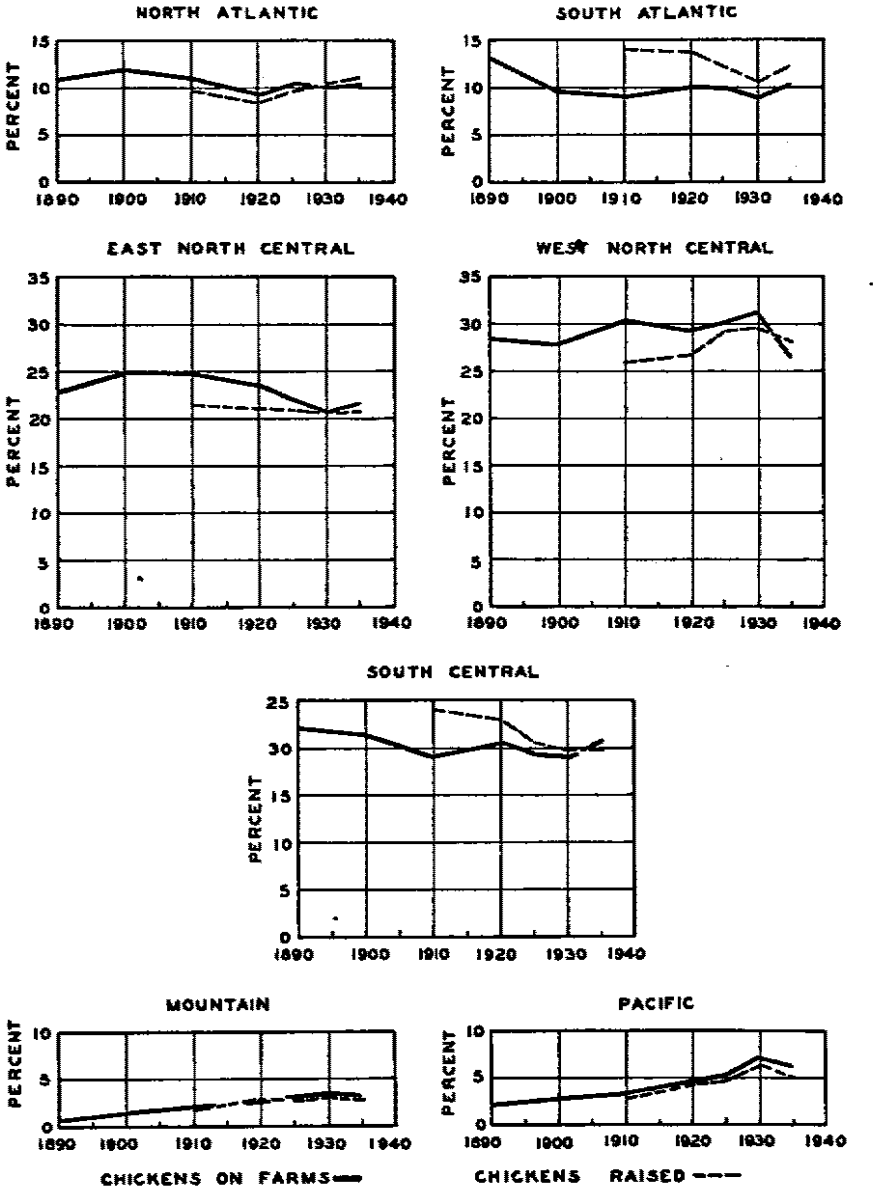

Fig. 2.—Percentages of (1) all chickens in the United States by geographic divisions, 1890–1935, and (2) chickens raised in the United States by geographic divisions, 1909–1934.

Data from tables 3 and 4.

TABLE 4

NUMBER AND PER CENT OF CHICKENS RAISED IN THE UNITED STATES BY GEOGRAPHIC DIVISIONS, 1909–1934

Geographic division	Chickens raised					Proportion of chickens raised				
	1909	1919	1924	1929	1934	1909	1919	1924	1929	1934
	number	*number*	*number*	*number*	*number*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
North Atlantic	44,838	39,537	53,219	69,655	67,353	9.7	8.4	9.7	10.3	11.2
East north central	98,896	99,259	113,868	137,854	124,479	21.5	21.0	20.9	20.5	20.7
West north central	118,998	126,763	158,863	198,437	168,824	25.9	26.8	29.1	29.5	28.2
South Atlantic	65,059	65,374	66,752	70,943	73,460	14.1	13.8	12.2	10.6	12.3
South central	110,385	108,400	119,101	132,783	117,503	24.0	22.9	20.6	19.7	19.7
Mountain	8,432	13,037	15,538	21,089	17,364	1.8	2.7	2.8	3.1	2.9
Pacific	14,014	20,939	25,508	42,321	29,774	3.0	4.4	4.7	6.3	5.0
United States	460,612	473,302	545,848	673,093	598,867	100.0	100.0	100.0	100.0	100.0

Sources of data:
Computations by authors on basis of: United States Department of Commerce Bureau of the Census. Censuses of 1910, 1920, and 1930, and Censuses of Agriculture of 1925 and 1935.

as are shown by the percentages of chickens on farms. There are, however, important differences in the relative level of these two groups of percentages. In the south Atlantic and south central states the level of the percentages of chickens raised is above the level of chickens on farms. In all other divisions the reverse is the case.

A more detailed picture of the relative importance of chicken production in the various geographic divisions of the United States is afforded by an analysis of the estimates of chickens raised annually, made since 1920 by the United States Department of Agriculture Bureau of Agricultural Economics (table 5). These data show clearly the predominant importance of the west north central division, with the east north central and south central divisions ranking next.

Chicken production increased in all divisions between 1920 and 1924. For the country as a whole there has been no marked upward or downward trend since the latter year, although there have been wide fluctuations in the year-to-year levels of production. While these data cover too short a period to permit of any very definite conclusions, production since 1924 appears to be of a cyclical nature, the cycles ranging from three to four years (table 5). This cycle bears a distinct relation to egg prices and through these to feed prices. (The value of poultry meat produced is relatively less important than that of eggs produced.) If feed prices are low as compared with egg prices farmers normally will increase their flocks. In 1938 egg prices were relatively high in comparison with feed prices (fig. 25). Hog prices were declining through the year. The effect of this situation can be seen clearly by an examination of hatchery sales in the United States (table 17).

While the volume of production in the east north central and west north central divisions has fluctuated considerably from year to year since 1924, the general level of production has not shown any pronounced trend, the marked decline in 1934 and 1937 being due to the severe droughts of 1934 and 1936. In the south central division the tendency has been slightly downward over the past decade and a half. No definite upward or downward trend is discernible in the data for the south Atlantic division. From 1924 until 1930 the trend continued upwards in the chicken deficit areas—north Atlantic and western (mountain and Pacific divisions combined). Since the latter year there has been no distinct upward or downward movement in the north Atlantic division; the western division showed a decline until 1938.

Relative changes in the annual production levels of chickens in different geographic divisions have an important bearing on the annual level of prices in various divisions. A decline in the production level in any one divison, relative to production in others, will tend to increase the

level of chicken prices in that division, relative to prices in others. These relations between production and prices in the various geographic divisions will be analyzed more fully in a later section ("Regional Trends in Farm Chicken Prices," p. 99–103).

Surplus and Deficit Areas.—A comparison of the percentage of chickens raised in each geographic division with the percentage of the human

TABLE 5

CHICKENS RAISED ANNUALLY BY GEOGRAPHIC DIVISIONS, 1920–1939

Year	North Atlantic	East north central	West north central	South Atlantic	South central	Western	United States
	thousands	*thousands*	*thousands*	*thousands*	*thousands*	*thousands*	*thousands*
1920	39,700	97,800	126,700	71,500	107,400	32,100	474,700
1921	55,300	112,700	139,400	76,600	127,300	38,400	549,700
1922	53,200	124,100	155,000	80,500	127,300	39,300	579,000
1923	56,300	132,700	161,500	92,200	144,700	42,500	648,900
1924	46,200	148,800	190,000	97,300	158,400	42,600	678,900
1925	67,900	143,400	198,000	77,900	137,500	53,900	678,700
1926	70,000	148,600	206,300	82,200	151,800	60,300	718,300
1927	74,300	153,600	208,000	87,200	160,800	67,000	750,400
1928	71,400	143,900	202,000	76,900	141,800	65,900	700,000
1929	77,800	153,800	231,400	79,200	148,100	70,800	751,100
1930	81,500	156,300	230,300	81,300	152,800	74,900	777,000
1931	75,900	145,700	207,100	79,500	138,800	63,400	709,400
1932	79,500	152,800	216,300	89,400	149,000	54,700	735,800
1933	83,500	160,300	223,200	88,900	141,300	57,900	750,100
1934	75,100	138,900	188,363	82,000	132,300	52,600	669,800
1935	82,500	152,400	181,700	89,000	131,600	54,300	690,500
1936	93,200	161,900	201,300	99,200	146,600	60,900	764,100
1937	81,000	133,700	162,300	87,200	130,900	53,900	648,900
1938	87,700	145,400	191,000	98,200	142,600	51,900	716,300
1939	90,600	151,000	208,300	106,400	156,900	61,700	773,900

Sources of data:
1920–1924: United States Department of Agriculture. Crops and Markets Supplement. p. 44. February, 1925.
1925–1936: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1925-1937. p. 12, 14. December, 1938. (Mimeo.)
1937: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1937-1938. p. 4. March, 1939. (Mimeo.)
1938–1939: United States Department of Agriculture Agricultural Marketing Service. Farm production and income—chickens and eggs, 1938-1939. p. 4. May, 1940. (Mimeo.)

population (tables 4 and 6 and fig. 3) in each division will give a rough approximation of the relative surplus or deficit position of the various divisions (areas in which the supply of chickens is in excess of or below local consumption needs) of the United States. Such a comparison over a period will indicate the extent to which individual divisions are changing their relative deficit or surplus positions.

In making such a comparison certain assumptions are involved. The first is that the volume of poultry meat available for consumption in each geographic division is approximately equal to the number of chickens raised in each division; in other words, that the average weights of

TABLE 6

HUMAN POPULATION OF THE UNITED STATES BY GEOGRAPHIC DIVISIONS, 1910–1935

Geographic division	Population					Percentage of total for United States				
	1910	1920	1925	1930	1935	1910	1920	1925	1930	1935
	thousands	*thousands*	*thousands*	*thousands*	*thousands*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
North Atlantic	25,868	29,662	32,219	32,427	35,740	28.1	28.0	28.0	28.0	28.0
East north central	18,251	21,476	23,526	25,297	25,522	19.8	20.6	20.5	20.6	20.0
West north central	11,638	12,544	12,948	13,297	13,661	12.7	10.8	11.3	10.8	10.7
South Atlantic	12,195	13,990	14,958	15,794	17,360	13.3	12.9	13.0	12.9	13.6
South central	17,194	19,136	20,707	22,064	23,250	18.7	18.0	18.0	18.0	18.2
Mountain	2,634	3,336	3,532	3,702	3,706	2.9	3.1	3.1	3.0	2.9
Pacific	4,192	5,567	6,977	8,194	8,280	4.5	5.3	6.1	6.7	6.5
United States	91,972	105,711	114,867	122,775	127,521	100.0	100.0	100.0	100.0	100.0

Sources of data:
United States Department of Commerce Bureau of the Census. Censuses of 1910, 1920, and 1930.
United States Department of Commerce Bureau of Foreign and Domestic Commerce. Statistical Abstracts for the United States, 1935 and 1936.

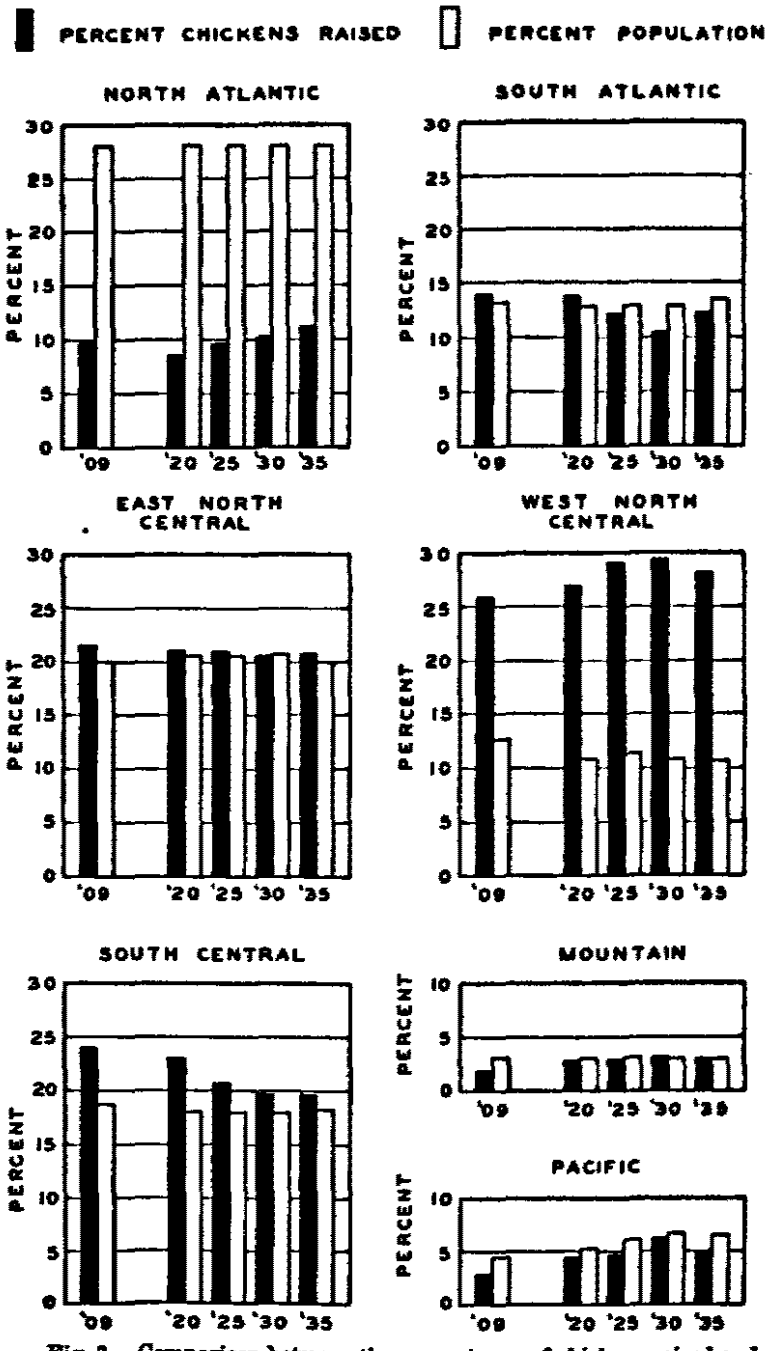

Fig. 3.—Comparison between the percentages of chickens raised and of the human population in the geographic divisions of the United States, 1909, 1920, 1925, 1930, 1935.

Data from tables 4 and 6.

chickens raised throughout the United States are about equal and that the percentage of chickens consumed is in direct proportion to the number of chickens raised. The second assumption is that per-capita consumption of chickens is about the same in all parts of the United States. A third assumption is that the turnover is the same in all sections of the country.

In several divisions of the United States where chickens are raised principally for egg production, the predominant breed is likely to be the White Leghorn. The average meat weight of chickens of this breed is about one-third less than that of other breeds such as the Plymouth Rock, Rhode Island Red, Wyandotte, and Orpington.[7] In addition, the mortality among Leghorns in large commercial flocks is usually much higher than is the case in smaller flocks where chickens are allowed greater freedom and activity. A much smaller proportion of Leghorns raised is thus likely ultimately to find its way into consumption as meat than is true for heavier chicken breeds, most of which are found in fairly small flocks. Moreover, the feeding of Leghorns is designed to promote the production of eggs and not of meat. Leghorn hens thus are likely to make an inferior quality of poultry meat. Where chickens are kept for commercial egg production they are usually held for a shorter period than they are in smaller farm flocks.

Unfortunately, no accurate quantitative data are available on the relative importance of different breeds of chickens in the various geographic divisions of the United States. It is possible, however, to venture a few general observations based upon opinions of poultry specialists familiar with production conditions in different parts of the United States.[8]

In the south Atlantic and south central states heavy breeds of chickens predominate. In the mountain and Pacific divisions (especially the latter), the predominant breed is the Leghorn. In the north Atlantic states probably more than half of all the chickens raised annually are of the heavier breeds, although in some states, particularly New Jersey and parts of New York, Leghorns predominate. Until within comparatively recent years the bulk of all chickens produced in the east north central and west north central states was of the heavier breeds. However, during the past few years, with the expansion of commercialized egg production

[7] The average weight of Leghorns is 4½ pounds for hens and 6 pounds for cocks. In contrast Wyandottes and Rhode Island Reds average 6½ pounds for hens and 8½ for cocks; Plymouth Rocks, 7½ pounds for hens and 9½ pounds for cocks; Orpingtons, 8 pounds for hens and 10 pounds for cocks. (See: Jull, M. A. Poultry husbandry. p. 32. McGraw Hill, New York. 1938.)

[8] Based upon statements made by W. E. Newlon, Specialist in Agricultural Extension Service, University of California, and members of the Poultry Division, College of Agriculture, University of California.

in these two divisions, the proportion of Leghorns raised has increased materially.*

The above information on the relative importance of light and heavy breeds has been partially substantiated by the reports of baby chicks produced by hatcheries.[10] By dividing the north Atlantic states into the New England and middle Atlantic divisions, baby-chick production in the New England division has run almost exclusively to the heavy breeds (1938–1940), whereas production in the middle Atlantic states has run slightly more to the light breeds. Outside of the middle Atlantic states, the mountain and the Pacific states are the only other divisions which have shown a tendency for production of light-breed baby chicks.

The data shown in figure 3 indicate that the north Atlantic division was the most important deficit area; in other words, local chicken production provided only a small percentage, probably less than half, of the chickens consumed in that area. Since 1920, however, this division has tended to provide a somewhat larger percentage of its consumption needs for chickens. The Pacific division is also a deficit area although the deficit position is not nearly so marked as in the north Atlantic division. In the south Atlantic, east north central, and mountain states, the percentages of chickens raised and of population were approximately equal; these divisions produced about as many chickens as were consumed. More than half the chickens produced in the west north central division from 1909 to 1934 were surplus to local consumption needs and therefore available for shipment to the deficit areas on the Atlantic and Pacific coasts. Small surpluses were also available in the south central division.

On the basis of the broad generalizations mentioned under the assumptions listed on pages 12–15, it is possible to draw the conclusion that the north central states probably produce a somewhat larger percentage of the United States supply of poultry meat than the percentages of chickens raised shown in figure 3 would indicate. On the other hand, probably the mountain and western states produce a considerably smaller proportion of the total United States supply of poultry meat than the percentages of all chickens raised in these two areas would indicate. The estimates of the per-capita production (in pounds) of chickens tend to confirm the above conclusions (table 7).

The north Atlantic and the western states stand out as deficit-chicken-

* Some further light will be thrown on this subject in later sections—"Chickens Raised and Eggs Produced per farm in 1934" (p. 24–25) and "Size of Poultry Farms and Flocks" (p. 25–31).

[10] Mimeographed hatchery reports issued monthly by United States Department of Agriculture Bureau of Agricultural Economics, Washington, D. C. Beginning in 1940 reports on hatchery operations were included in "Poultry and Egg Production" (mimeographed) issued by the United States Department Agriculture Marketing Service on the 15th of each month.

production areas, whereas the west north central states are those of greatest surplus. The east north central and south central states probably have only a slight surplus—if any. The south Atlantic states produce a smaller total weight of chickens than is indicated by the percentage of chickens found in this area. This apparent discrepancy has come about largely as a result of the development of the commercial-broiler

TABLE 7

PER-CAPITA PRODUCTION OF CHICKENS IN THE UNITED STATES BY GEOGRAPHIC DIVISION, 1925–1939

Year	North Atlantic	East north central	West north central	South Atlantic	South central	Western	United States
	pounds	*pounds*	*pounds*	*pounds*	*pounds*	*pounds*	*pounds*
1925	7.9	25.1	63.7	16.3	25.9	16.2	22.7
1926	7.9	25.5	66.1	17.1	27.4	17.5	23.7
1927	8.3	25.5	66.2	16.4	28.7	18.9	24.3
1928	7.8	23.4	63.6	15.8	24.4	17.1	22.0
1929	8.3	24.7	69.6	16.5	25.6	18.3	23.5
1930	8.4	24.3	71.1	16.7	25.5	19.0	23.6
1931	8.1	23.2	64.2	16.4	23.2	15.2	21.8
1932	8.5	25.0	65.5	18.3	24.5	13.8	22.7
1933	8.9	25.8	69.1	16.5	22.9	14.9	22.9
1934	7.9	21.9	55.9	16.1	21.5	12.8	19.9
1935	8.7	24.2	56.3	17.5	21.4	13.5	20.8
1936	10.1	26.0	46.2	20.1	23.9	15.1	23.0
1937	8.7	21.2	49.3	17.7	21.6	13.6	21.2
1938	10.0	23.0	56.8	18.2	21.3	11.8	21.1
1939	10.3	24.2	59.6	19.7	22.3	14.9	22.7

Sources of data:
1925–1936: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1925–1937. p. 16. December, 1938. (Mimeo.)
1937: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1937–1938. p. 18. March, 1939. (Mimeo.)
1938–1939: United States Department of Agriculture Agricultural Marketing Service. Farm production and income, chickens and eggs, 1938–1939. p. 20. May, 1940. (Mimeo.)

industry in Maryland, Delaware, and Virginia (south Atlantic division). It is highly probable that this area has a deficit as figure 3 and the above data would indicate.

Data released by the United States Department of Agriculture, Agricultural Marketing Service[11] indicate that the average weight of chickens sold in 1939 was 3.88 pounds. The average weights of birds sold in the various geographic divisions in 1939 were estimated to have been:

Geographic division	Pounds per bird
East north central	4.28
West north central	4.14
North Atlantic	4.08
South central	3.53
South Atlantic	3.23
Western	3.20

[11] Data from: United States Department of Agriculture Agricultural Marketing Service. Farm production and income, chickens and eggs, 1938–1939. p. 20. May, 1940. (Mimeo.)

Table 7 brings out rather clearly that geographically the largest production of poultry lies in the surplus-feed-producing divisions and this again emphasizes the relation between feed and the poultry industry. There is a very great difference between the Middle West, the Pacific Coast, and the areas adjacent to the great cities of the Atlantic seaboard in the extent to which feed is bought or produced by the farmer raising chickens. The producer of chickens in the Pacific and north Atlantic coast divisions buys large quantities of feed for his poultry. The farmer in the west north central states probably buys very little feed for poultry. Production of poultry in the latter division is a mechanism for the marketing of feed crops, as is beef and pork production.

Climate is also involved. In almost all places where poultry is kept on any considerable scale, egg production and egg prices are important. Since eggs are customarily held by the farmer and often also by the huckster for some days before they are delivered to the packing plant, the weather is important. In warm weather eggs deteriorate and, even if they do not go bad, they do not stand up well in storage. Lower prices are paid for eggs from the southern section of the country, and such eggs are not by choice put into storage. This gives the cooler parts of the country, the west north central and the east north central states, a very great advantage in egg production. And this, together with the availability of corn and other feeds, is one of the reasons responsible for the concentration of large numbers of fowl in these sections.

Per-Capita Consumption of Chickens.—The data on the relative levels of per-capita consumption in the various geographic divisions of the United States are even more meager and unsatisfactory. There is apparently some agreement on general trends in the United States. Between 1910 and 1919 there was probably a decline in the per-capita consumption of all poultry.[12] With greater urban prosperity after the World War, consumption of all poultry probably increased. Between the late twenties and the late thirties there was probably a decline in per-capita consumption of all poultry which probably was more pronounced in urban than in rural areas. Studies recently made indicate clearly that families with higher food budgets spend more for poultry than those with lower food budgets.

Data released by the United States Department of Agriculture Bureau of Agricultural Economics[13] support the above statement relative

[12] Montgomery, E. G., and C. H. Kardell. Apparent per-capita consumption of principal foodstuffs in the United States. U. S. Dept. Com. Bur. Foreign and Dom. Com., Dom. Com. Ser. 38:26. 1930.

The National Resources Board. Agricultural land requirements and resources. Report on Land Planning. Part 3:5. 1935.

[13] Stiebeling, Hazel K., and Esther F. Phipard. Diets of families of employed wage earners and clerical workers in cities. U. S. Dept. Agr. Cir. 507:1–141. 1939.

to a shrinking of per-capita chicken consumption in the thirties (through 1938). Chicken consumption in pounds per capita for the United States from 1925 through 1939 has been estimated as:[14]

Year	Pounds per capita	Year	Pounds per capita
1925	22.7	1933	23.2
1926	22.6	1934	21.3
1927	24.0	1935	20.6
1928	23.0	1936	21.9
1929	22.6	1937	21.2
1930	24.5	1938	20.2
1931	22.2	1939	22.1
1932	22.5		

Additional light can be focused on regional chicken consumption by data obtained in a cost-of-living survey made in 1918–19 by the United States Department of Labor Bureau of Labor Statistics, in collaboration with the National War Labor Board (table 8). This survey covered white

TABLE 8

AVERAGE ANNUAL PER-CAPITA CONSUMPTION OF POULTRY IN INDUSTRIAL CENTERS BY GEOGRAPHIC DIVISIONS, 1918–1919

Geographic division	Pounds per capita		Per cent of average for United States	
	Chickens	Other poultry	Chickens	Other poultry
North Atlantic	5.02	0.58	105	92
South Atlantic	5.84	0.57	122	90
North central	4.65	0.54	97	86
South central	4.56	0.50	95	79
Western	4.04	1.04	85	165
United States average	4.78	0.63	100	100

Source of data:
United States Department of Agriculture. Agriculture Yearbook 1924: 1136. 1925.

families of wage earners or salaried workers in 92 cities or localities in 42 states, the cities varying in size from New York to small country towns of a few thousand population. No attempt was made in this survey to collect data on consumption of farm families nor of Negro families in cities.

[14] Data for 1925–1936 from: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1925–1937. p. 16. December, 1938. (Mimeo.)
Data for 1937–1938 from: United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chickens and eggs, 1937–1938. p. 18. March, 1939. (Mimeo.)
Data for 1939 from: United States Department of Agriculture Agricultural Marketing Service. Farm production and income, chickens and eggs, 1938–1939. p. 20. May, 1940. (Mimeo.)

Because the level of per-capita consumption of chickens would vary annually according to changes in population and the total volume of chicken meat marketed, the relative rather than the absolute levels of consumption in the different divisions would have more significance. The survey showed that the per-capita consumption in the western states was only about 85 per cent of the average for the United States as a whole, whereas that in the south Atlantic states was 22 per cent higher than the United States average.

It is impossible to tell whether and to what extent the absolute and relative levels of per-capita consumption of chicken meat in the various geographic divisions would have been modified if the survey had covered rural as well as urban families. Even if these data can be regarded as a fairly accurate portrayal of the relative levels of per-capita consumption of both rural and urban families in 1918–19, a still further difficulty arises. No data are available to indicate whether the same relative levels of per-capita consumption by divisions have been maintained or to what extent the relative per-capita consumption of chicken meat in the different divisions has been changed.

Poultry dealers and poultry specialists interviewed during the course of this study stated that it was their belief that per-capita consumption of chickens is highest in the southern states and lowest in the Pacific states. None of the persons interviewed, however, would venture an estimate as to just how large the differences were.

Assuming that the data collected in the 1918-19 survey were fairly representative of the relative levels of rural and urban consumption in the different geographic divisions and that the relative levels have not been greatly modified since that time, the percentage of all chicken meat consumed in the south Atlantic states is a somewhat larger percentage of the total United States consumption of chickens than the percentages of population in figure 3 would indicate. On the other hand, the percentage of population in the western states would tend to overstate the percentage of all chicken meat consumed in this region. In spite of this, however, the ratio between percentages of all chickens raised and of population probably underemphasizes the deficit position of the western states. In other words, the percentage of chickens raised overstates the proportion of all chicken meat produced more than the percentage of population overstates the proportion of all chicken meat consumed.

A more recent survey of the diets of families of employed wage earners and clerical workers in different cities offers additional information on poultry consumption in different divisions.[18] The estimated annual

[18] Stiebeling, Hazel K., and Esther F. Phipard. Diets of families of employed wage earners and clerical workers in cities. U. S. Dept. Agr. Cir. 507:124. 1939.

per-capita poultry consumption reported for the above classes of workers by division and color of family in 1934–1936 was:

North Atlantic cities, 843 white families, 16.1 pounds
East south central cities, 282 white families, 11.2 pounds
Pacific cities, 441 white families, 10.4 pounds
Southern cities, 222 Negro families, 12.6 pounds.

These data partially confirm the data obtained in the 1918–19 survey of the Department of Labor. Poultry consumption apparently is high in the north Atlantic cities and relatively low in the cities of the Pacific Coast. The data from the southern states indicate that poultry consumption in the cities of that division is higher than in the Pacific Coast cities. It is highly probable that in the rural areas of the southern states per-capita consumption is higher than in rural areas of the West. The latter area with its more intensive specialization has a smaller percentage of farms with chickens.

Imports and Exports of Poultry and Eggs.—The foreign trade in poultry plays a minor role. Exports of both live and dressed poultry from 1923 to 1929 never totaled 6 million pounds and since the latter year they have generally averaged less than half this amount. Imports of poultry for consumption have likewise dropped. Between 8 and 9 million pounds were imported in 1926 and in most recent years the total has been under a million pounds.

Inasmuch as poultry meat is to a considerable extent a by-product of egg production, it should follow that anything which tends to lower the price of eggs, such as imports, might tend to raise the relative price of the by-product, meat. A few years prior to the beginning of the World War (1910–1913) imports of egg products, for example dried or frozen eggs and yolks, began to appear on the American market. A peak in these imports was reached in the twenties. In the five years ending in 1929 the equivalent of approximately 47,000,000 dozens of eggs were imported annually into the United States. Higher tariffs, disturbances such as in the Far East, reduced the annual imports to less than the equivalent of 19,000,000 dozen in the similar period ending in 1938.

Domestic exports of egg products have never been of any considerable amount. Imports of shell eggs, while not equaling the total imports of all types of eggs (in fresh-egg equivalents) were almost half as large from 1925 through 1929. An annual average of not over 25,000,000 dozens of eggs (in egg equivalents) in exports in the five years ending in 1929 dropped to less than 3,000,000 in the similar period ending in 1938.

While the imports of egg products have not been large in the few years ending in 1938, they were not inconsiderable in the decade of the twenties. In two of the years, 1920 and 1925, the imports (in egg equivalents)

were slightly less than half of the total egg production of California in 1934. While these eggs may not be coming in now (1940) because of the disturbances in the Orient or because of tariff barriers, they have come in, in the past and may come in again in the future.

LOCATION AND CHARACTERISTICS OF CHICKEN PRODUCTION IN THE UNITED STATES

Number of Farms Reporting Chickens.—According to the 1935 Census of Agriculture 85.6 per cent of all farms in the United States reported having chickens on hand on January 1, 1935 (table 31). The proportion

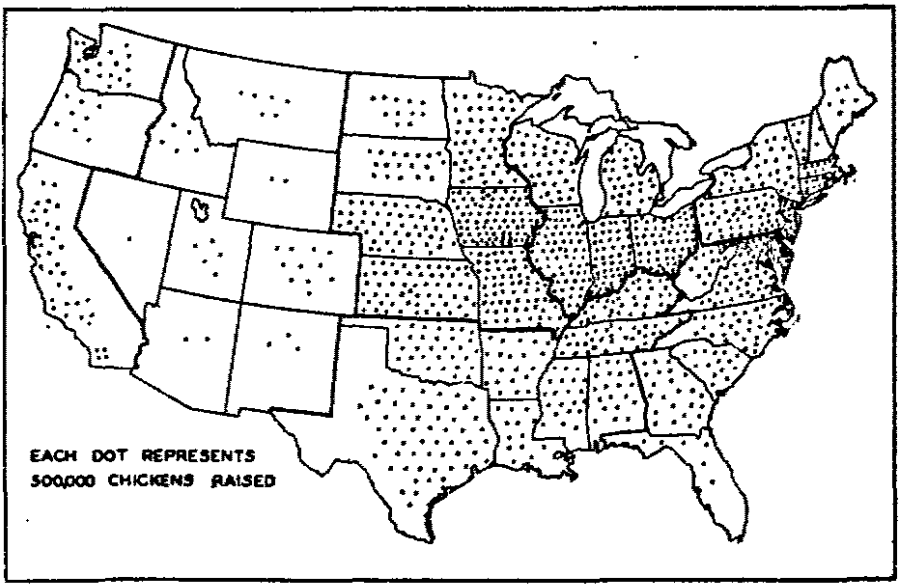

Fig. 4.—Location of chicken production, United States, 1934.
Data from table 31.

of all farms reporting chickens, however, varied considerably by geographic divisions and by states. In the north central, south Atlantic, and south central states over 87.0 per cent of all farms are shown to have had chickens, in contrast with only 68.9 per cent of the farms in the Pacific division. In six states—Indiana, Illinois, Michigan, Iowa, Missouri, and Nebraska (all in the north central division)—over 90.0 per cent of the farms reported having chickens. On the other hand, less than 65.0 per cent of the farms in four states, Massachusetts, Connecticut, Arizona, and California, had chickens on January 1, 1935.

The number of farms in the United States reporting chickens on farms amounted to 5,833,079 as compared with 5,212,762 farms reporting as having raised chickens in 1934 and 5,579,199 reporting as having pro-

duced eggs. These data indicate that large numbers of farms do not raise their own chickens, but purchase grown chickens. This is particularly true of the Pacific states, where the number of farms reporting chickens raised in 1934 was only 72.1 per cent of the number reporting chickens on farms on January 1, 1935. The corresponding figure for the United States as a whole was 89.4 per cent.

Location of Chicken Production in the United States.—As was stated previously (p. 8) the chicken industry of the United States is concentrated largely in the east north central, west north central, and south

TABLE 9

TEN LEADING STATES IN CHICKENS RAISED AND EGG PRODUCTION IN 1934

State	Chickens raised		State	Egg production	
	Number	Per cent of United States		Dozens	Per cent of United States
	thousands	*per cent*		*thousands*	*per cent*
Iowa	42,393	7.1	Iowa	147,422	6.8
Illinois	33,401	5.6	Ohio	120,976	5.6
Missouri	33,294	5.6	Missouri	118,284	5.5
Ohio	29,478	4.9	California	117,779	5.4
Kansas	29,034	4.8	Pennsylvania	112,217	5.2
Texas	27,747	4.6	Illinois	109,541	5.1
Indiana	26,721	4.6	Texas	106,785	4.9
Nebraska	24,745	4.1	Minnesota	102,576	4.7
Minnesota	24,578	4.1	New York	97,167	4.5
Pennsylvania	23,598	3.9	Wisconsin	93,195	4.3

Source of data:
United States Department of Commerce Bureau of the Census. Census of Agriculture, 1935. Vol. 2: XXX-XXXIII. 1936.

central divisions, which together accounted for about 68.6 per cent of all chickens raised in 1934 (table 31 and fig. 4). These three divisions together, however, had only 49.1 per cent of the human population. The north Atlantic and south Atlantic divisions together, with 41.5 per cent of the population, raised only 23.5 per cent of the chickens. Similarly, the western states with 9.4 per cent of the population raised only 7.9 per cent of the chickens.

The first ten states in order of importance as regards chickens raised and eggs produced in 1934 are shown in table 9. With the exception of Texas and Pennsylvania, all ten largest chicken-producing states are in the north central division. These ten states together accounted for nearly 50 per cent of all chickens raised in 1934. The order with regard to egg production was somewhat different. California, New York, and Wisconsin, which did not figure among the ten largest chicken-producing states ranked four, nine, and ten respectively as regards egg production. The

ten leading egg-producing states accounted for 52 per cent of all eggs produced in the United States in 1934.

The number of chickens raised for the United States as a whole in 1934 averaged 4.7 per capita. The variation by geographic divisions is considerable, ranging from 1.9 chickens per capita in the north Atlantic division to 12.4 in the west north central states. In the Pacific division the average was 3.6 chickens per capita, or about 25 per cent below the average for the country as a whole. On a state basis the variation is even

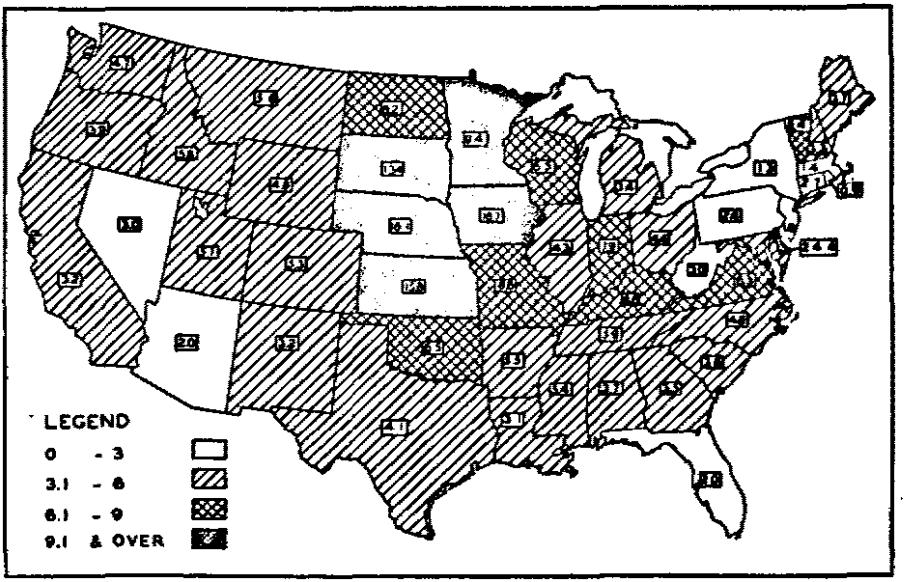

Fig. 5.—Chickens raised per capita, United States, 1934.
Data from table 31.

more marked, ranging from 0.9 chickens raised per capita in Rhode Island to 18.1 in Nebraska, and 24.4 in Delaware (fig. 5). In California only 3.2 chickens per capita were raised.

Chickens Raised and Eggs Produced per Farm in 1934.—The average number of chickens raised per farm reporting chickens in the United States in 1934 was 115, ranging from 65 in the south central and 79 in the south Atlantic divisions to 192 in the north Atlantic and 200 in the Pacific divisions (table 31 and fig. 6). In only seven states—New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey (in the north Atlantic division), Delaware (in the south Atlantic division) and California (in the Pacific division)—did the number raised per farm exceed 250. In three states in the south central division the number of chickens per farm averaged less than 50.

For the United States as a whole the average number of eggs produced

per farm in 1934 was 387 dozen, ranging from 173 dozen in the south central division to 1,045 dozen in the Pacific division (table 31). The smallest number of eggs produced per farm, 88 dozen, was in South Carolina and the largest number, 1,718 dozen, in New Jersey, California coming second with 1,370 dozen (fig. 7).

Size of Poultry Farms and Flocks.—Some further light on the characteristics of poultry production in the United States is obtained from a study of census data on types of farms producing chickens and size of

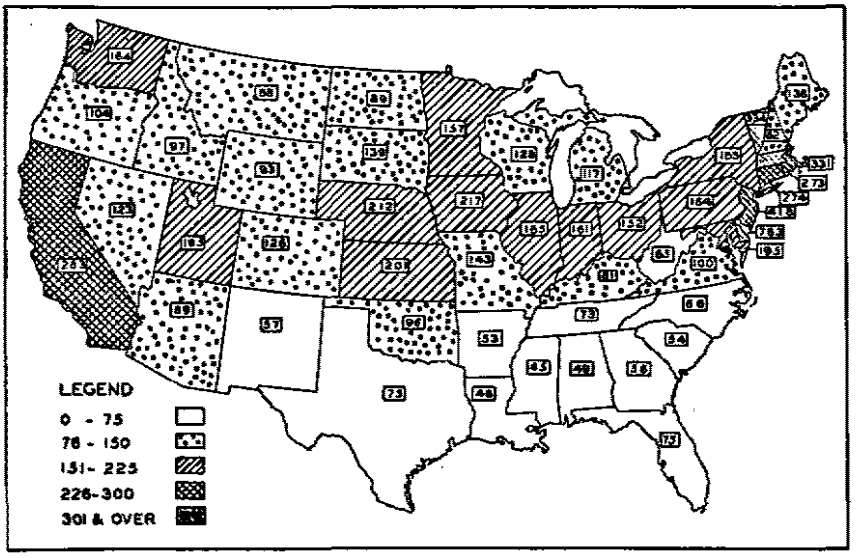

Fig. 6.—Average number of chickens raised per farm, United States, 1934.
Data from table 31

flocks. In the 1935 Census of Agriculture, data were obtained on the size of poultry flocks on farms. Tables 10, 32, and 33 clearly point to the marked differences in poultry production in different sections of the United States. In 1935 there were only 11,172 farms with flocks of over 1,000 chickens and 8,343 of these, or almost 75 per cent were in either the Pacific or north Atlantic divisions (table 32). Flocks in all of the other divisions were comparatively small. The larger flocks declined in the Pacific division between 1930 and 1935 while they increased materially in the north Atlantic division.

Table 10 brings out even more clearly than table 32 the contrasts between the chicken industry of the Pacific Coast and other sections of the country. In the Untied States over 87 per cent of the chickens in 1935 were in farm flocks of less than 400 birds (table 10). The corresponding percentages were 94, 63, and 43 for the west north central, north At-

TABLE 10

PERCENTAGE OF CHICKENS IN DIFFERENT-SIZED FLOCKS IN THE GEOGRAPHIC DIVISIONS OF THE UNITED STATES ON APRIL 1, 1930, AND JANUARY 1, 1935

Size of flock*	North Atlantic		East north central		West north central		South Atlantic		South central		Mountain		Pacific		United States	
	1930	1935	1930	1935	1930	1935	1930	1935	1930	1935	1930	1935	1930	1935	1930	1935
Under 50	12.8	12.5	10.2	11.7	5.0	9.0	44.6	44.6	40.0	42.3	20.7	26.0	9.4	13.0	17.8	21.6
50- 99	17.9	14.1	25.0	24.4	15.9	20.2	21.6	24.5	27.8	29.3	24.9	23.9	7.3	9.1	20.4	22.2
100- 199	20.6	17.9	38.6	37.0	40.1	38.9	14.4	14.4	19.7	18.3	23.4	19.8	7.5	9.2	28.8	26.8
200- 399	19.2	19.0	19.5	19.8	32.3	26.3	8.4	7.9	8.6	6.6	13.9	12.2	10.6	11.6	19.6	16.7
400- 699	13.7	13.7	4.4	4.6	5.5	4.4	4.6	3.7	2.2	1.4	7.7	7.1	13.7	13.2	8.9	8.4
700- 999	6.3	6.5	1.1	1.1	0.7	0.7	1.9	1.5	0.7	0.4	3.5	3.2	10.2	9.0	2.2	2.1
1,000-2,499	8.4	11.4	1.0	1.1	0.4	0.4	2.9	2.5	0.7	0.5	5.2	5.5	24.6	21.3	3.5	3.5
2,500 and over	3.7	4.9	0.2	0.3	0.1	0.1	1.6	0.9	0.3	0.2	1.7	2.3	17.2	13.6	1.8	1.7

* Size of flock based on numbers of chickens 3 months old or over on census dates.

Source of data:
Calculations by authors based on data in: United States Department of Commerce Bureau of the Census. Chickens and eggs by size of flock. p. 4-10. 1929.

lantic, and Pacific states, respectively. Flocks of over 1,000 chickens accounted for only 5 per cent of all the chickens on farms in the country as a whole. In the commercial sections—the Pacific and north Atlantic states—the percentages were 35 and 16, respectively, while in the west north central states the percentage was approximately 0.5.

Apparently there is a greater specialization in egg than in chicken production. While about 5 per cent of the chickens raised in the United States in 1934 come from flocks of over 1,000 chickens (table 33) eggs

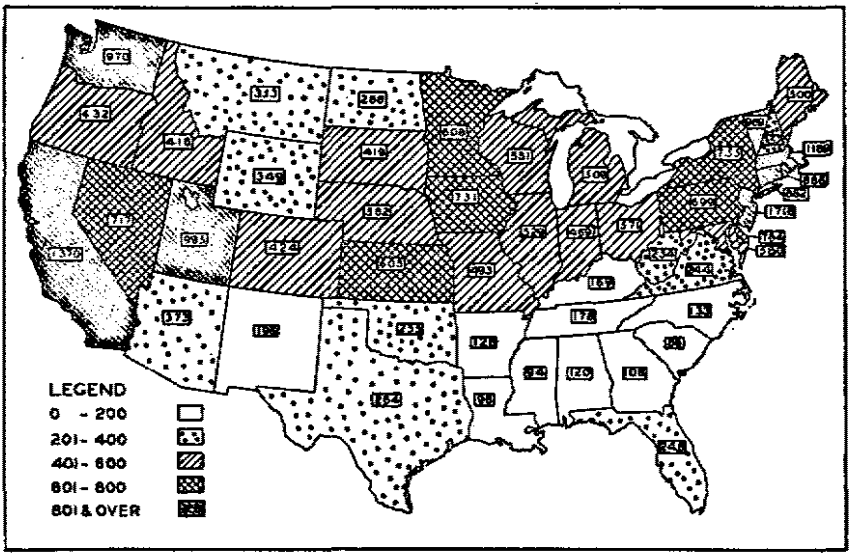

Fig. 7.—Eggs produced per farm (in dozens), United States, 1934.
Data from table 31.

produced from the large flocks amount to almost 8 per cent of the total for the country (table 34). In the Pacific Coast states the larger flocks accounted for almost 38 per cent of the egg production and about 34 per cent of the chickens raised.

The 1930 Census classified farms by types. Poultry farms were those on which over 40 per cent of the farm income was derived from chickens and eggs. Only 163,751 or about 3.0 per cent of the 5,372,597 farms reporting chickens on hand on April 1, 1930, were classified as poultry farms (table 11). In the Pacific division, 14.6 per cent of all farms with chickens were classified as poultry farms; in the north Atlantic division, 8.9 per cent, and in the south central division, only 0.8 per cent. The poultry farms, however, had 14.7 per cent of all chickens on farms in the United States; in the Pacific division, 67.1 per cent; in the north At-

TABLE 11

CHICKENS (OVER 3 MONTHS OLD) ON FARMS BY GEOGRAPHIC DIVISIONS, APRIL 1, 1930

Geographic Division	On poultry farms*					On other farms		
	Farms		Chickens			Farms	Chickens	Chickens per farm
	Farms	Per cent of all farms reporting chickens in division	Chickens	Per cent of all chickens on farms in division	Chickens per farm			
	number	*per cent*	*thousands*	*per cent*	*number*	*number*	*thousands*	*number*
North Atlantic	35,657	8.9	12,947	33.7	363	365,903	25,432	70
East north central	36,303	4.1	7,925	10.2	218	844,938	69,759	80
West north central	31,552	3.1	6,764	8.7	214	993,939	111,497	112
South Atlantic	14,614	1.6	4,469	13.4	306	893,573	28,954	32
South central	13,461	0.8	3,128	4.4	232	1,779,974	68,743	39
Mountain	5,731	3.1	2,349	18.2	393	176,040	10,124	57
Pacific	26,413	14.6	18,044	67.1	683	154,879	8,844	57
United States	163,731	3.0	55,535	14.7	339	5,208,846	323,353	62

* Farms receiving 40 per cent and more of their income from poultry and poultry products.

Source of data:
United States Department of Commerce Bureau of the Census. Fifteenth Census of the United States, 1930. Agriculture. Type of farm. vol. 3:34-45. 1932.

lantic division, 33.7 per cent; and in the south central division, only 4.4 per cent.

The average-sized poultry farm in the United States had 339 chickens on hand on April 1, 1930, the range being from 683 chickens in the Pacific division to only 214 and 218 chickens per farm in the west north central and east north central divisions, respectively. Average chicken numbers on hand on other than poultry farms for the United States as a whole was 62, ranging from only 32 in the south Atlantic states to 112 in the west north central states. The average for the mountain and Pacific divisions was 57 each.

The 1930 Census subdivided poultry farms on the basis of area (fig. 8). In the Pacific division 69 per cent of the poultry farms were less than 20 acres in size, about 86.5 per cent less than 50 acres. In the mountain division nearly 53 per cent of the poultry farms were less than 20 acres and about 70 per cent less than 50 acres. In the other divisions the majority of poultry farms were in excess of 20 acres. In the north Atlantic states, 57.2 per cent of the poultry farms were between 20 and 174 acres and only 38.8 per cent less than 20 acres. In the east north central division, 75.5 per cent of the poultry farms were over 20 acres in size; in the west north central division, 76.3 per cent; in the south Atlantic division, 69.5 per cent; and in the south central division, 74.9 per cent. In all the divisions a small number of farms classified as poultry farms exceeded 175 acres in size.

It is probable that the preponderance of the poultry farms of less than 20 acres and a considerable number of the farms, 20 to 49 acres in size, were specialized farms, devoted primarily to commercial egg production. On such farms the Leghorn breed of chickens would predominate. On the other hand, poultry farms in excess of 50 acres would very likely be more diversified; poultry raising, while the most important single activity, would provide only one of several sources of farm income. A considerable proportion of the chicken flocks on the larger farms would be composed of other than Leghorn breeds. On "other" farms (farms on which less than 40 per cent of the income is from poultry) heavier breeds would tend to predominate and chicken production would largely be a side-line enterprise. While it is probable that a not inconsiderable proportion of "other" farms in the north Atlantic, mountain, and Pacific divisions would raise Leghorn chickens, it is just as likely that the large majority of flocks on "other" farms in the east north central, west north central, south Atlantic, and south central divisions (which together had about 86 per cent of all chickens on "other" farms) are composed principally of the heavier breeds of chickens.

These data on types of farms and size of farms thus indirectly throw

some light on the relative importance of Leghorns on farms in the different geographic divisions. In the mountain and Pacific divisions, where most of the poultry farms are small in size but with large flocks, the Leghorn is the predominant breed of chicken. In the north Atlantic division, especially in some states where commercial egg production is important, a considerable proportion of the chickens is also of the Leghorn breed.

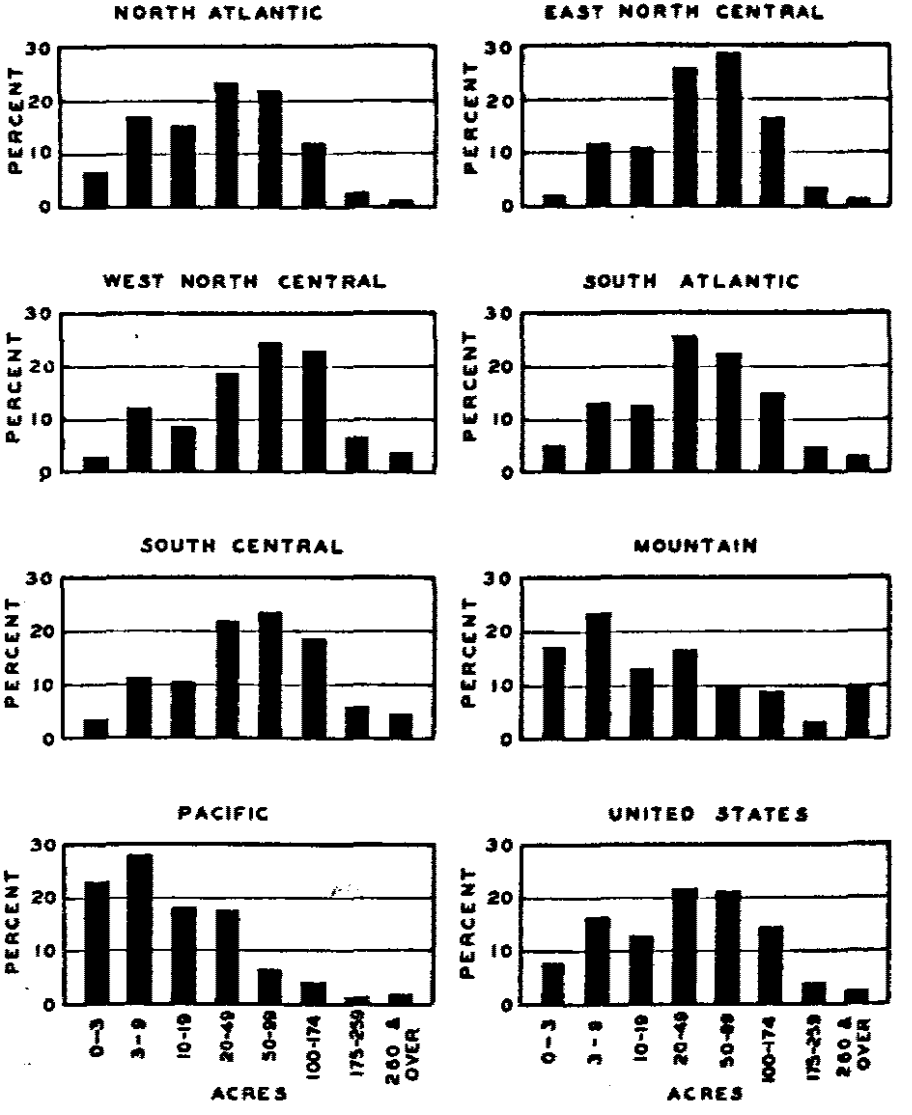

Fig. 8.—Percentages of poultry farms in the United States and its geographic divisions, 1930.

Data from: United States Department of Commerce Bureau of the Census. Fifteenth Census of the United States, 1930. Agriculture. Type of farm. vol 3(3):50. 1932.

In the other four divisions, however, Leghorns are very likely to compose only a small part of the chickens raised.[18]

Chickens Consumed on Farms or Sold.—Not all chickens raised each year are consumed as meat the same year. A large proportion of the hens is carried over into subsequent years for egg production and replaces hens carried over from previous years. A certain proportion of the latter, however, dies before ready to be sold as meat. The United States Department of Agriculture Bureau of Agricultural Economics estimates the mortality of mature birds on farms at the beginning of each year to

TABLE 12

CHICKENS RAISED, CONSUMED ON FARMS, OR SOLD IN 1938

Geographic division	Raised	Chickens produced	Consumed on farms	Sold	Consumed on farms or sold	Chickens sold as a percentage of chickens consumed on farms and chickens sold
	thousands	*thousands*	*thousands*	*thousands*	*thousands*	*per cent*
North Atlantic	87,687	80,613	12,850	65,100	77,950	83.5
East north central	145,406	129,957	40,774	84,405	125,179	67.4
West north central	191,004	172,258	55,687	103,854	160,541	64.7
South Atlantic	98,225	90,891	42,196	45,492	87,688	51.9
South central	142,584	128,131	73,189	48,975	122,164	40.1
Mountain	20,223	17,934	7,561	9,655	16,216	59.5
Pacific	31,070	26,916	6,871	22,017	28,888	76.2
United States	716,199	646,700	240,128	380,498	620,626	61.3

Source of data:
United States Department of Agriculture Bureau of Agricultural Economics. Farm production and disposition, chicken and eggs, 1937-1938. 18 p. March, 1939. (Mimeo.)

be at least 12 per cent. For recent years this figure should probably be somewhat higher—especially in the commercial egg-producing sections of the country. The Bureau has prepared for several years, in addition to its annual estimates of chickens on hand and chickens raised, an estimate on chickens produced (table 12). The latter estimate is obtained by deducting from the estimate of chickens raised each year the estimated death losses (12 per cent), of the mature chickens estimated to be on hand at the beginning of each year.

A considerable proportion of chickens produced annually does not enter into commercial channels for poultry meat, but is consumed on farms. According to estimates of the Bureau of Agricultural Economics, 620,626,000 chickens were consumed on farms or sold in 1938 (table 12). Of this number 240,128,000, or 38.7 per cent were consumed on farms. The proportion of chickens sold to all chickens varied considerably in the different geographic divisions. In the north Atlantic division over

[18] There are indications, however, that commercialized egg production (from Leghorns) has increased considerably since 1930 in the east north central and west north central divisions.

83 per cent of the chickens (consumed on farms or sold) were sold. In the Pacific states the percentage was over 76. In California the percentage was 82.7, approximating that for the north Atlantic division. In the east north central and west north central divisions about 65 per cent was sold; in the mountain division, about 60 per cent. In the south Atlantic division approximately one half were consumed on farms and the other half sold. In the south central division larger numbers of chickens were consumed on farms than were sold. Sales of chickens amounted to only about 45 per cent (for the two divisions) of all chickens consumed on farms or sold. A not inconsiderable proportion of the chickens sold is probably consumed in the states in which they are produced.

These data are significant in that they indicate that while considerable numbers of chickens are produced in the southern states, only a small aggregate quantity is available for shipment to the large consuming markets of the East and West.

TREND AND LOCATION OF CHICKEN PRODUCTION IN CALIFORNIA

Development.—Between 1890 and 1930 chicken numbers on California farms increased nearly five times (table 13). In the earlier year California had 3,504,000 chickens, or only about 1.4 per cent of all chickens on farms in the United States; in 1930 about 4.6 per cent of the total and approximately two thirds (64.9 per cent) of those in the Pacific division. In 1935, however, numbers on California farms had declined to 14,043,000 as compared with 17,467,000 in 1930. The decline for the entire United States between 1930 and 1935 was 7,275,000, so that nearly 50 per cent of the United States decrease was accounted for by the decline in California.

In 1890 the south coast, Sacramento Valley, San Joaquin Valley, and southern California sections each had approximately one fifth (20 per cent) of the chickens in the state; just under 16 per cent were in the north coast section. In 1920, however, the north coast had about one third (33.6 per cent) and southern California about one fourth (25.8 per cent). The other four sections had declined in relative importance, the decline being greatest in the northern and eastern mountain and Sacramento Valley sections. Since 1920 another important shift has taken place in the relative importance of the sections. In 1935 southern California had 30.1 per cent of all chickens in the state as compared with only 25.8 per cent in 1920; the proportion in the north coast region had declined from one third (33.6 per cent) to one fourth (25.2 per cent). The south coast, Sacramento Valley, and San Joaquin Valley had increased in relative importance, while the northern and eastern mountain section retained the same relative position.

Number of Poultry Farms.—The total number of all types of farms in California increased from 136,409 in 1925 to 150,360 in 1935 (table 14). In 1925, however, only 88,761 farms, or 65.1 per cent of all farms in the state reported chickens on farms. While the number of farms reporting chickens had increased to 92,774 in 1935, the percentage had declined

TABLE 13

NUMBER AND PERCENTAGE DISTRIBUTION OF CHICKENS ON FARMS AND GEOGRAPHIC DISTRIBUTION, CALIFORNIA, 1880–1935

Section	1880 June 1	1900* June 1	1910* Apr. 15	1920 Jan. 1	1925 Jan. 1	1930* Apr. 1	1935* Jan. 1
	Thousands, i.e., 000 omitted						
North coast	556	823	1,835	3,502	3,974	5,202	3,530
South coast	735	947	1,063	1,180	1,680	2,146	1,776
Sacramento Valley	755	737	762	1,008	1,335	1,650	1,668
San Joaquin Valley	680	734	1,047	1,836	1,945	2,290	2,771
Southern California	674	602	1,220	2,698	3,741	6,053	4,222
Northern and eastern mountain	85	139	135	119	127	136	137
California total	3,504	3,943	6,067	10,427	12,736	17,667	14,063
	Percentage distribution						
North coast	15.9	20.8	30.0	33.6	31.1	29.8	25.2
South coast	21.0	21.5	17.9	11.4	13.0	12.3	12.6
Sacramento Valley	21.5	18.7	12.5	10.5	10.4	9.4	11.4
San Joaquin Valley	19.7	18.4	17.2	17.6	15.2	13.1	19.7
Southern California	19.2	17.6	20.2	25.8	29.3	34.6	30.1
Northern and eastern mountain	2.4	3.0	2.2	1.1	1.0	0.8	1.0

*Excludes chickens under 3 months old.

Sources of data:
United States Department of Commerce Bureau of the Census. Censuses of 1880, 1900, 1910, 1930, and 1930. and Censuses of Agriculture of 1935 and 1935.
Percentage distribution: Calculations by authors on basis of census enumeration.

to 61.7. The average number of chickens per farm reporting chickens was 144 in 1925 and 207 in 1930. In 1935, however, the average per farm had declined about one fourth to 151.

There are marked variations in the percentage of farms with chickens and the number of chickens per farm in the various sections of the state, an indication of the extent of specialization in California agriculture. In 1935 only three sections—north coast, San Joaquin Valley, and northern and eastern mountain—had more than 70 per cent of the farms reporting chickens. Southern California showed only 47.2 per cent of farms with chickens. In all the sections except the San Joaquin Valley, which showed an increase, the proportion of farms reporting chickens

TABLE 14

TOTAL FARMS, NUMBER AND PERCENTAGE OF FARMS REPORTING CHICKENS, AND CHICKENS PER FARM, CALIFORNIA, 1925, 1930, AND 1935

Region of state	Total farms			Farms reporting chickens			Percentage of farms reporting chickens			Chickens per farm reporting		
	1925	1930	1935	1925	1930	1935	1925	1930	1935	1925	1930	1935
	number	*number*	*number*	*number*	*number*	*number*	*per cent*	*per cent*	*per cent*	*number*	*number*	*number*
North coast	14,219	14,187	15,080	11,339	10,538	10,714	79 8	74 3	71 1	280	494	330
South coast	20,948	18,453	20,561	13,613	10,740	11,840	63 2	58 2	56 8	82	200	150
Sacramento Valley	20,929	20,710	22,626	14,556	14,239	15,134	69 6	68 6	62 9	64	116	106
San Joaquin Valley	40,456	39,932	42,590	27,616	27,588	30,938	68 3	69 1	72 6	48	83	90
Southern California	37,671	39,653	46,204	20,131	19,130	21,788	53 4	48 4	47 2	99	316	194
Northern and eastern mountain	2,892	2,831	2,999	2,306	2,202	2,360	79 7	77 8	78 4	44	62	58
State total	136,409	135,676	150,360	89,761	84,437	92,774	65 1	62 2	61 7	144	207	151

Sources of data:
Computations by authors on the basis of: United States Department of Commerce Bureau of the Census. Census of 1930 and Censuses of Agriculture of 1925 and 1935.

had declined since 1925. The number of chickens per farm in 1935 (fig. 10) varied from 330 in the north coast section and 194 in southern California to 90 in the San Joaquin Valley and 58 in the northern and eastern mountain sections. In all sections, again excluding the San Joaquin Valley, chicken numbers per farm decreased between 1930 and 1935. The San Joaquin Valley thus showed an increase both in the number of farms and in the number of chickens on farms.

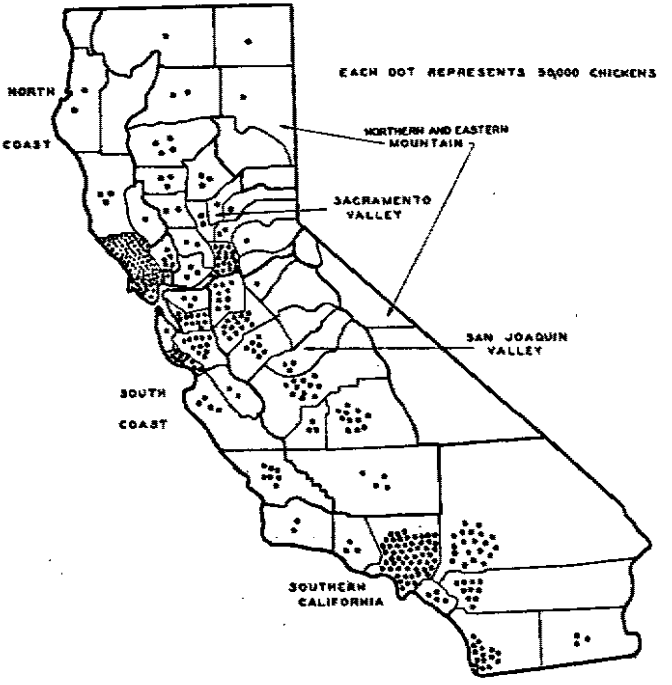

Fig. 9.—Chickens raised in California, 1934.
Data from table 35.

Location of Chicken Production in California.—The chicken industry in California is highly concentrated in a few counties surrounding San Francisco Bay and in the coastal regions of southern California. Production throughout the Sacramento and San Joaquin valleys together, while important in the aggregate, is widely scattered. In 1934 five counties, surrounding or close to San Francisco Bay—Sonoma, Marin, Alameda, Santa Clara, and Santa Cruz—raised nearly 33 per cent of all chickens in California (table 35 and fig. 9). Four counties in southern California—Los Angeles, San Bernardino, Riverside, and San Diego—raised another 27 per cent. Thus nine of the fifty-eight counties in the state raised about 60 per cent of all the chickens in the state. Sonoma County alone

raised just over one fifth (21.7 per cent) and Los Angeles County another 15.3 per cent. In other words, these two counties raised over one third of all chickens in California in 1934.

The number raised per farm varies considerably in the different counties (table 35). In the mountain counties of the northern and eastern parts and in the desert areas in the eastern and southern parts of the state less than 100 chickens were raised per farm in 1934 (fig. 10). Most

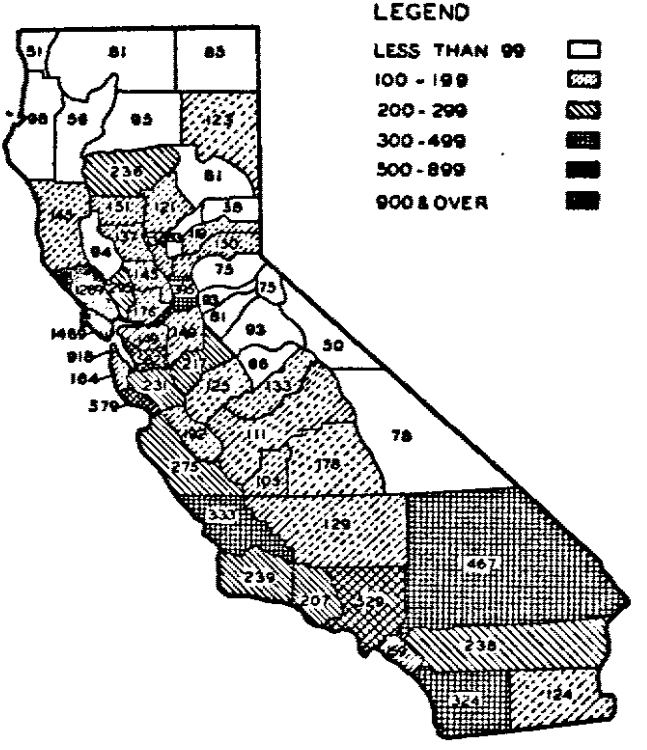

Fig. 10.—Number of chickens per farm, California, 1934.
Data from table 35.

of the Sacramento and San Joaquin Valley counties showed an average of between 100 and 200 chickens raised per farm. Nearly all the counties having an average of over 200 raised per farm were located along the coast from Sonoma County south. Marin and Sonoma counties each raised an average of over 1,000 chickens per farm.

Further light on this aspect of the chicken industry in California is afforded by census data on size of farm flocks of chickens and size of poultry farms. The 1935 Census of Agriculture shows that there were 70,762 farms, or 76.3 per cent of all farms in the state reporting chickens on farms, that had flocks of less than 100 chickens (table 15). However,

these 70,762 farms had only 15.6 per cent of all the farm chickens. On the other hand, the 3,219 farms with flocks of over 1,000 chickens, comprising only 3.5 per cent of all the farms in the state reporting chickens, had 45.5 per cent of all the chickens on farms.

There was a distinct decrease in the number of large flocks between 1930 and 1935. The number of farms with flocks in excess of 400 decreased from 10,869 in 1930 to 8,475 in 1935. On the other hand, the number of farms with flocks of less than 100 increased from 61,116 in

TABLE 15

SIZE OF FARM FLOCKS OF CHICKENS IN CALIFORNIA, 1930 AND 1935

Size of flock	Farms reporting chickens on farms		Chickens on farms (3 months old and over)		Proportion of farms reporting		Proportion of chickens on farms	
	1930	1935	1930	1935	1930	1935	1930	1935
	number	*number*	*number*	*number*	*per cent*	*per cent*	*per cent*	*per cent*
Under 50	47,349	55,758	1,126,989	1,284,961	56.1	60.1	6.5	9.1
50– 99	13,767	15,004	852,748	910,465	16.3	16.2	4.9	6.5
100– 199	7,276	8,101	909,343	992,666	8.6	8.7	5.2	7.1
200– 399	5,176	5,436	1,363,479	1,391,104	6.1	5.9	7.8	9.9
400– 699	4,120	3,610	2,083,513	1,781,182	4.9	3.9	11.9	12.7
700– 999	2,255	1,646	1,830,324	1,297,332	2.7	1.8	10.3	9.2
1,000-2,499	3,580	2,627	5,087,933	3,656,639	4.2	2.8	29.1	26.1
2,500 and over	914	592	4,242,955	2,718,744	1.1	0.6	24.3	19.4
	84,437	92,774	17,467,284	14,043,093	100.0	100.0	100.0	100.0

Source of data:
United States Department of Commerce Bureau of the Census. Chickens and eggs by size of flock, p. 4–10. 1930.

1930 to 70,762 in 1935. An increase was also shown in the number of farms having flocks of 100 to 199 and 200 to 399.

Only 15,421, or 18.3 per cent of all the farms in the state reporting chickens on hand in 1930 were classified as poultry farms (table 16). The proportion of poultry farms to all farms reporting chickens in the different regions of the state (calculated from table 16) were:

Region of state	Per cent	Region of state	Per cent
Southern California	33.1	Sacramento Valley	12.9
North coast	30.4	San Joaquin Valley	6.5
South coast	20.3	Northern and eastern mountain	3.5

In the southern California section about 85.0 per cent of the poultry farms were under 10 acres, in the south coast section about 72.9 per cent, and in the north coast section about 52.9 per cent. In the other sections poultry farms tended to be somewhat larger. For the state as a whole, however, about 79.5 per cent of all poultry farms were under 20 acres and 90.5 per cent under 50 acres. It is significant, moreover, that the sections in which the smaller-sized farms (under 10 acres) predominated,

TABLE 16

NUMBER AND SIZE OF CALIFORNIA POULTRY FARMS* BY REGIONS OF STATE IN 1930

Region of state	Under 3 acres	3–9 acres	10–19 acres	20–49 acres	50–99 acres	100–174 acres	175–259 acres	260–499 acres	500 acres and over	Total all sizes
	Number of poultry farms in different size groups									
North coast	289	1,406	774	395	136	99	55	27	19	3,200
South coast	940	653	271	173	63	42	14	12	17	2,185
Sacramento Valley	117	388	435	424	181	144	38	71	32	1,830
San Joaquin Valley	271	434	398	472	116	52	16	32	10	1,801
Southern California	3,652	1,734	490	223	78	84	23	39	14	6,327
Northern and eastern mountain	4	9	9	10	11	18	5	6	6	78
California	5,273	4,614	2,377	1,697	585	439	151	187	98	15,421
	Per cent of poultry farms in different size groups									
North coast	9 0	43 9	24 2	12 4	4 3	3 1	1 7	0 8	0 6	100 0
South coast	43 0	29 9	12 4	7 9	2 9	1 9	0 7	0 5	0 8	100 0
Sacramento Valley	6 4	21 2	23 7	23 2	9 9	7 9	2 1	3 9	1 7	100 0
San Joaquin Valley	15 0	24 1	22 1	26 2	6 5	2 9	0 9	1 8	0 5	100 0
Southern California	57 7	27 3	7 7	3 5	1 2	1 3	0 4	0 6	0 3	100 0
Northern and eastern mountain	5 1	11 5	11 5	12 8	14 1	23 2	6 4	7 7	7 7	100 0
California	34 2	29 9	15 4	11 0	3 8	2 9	1 0	1 2	0 6	100 0

* Farms on which the value of poultry accounted for 40 per cent and over of the total farm value of all products.

Source of data:

Compiled by authors from: United States Department of Commerce Bureau of the Census. Fifteenth Census of the United States. 1930. Agriculture vol. 2(2): 412-15. 1932.

also had the highest proportion of large-sized flocks. In other words, the large commercial poultry flocks were on relatively small specialized farms.

No data are available concerning the relative importance of different breeds of chickens in the several sections of the state. It is the opinion of persons familiar with the poultry industry of the state, however, that at least 90 per cent of the chickens raised are of the White Leghorn breed. The large commercial farms run almost entirely to Leghorn hens. On many of the farms with small flocks, especially in the northern and eastern mountain section and the San Joaquin Valley, probably somewhat larger quantities of heavy breeds of chickens are raised, but even in these sections most farm flocks consist of Leghorn chickens.

CHARACTERISTICS OF THE CHICKEN INDUSTRY IN CALIFORNIA[37]

The preceding section showed (1) that only 61.7 per cent of all farms in the state had chickens on hand on January 1, 1935, and (2) that flock size varied considerably. The purpose of this section is to present additional information on the importance and characteristics of chicken raising on individual farms.

Position of the Chicken Enterprise on Farms.—Chickens are raised under a variety of conditions in different parts of the state, and while commercial egg production is important, large numbers of farmers keep chickens mainly to supply the family with eggs and poultry meat. The chicken flocks of the state may fall roughly into three groups: (1) small flocks kept to supply family needs; (2) commercial flocks on farms on which chicken raising is only one of several enterprises and sources of income; and (3) specialized commercial flocks which supply the only source of farm income. It is, however, difficult to determine the number of farms that would fall under each of these three headings.

Undoubtedly the bulk of the 55,758 farms shown in the 1935 Census of Agriculture (table 15) as having flocks of less than 50 chickens and a considerable number of the 15,004 farms with flocks from 50 to 99 chickens would come under the first group. Some of the farms with larger flocks, however, would also be kept mainly to supply the family and farm employees with chickens. On the other hand, some eggs and chickens on the smaller farms may be sold to local dealers or to local families. On the smaller farms the chicken flock would generally be under the care of the farmer's wife or members of his family.

The majority of the 13,537 farms with flocks from 100 to 399 chickens,

[37] Most of the information in this section was furnished by L. W. Fluharty and A. Shultis, Specialists in Agricultural Extension and Associates on the Giannini Foundation, College of Agriculture, University of California, and is based on data compiled from enterprise-efficiency studies made over a period of years in various counties in the state.

a smaller proportion of the 3,610 farms with 400 to 699 chickens, and probably a few of the farms with larger flocks would fall under the second group. Egg production and chicken raising would engage a considerable part of the time of the farm operator. Income from chickens would furnish an important, and, in many cases the main source of farm income. Other farm enterprises conducted along with chicken raising would vary in the different parts of the state and from farm to farm even in individual counties. There would probably be a large number of combinations and variations of chicken raising with other enterprises.

Under the third group—specialized commercial chicken farms—would come most of the farms with flocks of 700 chickens and over, as well as a considerable number of flocks with from 400 to 699 chickens. Practically the full time of the farm operator and his family would be devoted to chicken raising and egg production. The chicken enterprise would provide the main source of farm income, although many of the larger-sized farms (in acreage) may have one or more supplementary enterprises. As a general rule the specialized commercial chicken farms are small in size—probably less than 20 acres.

Mortality and Culling.—Chicken mortality varies considerably in the different sections of the state and is usually found to be heaviest in congested chicken-raising areas and in large flocks. Enterprise-efficiency records of the Agricultural Extension Service of the College of Agriculture, University of California, covering from 38 to 254 commercial flocks a year in different parts of the state, indicate that mortality (based upon the average annual number of hens in a flock) increased from 20.1 per cent in 1925 to 22.6 per cent in 1929 and 33.0 per cent in 1933.[19] The large increase in mortality from 1929 was due, to a considerable extent, to less care during the depression; in the less careful selection of healthy replacement stock; and probably also to a general slackening of feeding and other management practices. The average mortality rate was found to vary considerably in different counties and even within the same county. Since 1934, heavier culling, greater care in selection of young chicks and in feeding and other management practices, have aided in arresting and even decreasing the trend of mortality in most counties.

The enterprise-efficiency studies above referred to also indicate that commercial chicken producers in the state have given increased attention to the culling of poor-laying hens from their flocks. Since 1925 the percentage of hens culled (based on the average annual number of hens in a flock) increased from 28.7 in 1925 to 49.5 in 1934. The percentage of hens culled varied considerably from county to county and even within

[19] Data from an unpublished manuscript being prepared by L. W. Fluharty, Specialist in Agricultural Extension, University of California.

counties. Data from enterprise-efficiency studies in several counties for the years 1935 and 1936 indicated some decrease in the rate of culling.

Income and Expense Factors.—The income per hen in commercial flocks varies from year to year according to the egg price, the cost of maintaining the flock, and the prices obtained for chickens sold.

During the eight years, 1927 to 1934, the average total income per hen in 1,386[19] commercial flocks included in the farm enterprise-efficiency studies above referred to averaged $3.50, of which $3.24 was obtained from eggs sold and used in the home, $0.16 from the net sale of chickens (chickens sold less chickens bought), and $0.10 from other sources (sale of manure, feed bags, etc.). The average total income varied from $4.55 per hen in 1929 to $2.32 per hen in 1933.

Total expense per hen in the 1,386 flocks averaged $3.28 and is made up as follows: feed cost, $2.01; hired labor, $0.13; family labor, $0.56; depreciation on buildings and equipment, $0.13; interest on investment, $0.26; and miscellaneous expense, $0.19. During the period of eight years, total expense varied from $3.69 per hen in 1929 to $2.61 per hen in 1933. Feed costs alone averaged 61.2 per cent of total costs per hen. Some variation is found in feed costs in different sections, the variation depending upon the sources from which feeds are purchased, cost of feeds in each section, and the extent to which chickens obtain part of their feed requirements on the farm. It is estimated that specialized chicken producers purchase about 33.0 per cent more commercial feeds than do producers whose flocks are only one of several farm enterprises. Here again there would be a considerable variation depending upon the nature of the other enterprises. For example, on farms producing grain or livestock as well as chickens, less commercial feed per hen would be purchased than on farms producing deciduous or citrus fruits as other farm enterprises.

The cost of family labor was calculated at the prevailing wages for agricultural labor in the sections. This represented the amount which could have been earned had members of the family preferred to work for other farmers. Interest on investment was calculated on the prevailing rate of interest charged.

Management income per hen (total income less total expense) in the 1,386 flocks averaged $0.22 during the eight years. Management income per hen ranged from $0.05 in 1934 to $0.86 in 1927. In 1931, 1932, and 1933, however, net losses per hen averaged $0.07, $0.23, and $0.29, respectively.

Farm income per hen (management income plus the value of the op-

[19] This represents a much smaller number of separate farms, because many of the flocks were included in studies made each year. The number of flocks included each year varied from 75 in 1934 to 250 in 1929.

erator's and family labor plus interest on investment) averaged $1.04, the range being from $0.44 per hen in 1933 to $1.69 per hen in 1929. This was the total amount of family income per hen provided the operator owned all his capital. This total family income represents what is left after all of the cash expenses plus depreciation have been subtracted from the total cash income. This explains why, in spite of net losses over a number of years, many farmers manage to remain in business. The net losses might indicate that the family was paid a lower-than-the-prevailing wage. In those cases where an operator borrowed some or all of his capital, interest paid on such borrowed capital would have to be deducted from farm income per hen in order to obtain net family income.

These data are averages based on annual records of not more than 250 commercial poultry flocks. As a general rule poultry producers who coöperate in these studies are somewhat more efficient than the average poultry farmer. Total income, total expense, management income, and farm income per hen vary considerably from farm to farm in any one year and on the same farm from year to year. The total farm income per flock (farm income per hen times the number of hens), of course, varies in relation to total income per hen, total expense per hen, and the number of hens in each flock. In spite of these limitations, however, these enterprise-efficiency studies do represent a fairly reliable reflection of the commercial poultry industry of the state.

POULTRY CLASSIFICATION AND PRODUCTION OF POULTRY CLASSES

Classification of Chickens.—The large range of terminology[20] used in designating both live and dressed poultry is confusing. Investigators point out that in dressed poultry over a hundred separate grades were found on the New York market.[21]

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 market and price. Chickens are commonly divided into light and heavy breeds (p. 15–16). The White Leghorn is the predominant breed in the former class, and a number of different breeds make up the latter. Oftentimes poultry in the latter classification is referred

[20] For a description of tentative United States standards and grades see: United States Department of Agriculture Bureau of Agricultural Economics. Tentative United States standards for grades for live poultry. 2 p. Revised April 1, 1937. (Mimeo.)

United States Department of Agriculture Bureau of Agricultural Economics. Classification and tentative specifications for United States standards and grades for dressed chickens. 8 p. Revised March, 1938. (Mimeo.)

[21] Sprague, Gordon W., and Alexander Sturges. Economic survey of the live poultry industry in New York City. United States Department of Agriculture Misc. Pub. 283: 1–115. 1937.

Benjamin, Earl W., and Howard C. Pierce. Marketing poultry products. xi+401 p. John Wiley and Sons, New York. 1937.

to as colored chickens and fowl, although these latter designations are not strictly correct.

A very large percentage of the White Leghorns and an increasingly large percentage of the colored breeds destined for market originate in commercial hatcheries. The season of largest hatchery sales is from January through July (table 17). A sizable percentage of the heavier chick-

TABLE 17

SALABLE CHICKS HATCHED AS A PERCENTAGE OF CAPACITY OF INCUBATORS, UNITED STATES, 1930–1939

Year	January	February	March	April	May	June	July	Average
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
1930	9.0	18.0	59.9	74.2	52.5	31.8	9.0	37.7
1931	4.5	13.8	39.6	51.7	41.4	22.1	10.8	27.3
1932	6.9	15.7	37.7	46.5	44.4	23.1	12.8	27.7
1933	5.0	15.2	36.1	54.3	52.4	29.0	12.3	30.0
1934	6.1	12.9	33.3	54.9	47.8	17.7	5.5	27.7
1935	8.9	14.7	37.6	65.6	56.2	31.0	15.5	34.4
1936	11.6	21.3	43 3	70.7	58.7	36.8	16.3	37.0
1937	8.0	16.8	42.6	56.9	36.6	14.4	6.9	26.0
1938	10.2	17.2	44.0	58.1	47.5	23.5	12.9	30.5
1939	14.5	21.1	46.6	65.7	53.4	23.4	13.9	34.1

Source of data:
United States Department of Agriculture Bureau of Argicultural Economics. Hatchery reports issued monthly for months January-July inclusive. (Mimeo.)

ens, as well as some of the lighter ones, are hatched on farms. The farm hatching season extends from February to June, although in some years considerable hatching is done in January and July. The far greater number of the chickens destined for market in the United States are therefore hatched in the first part of the year, and this accounts for a considerable part of the seasonality in the production of certain poultry classes. However, the proportion of all chickens hatched in one month varies considerably (tables 17 and 18) from year to year and is controlled mainly by the producer and not by the weather, although the producer may be influenced by considerations of the weather. The earliness or lateness of the hatch may influence the time of marketing the young chickens (broilers, fryers, and roasters), as well as the weight per bird at the time of marketing.

In a market sense, "chickens" refers to young live chickens (sometimes dressed), and includes broilers, fryers, and roasters. In producing sections, the term "spring," or "springers," is common for "chickens." Broilers constitute the youngest class, fryers the next, and roasters the last class. These classes, especially with colored birds, merge into one another as the season advances.

Broilers are described as "young chickens, approximately 8 to 12 weeks

old, of either sex, of marketable age but not weighing over 2.5 pounds and sufficiently soft-meated to be cooked tender by broiling."[22]

In general, in the United States, broilers are produced on three types of farms: (1) general farms such as are found prevailing in the Middle

TABLE 18

HATCHERY SALES IN CALIFORNIA, 1927–1939

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
State sales in per cent of capacities of hatcheries reporting												
1927	19.3	42.8	54.7	41.8	13.1	4.4	2.1	2.9	7.1	5.6	5.9	5.6
1928	15.3	33.9	50.4	23.9	13.1	5.5	3.7	4.9	7.7	7.8	5.4	10.1
1929	19.4	33.7	45.5	32.4	17.0	8.4	7.2	10.3	13.7	11.5	7.5	10.3
1930	25.5	39.5	53.2	38.5	20.6	5.5	2.6	4.1	6.5	6.0	4.8	6.5
1931	11.7	22.4	37.0	26.1	11.4	4.5	4.3	4.9	8.0	8.2	6.5	8.4
1932	11.9	20.7	27.5	17.2	10.1	4.7	3.5	4.0	5.1	*	*	*
1933	10.5	20.3	26.6	21.5	11.3	6.3	4.9	4.2	4.9	2.7	1.7	5.1
1934	7.8	18.7	31.9	20.6	8.2	4.4	3.1	4.0	6.1	6.6	7.5	10.3
1935	17.0	24.8	33.0	29.8	20.4	9.1	7.3	9.9	13.2	13.4	11.3	10.3
1936	21.4	29.7	38.5	34.8	15.6	11.5	9.9	9.3	11.9	10.7	9.9	9.6
1937	16.9	24.8	40.1	41.5	12.5	5.6	6.5	5.0	10.5	11.0	11.4	13.0
1938	20.2	25.4	33.6	24.2	17.0	12.0	10.9	10.5	13.4	10.5	10.7	9.7
1939	17.7	26.5	35.8	31.1	19.4	13.4	10.1	11.1	13.6	11.3	7.7	12.6
Outside sales in per cent of capacities of hatcheries reporting												
1927	2.9	10.4	21.0	39.6	5.4	0.6	†	0.1	0.5	0.5	0.5	0.2
1928	0.5	4.3	12.3	15.6	6.1	0.7	0.3	0.2	0.5	0.4	0.2	0.4
1929	1.9	6.5	23.2	34.0	10.0	1.9	0.5	0.4	0.5	0.7	0.4	0.5
1930	2.2	10.0	26.3	47.5	13.2	0.5	0.1	0.1	0.2	0.1	†	0.3
1931	0.3	2.3	11.0	18.5	5.7	0.5	0.1	0.1	0.1	0.4	0.2	0.2
1932	1.0	2.5	12.4	11.5	3.2	0.2	†	0.1	0.1	*	*	*
1933	0.4	1.0	9.4	10.7	2.5	0.4	†	0.2	0.2	0.1	0.2	†
1934	0.4	3.2	12.7	11.5	2.5	0.2	0.1	0.1	0.1	0.2	0.1	0.2
1935	0.5	4.7	11.4	17.5	4.7	0.5	0.2	0.4	0.5	0.7	0.5	1.5
1936	2.4	5.4	22.5	27.2	9.2	1.3	0.5	0.5	0.1	0.4	0.2	0.4
1937	1.1	2.7	15.5	16.1	3.0	0.3	0.1	0.1	1.5	2.4	1.1	0.3
1938	0.5	3.5	14.2	12.0	2.7	0.5	0.1	0.4	1.9	0.9	0.5	0.7
1939	2.5	4.9	13.9	15.7	5.5	0.3	0.2	0.3	1.7	0.5	0.3	0.3

* No reports issued.

† Less than 0.05 per cent.

Sources of data:
United States Department of Agriculture Bureau of Agricultural Economics. Federal-State Market News Service. Report on hatchery sales in California. Monthly. December issues.

West and to some extent in the north Atlantic and New England states; (2) specialized egg farms composed largely of Leghorn chickens and found largely on the Pacific Coast and in the north Atlantic states—with scattered farms in the Middle West; and (3) commercial broiler

[22] United States Department of Agriculture Bureau of Agricultural Economics. Classification and tentative specifications for United States standards and grades for dressed chickens. p. 1–8. Revised March, 1938. (Mimeo.)

farms such as are found in Delaware, Virginia, Maryland, Connecticut, New York, and to some extent in California.

Broilers on eastern markets make their appearance mainly in June, July, August, and September. Within the past two decades the broiler industry, particularly along the east coast, has placed its product on the market during all months of the year. While the production of broilers during the late spring and summer months is an old phase of the poultry business, the raising of winter and early spring broilers on a large commercial scale is a relatively new development.

Fryers are "young chickens approximately 14 to 20 weeks old of either sex weighing between 2½ and 3½ pounds, and sufficiently soft-meated to be cooked tender by frying."[33] They may be either of the White Leghorn or colored breeds. The line of demarcation between broilers and fryers is determined by both age and weight and is very indistinct. On many markets the term "fryer" is not used, broilers covering chickens up to 20 weeks and weighing less than 3½ pounds. Since fryers are usually hatched at the same time as broilers, the peak of production occurs in volume after that of broilers. In a study made of the receipts of dressed poultry of different classes on the New York market,[34] approximately 67 per cent of the annual amount of fryers received arrived in the four months from August through November. Fryers are produced in relatively small volume from January through June. Throughout the year fryer production is approximately two months later than that of broilers. Leghorn fryers are probably not offered for sale for so long a period as the colored fryers because they are not so acceptable after they pass 3 pounds in weight.

The roaster is a "young chicken, approximately 5 to 9 months old, of either sex, weighing over 3½ pounds, and sufficiently soft-meated to be cooked tender by roasting."[35] Only colored chickens fit into this classification.

On the New York market from 15 to over 20 per cent of all the live-poultry receipts were in this classification from 1933 to 1935.[36] On account of the time of hatching normally followed in the midwestern section of the country in which the bulk of the roasters are raised, there

[33] United States Department of Agriculture Bureau of Agricultural Economics. Classification and tentative specifications for United States standards and grades for dressed chickens. p. 1–8. Revised March, 1938. (Mimeo.)

[34] Sprague, Gordon W. Average monthly wholesale prices and price relations for fresh dressed poultry at New York City. U. S. Dept. Agr. Bur. Agr. Econ. 31 p. 1933. (Mimeo.)

[35] United States Department of Agriculture Bureau of Agricultural Economics. Classification and tentative specifications for United States standards and grades for dressed chickens. p. 1–8. Revised March, 1938. (Mimeo.)

[36] United States Department of Agriculture. Handbook of poultry and egg statistics. Misc. Pub. 158:34. 1937.

is little volume in production until July or August. A rapid acceleration in production occurs in September, and a peak is usually reached in the last three months of the year when from 60 to 75 per cent of the roasters are marketed. The volume of production diminishes from January to May or June. Seasonal production is fairly regular. The movement is opposite in directon to that normally exhibited by colored hens as an increasingly larger number of chickens mature. As a result, roaster production is almost negligible from April to July.

In a market sense "fowl" means mature hens of any age or weight. In the great poultry-producing sections of the United States this class is by far the largest in the arrivals at the markets. Unlike broilers, fryers, and roasters, a large potential supply of hens exists in the country throughout the year, which may always be attracted to the market if prices become sufficiently favorable. The variation in receipts of hens from month to month is not so marked as with the other classes of poultry. In January, February, and March the volume marketed is associated with the price of eggs, for there is some evidence that unusually low winter egg prices will cause a heavier-than-usual flow of hens to market. In the main chicken-producing sections of the country, April, May, and June are months of heavy egg production and consequently fowl marketings are very likely to be low. During the summer, culling increases with resultant increase in fowl offerings. A rise in offerings often occurs in September and continues until a peak in marketing is reached in November and December.

Leghorn hens are placed in the fowl, or hen, class. In most markets, however, the Leghorn hen, or Leghorn fowl, is separated from those of the colored breeds. Ducks, geese, and turkeys are in a somewhat different category from the other poultry products described, since they are not by-products of an egg industry. Duck, geese, and turkey production is planned so that the products will be available in fall and early winter. With turkeys, however, and probably with ducks, the production season has been greatly expanded within recent years.

In the larger markets there is a fair demand for squabs, mainly confined to the more expensive hotels and restaurants. The largest supply of squabs is usually from March to November.

Poultry Classes in California.—While the description of the production of poultry classes in the United States holds in a very general way for most of the major poultry-producing areas, there are differences both in the relative importance of production of the different classes and in the seasonality of production in so far as California is concerned. Since the advent of the United States Department of Agriculture Bureau of Agricultural Economics in poultry-price reporting at San Francisco

and Los Angeles, the terminology classification has corresponded to that already described (p. 43–46).

Probably 90 per cent of the chickens in California are White Leghorns, and these furnish much of the chicken-meat supply of the state—especially in the broiler, fryer, and Leghorn-hen classifications. A 1934 estimate of a broiler production of between 500,000 and 1,000,000 was made for California.[37] On account of numbers shipped out of the state during certain years,[38] the latter figure is probably closer to actuality. The same source estimated the total commercial-broiler production to be 16,500,000 birds for the United States in 1934. The total number of chickens raised as estimated by the Census for the United States for the same year was 598,867,000 and for California, 18,159,412. Broiler production is a far more important part of the poultry industry of the state than it is of the nation. Probably two thirds of the national broiler crop is raised in Delaware, Virginia, and Maryland.

In California, with its highly specialized egg production, the main source of broilers is from White Leghorn cockerels produced as by-products on commercialized egg farms. Especially, since the advent of chick sexing, many now buy only pullet chicks for flock replacement. There has been some development of farms producing cockerels and pullets as broilers in the state, although occasionally one finds them produced on general farms. In certain other states where broilers are of importance, Barred and White Plymouth Rocks, Rhode Island Reds, and Wyandottes are utilized.

Meat production being strictly secondary to egg production, California poultrymen perhaps can do but little to change the seasonality of marketing operations. The majority of birds are brooded in February, March, and April (table 18); and since broilers are approximately 8 to 12 weeks old the largest supplies arrive on the market during the four months, April, May, June, and July, and lowered prices result. The early hatching in California permits pullets to produce in the fall when egg prices are at a peak. To produce birds for the peak-price broiler market would necessitate brooding in midsummer, which is undesirable on account of the warm summer weather. Furthermore, pullets would start producing in the spring, which is undesirable on account of low prices. For the other western states the season is approximately one month later

[37] Termohlen, W. D., and J. W. Kinghorne. An economic survey of the commercial broiler industry. U. S. Dept. Agr. Agricultural Adjustment Administration. General Inform. Ser. G61:1–54. 1936.

[38] Receipts of dressed poultry at New York from California in pounds in the six years 1934–1939 have been as follows: 1934—2,235,000; 1935—5,487,000; 1936—6,650,000; 1937—4,132,000; 1938—3,857,000; 1939—2,830,000. In some years receipts at Boston have been considerable, while those at Philadelphia and Chicago have been minor. Data are not available on dressed receipts at other cities. In all probability most of the receipts have been in the broiler or fryer classifications, since they have appeared in the spring.

so that the greatest broiler production may extend at times into late July and early August.

In some areas it might be possible to brood chicks for the October broiler market since the brooder house would be empty during the period July to October. Whether or not this would prove feasible would depend very largely on climatic conditions. A combination of brooding for roasters in the fall, broilers in the summer, and egg production in the spring might be worked out for those wishing to specialize in brooding.

The peak production of Leghorn fryers in California occurs from a month to two months later than that for broilers. What proportion of California chicken production Leghorn fryers and other classes constitute would be a conjecture, since no data are available.

A potential supply of Leghorn hens is always on hand. The normal processes of culling send numbers onto the markets. The interrelations of feed, egg, and Leghorn-hen prices determine whether a larger or smaller number will be marketed. Given low egg prices in relation to feed prices and relatively high Leghorn hen prices, a large number of hens will be marketed.

Considerable interest has been shown in the possibility of the commercial production of colored chickens in California. While there has been some production of all classes of colored chickens and fowl, it has been minor.

Questions have been raised concerning out-of-season roaster production in California. The possibilities for markets cannot be predicted safely. The Pacific Coast demand is not large. At present, roasters are not quoted on the New York market during the spring months and at times this has been the case in California markets. The market for large numbers of roasters in the East is in the fall. The possibility of shipping out-of-season roasters east in the spring would be problematical. Not only would transportation costs be large but feed costs would probably be prohibitive. Spring roaster production would necessitate the use of the brooder house only during the winter months, so that the producer would have to supplement this with some other line of poultry production.

While most of the fowl produced in California are of the Leghorn breed, there is a considerable sale of colored hens, especially from many farm flocks and from a number of poultry farms maintaining flocks of colored chickens. The sales of roosters, both White Leghorn and colored, in such a highly commercialized egg-producing state as California would be of minor importance.

Duck and turkey production are of considerable import in California. While there is some demand for squabs within the state, the production can be and at times has been, overexpanded.

MARKETING METHODS AND CHANNELS IN CALIFORNIA

Methods of Sale by Producers.—Chicken meat in California is largely a by-product of egg production. Although a fairly large proportion of the California farms with small flocks produce heavy breeds of chickens, either exclusively or along with Leghorn chickens, and while there are a few producers who specialize in producing heavy market birds, the total number of chickens of heavy breeds is relatively insignificant in comparison with the number of Leghorn chickens marketed. Most of the dealers interviewed in the Los Angeles market estimated that at least 90 per cent of the heavy-breed chickens sold in that market are shipped in from out of state. In the San Francisco market the proportion of heavy-breed birds obtained from within the state is probably somewhat higher than in Los Angeles. Dealers in the San Francisco Bay area estimate that at least 65 per cent of heavy-breed chickens shipped into that market are obtained from out of state.

Interviews with chicken producers, hucksters (local itinerant buyers, also known as "peddlers"), and local dealers or merchants in different parts of the state indicate that there is not much variation in the selling practices of producers regardless of whether they sell Leghorns or chickens of the heavier breeds. A few producers, especially in the southern part of the state, sell their poultry directly to consumers, either on the farm or through stalls operated in farmers' markets. A somewhat larger proportion of farmers sell their chickens direct to local retail butchers. In the counties in close proximity to San Francisco, a large number of chicken producers sell through the Poultry Producers of Central California which operates several killing, grading, and packing plants in the country. The chickens so purchased are sold in the San Francisco market to retail stores, hotels, and on occasion to other wholesale dealers. In southern California the Fontana Producers Egg and Supply Company sells its members' poultry direct to a local killing establishment operated by one of the large meat packers. The North Pacific Coast Poultry Producers at Eureka handle chickens for their members. Other poultry coöperative associations in the state do not handle their members' chickens; they confine their activities largely to handling their members' eggs and supplying them with poultry feeds.

The great bulk of chickens produced in the state, both Leghorns and heavy breeds, are sold by individual producers directly to local buyers of several kinds (see section "Operations of Local Buyers").

The marketing season for chickens depends almost entirely upon prevalent breeding practices. At one time nearly all chicks were hatched in the late fall and early winter months. The male chicks reached the broiler

stage some two to three months later so that the broiler marketing season began in February and continued until June or even July. Similarly, hens were usually culled in the late spring and summer months; Leghorn hens thus started moving to market about June and continued until in August. During recent years, however, hatching and culling practices have undergone considerable change. The largest proportion of chicks is now hatched during the late winter and spring months. Hatching has, however, become much less seasonal, considerable quantities of chicks being produced in each month of the year (table 18). An increasing number of farmers follow the practice of culling their flocks regularly rather than waiting until the late spring and summer months. As a result, while the heaviest marketing of broilers still comes in the spring and early summer months and the heaviest marketing of hens in the summer months, supplies of both broilers and hens reach the market practically all the year round.

Although the main broiler- and hen-marketing seasons usually extend over several months, chicken sales by individual producers may occur only a few times a year. Individual producers do not sell small quantities of broilers and hens at regular intervals but rather tend to sell large lots at a single time. Thus a producer may sell broilers only two or three times a year and hens somewhat more frequently according to how often he culls. For example, a producer would usually sell all the hens culled in June in one lot and so on for other cullings.* The longer marketing season occurs because all producers do not sell broilers and culled hens at the same time. This factor is important in determining the returns obtained by an individual producer from the sale of broilers and hens. One producer may obtain a low return on the sale of his broilers because they were ready for market at a time when prices were low, whereas another producer may have been fortunate enough to sell earlier or later in the season when prices were considerably higher.

No satisfactory and practical grades exist for live poultry. The price per pound received by producers usually is based on the average weight per bird (which is an indication of the available meat on a chicken) and the general outward appearance of each bird at the time of sale. Chickens that have blemishes or deformities (broken wings or legs or scars) are degraded and sometimes rejected. Sick chickens are often sold to certain local buyers, for resale presumably to fox farms and dog and cat hospitals. Some producers and dealers, however, allege that in spite of city regulations prohibiting the sale of sick chickens for human consumption, some sick chickens find their way into the hands of cut-rate

* This does not apply to producers who sell directly to consumers or regularly to retail butchers. Such producers would aim at maintaining a sufficient supply of broilers and hens all the year round to meet current needs.

retail butchers. As the average weight of chickens is an important factor in "rough" live grading, producers have often followed the practice of heavy feeding just before chickens are sold. This practice, however, is well known to local buyers who tend to discount the weight accordingly. Most producers endeavor to have their chickens in the condition demanded by the trade. Producers usually find that local buyers are more exacting in their grading of broilers and hens at the peak of the marketing seasons. Chickens, which later on in the season will be placed in the first grade, are placed in a lower grade or rejected.

Prices received by producers are usually based on prices at the nearest wholesale market less the local dealer's margin (the amount which the local dealer requires to cover profits and his operating costs, including transportation to the wholesale market). As will be shown in the next section, the producers' price does not always move at a fixed differential below the wholesale price.

Operations of Local Buyers.—There are several different types of local buyers (in contrast to coöperative associations) who purchase chickens from producers. These local buyers are usually in active competition with each other in the areas in which they operate. All local buyers who purchase poultry from producers on any basis other than cash (coin or currency, lawful money of the United States) in full at time of delivery, have to be licensed by the Director, State Department of Agriculture. The purpose of this license is to protect producers against unfair and fraudulent practices of buyers of their products and especially against nonpayment for farm products consigned to a dealer or not paid for in full in cash at the time of delivery.[30]

The most important type of local poultry buyers, from the standpoint of both size and volume of business handled, are hucksters, or peddlers, who are itinerant local buyers with no fixed place of business other than the home. Each huckster operates one or more trucks and visits farmers at frequent intervals for the cash purchase of chickens. Some hucksters may operate continuously within a definite territory; others move from one area to another at frequent intervals. Dealers of this type usually grade chickens purchased from producers into one or two broad classifications, transport them alive in coops to the nearest large market, where the chickens are sold to a wholesale dealer or to retail slaughterhouses. Some hucksters tend to deal almost exclusively with a particular wholesale dealer, and act largely as the local buyer for such wholesale dealer; others sell their chickens to whatever dealer in the city will give them the best price.

[30] [California] Agricultural Code (revised to September 19, 1939) Division 6, Chapter 6, Sections 1261 to 1273, p. 319–31. Published by California State Department of Agriculture. 1939.

A second type of local buyer is the local agent of a city wholesale dealer. In some instances wholesale dealers maintain country buying stations from which employees contact producers in the surrounding territory. In other cases wholesale dealers send their buyers into the country direct from the city plant. Chickens purchased from producers are roughly graded and sorted in the country and shipped to the city plant of the wholesale dealer, where they are killed, dressed, and graded.

A third type of local buyer is the large meat-packing concern which operates a country killing and dressing plant (of which there are several in the state). Producers may ship their poultry direct to the local plant or deliver to trucks operated from the plant. Chickens purchased by such plants are killed, dressed, and graded and shipped direct to the main packing plant in the nearest city.

A fourth and less important type of local buyer is a local produce merchant or retail storekeeper. The latter is found usually in the less important poultry sections of the state. This type of local buyer may act as the local agent for a wholesale dealer in an adjacent city; he may sell locally to a huckster or may ship the poultry purchased to a wholesale dealer in a nearby city.

Producers often complain bitterly about the allegedly unscrupulous practices employed by local buyers of poultry—particularly hucksters. Such complaints are most frequent when prices received by producers are low, a conditon resulting from general supply and demand relations for poultry, over which local buyers have little or no control. Many producers interviewed, especially in southern California, referred to the fact that local buyers' margins (difference between the price in the nearest wholesale market and the price received by the producer) often varied considerably at different times of the year, being the highest usually at the peak of the marketing season (see p. 121–122). Producers also claim that local buyers lower the returns of producers by classing chickens as second grade, which later on will be accepted as first grade by the wholesaler or retailer.

Complaints about variations in local buyers' margins and grading practices can in large measure be accounted for by supply and demand conditions in the wholesale markets. During the heavy broiler- and hen-marketing seasons, wholesale dealers are likely to be more exacting in their quality requirements because only sound chickens are put into storage. Furthermore, hucksters often find it difficult to obtain an outlet for the chickens which they have purchased, because many wholesale dealers have adequate supplies. Risks of price declines are also greater as the volume of marketing approaches a peak. Under such conditions hucksters would, of course, try to pass most of the market risk on to pro-

ducers and so widen their own operating margins. Later on in the season when live chickens of a certain class are scarce, certain wholesale dealers may find their supplies inadequate to meet current retail market outlets. As it is sound business practice for the wholesale dealer to maintain his regular retail contacts, he is often willing to pay local buyers a premium for chickens. The local buyer in turn may have to pay a premium to producers for chickens of the desired grade. A similar situation arises where a wholesale dealer has an outlet for extra high-quality birds.

Undoubtedly there is justification for some of the complaints of producers, especially as regards the operations of hucksters. Some of the latter are of the fly-by-night type; large numbers of hucksters have no established business reputation to uphold; some are unscrupulous and irresponsible in their business dealings. Large numbers of hucksters, however, have been in business a number of years and have developed a regular producer clientele. Furthermore, competition between well-established local buyers, representing wholesale dealers and meat-packing firms, makes it unnecessary for producers to deal with hucksters of doubtful business integrity.

It does not follow, however, that local buying and handling of poultry are as efficient as they could be under a different combination of circumstances. There may be too many local buyers in relation to available supplies operating in a particular territory. Although few of the local buyers may be making satisfactory business profits, their margins may nevertheless be much higher than if a relatively smaller number were in operation. Similar conditions are found in many phases of business activity (for example, gasoline stations and grocery stores) and are the result of imperfect functioning of our economic system. Moreover, during periods of business depression, the number of hucksters and peddlers tends to increase. Only a small capital investment is required to enter the business and many persons are willing to work as long as their operations net them a living wage.

Handlers of Poultry in San Francisco.[21]—The location and permanence of industrial and wholesale commercial centers within large cities are determined to a considerable extent by topography; lines of communication with the eastern and northern shores of the Bay are through the city. The City (and County) of San Francisco lies on a peninsula (fig. 11), surrounded by water on the east, north, and west; its only land communications with the rest of the state being on the south. Communication with the eastern and northern shores of the Bay is by means of ferry, barge, or bridge. Most of the ferries dock at the ferry slips on the

[21] Much of the historical material in this section is based on information supplied by Joseph H. Mitchell of O'Brien, Spotorno, Mitchell, and Campagno Brothers, and Emanuel Campagno, of the General Poultry Company, both of which firms are located in San Francisco.

east side of the city. Furthermore, several of the main arterial highways from the south, as well as railroads, converge in the area adjacent to the ferries. The San–Francisco—Oakland Bay Bridge connecting the city with the East has its terminal a few blocks southwest of the ferries. The Golden Gate Bridge, connecting the city with the north shore, has its San Francisco terminal a considerable distance to the north and west of the ferry terminals. The highways from both bridges to the wholesale pro-

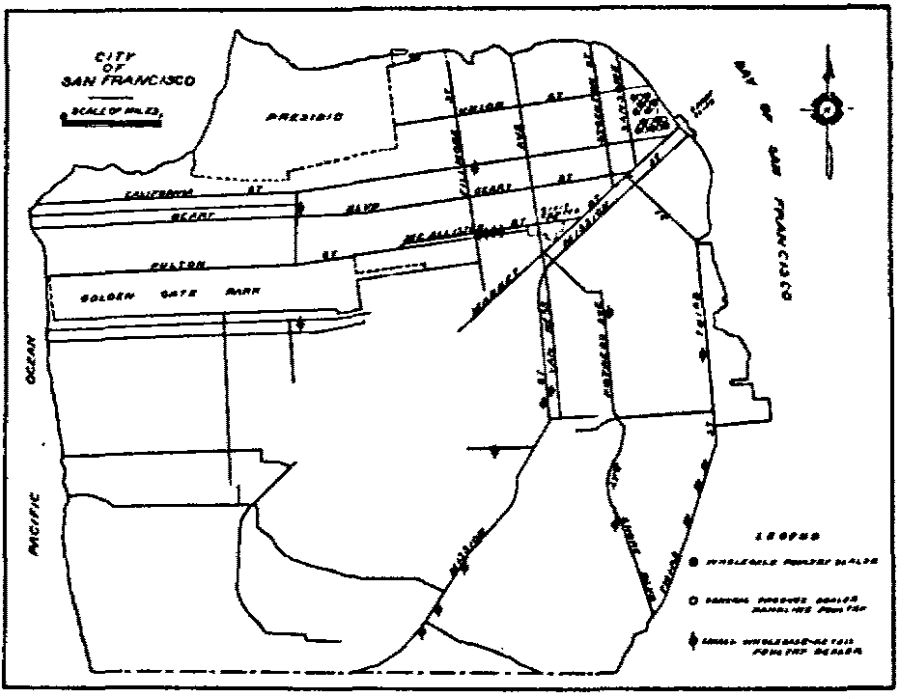

Fig. 11.—Location of wholesale poultry dealers, general produce dealers handling poultry, and small wholesale-retail poultry dealers, San Francisco, 1936.

duce district are direct and level. The topography of much of San Francisco is hilly, the low-lying-level areas being also to the east of the city. This combination of natural conditions and communication lines has caused the San Francisco wholesale produce district (fruits and vegetables as well as poultry) to be located in a relatively concentrated area adjacent to the ferries and at the terminals of the highways from the north, south, and east.

The general location of the manufacturing and wholesale commercial districts, moreover, can be regarded as relatively permanent. As far back as 1850, San Francisco was an important trading center with a relatively stable, though growing, population. In 1900 its population was 343,000; in 1910 about 417,000, or 21.6 per cent greater than in 1900. In 1930 its

population had increased to 634,000, or 84.8 per cent greater than in 1900. While the size of the residential areas has been expanded, the older residential areas are more fully occupied. There has been some expansion since 1900 in the manufacturing areas, but the wholesale warehouse areas have remained practically unchanged.

Up until the time of the earthquake and the fire of 1906 nearly all poultry arriving on the San Francisco market from California and other states was consigned by local buyers (at that time mainly country storekeepers and general produce dealers) to commission merchants for sale at auction or private treaty. The chickens so sold were bought by only two or three wholesale poultry dealers and a large number of retail dealers, most of whom were located in the northeast section of San Francisco bounded by Van Ness Avenue on the west and Market Street on the east and south (fig. 11). Nearly all the buildings occupied by the commission merchants, wholesale dealers, and retail dealers were destroyed by the fire of 1906. Very few of these concerns opened up again after the fire and those that did were scattered over a wide area in the city.

From 1907 on, the commission merchants and retail poultry dealers decreased in importance, both in numbers and in volume of poultry handled. Dealers known in the trade as "jobbers"[34] took the place of the commission merchants; wholesale poultry dealers replaced the small retail poultry dealers. Concurrent with this change, large handlers of poultry again tended to locate in the northeast section in close proximity to the ferries.

Within the past decade or so another significant change has occurred in poultry handling in San Francisco. Wholesale poultry dealers have to a considerable extent replaced the jobber-broker by establishing direct buying contacts in country districts in California and in other states. In 1927 the Poultry Producers of Central California also undertook to handle poultry on behalf of its members. The large meat-packing concerns also operate dressed-poultry departments, most of their supplies being obtained from their own country killing plants. In 1936, while there were still a few operators of the jobber-broker type, the great bulk of the poultry arriving at the market was handled by some seven wholesale poultry dealers, two meat-packing concerns, and the Poultry Producers of Central California.[35] Smaller quantities of poultry were handled by

[34] These "jobbers" were in reality both brokers and jobbers. Chickens consigned to them in carload lots were sold in smaller lots both to wholesale dealers and to retail dealers.

[35] Up until 1935 the Poultry Producers of Central California did most of its killing and dressing of poultry in its San Francisco plant. In 1936, however, killing and dressing were done at country plants, the freshly killed, graded, and packed chickens being shipped to San Francisco. The killing plant in San Francisco is still used occasionally for live poultry consigned directly to the association at San Francisco and for heavy chickens bought by the association in San Francisco.

several general produce dealers, whose main business is the sale of fruits and vegetables. One large jobber-broker handled considerable quantities of heavy chickens, shipped in from midwestern states.[34] With the exception of one large meat packer, all the bulk handlers of dressed and live poultry were concentrated within a few city blocks east of Sansome Street and north of Market Street—within an area covering only about a half a square mile (fig. 11).

The wholesale poultry dealers obtain the bulk of their supplies of live chickens from hucksters or from their own buying stations or agents in the country districts of California and other states. Most of these concerns also purchase considerable quantities of dressed poultry (mostly roasters and heavy hens) direct from country buyers in midwestern states; a few of them, however, purchase their heavy chickens, of out-of-state origin, from the large jobber-brokerage firm referred to above (p. 55). On occasion one wholesale dealer with excess supplies may sell to other wholesale dealers whose supplies are at the time inadequate to meet their market outlets.

Live poultry received by wholesale dealers is usually battery-fed for several days before killing. The time of feeding varies considerably and depends upon the age and condition of chickens when they are received at the plant, and the point of origin (whether California or out of state). Each wholesale dealer has his own feeding formulas for different types of chickens. Killing and dressing methods appear to be fairly well standardized, although in 1936 one firm was operating a device whereby feathers were removed by a waxing process. After killing, chickens are displayed in racks for inspection by customers.

The bulk handlers of poultry (wholesale poultry dealers, the two meat packers, and the coöperative associations) in turn sell their dressed poultry to (1) retail butchers of whom there were between 1,500 and 1,800 in 1936; (2) hotels and restaurants; (3) various public and semipublic institutions, such as hospitals, veterans' homes, the army and navy; (4) steamship companies; and (5) occasionally direct to consumers who take delivery at the plant. A considerable, though indeterminate, quantity of the poultry handled by these bulk operators is shipped to buyers (mainly public institutions) located outside of San Francisco; some is exported, mostly to Hawaii, and some is ultimately consumed outside of California (for example, the poultry purchased by steamship companies). This

[34] There were in addition the California Turkey Growers Coöperative Association handling turkeys only and a jobber handling mainly turkeys for the Northwest Turkey Growers Association but also chickens and dairy products on behalf of coöperative associations in various states in the mountain division of the United States. (See: Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bul. 612:1–78. 1937.)

wide dispersion of poultry from San Francisco makes it impossible to determine with any degree of accuracy the per-capita consumption of poultry meat in the city. The wholesale poultry dealers also sell considerable quantities of live poultry (and some dressed poultry) to some twenty small wholesale-retail butchers or slaughterers located in various parts of San Francisco.

The buying practices of the various customers of the bulk handlers of poultry differ considerably. Many restaurant owners and owners of retail stores visit the killing plants and select live chickens which are then killed for them. Others who visit the plants make their selection from freshly killed chickens displayed on racks. On the other hand, large numbers of retail stores, restaurants, and hotels phone in their orders for types and grades of chickens, or orders are placed through the salesmen employed by the various bulk handlers of poultry. The purchasing agents for some of the public institutions visit the various bulk handlers and place orders for chickens of different classes and grades. Many of the public agencies, however, call upon the various members of the poultry trade for sealed bids on specified quantities, classes, and grades of poultry. Before acceptance and final settlement for the poultry so purchased, the poultry is usually inspected by the purchasing agent, or by a local official of the United States Department of Agriculture Bureau of Agricultural Economics.

At one time there were a large number of retail handlers of live poultry (p. 55). A few of these still survive. In 1930 there were twenty wholesale-retail butchers or slaughterers widely scattered in San Francisco (fig. 11), although the number varies somewhat from year to year. These have been able to survive because they cater to a special consumer demand. They serve the Jewish trade and persons who prefer to select their own chickens and have them freshly killed. Some of these concerns handle live poultry exclusively, whereas others are operated in conjunction with a retail grocery store or retail butcher shop. They vary considerably in regard to volume of poultry handled, source of their supplies, and types of customers served.

While most of these concerns handle from 25 to 50 coops of chickens weekly, a few handle as many as 100 coops.[36] Nearly all of them also handle other types of poultry (such as turkeys, ducks, geese, and squabs) and rabbits; one of the larger of these concerns, in addition, sells large quantities of dressed poultry. A few of these concerns sell exclusively to retail consumers, whereas others also sell wholesale to nearby stores and restaurants or even to public institutions. Most of these small wholesale-

[36] The number of chickens per coop varies from 20 to 40, the number depending upon the average size and weights of birds—broilers, Leghorn, and colored hens.

retail butchers obtain their supplies from the wholesale poultry dealers in downtown San Francisco; a few, however, obtain their supplies, in whole or in part, from hucksters or direct from producers in the country.

The national characteristics, experience, and standing of persons operating in a wholesale market have an important influence on the general tone of that market and of the supply territory. If there is a rapid turnover of wholesale dealers and if questionable business practices are prevalent, similar conditions are apt to be found in the surrounding country districts. Much of the dissatisfaction of producers with local marketing conditions can thus be traced to conditions in the adjacent wholesale market. The fact that such a relation may exist warrants some analysis of the personnel engaged in the wholesale poultry trade in San Francisco.

Before 1906 nearly all the commission houses were operated by persons of American, French, Irish, or Jewish extraction. While a few of the pioneer operators are still in business, most of the wholesale poultry firms now are operated by persons of Italian nationality. Although the names and corporate standing of several of the firms have undergone change from time to time, many of the managers, owners, or part owners of these firms have been connected with the poultry business in San Francisco for twenty and in some instances for over thirty years. While there were a few complaints regarding questionable business practices, the majority of the retailers, hucksters, and others who were interviewed in the course of this study stated that their dealings with most of the wholesale dealers were entirely satisfactory. They attribute much of this to the high standards of business ethics maintained by the old and experienced operators.

Handlers of Poultry in Los Angeles.—The Los Angeles poultry market differs from that in San Francisco in several important respects. In the first place Los Angeles is located on fairly level land with adequate transportation facilities from all sides. The City of Los Angeles, along with several other important cities in the County, covers a very wide territory. All of these cities are surrounded with rich agricultural lands, large numbers of the farms (especially poultry farms) being within the limits of the various cities.

In contrast with San Francisco, the City of Los Angeles has grown tremendously since 1900. In that year Los Angeles was a comparatively small city with a population of only 102,000. By 1910 its population had increased threefold to 319,198 and again nearly doubled between 1910 and 1920. In 1930 its population was more than double that of 1920 and more than twelve times that of 1900. (Population of Los Angeles County is estimated to have increased from 2,208,492 in 1930 to 2,785,000 in 1939.)

Because of these two factors—the general topography of Los Angeles and its rapid growth—the manufacturing and wholesale districts are less clearly defined and cover a much wider area than in San Francisco. Moreover, the personnel, both firms and individual persons, engaged in the poultry meat trade has undergone considerable change and has been less stable than in San Francisco. Very few of the wholesale poultry firms have been in operation for more than ten or fifteen years. The turnover of firms and individuals engaged in the wholesale poultry business has been fairly rapid. For this reason many of the firms have not established direct buying contacts with local dealers in other states. Los Angeles, moreover, receives a much larger proportion of the poultry meat consumed from out of state than does San Francisco. As a consequence the poultry broker plays a much more important rôle in Los Angeles than in San Francisco. In 1936 there were five brokerage firms handling large quantities of dressed poultry a year on a consignment basis and five handling small quantities. In addition one firm shipped in live poultry, purchased by it in other states, for sale to wholesale poultry dealers in Los Angeles.

There were (1936) in Los Angeles nine wholesale dealers in dressed poultry (including five meat-packing concerns) and five wholesale dealers[36] operating killing and dressing plants (fig. 12). Dressed-poultry dealers obtain their supplies of dressed poultry from country plants in California or in other states. These fourteen dealers in dressed and live poultry are located in the produce and wholesale district of Los Angeles, but are far more widely separated than in San Francisco. In addition, there is a large number of smaller wholesale-retail dealers or slaughterers scattered all over Los Angeles. In 1936 there were over 100 of these concerns, in which there is a rapid turnover both in number and in location.

Wholesale-retail dealers obtain the bulk of their supplies directly from hucksters or producers and only small quantities from the established wholesale dealers in contrast to San Francisco where the twenty-odd wholesale-retail poultry dealers obtain most of their supplies from the wholesale poultry dealers. The volume and nature of the business of these small wholesale-retail dealers vary considerably. They handle from about 400 to 2,500 pounds of all types of poultry (such as chickens, turkeys, ducks) and rabbits a week. Some of these operators cater almost entirely to the retail trade, whereas others sell a considerable volume of poultry wholesale, mainly to restaurants. A number of these dealers handle only high-grade poultry for a select Jewish trade. Many of them, however, handle low-quality chickens and other poultry on a cut-rate

[36] In addition another wholesale dealer with a killing plant in Pasadena sold large quantities of poultry to hotels, stores, and restaurants in Los Angeles.

basis. A considerable number of nationalities were represented in the wholesale-retail dealers, nearly all of whom were contacted during the course of this investigation.

It was impossible to obtain any exact data on the proportion of all poultry sold in Los Angeles which was handled by these small wholesale-retail dealers. Most of the latter kept records only of income and expenses

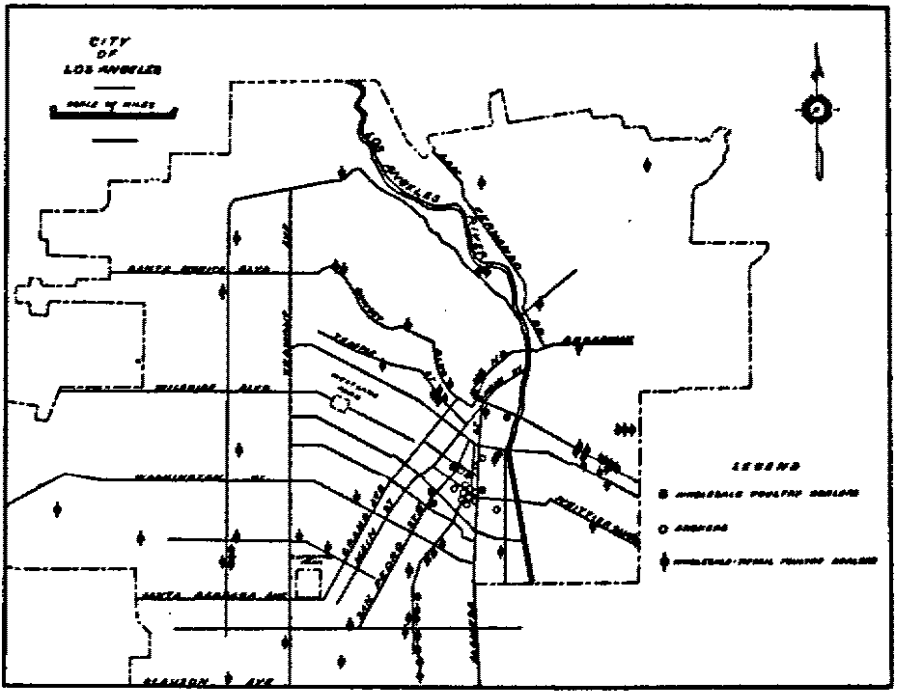

Fig. 12.—Location of wholesale poultry dealers, brokers, and wholesale-retail poultry dealers in Los Angeles, 1936.

and hazarded only rough guesses as to their weekly volume of business, which, moreover, varied considerably at different times of the year. Officials of the Health Department (Meat Inspection Section) of the City of Los Angeles estimated that these small wholesale-retail dealers handled from 25 to 35 per cent of all poultry sold in that city.

It is also probable that a considerable volume of poultry is purchased by consumers in Los Angeles from poultry producers located within the city limits or in the surrounding country.

SUPPLY FACTORS IN THE SAN FRANCISCO AND LOS ANGELES MARKETS

Supply Areas in California for San Francisco and Los Angeles.—Chickens produced in the various counties are available first for local consumption needs, and second, for shipment to a nearby wholesale market.

Surplus production to local consumption needs in these various counties tends to move to either of the two main California wholesale marketing centers—San Francisco[37] and Los Angeles. The supply area of the San Francisco market would include all the counties in the north coast and Sacramento Valley sections; all the counties in the south coast section except San Luis Obispo County; all the counties in the northern and eastern mountain section except Mono and Inyo counties; and San Joaquin, Calaveras, Stanislaus, Tuolumne, Merced, Mariposa, and Madera counties in the San Joaquin Valley. The Los Angeles supply area would include all the counties in southern California; San Luis Obispo County

TABLE 19

THE SAN FRANCISCO AND LOS ANGELES SUPPLY AREAS FOR CHICKENS, 1934

Supply area	Human population		Chickens raised		Chickens per capita
	Number	Per cent of total for state	Number	Per cent of total for state	
San Francisco	2,528,189	41.1	10,798,837	59.5	4.3
Los Angeles	3,623,899	58.9	7,362,544	40.5	2.0
Total for state	6,151,280	100.0	18,159,412	100.0	2.9

Source of data:
Calculated by the authors from table 35.

in the south coast section; Mono and Inyo counties in the northern and eastern mountain section; and Fresno, Tulare, Kings, and Kern counties in the San Joaquin Valley.

The San Francisco supply area with 41.1 per cent of the human population of the state had 59.5 per cent of all chickens raised in 1934, or about 4.3 chickens per capita as is shown in table 19. On the other hand, the Los Angeles area with 58.9 per cent of the population had only 40.5 per cent of the chickens raised, or about 2.0 chickens per capita. The San Francisco market probably had access to a somewhat greater proportion of heavy breeds of chickens, produced in the northern and eastern mountain and valley sections of the state than was the case for Los Angeles. The great bulk of chickens available to both markets from within the state, however, consisted of Leghorn broilers and hens.

Information on Poultry Receipts at Two Markets.—The only agency in the state undertaking to assemble data on daily poultry receipts[38] at the San Francisco and Los Angeles markets is the Federal-State Market

[37] The Oakland market is closely related to that of San Francisco. Possibly it would be more nearly correct to refer to the San-Francisco—Oakland market.

[38] These data are also summarized by months in mimeographed reports issued by the Federal-State Market News Service at the end of each calendar year.

News Service. This information, with that for prices (p. 79), is obtained from the various dealers and transportation agencies in each market who coöperate by reporting daily receipts. The data on receipts of poultry have been much more complete for San Francisco than for Los Angeles.

The Federal-State Market News Service has published the following information on poultry receipts at San Francisco:

1. Live Poultry:
   a) Cars received daily; data available since 1925; reports intermittent and incomplete prior to 1925.
   b) Coops of live poultry received daily by freight (reported regularly only since 1927), and by truck and boat (reported regularly only since 1929).
2. Dressed Poultry:
   Pounds of dressed poultry received daily. (No distinction made regarding means of transportation.)

Although a few of the small wholesale-retail dealers in San Francisco handling an unimportant volume in the aggregate do not report arrivals of live poultry purchased within the state, the data published afford a reasonably complete and accurate record of dressed and live poultry. Several factors combine to make such a complete coverage of receipts possible. First, the principal handlers of poultry are located in a comparatively small area of the city. Second, most of the main transportation systems converge in this area. Finally, the principal handlers of poultry and the various transportation agencies coöperate fully in supplying information on poultry arrivals. Data on poultry receipts unfortunately are for all grades and types of poultry (such as chickens, ducks, geese, turkeys). No attempt has been made as yet to segregate receipts by types. While all types of poultry are to some extent competitive one with the other, more detailed information on receipts by types would be of considerable value to the trade.

In the Los Angeles market the Federal-State Market News Service reports regularly only receipts of dressed poultry. Occasional reports on arrivals of carloads of live poultry are made. Because of the scattered nature of the Los Angeles poultry market, it has been found impractical to obtain data on live poultry receipts by truck. All the live poultry arriving in Los Angeles by railroad is received in poultry cars operated by the Palace Live Poultry Car Company of Los Angeles. While the company coöperates with the Federal-State Market News Service, the latter agency does not publish data on car receipts of live poultry, because such information is of little value without information on truck receipts. All persons connected with the Los Angeles poultry market, who were interviewed during the course of this study, stressed the need for more accurate information on receipts.

In 1935 the City Council of Los Angeles considered an ordinance

which would establish, under the direction of the Board of Health Commissioners, one or more poultry-inspection stations in the city. All poultry, dressed and live, arriving in the city would have to be inspected and passed at these stations. The ordinance failed to pass. If some such agency is established in the future, it would facilitate the collection of reliable data on volume of live and dressed poultry received daily.

If more accurate data were available in the San Francisco and Los Angeles markets on receipts of live and dressed poultry by types there would be a possibility of arriving at a fairly accurate estimate of the total weight of poultry received annually. A car of live poultry varies from a minimum of 14,000 pounds live weight to a maximum of 17,000 pounds.[39] In the winter months the average live weight of chickens per car varies between 16,000 and 16,500 pounds; in the summer between 14,000 and 14,500 pounds.[40] The weight of a coop of chickens varies according to the type of chickens shipped. The average weight of a coop of broilers varies from 75 to 80 pounds; of Leghorn hens and roasters from 100 to 105 pounds; and of colored hens from 125 to 130 pounds.

Origin of Poultry Supplies at San Francisco.—Receipts of cars of live poultry at San Francisco decreased from 293 in 1925 to only 98 in 1932, a decrease of 66.6 per cent (table 36). In 1933, as a result of a considerable reduction in railroad rates from eastern states in July of that year, receipts increased to 209 cars; in 1934 to 260 cars. In the following four years, however, receipts of cars of live poultry again declined precipitously, only 60 cars being received in 1937, 71 in 1938, and 52 in 1939. Coops of chickens arriving at San Francisco by express or freight declined steadily from 16,195 in 1927 and 17,989 in 1929 to only 1,404 in 1939. Receipts by boat showed a similar decline from 6,821 coops in 1929 to 20 in 1939. Receipts by truck, however, increased from 85,944 coops in 1929 to 184,347 coops in 1939. Combined receipts of coops (freight, boat, and truck) increased from 110,754 in 1929 to 185,771 coops in 1939. In the latter year coops by truck amounted to 99.2 per cent of all coops received as compared with 77.6 per cent in 1929.

In marked contrast to the decline in cars of live poultry, receipts of dressed poultry increased steadily from 4,966,000 pounds in 1922 and 5,615,000 in 1925 to 16,842,000 pounds in 1936. Since the latter year, declines have been registered, 12,396,000 pounds being reported for 1939 (table 37).

The major proportion of live poultry receipts by cars originates in the west north central states, and especially in Nebraska (table 36 and fig.

[39] Prior to 1935 the maximum weight permitted by the railroads was 18,000 pounds per car live weight.

[40] Live poultry would be mainly chickens. Turkeys, ducks, and geese are usually shipped in dressed form.

13). In the ten years 1930–1939, the north central states supplied 66.4 per cent of all cars of live poultry arriving at San Francisco; Nebraska alone supplied 60.8 per cent. The mountain states supplied 30.0 per cent; the south central states 2.5 per cent, and the Pacific states 1.2 per cent. Considerable change has taken place in the relative importance of the various geographic divisions and states with regard to shipments of cars of live poultry to San Francisco. The west north central and the south

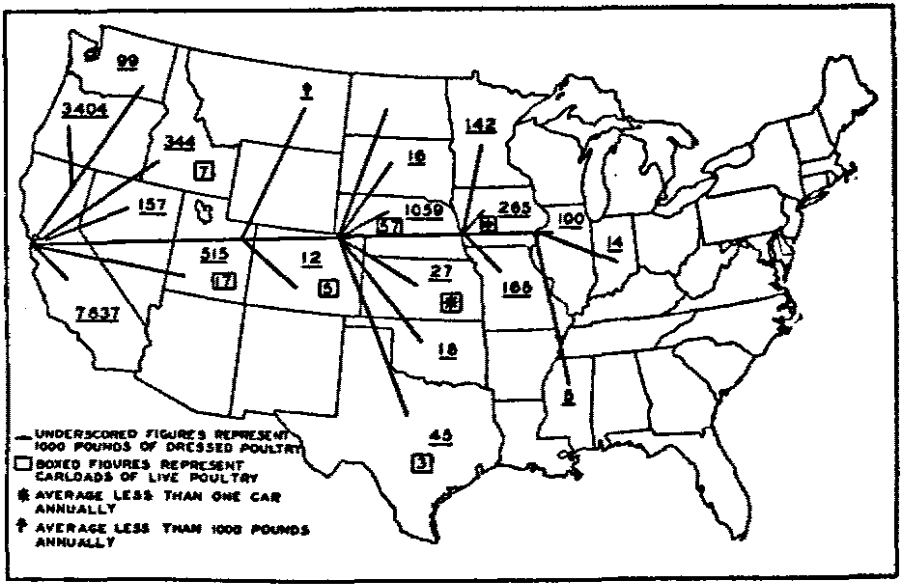

Fig. 13.—Origin of average annual receipts of live and dressed poultry at San Francisco, 1935–1939 (live-poultry receipts from California omitted).
Data from tables 36 and 37.

central states have decreased in relative importance as a source of supplies of cars of live poultry, whereas the mountain states have increased. In the seven years, 1933–1939, no cars of live poultry were received from the Pacific states.

Practically all live poultry arriving in San Francisco in coops originates within California, although small quantities arrive in this manner from Oregon and Washington. Truck transportation of poultry apparently is superseding other means of transportation where the distance traveled is comparatively short.

The bulk of dressed poultry receipts in San Francisco originate in California and Oregon (fig. 13). In the ten years 1930–1939, the Pacific states supplied 78.5 per cent of all dressed poultry; California alone supplied 55.2 per cent. Next in importance were the east north central and west north central states together with 11.9 per cent, and the moun-

tain states with 9.0 per cent. The south central and north Atlantic states together supplied only 0.6 per cent of the total receipts during these years.

Receipts of dressed poultry from the west and east north central divisions in the five years 1935–1939 were over 62 per cent greater than in the preceding period 1930–1934. However, it is apparent that this increase only partially offsets the decline in the receipts of live poultry

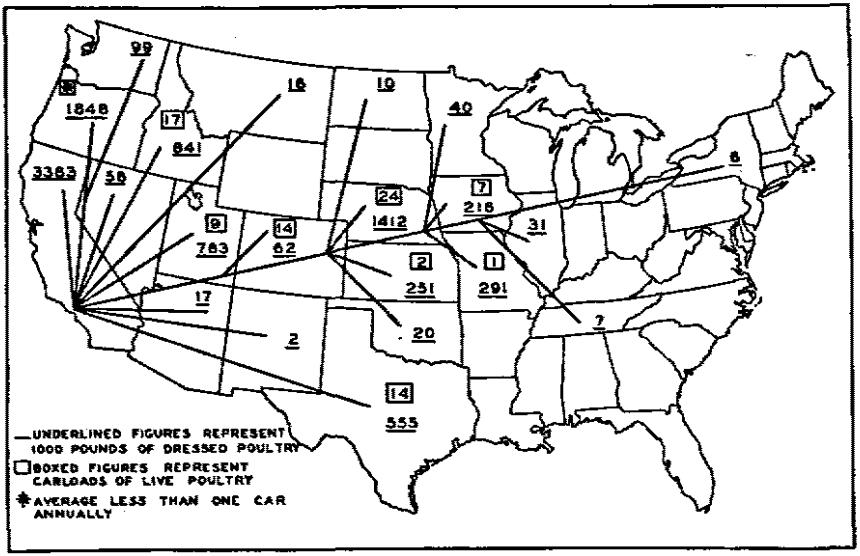

Fig. 14.—Origin of average annual receipts of live and dressed poultry at Los Angeles, 1935–1939 (live-poultry receipts from California omitted).
Data from tables 38 and 39.

from these same regions. There has been no marked trend in receipts of dressed poultry from the mountain states although receipts have fluctuated considerably from year to year. On the other hand, dressed poultry receipts from California and Oregon increased greatly between 1925 and 1937.

Origin of Poultry Supplies at Los Angeles.—Receipts of cars of live and dressed poultry in Los Angeles (fig. 14) show a similar movement to those for the San Francisco market (tables 38 and 39). Cars of live poultry arriving in the Los Angeles market declined from 433 in 1925 to 144 in 1929. In 1930, however, receipts more than doubled to 292, but declined again to 111 in 1933. In 1934, as a result of the decrease in railroad rates in 1933, receipts increased to 161 cars, but again declined in 1935, 1936, and 1937, then increased slightly in 1938 and fell in 1939. Receipts of dressed poultry, on the other hand, increased from 4,801,000 pounds

in 1925 to 13,717,000 in 1939. Since 1936 the rise has been in contrast to the San Francisco market where there has been a decrease in receipts.

There are some interesting differences in poultry receipts in the Los Angeles and San Francisco markets (figs. 13 and 14). Between 1925 and 1932 receipts of cars of live poultry in Los Angeles exceeded those in San Francisco every year except 1928 and 1929. Since 1933, however, car receipts of live poultry in San Francisco exceeded those in Los Angeles with the exception of 1937, 1938, and 1939. On the other hand, dressed poultry receipts in San Francisco since 1925 have consistently exceeded those in Los Angeles until 1939. Moreover, the upward trend in dressed poultry receipts in San Francisco was increasing more rapidly than in Los Angeles. In 1925 dressed poultry receipts in San Francisco amounted to 5,615,000 pounds as compared with 4,801,000 in Los Angeles. In 1938 receipts in San Francisco were 12,839,000 pounds; those in Los Angeles 9,892,000 pounds; whereas in 1939 the corresponding data were 12,396,000 pounds and 13,717,000 pounds, respectively.

SEASONAL SUPPLIES OF POULTRY

Production practices followed in the supply areas will largely determine the time of marketing, which varies considerably between different sections of the country. That these practices may change has already been pointed out.[a] Storage holdings of poultry have a decided effect on seasonal supplies of all classes of poultry. (On account of the influence of such holdings on price, the discussion will be found on page 143.) Seasonal marketings of all poultry and classes within the poultry group are perhaps not so regular as is the case with certain agricultural products. The reasons can be found in a combination of factors under which poultry is produced and sold.

The arrivals of both live and dressed poultry on the main markets of the country are usually at the year's low in February, March, and April. From the latter month through July there occurs a gradual rise in receipts which is accelerated in August. This upward movement usually culminates in November, although in some years December receipts are as high as those in November. A decided drop occurs for January. In the last four months of the year between 50 and 60 per cent of the year's total live and dressed poultry receipts are received on the large markets of the Middle West and north Atlantic Coast.

In order to have some measure of the variation in monthly receipts and the sources of seasonal supplies at San Francisco and Los Angeles,

[a] Under the section "Marketing Methods and Channels in California" (p. 49–60) it was indicated that hatching, and hence broiler sales, were much less seasonal than formerly and that emphasis on regularly culling low producers out of flocks was making available a more even supply of hens on the market throughout the year.

an analysis was made of the available data covering monthly receipts at these two markets for the years 1933–1939. In making computations, the five years 1935–1939 have been used in order to avoid using data of both drought years, 1934 and 1936.

San Francisco Market.—Carlot receipts of live poultry at San Francisco, which averaged 90 cars annually during the years 1935–1939 (table 40), came entirely from outside of the state with approximately 64 per cent originating in the east and west north central states, 32 per cent

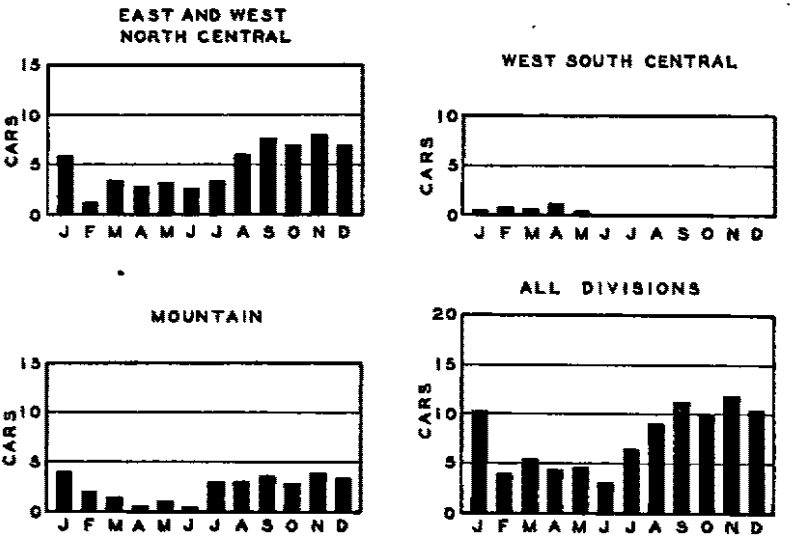

Fig. 15.—Average monthly carloads of live poultry received at San Francisco by divisions of origin, 1935–1939.
Data from table 40.

from the mountain states, and 4 per cent from the west south central states (table 41). Monthly carload receipts of live poultry from all states (fig. 15) are heaviest in the fall and winter months, with 59 per cent of the entire year's supply coming during the period from September through January. Although shipments from the east and west north central states have averaged twice as many carloads annually from 1935 to 1939 as those from the mountain states, the monthly movement from each division follows much the same seasonal change, with lows for each division generally occurring in June followed by an increase to peak shipments in November (January for the mountain states). Of the carloads of live poultry originating in the west south central states, almost all have been received during the three-month period from February through April.

Receipts from the east and west north central states constitute the bulk

of live poultry supplies received in carloads at San Francisco, varying from an average low of 30 per cent of the total in February to a high of 87 per cent in June (table 41). The relative importance of supplies from the mountain states is greatest in February when they make up 50 per cent of the receipts. Shipments received at San Francisco from the west

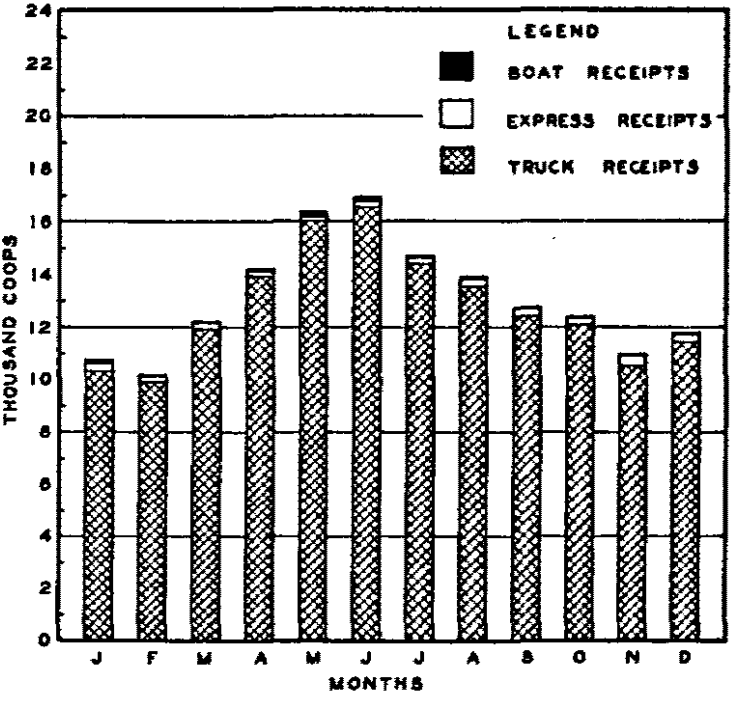

Fig. 16.—Average monthly receipts of coops of live poultry at San Francisco, 1935–1939, by boat, express, and truck.
Data from table 40.

south central region are relatively small and in only 2 months—February and April—do they average as much as 20 per cent of the total (table 41).

Live poultry arriving on the San Francisco market in coops is reported by the Federal-State Market News Service. These receipts, coming almost wholly from within the state, constitute the bulk of the live poultry supply (table 40). From 1935 through 1939 coop receipts averaged nearly 157,000 annually, with the heavy movement coming on the market in late spring and early summer (fig. 16). May and June are the months of heaviest receipts, with over a fifth (21 per cent) of the annual arrivals reported during this two-month period (table 41); the four winter months, November, December, January, and February, constitute the seasonal low point and represent slightly over a fourth (28 per cent) of

the yearly arrivals. This peak period in late spring and early summer of seasonally large coop receipts corresponds fairly closely to the period when, for production areas within the state, culling is receiving emphasis and broilers are usually ready for marketing. It is in sharp contrast with the seasonal movement of live poultry receipts shipped in carloads from supply areas outside the state.

Almost 98 per cent of the average annual coop receipts are brought in by truck (table 41); only 2 per cent are express shipments; and the remainder (0.3 per cent) are by boat. The relative importance of truck shipments varies only slightly from month to month. In April and in May truck receipts of coops make up 98.3 per cent of the supply; in November they decline to 96.4 per cent. On the other hand, in April and in May express receipts constitute only 1.4 per cent of supply, increasing in importance up to November, when 3.5 per cent arrive by express.

Receipts of dressed poultry at San Francisco averaged 14,243,000 pounds annually during the period 1935–1939 (table 40). A large part of this supply was received during the four months from November through February (fig. 17). Arrivals in these four months totaled 64 per cent of the average annual supply of dressed poultry, with November and December accounting for 40.1 per cent (table 42 and fig. 18). Receipts in July, the low month for the year, averaged only 2.6 per cent compared with December, when 21.8 per cent of the year's receipts are received.

Dressed-poultry receipts include turkey shipments which are not separated from other poultry in the available data on market receipts. Turkeys are generally received dressed, and do not make up a significant portion of live poultry, which is mainly chickens. The period of heavy dressed-poultry receipts corresponds closely to the time of large seasonal marketings of turkeys. Receipts from both the Pacific and mountain divisions are relatively heavy (table 42 and fig. 17) in November and December and for the Pacific states they continue large in January and February. Available data indicate the importance of these divisions as supply areas for turkeys marketed in San Francisco and Los Angeles.[48]

The Pacific states furnish the bulk of the supply of dressed poultry arriving on the San Francisco market. In the five years 1935–1939, 79.6 per cent of the average annual receipts came from this division with California alone supplying 55.0 per cent of the total (table 42). The relative importance of California as a source of supply was greatest in February when 73.2 per cent of the receipts originated within the state. In this same month 86.8 per cent of the supply on the San Francisco

[48] Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bul. 612:16–22. 1937.

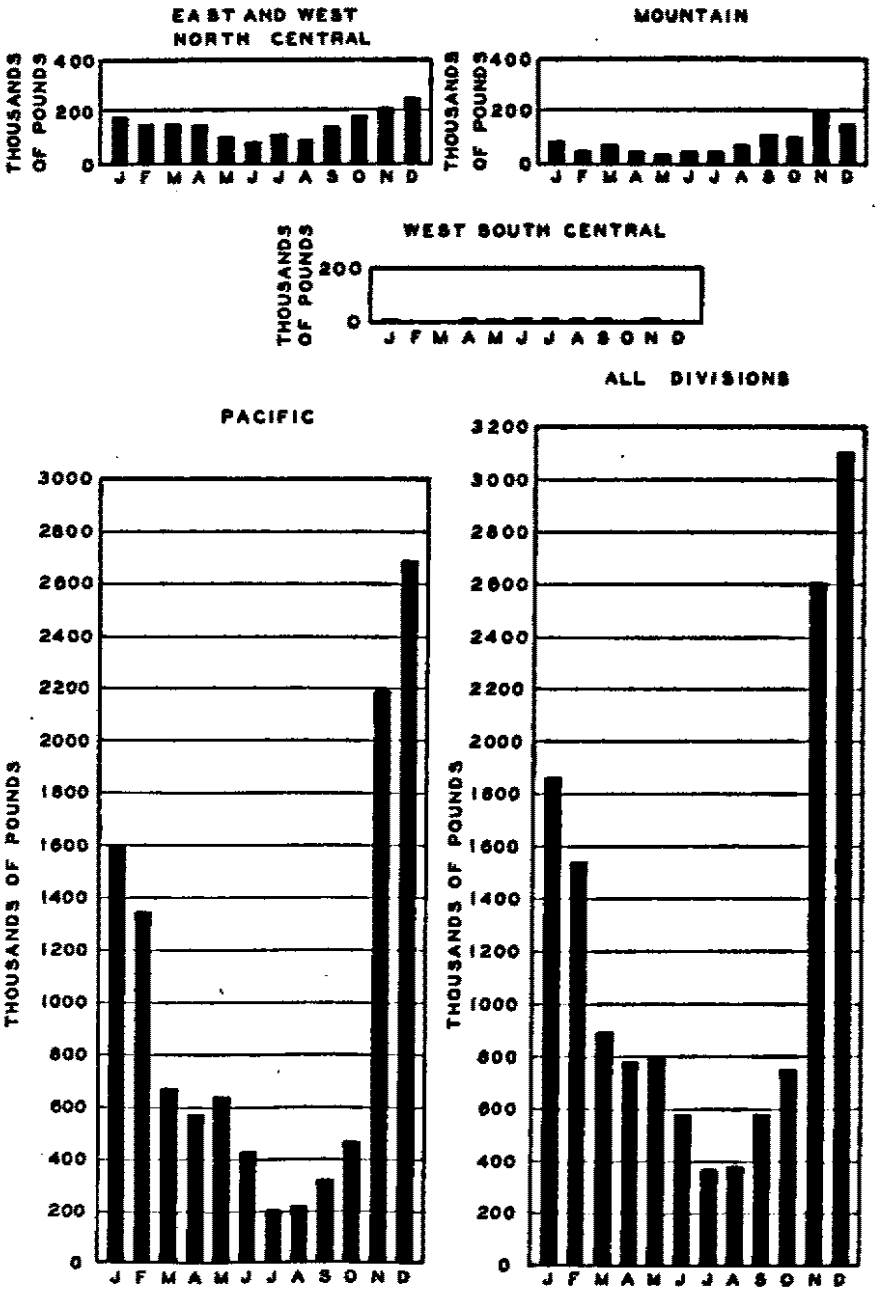

Fig. 17.—Average monthly receipts of dressed poultry at San Francisco by divisions of origin, 1935–1939.

Data from table 40.

market came from the three Pacific states. July was the low month for the Pacific states; September was the low point for California, only 32.7 per cent of the receipts coming from this state during that month. The east and west north central states and the mountain states are less important than the Pacific states as sources of supply, furnishing 12.6 per

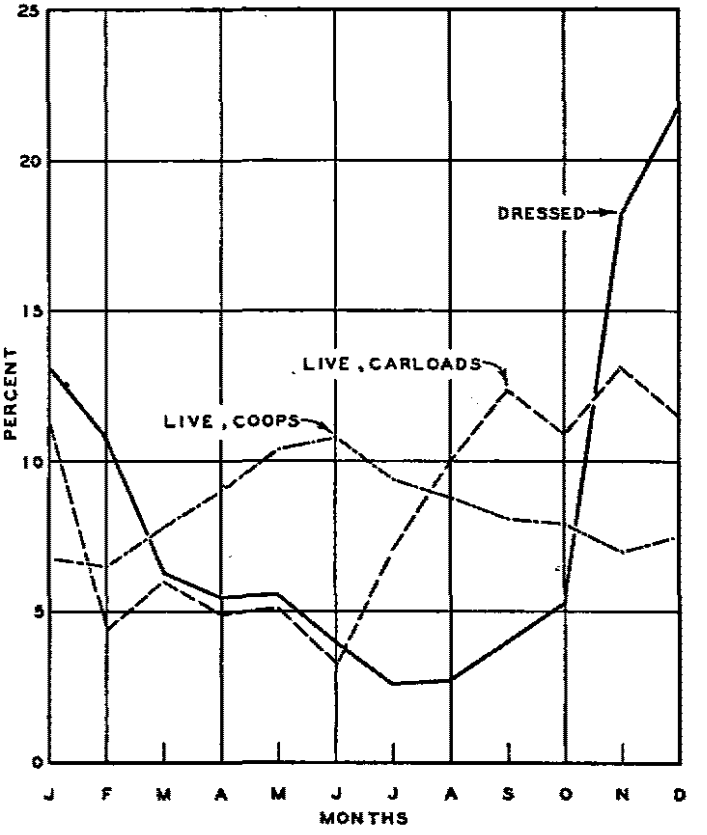

Fig. 18.—Average monthly receipts of live and dressed poultry at San Francisco expressed as percentages of average annual receipts of each respective type, 1935–1939.

Data from tables 41 and 42.

cent and 7.2 per cent, respectively, of the average annual market receipts. Nevertheless, during certain months significant proportions of the supply originate in these divisions. In midsummer and early fall these states account for 37 to 43 per cent of the total receipts. The west south central states furnish only 0.5 per cent of the average annual San Francisco receipts, but the bulk of the supplies from this division arrive from April through September, the months of lowest average receipts.

Although the available data on receipts of live poultry are not reported in pounds and hence do not permit an accurate appraisal of the volume received live as compared to dressed poultry, rough estimates based on the weights of coops and carloads reported on page 63 would indicate the approximate importance of the various types of shipments. A relatively greater proportion of the average annual receipts in coops arrive during the late spring and summer months (fig. 16), whereas shipments of dressed poultry are relatively low during this period and higher in

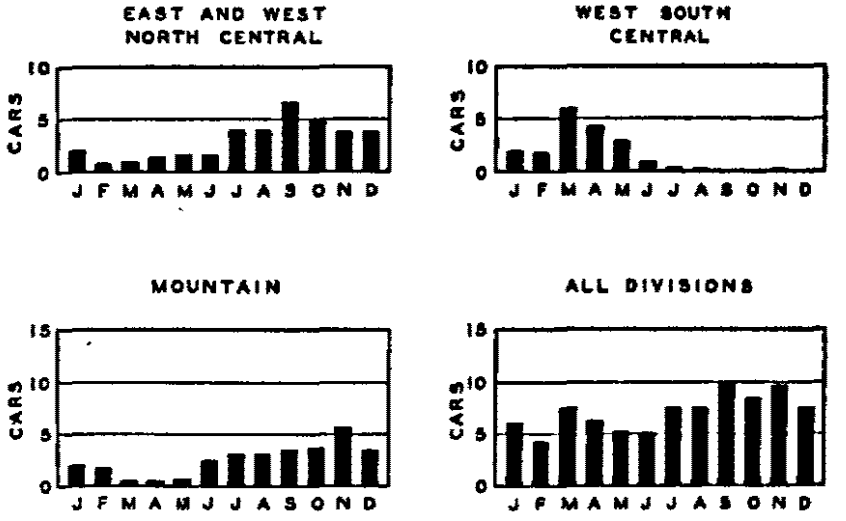

Fig. 19.—Average monthly receipts of cars of live poultry at Los Angeles by divisions of origin, 1935–1939.
Data from table 48

the fall and winter months when coop receipts are relatively less important. These two types of shipments constitute the bulk of the supply of poultry arriving on the San Francisco market.

Los Angeles Market.—Carloads of live poultry received at Los Angeles have averaged 84.2 cars during the five-year period 1935–1939. The monthly distribution of these cars throughout the year has shown a seasonal tendency toward increased receipts the last half of the year, although there is considerable variation from month to month (tables 43 and 44 and fig. 19). Receipts during the last six months of the year comprise 59.7 per cent of the average annual total cars of live poultry arriving on the market. September, the high month, accounts for 11.9 per cent of the annual receipts, as contrasted with February when the cars received amount to only 5.0 per cent of the year's total (table 44).

The east and west north central states contribute the largest share of the carload receipts of live poultry, averaging 42.0 per cent during the

period 1935–1939. The mountain states and the west south central states follow in the order named, originating 34.9 per cent and 22.6 per cent, respectively. Late in the year the principal source of supply is the east and west north central states when the seasonal shipments from these areas reach their peak. During the four months July through October receipts from these north central states constitute approximately 58 per cent of the live poultry reported as arriving in carloads. Seasonal shipments from the mountain states are also heaviest during the last half of the year with November the peak month; in that month over half (58.3 per cent) of the live carlot receipts on the market come from the mountain states (fig. 19). Supplies from the west south central region are an important factor only during the early part of the year. In February 42.9 per cent of the usual monthly arrivals come from these states; in March they furnish 81.1 per cent; in April, 71.0 per cent; and in May, 57.7 per cent.

The seasonal movement of dressed-poultry receipts reported on the Los Angeles market is characterized by extremely heavy arrivals during November and December (fig. 20). These two months alone account for 57.6 per cent of the average annual receipts during the period 1935–1939. Arrivals during the year vary from a monthly low of 2.8 per cent of the average annual supply in July to a high of 34.1 per cent in December (table 45 and fig. 21). These extremely large receipts in November and December are typical of the shipments from both the Pacific and mountain states and to a lesser extent the east and west north central states. Dressed receipts from the mountain states in the last two months of the year make up 60.4 per cent of the year's total from that area at Los Angeles; the Pacific states send 69.1 per cent of their total shipments during those two months; and the north central states 37.8 per cent. Shipments from California make up a substantial proportion of those arriving from Pacific Coast states (table 43). The seasonal variation in these dressed-poultry receipts originating in California shows a similar tendency toward heavy shipments in November and December when they amount to 59.6 per cent of the annual receipts from the state. It is impossible to indicate the relative importance of turkey shipments in the total receipts at the market for the available data do not separate the poultry by classes. It should be recognized, however, that there is a heavy seasonal movement of dressed turkeys which takes place in November and December to meet the Thanksgiving and Christmas demand for this type of poultry and that this factor contributes significantly to the heavy market receipts of dressed poultry reported for the last two months of the year.

The importance of the different divisions as sources of supply for dressed poultry on the Los Angeles market varies with different seasons

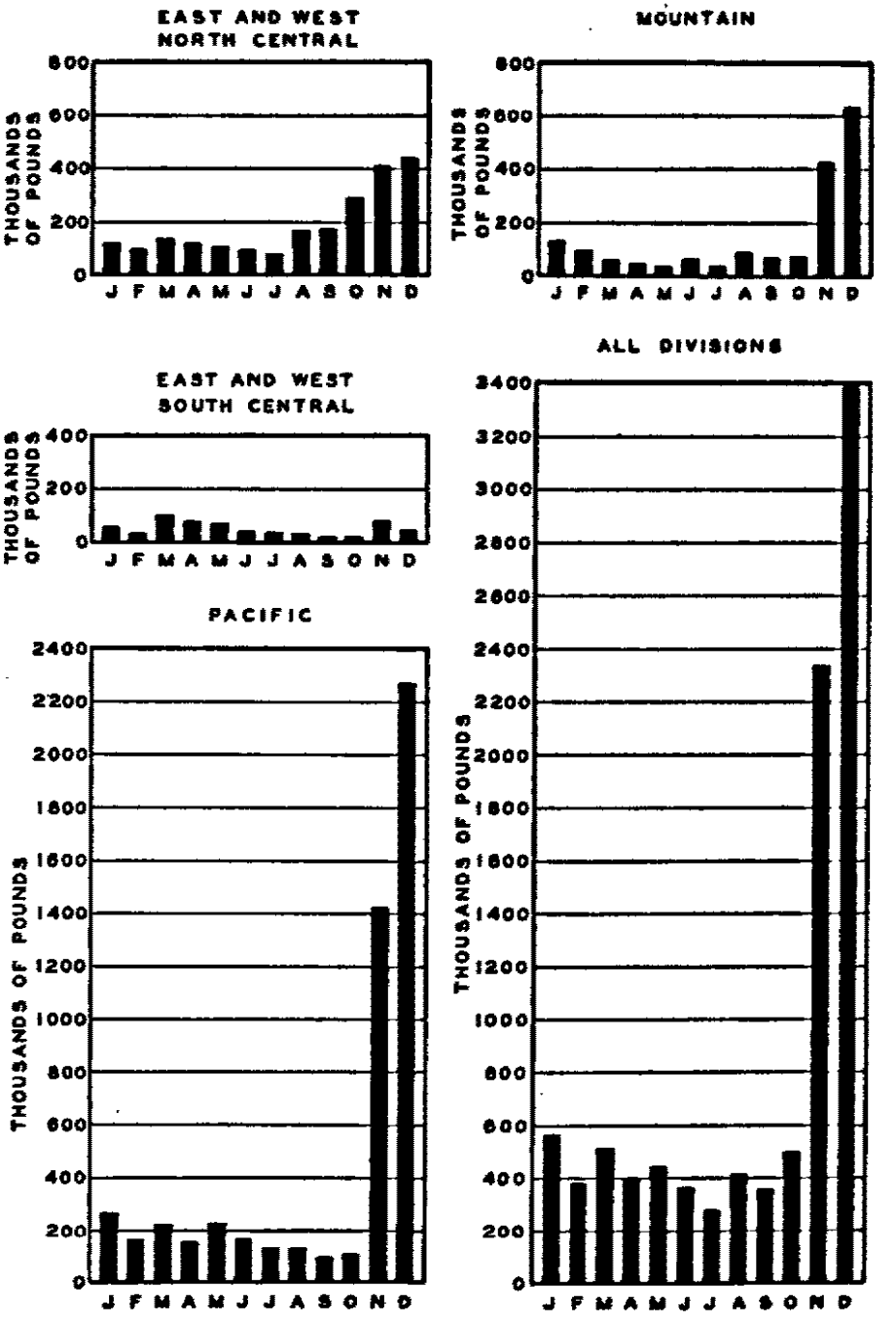

Fig. 20.—Average monthly receipts of dressed poultry at Los Angeles by divisions of origin, 1935–1939.

Data from table 43.

of the year. The Pacific states, which furnished 53.6 per cent of the annual supply during the period 1935–1939, contributed the largest share of any area during all months of the year except August, September, and October. During the first 7 months of the year the portion of any month's supply from the Pacific states varied from 38.9 per cent to 51.1. After July the movement from this area declined in relative importance to a

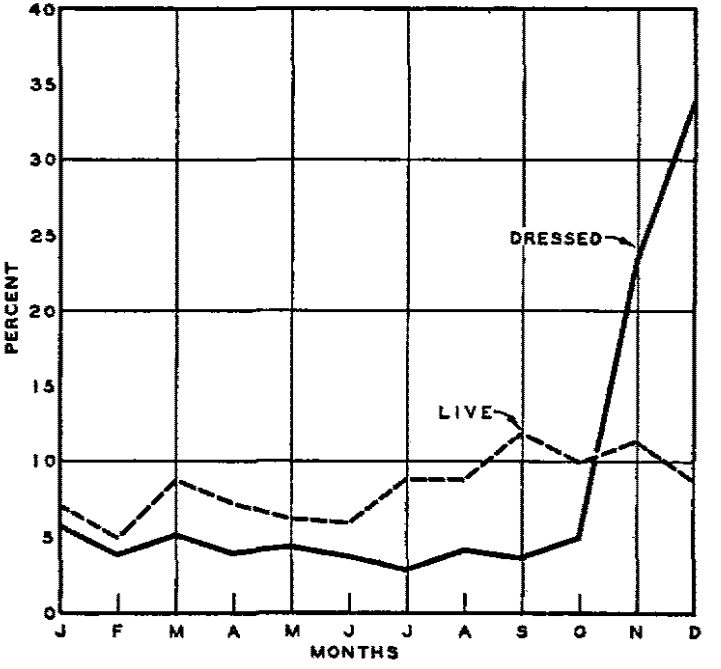

Fig. 21.—Monthly receipts of live (cars) and dressed poultry at Los Angeles expressed as percentages of average receipts of each respective type, 1935–1939.

Data from tables 44 and 45.

low of 21.6 per cent in October, recovering by November to 60.6 per cent and 66.8 per cent in December. During this decline in relative significance of shipments from the Pacific states in the early fall months, the east and west north central states increased in importance as a source of supply. In September and October these north central states originated 49.5 per cent and 59.3 per cent of the receipts arriving in those respective months. For the five-year period, however, the north central division furnished 22.6 per cent of the annual receipts of dressed poultry. The mountain states were relatively more important as a source of supply in the late fall and winter months when they furnished from 15.3 to 24.8 per cent of the receipts. The important period for the east and

west south central states was in spring and summer with a peak in March when 19.2 per cent of the month's supply came from this division, although for the average year only 5.8 per cent of the receipts came from this south central division. Throughout the year California was an important contributor to receipts of dressed poultry at Los Angeles, originating on the average 34.0 per cent of the supply. In every month of the year except November and December California furnished over half of the receipts reported from the Pacific states and from May through October nearly all the supply from this division came from within the state.

CONSUMPTION OF POULTRY IN CALIFORNIA

Studies of poultry consumption have revealed that race or nationality and income are important influences affecting the buying habits of poultry consumers.[46] Discussions with members of the poultry trade indicated

TABLE 20

POPULATION OF LOS ANGELES AND SAN FRANCISCO CLASSIFIED ACCORDING TO RACE OR NATIONALITY, 1930

Classification	Los Angeles		San Francisco	
	Number	Per cent	Number	Per cent
Total	1,238,048	100.0	634,394	100.0
White:				
Native white of native parentage	613,028	49.9	235,298	37.1
Foreign born and native white of foreign or mixed parentage*	456,556	36.8	359,671	56.7
Northern European origin	329,330	26.6	244,356	38.5
Mediterranean origin	29,564	2.2	73,875	11.4
All others	86,662	6.9	42,910	6.8
Negro	38,894	3.1	3,809	0.6
Other races	125,570	10.2	35,622	5.6
Indian	616	0.1	151	0.0†
Chinese	3,009	0.2	16,302	2.6
Japanese	21,081	1.7	6,250	1.0
Mexican	97,116	7.9	7,922	1.2
Others	3,748	0.3	4,996	0.8

* Classified according to country of birth of father, except when father is native and mother foreign born, and then according to country of birth of mother.

† Negligible.

Source of data:

United States Department of Commerce Bureau of the Census. Fifteenth Census of the United States, 1930. Population. vol. 3 (1):260-66. 1932.

that these factors were regarded as important in the Los Angeles and San Francisco markets. On these markets the trade pointed out that

[46] See the section on "Consumption of Poultry in New York City" *in: Economic* Survey of the Live Poultry Industry in New York City. U. S. Dept. Agr. Misc. Pub. 283:58–71. 1937.

Stiebeling, Hazel K., and Esther F. Phipard. Diets of families of employed wage earners and clerical workers in cities. U. S. Dept. Agr. Cir. 507:1–141. 1939.

persons of Negro extraction and members of the Jewish faith were the largest per-capita consumers of poultry. The Jewish holidays always call for an increase in poultry consumption. Mexicans also are relatively heavy users of poultry along with consumers who originated in the Mediterranean countries. Persons of Nordic extraction seem to prefer other types of meat for their big meals and celebrations.

Population figures for these two markets are given in table 20 where they are classified on the basis of race or national origin. This table shows that the groups which are reported to be heavy per-capita consumers of poultry make up a significant although not a major portion of the total population. The proportion of persons of Jewish faith and hence their relative importance as an influence upon poultry consumption are not revealed by such a population classification. Data collected in 1926 by the United States Department of Commerce Bureau of the Census, which classify church membership into the different denominations, indicate that in Los Angeles out of 326,446 persons reported in 1926 as church members,[44] 20.0 per cent were members of Jewish congregations, and in San Francisco out of 229,073 persons reported as church members, 15.3 per cent were members of Jewish congregations. While these data do not classify the entire population of the two cities, it might be inferred that persons of the Jewish faith make up a substantial portion of the population and that as heavy users of poultry, they would exercise considerable influence on total and per-capita consumption in these markets.

PRICE DETERMINATION AND PRICE QUOTATIONS

Practically all chickens produced annually and not consumed on farms are destined sooner or later for human consumption. The individual farmer usually has some, though a limited, choice of where and when to sell. In this he is influenced to a considerable extent by prevailing prices being paid in local or central markets for the type of poultry he has for disposal. Producers are thus vitally interested in the accuracy and reliability of information currently available relative to farm, wholesale, and retail prices.

From a practical standpoint, prevailing prices in wholesale markets are of particular importance. Dealers in large wholesale markets usually have more up-to-date and comprehensive information relative to available and potential supplies and on present or potential demand, not only in their own wholesale market, but also in wholesale markets in other parts of the country. The wholesale markets do not have a rigid supply territory. Although supplies of poultry from the counties adjacent to

[44] United States Department of Commerce Bureau of the Census. Census of religious bodies. vol. 2:1–1469. 1926. (Church members are defined variously by different sects or denominations.)

San Francisco usually gravitate to that wholesale market (because of low transportation costs) and supplies in the counties adjacent to Los Angeles gravitate to Los Angeles, there are many areas in the state from which poultry may move to either market. The factors determining the direction of flow would be the relative prices in the two wholesale markets and relative transportation costs.

Similarly poultry produced in Texas, Nebraska, and numerous other states to the east of California may move to the Chicago and New York markets as well as to the California markets. Transportation costs, whether truck or railroad, between different parts of the country tend to remain fairly uniform from day to day, month to month, and even year to year. Prices of poultry in the various wholesale markets, however, tend to be in a continuous state of fluctuation, the prices depending upon changes in demand and supply conditions in each market. Local buyers of poultry on the edge or overlapping portions of the supply areas of different wholesale markets are continuously on the alert as to which of several markets they will ship poultry purchased from producers. Poultry from these areas thus tend to move in different directions according to the relative prices prevailing in different wholesale markets.

This factor of supply and demand tends to keep prices in the various wholesale poultry markets closely in line with each other. A marked increase in poultry prices in New York is very likely to be followed within a few days by a similar increase in the San Francisco and Los Angeles markets. It is possible, however, for prices in individual wholesale markets to depart appreciably from the normal relation of prices in other wholesale markets, prices depending again purely upon local supply and demand conditions. Such a departure, however, is not likely to be long continued without affecting the flow of supplies to or from such markets.

Another factor in recent years that has probably kept poultry prices in various sections of the country in line has been the rôle played by the chain stores in the marketing of poultry and in influencing prices. Some of the chains do an enormous business in poultry, especially in the East and Midwest. Special organizations within these chains have been formed at times to handle the poultry side of their business. Similarly, the entrance of such organizations as the Poultry Producers of Central California into the wholesale poultry business has undoubtedly had some effect in the smoothing out of prices between certain areas.

Not only are the prices between wholesale markets kept in line by the movement of supplies from overlapping production areas, but the wholesale prices also bear a close concurrent relation to prices received by producers and those paid by retailers and consumers. Local buyers tend to base the prices they pay producers upon the current prices in the whole-

sale market or markets to which they normally ship. The prices received by producers are usually less than those in the wholesale market by the customary margin taken by the local buyer to cover his expenses of operation. Although the margins of local buyers may vary somewhat from time to time and as between buyers, the variation is not likely to be great.

Retail prices (or prices paid by consumers) generally exceed the current prices in the wholesale market by the customary margins required by retail stores and butchers to cover their costs of operation and profits. These margins probably show a greater degree of variation from time to time and as between retail dealers. Variations of margins as between retail stores and butchers are probably closely related to differences in services given consumer customers. Dealers who sell on a cash-and-carry basis usually operate on lower margins than those who sell on credit and deliver to the homes of consumers. Furthermore, individual retail stores may have to lower or widen their margins temporarily on individual supplies according to the volume of supplies on hand. If consideration is given to these facts, however, it is found that prices paid by consumers tend to fluctuate in rather narrow limits above current wholesale prices.

In view of these close interrelations (between wholesale markets and between wholesale prices and those received by producers and paid by consumers) producers, dealers, and consumers are vitally interested in the extent to which current wholesale price quotations actually reflect the prices at which poultry is being sold at wholesale.

In nearly every important wholesale market for poultry products there is one agency or more that undertake to gather and publish current price quotations which are intended to reflect as accurately as possible the prevailing representative prices at which poultry is being sold. Wholesale dealers who have local agents or buyers usually notify them daily of the prices at which poultry is being sold and the prices these agents can pay for different grades and classes of poultry. Several newspapers and trade papers also undertake such a service on a daily or weekly basis. Within recent years, however, two types of agencies have come to assume a dominant position in the issue of quotations.

The first of these agencies is the Federal-State Market News Service, a public agency financed jointly by the United States Department of Agriculture and the California State Department of Agriculture. This agency maintains offices in San Francisco and Los Angeles to report on prices and movement (where feasible) of a large range of farm products. Minor offices may be, and usually are, established seasonally in different local production areas to report on movements and conditions of certain types of farm products. The San Francisco and Los Angeles offices of the

Federal-State Market News Service each includes a section primarily concerned with poultry and dairy products. The main functions of the officials of this section are to gather and publish data on prices and movement on poultry (and dairy products) and to provide a standard grading service for government agencies and such other groups who may require it.

A second agency which in some markets (for example Los Angeles) is of considerable importance in currently reporting poultry prices is a local produce exchange, usually incorporated, in which all or most of the important wholesale operators have membership. The operations of such a produce exchange differ in many important respects from that of the Federal-State Market News Service. Because of marked differences in the effectiveness and type of market information available in the San Francisco and Los Angeles wholesale poultry markets, price-quotation services in the two markets will be analyzed separately.

The San Francisco Market.—In the San Francisco market there is no organized produce exchange for trading in poultry-meat products. The service of determining and publishing current prices is undertaken by the San Francisco office of the Federal-State Market News Service. Data on poultry supplies arriving in San Francisco, together with prices paid and received by wholesale dealers for various grades and classes of poultry, are gathered daily by officials of the Federal-State Market News Service. This is assembled in a mimeographed report issued daily, which is available free to all persons or agencies desiring it. The data in these reports are also used by the daily newspapers and radio stations and by various trade and farmers' periodicals in their daily and weekly market reports.

Included in the daily mimeographed reports are three groups of prices: (1) buying prices (live), f.o.b. San Francisco, these being the prices paid by wholesale dealers to producers (in reality local buyers) for live poultry delivered in lots of one coop or more to the plant of wholesale dealers in San Francisco; (2) prices to retailers, local dressed, these being the prices at which wholesale dealers sell locally killed poultry to retailers in lots of one box or more; and (3) prices to retailers, fresh box-packed, these being the prices at which wholesale dealers sell dressed poultry (poultry killed and dressed at country plants in California and other states) to retailers in lots of one box or more. The prices quoted, unless otherwise stated, are on prime (or first) quality poultry. Prices per pound are quoted on the following classifications of poultry:[a] (1) Leghorn broilers (separate prices for broilers weighing under 1½ pounds, 1½ to 1¾ pounds, and over 1¾ up to 2¼ pounds); (2) Leghorn

[a] Classifications of Friday, June 9, 1939.

fryers (over 2¼ pounds in weight); (3) colored chickens, under 3¼ pounds (fryers), 3¼ to 4 pounds (roasters), over 4 pounds (roasters); (4) Leghorn hens (under 3½ pounds and 3½ pounds and up); (5) colored hens under 5 pounds and colored hens over 5 pounds; (6) Leghorn roosters; (7) colored roosters; (8) young ducks over 5 pounds; (9) squabs (all sizes); (10) pigeons (price per dozen); (11) domestic rabbits under 5 pounds; (12) young tom turkeys under 18 pounds and young toms over 18 pounds; (14) young hens. Comparative figures by classifications are also given for the Los Angeles market.

The daily report also contains information on the number of coops of live poultry and pounds of dressed poultry that arrived in the market during the preceding day, together with a summary comparison on a weekly and current year (to date) basis with similar periods for the preceding year. Information is also given on the movement of dressed poultry into and out of cold storage for the previous date, the volume of poultry in storage on the date of the report, together with the volume in storage on the same week day of the previous year. Then follows a short qualitative analysis of the tone of the San Francisco and Los Angeles markets for different classifications of poultry.

Officials of the Federal-State Market News service visit dealers daily and obtain from them information on the prices paid and received by them for different grades and classes of poultry. Such verbal information is frequently checked by information obtained from hucksters as to prices received by them from wholesale dealers; and from retailers as to prices paid by them to wholesalers. Most dealers also make available to the market reporter purchase and sales invoices. In addition to the information on prices, all important handlers of poultry report daily to the office of the Federal-State Market News Service their receipts of poultry and in many instances also poultry in transit. This information is supplemented by reports from the various railroads of receipts of poultry by rail.

The information so obtained is summarized by the market reporters on their return to the office and immediately mimeographed and dispatched to the list of persons requesting the information. The prices quoted (either as single or a range of prices) represent as nearly as possible the weighted average of prices paid and received by wholesale dealers on the market. It is important to stress the fact that the quotations are based on actual sales and not on dealers' estimates of current market values.

The current and continuous information thus collected enables the well-trained market reporters of the Federal-State Market News Service to obtain a fairly accurate idea, not only of prices actually being paid and received by dealers, but also of the general tone of the market, that

is, whether trading is good or poor and whether prices are showing a tendency to increase or decrease.

Interviews with wholesale dealers, retailers, and producers indicate that the work of the Federal-State Market News Service is greatly appreciated and widely used. Dealers appear to place much confidence in the reliability of the daily reports and in turn reciprocate willingly in supplying accurate information on their trading operations. Producers, hucksters, and retailers in turn have a reliable method of determining whether the prices they are paying or receiving are in line with current market conditions.

It should not be inferred that producers are always satisfied with the prices they receive. There are frequent complaints that the margins of the wholesale dealers or of hucksters are too wide or that the general level of prices is too low. More frequently, however, complaints of producers are directed at the grading and weighing practices of hucksters. No doubt individual country buyers often adopt what are commonly called "tricks of the trade" in order to obtain poultry at as low a cost to themselves as possible. Most producers, however, recognize that low prices may merely be a reflection of general supply and demand situations, conditions over which producers, hucksters, and dealers have little direct control. Producers, however, do have the assurance that the prices quoted by the Federal-State Market News Service are as near an accurate reflection as possible of prices actually being paid and received.

The Los Angeles Market.—In marked contrast with conditions in San Francisco, there appears to have been a considerable degree of dissatisfaction among producers and retailers in southern California with the price-determining services in that market.

Two separate and independent agencies undertake to determine live-poultry prices in southern California. The less widely used service is the Los Angeles office of the Federal-State Market News Service, which operates in much the same way as in San Francisco, but under several severe disadvantages:

1. Trading is scattered over a much wider area than in San Francisco. This makes it extremely difficult for officials to make personal daily contacts with wholesale and retail dealers, especially since the Los Angeles office appears to be undermanned.

2. The wide dispersion of the trading area and the large number of retail slaughterhouses, which cannot be contacted daily, has made it impossible, up to the present time, to develop satisfactory machinery for assembling data on current receipts of live poultry. Data on receipts by rail are obtained daily from transportation agencies but no data are available on local and out-of-state truck receipts.

3. The local newspapers have not undertaken to publish the daily quotations of the Federal-State Market News Service. The quotations of the Produce Exchange of Los Angeles are published. Both producers and retailers obtain their information on current prices mainly from local newspapers.

4. The high degree of coöperation between dealers and the Federal-State Market News Service that is found in San Francisco does not exist to nearly the same extent in Los Angeles. This is partly due to the scattered nature of the market, partly to the more rapid turnover of dealers in Los Angeles, and partly to the fact that dealers themselves belong to an organization which performs the service of price determination.

As a result of these conditions, the reports of the Federal-State Market News Service are not widely used in Los Angeles. The chief source of market-news information is the Produce Exchange of Los Angeles.

This agency is organized to conduct trading in dairy and poultry products in Los Angeles. Practically all brokers, packers, wholesale dealers, and producer coöperative associations handling dairy products, poultry, and eggs in and around Los Angeles are members of the Produce Exchange. In 1935 the Produce Exchange had some forty-nine full members and thirty-one associate members. Officials of the Produce Exchange gather and display daily in a prominent position all pertinent market information, both local and nationwide, about the products on which the trading is conducted. To this end the Produce Exchange is in daily telegraphic communication with other important wholesale markets in the nation.

Every day, excluding Saturday, Sunday, and holidays, the Produce Exchange is opened for trading at 4:00 p.m. Bids, offers, and sales are made by members on various grades and types of dairy and poultry products. The price recorded for the last bid, offer, or sale for each grade and product becomes the official Produce Exchange quotation for that day.

Only a very small part of the manufactured dairy products and eggs handled in Los Angeles is sold over the Produce Exchange. No trading is conducted in dressed poultry. Dealers and brokers handling dressed poultry, who were interviewed during the course of this study, stated that in negotiating purchases and sales of dressed poultry, they were guided partly by the dressed-poultry quotations in the New York market and partly by live-poultry quotations in the Los Angeles market.

Because of the difficulty of handling live poultry on the Produce Exchange and because of the absence of standard grades for live poultry, no actual sales of live poultry are made on the Produce Exchange. The prices quoted for live poultry are merely a reflection of those which

dealers consider are and could be paid concurrently to producers (actually to hucksters) f.o.b. Los Angeles. These prices are changed from time to time by the method of bids and offers whenever the opinion of dealers indicates that supply and demand conditions warrant a change. In reality, therefore, the prices as determined by the Produce Exchange do not reflect the prices at which purchases of live poultry are being made, but merely represent a crystallization of the opinions of dealers on current market values.

Of the eighty-odd members of the Produce Exchange only eighteen regular members and ten associate members handled poultry in 1936. Several of these handlers of poultry do not deal in live poultry or handle it only occasionally as brokers. Such members do not regularly participate in the determination of live-poultry quotations. In actual practice the determination of current values of live poultry by the method of bids and offers is undertaken by not more than ten members of the Produce Exchange, practically all of whom are wholesale dealers. Thus, neither producers nor retailers, including retail slaughterhouses, are represented in the determination of market values.

Another weakness of the method of determining market values by the Produce Exchange is the fact that the quotation is used not only as a basis of purchase of live poultry from producers but also as a basis of sale to the retail trade. Wholesale dealers, of course, negotiate each sale separately, and there is often some variation in the prices at which sales of similar grades of poultry are made on the same day. Nevertheless, the Produce Exchange quotation is regarded as the foundation upon which current daily sales are based. In the determination of the Produce Exchange quotations, dealers are thus prone to consider not only what they are willing and able to pay producers or hucksters for poultry, but also the prices at which poultry can be moved into the retail trade. Thus, at certain times the Produce Exchange quotations will probably reflect more closely the current market value of sales to the retail trade, rather than the prices paid to producers f.o.b. Los Angeles.

Retailers in their purchases of various types and grades of poultry from wholesale dealers reflect rather rapidly the reactions of consumers to prices and quantities of poultry offered. Retailers have found that consumers who are regular purchasers of poultry react unfavorably to very wide variations in price at different seasons of the year. If prices fall too low at the period of flush production, consumers' resistance to higher prices is experienced later. Consequently, retailers are anxious to keep prices to consumers as uniform as possible or to oppose wide seasonal fluctuations of price. In order to meet these reactions of retailers, the wholesale dealer attempts to prevent his prices to retailers from

falling to too low a level during periods of plentiful supply and from rising too high in periods of short supply.

During periods of heavy supply, dealers are willing as a rule to buy only limited quantities of poultry at the current market quotation. The heavier supplies offered are taken only at prices below the current market quotation. Part of the poultry purchased at such times is moved directly to the retail trade; part is put into storage. On the other hand, during periods of low fresh supplies, the current needs of retailers are met largely out of accummulated storage stocks and partly out of current purchases from producers. During such times, dealers who have insufficient poultry of certain grades in storage to meet their retail outlets may frequently have to pay the market quotation or higher for live poultry. Comparisons of prices received by producers with current Produce Exchange quotations indicate that producer prices often vary from as much as 4 cents below the quotation during the period of heavy supply to as much as 2 cents above the quotation at periods of low supply. In other words, prices received by producers for different classes of poultry tend to show a much greater seasonal variation than do the Produce Exchange quotations for similar classes. These quotations cannot, therefore, be regarded as a very accurate reflection of the prices received by producers at certain times of the year.

Considerable criticism was voiced by producers and operators of retail slaughterhouses about the Produce Exchange quotations. Some of the criticisms were that the quotations were often assertedly manipulated to the disadvantage of producers, and others that the quotations do not serve as an accurate reflection of current market values. None of the producers who asserted that the Produce Exchange quotations were subject to manipulation were able to produce any concrete evidence. Some of the illustrations advanced by a few producers and retail slaughterers may have been evidence of manipulation; on the other hand, numerous other factors may have been responsible for the discrepancies between the Produce Exchange quotations and the prices received by producers or paid by retail slaughterers. A few producers seemed inclined to believe that the low level of prices was due to both manipulation and general supply and demand conditions. It is, however, an extremely difficult matter to obtain evidence of and prove manipulation. The Produce Exchange quotations, after all, represent merely the collective views of distributors on market values and, owing to the lack of reliable data on current receipts of live poultry, it is entirely possible that dealers may frequently make errors in judgment. Furthermore, dealers do not publish their reasons for making changes in the prices quoted. It should be pointed out in this connection, however, that the small number of per-

sons participating in "making" the prices for poultry on the Produce Exchange makes occasional manipulation possible, regardless of whether or not manipulation actually occurs.

Quite apart from the possibility of manipulation, the Produce Exchange quotations on live poultry do not serve, from the producers' viewpoint, as a very satisfactory and reliable reflection of current prices paid to producers f.o.b. Los Angeles. Quotations based on a few dealers' opinions of current market value can never be as reliable as quotations based on actual sales, especially if dealers' opinions are also influenced by resale values of poultry. Furthermore, quotations based entirely upon opinions of only one element in the trade will always be open to suspicion, no matter how closely they reflect actual market values. The absence of reliable data on production of poultry both in California and in the United States as a whole, together with the even less reliable data on current receipts of poultry in Los Angeles, still further complicates the situation from both the producers' and the distributors' viewpoints. One of the cardinal requirements for a reliable system of price determination is adequate, accurate, and up-to-date knowledge of supply and demand conditions.

Looked at from any angle, the conditions under which current market quotations are determined in Los Angeles are extremely unsatisfactory. Several changes would seem to offer promise of improvement:

1. It would be better if the quotations of the Produce Exchange of Los Angeles were so altered as to dissociate resale values from prices paid to producers. This could be accomplished by issuing two sets of quotations, the first to reflect prices paid to producers f.o.b. Los Angeles, and the second to reflect prices to retailers.

2. More satisfactory still would be an expansion and wider use of the facilities of the Federal-State Market News Service. An increase in the personnel of the Los Angeles office would be necessary in order to insure wider coverage of the market, especially closer contact with the retail slaughterhouses which are such an important group in that poultry-marketing center. For such an expanded service, or even for the present service rendered by the Federal-State Market News Service to prove of any value, the daily quotations must be published in the local newspapers.

3. Finally, it would seem necessary that some agency, such as the Federal-State Market News Service or the city and county health-inspection services, undertake to develop machinery for collecting accurate data on current receipts of dressed and live poultry. This could be done if one or more inspection stations were established at which trucks hauling poultry into the Los Angeles market would have to report.

TREND OF CHICKEN PRICES IN THE UNITED STATES

Numerous complex factors influence prices of individual commodities at any given time and over a period. The factors determining price levels on any particular day, in any week, month, or year, usually are different from those that determine the long-time trend in prices. As an aid in understanding the relation of some factors to price, price interrelations are analyzed from several different angles.

Over a long period the most important factors that would appear to influence the general trend of chicken prices are (1) the trend of chicken production in relation to the population trend, (2) changes in buying power and consumption habits of people, and (3) changes in the general price level. Involved in (1) are the changes that have occurred in the relative volumes of both chicken eggs and chickens produced.

Prices of other foods influence chicken prices, although it might be difficult to offer statistical proof covering any considerable period. Supplies of other meats, and more particularly those of other poultry meat, have a decided effect on chicken prices. The problem of substitution is coming increasingly to the foreground in the case of almost all foods. The family purchasing a turkey does not buy a chicken destined for the same meal. But, when supplies of lamb are plentiful and prices are low, the housewife may purchase lamb in preference to chicken—especially if the price of the latter is relatively high. Of considerable influence in the consumption of poultry on the California market are the supplies of rabbits.

Chicken prices are undoubtedly influenced by feed prices largely through egg prices. A favorable relation between egg and feed prices makes for an increase in the number of chickens that are intended primarily for egg production. This feed-price relation influences both the short- and long-time production of chickens.

Within the year, chicken prices are influenced markedly as the result of the chicken's biological nature. The seasonal production of different poultry classes and the resultant cold-storage movements have a pronounced effect on seasonal price changes.

Producer Price Data.—Confusion arises as a result of the number of quotations and prices on poultry published and upon their significance. Since 1909 the United States Department of Agriculture Bureau of Agricultural Economics has issued a "price paid producers" for chickens on one day in each month (at present the fifteenth). This represents an average price reported by producers in all sections of the country for many and varied grades, breeds, sizes—and perhaps for many other factors. This price is published as an average not only for the country as

a whole but also for each major geographic division and for every state. These averages are of general interest. They offer indications of price trends and enable poultrymen to compare chicken prices with general prices and with those of competing products.

In California the producer price represents the average price paid for chickens kept mainly for egg production, but it is highly probable that there are included in the average some prices received for chickens primarily intended for meat purposes. On the other hand, in a state such as Nebraska—or in many of the midwestern states—farm prices represent an average of prices paid producers for birds intended both for meat and for egg production. In making up the California average, prices on Leghorns, Plymouth Rocks, and other breeds are used; these individual prices may have been paid in San Diego, Los Angeles, Alameda, Sacramento, or in any of the other counties. The individual poultryman cannot use these data (table 46 and 47) as a basis (or lack of basis) for a comparison with prices received by him. Within the industry the short-time price trend of a specific class of chicken may be upward while at the same time that of another class may be in the opposite direction.

Trend in Chicken Prices, 1910–1939.—In the section "Trend of Production," it was indicated (p. 5–8) that chicken numbers on farms in the United States had increased more slowly than the human population over a period of forty-five years. From 1890 to 1935 the human population doubled, whereas chicken numbers increased only by 43.5 per cent. Between these same years, there was a marked decline in turkey production and duck and geese numbers declined.

A study of available price data indicates that chicken prices have increased materially since 1890. Unfortunately, earlier censuses (prior to 1890) did not give sufficient data to allow for comparisons of prices received for chickens. Since 1909 data described in section "Producer Price Data" (p. 87–88) have been available.

From 1909 to 1939 there have been several violent fluctuations in general conditions associated with the World War and the economic depression which began in 1929. These economic disturbances were accompanied by marked fluctuations in prices of large numbers of commodities, including chickens. The major part of the effect of these fluctuations on chicken farm prices was removed by dividing the weighted average of the twelve monthly prices reported by the United States Department of Agriculture Bureau of Agricultural Economics by the corresponding indexes of wholesale prices prepared by the United States Department of Commerce Bureau of Labor Statistics. These adjusted prices are shown in table 21, together with certain other pertinent data.

A comparison between the unadjusted and adjusted price data is shown in figure 22.

Average annual farm prices of chickens in the United States remained relatively stable from 1910 through 1915, but increased rapidly from 11.6 cents a pound in 1915 to 24.3 cents in 1920 (table 46). After the latter year, prices declined to 18.3 cents in 1923, but rose to 22.8 cents in 1929. A rapid decline set in between 1929 and 1933, dropping to 9.5

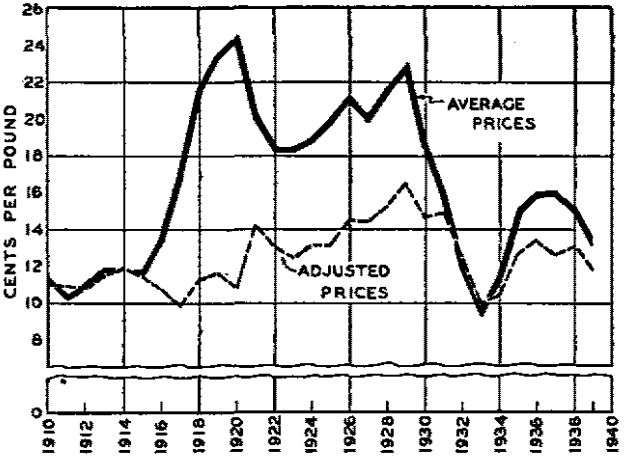

Fig. 22.—Average and adjusted farm prices of chickens in the United States, 1910–1939.
Data from table 21.

cents in the latter year. A fairly rapid rise to 14.9 cents in 1935 was followed by a somewhat slower increase in price to 15.9 cents in 1937. Since the latter year, prices have declined.

Average farm chicken prices, adjusted for changes in the wholesale commodity index, indicate a fairly stable price condition in the United States from 1910 to 1914 (fig. 22). From the latter year until 1917, prices of general commodities advanced more rapidly than those of chickens (fig. 23). From 1917 to 1929 there was a steady upward trend in the adjusted chicken price. For example, chicken prices increased more rapidly than general commodity prices. Between 1929 and 1933, adjusted chicken prices declined, the decline being marked in 1932 and 1933. For the five years 1935–1939, adjusted chicken prices were materially higher than they were before the World War. When considering the adjusted chicken prices in California, trends similar to those in the entire country are evident, except that in the period 1935–1939 California chicken prices were in almost the same relative position as compared with general commodity prices as they were before the War period.

TABLE 21

UNITED STATES AND CALIFORNIA FARM PRICES AND RELATIVES OF CHICKENS AND EGGS, PRICES DEFLATED BY UNITED STATES WHOLESALE COMMODITIES PRICE INDEX, AND THE UNITED STATES INDEX OF FARM PRICES, 1910–1939

Year	Farm prices of chickens		Farm prices of eggs		Price relatives				United States index of farm prices*	United States index of wholesale prices*	Prices deflated by wholesale price index (adjusted prices)			
					Chickens		Eggs				Chickens		Eggs	
	United States	California	United States	California	United States	California	United States	California			United States	California	United States	California
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	cents per pound	cents per pound	cents per dozen	cents per dozen	1910–1914 = 100	1910–1914 = 100	1910–1914 = 100	1910–1914 = 100		1910–1914 = 100	cents per pound	cents per pound	cents per dozen	cents per dozen
1910	11.3	14.7	20.5	28.4	101	99	107	105	103	103	11.0	14.3	19.9	27.6
1911	10.4	15.0	16.9	28.0	93	101	88	96	95	95	10.9	15.8	17.8	27.4
1912	10.9	14.2	19.6	26.9	97	96	103	96	100	101	10.8	14.1	19.6	26.6
1913	11.7	14.7	18.8	26.8	104	99	98	99	101	103	11.5	14.4	18.4	26.3
1914	11.8	15.6	20.1	28.3	105	105	105	105	101	99	11.9	15.8	20.3	28.6
1915	11.6	15.3	18.9	26.5	103	103	98	98	98	102	11.4	15.0	18.5	26.0
1916	13.4	16.2	21.4	26.5	119	109	111	105	118	126	10.7	12.9	17.1	22.2
1917	16.9	19.1	31.3	35.3	151	129	163	130	175	172	9.8	11.1	18.2	20.5
1918	21.6	25.6	35.2	43.8	193	173	183	162	202	192	11.2	13.3	18.3	22.8
1919	22.4	30.5	29.9	49.1	200	206	206	181	213	208	11.0	15.1	19.8	24.2
1920	34.3	39.3	42.3	46.4	317	197	230	171	311	225	10.8	13.0	18.8	20.6
1921	20.1	27.3	26.9	22.2	179	184	140	119	126	142	14.2	19.2	18.9	23.7
1922	18.4	25.5	28.9	30.2	164	172	134	112	132	141	13.0	18.1	17.0	21.4
1923	18.3	24.0	25.6	31.6	163	162	133	117	142	147	12.4	16.3	17.4	21.5
1924	18.8	24.3	25.2	32.0	168	164	131	118	143	143	13.1	17.0	17.6	22.4

1925	19.8	26.1	30.4	36.6	176	176	168	135	156	151	18.1	17.8	20.1	24.2
1926	21.1	26.2	28.6	31.6	186	177	150	117	145	146	14.5	17.9	19.7	21.6
1927	20.0	24.7	25.0	27.6	178	166	130	102	139	139	14.4	17.8	18.0	19.9
1928	21.5	26.0	28.1	29.1	192	175	146	107	149	141	15.2	18.4	19.9	20.6
1929	22.8	27.1	29.8	32.5	203	183	155	120	146	139	16.4	19.5	21.4	23.4
1930	18.4	23.8	23.7	26.7	164	160	123	99	126	126	14.6	18.9	18.8	21.2
1931	15.8	20.1	17.6	20.1	141	135	93	74	87	107	14.8	18.8	16.4	18.8
1932	11.8	15.5	14.2	17.5	105	104	74	65	65	95	12.4	16.2	14.9	18.4
1933	9.5	13.7	13.8	17.4	85	92	72	64	70	96	9.9	14.2	14.4	18.1
1934	11.3	14.3	17.1	18.9	101	96	80	70	90	109	10.4	13.1	15.7	17.3
1935	14.9	17.7	23.4	25.1	133	119	122	93	108	117	12.7	15.1	20.0	21.5
1936	15.8	17.5	21.8	22.9	141	118	113	85	114	118	13.4	14.8	18.5	19.4
1937	15.9	18.2	21.3	23.7	142	123	111	88	121	126	12.6	14.4	16.9	18.8
1938	15.0	18.1	20.3	23.6	134	122	108	87	95	115	13.0	15.7	17.7	20.5
1939	13.4†	16.3	17.5‡	21.4	119	110	91	79	93	113	11.9	14.4	15.9	18.9

* Base period of col. 9 is August, 1909 to July, 1914. Base period of col. 10 is 1910–1914 calendar years.

† The following weights were used in computing averages for chickens: Jan., 7; Feb., 6; Mar., 5; Apr., 7; May, 11; June, 17; July, 13; Aug., 8; Sept., 6; Oct., 7; Nov., 7; Dec., 6.

‡ The following weights were used in computing averages for eggs: Jan., 7; Feb., 9; Mar., 12; Apr., 12; May, 12; June, 9; July, 9; Aug., 7; Sept., 6; Oct., 5; Nov., 5; Dec., 7.

Sources of data:

Cols. 1 and 3: United States Department of Agriculture. Crops and Markets 13:40, 1936; 14:35, 1937; 16:37, 1939; and 17:39, 1940.

Cols. 2 and 4: Weighted averages of monthly prices from: 1910–1925: United States Department of Agriculture. Prices of farm products received by producers. Statis. Bul. 17(4):147. 1927. 1926–1938: United States Department of Agriculture. Crops and Markets, monthly issues.

Cols. 5–8, and 11–14: Computed by the author.

Cols. 9 and 10: United States Department of Agriculture Bureau of Agricultural Economics. The Agricultural Situation 19(1):20–21, 1935; 23(2):24, 1939; 24(2):24, 1940.

Further light on the change in the long-time trend of chicken prices can be obtained by contrasting relative changes in prices since the pre-War period with those of all farm products and chicken eggs. During the War period the relative increase in farm chicken prices was approximately the same as that for all farm products. From the peak of prices

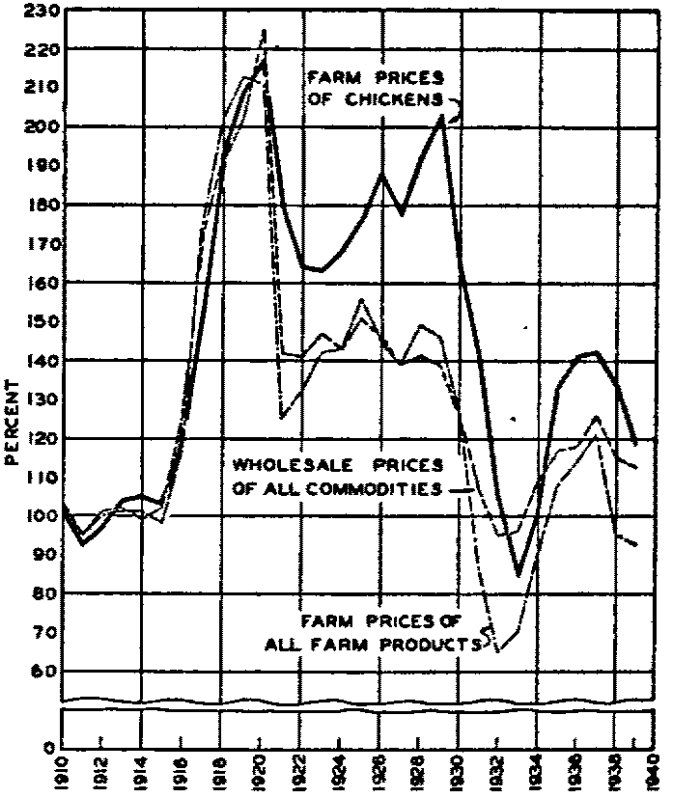

Fig. 23.—Relative farm prices of chickens, of all farm products, and of wholesale prices of all commodities, 1910–1939. (1910–1914=100.)

Data from table 21.

in 1919, the prices of all farm products dropped over 40 per cent in one year, while chicken prices declined less than 18 per cent (1920 to 1921). The decline in chicken prices, unlike those of all farm products, tended to continue downward until 1923, so that 1922 and 1923 prices were lower than those in 1921. However, the percentage decline in chicken prices between 1920 and 1923 was less than 25 per cent.

While there was some recovery in farm-products prices from 1921 to 1925, a downward trend set in after the latter year. Chicken prices, after reaching a low point in 1923 began to climb, so that in 1929 they topped those of the pre-War period by over 90 per cent.

In the entire 1921–1929 period, however, prices received by chicken producers averaged over 75 per cent more than those prevailing from 1910 through 1914. General farm-products prices averaged only about 40 per cent higher. It would appear that chicken prices were on a permanently higher level in the post-War period, as compared with the pre-War period. The relatively high level of prices maintained for both chickens and turkeys reflects the marked decrease in the production of poultry meat generally in relation to the trend of population.

Between 1929 and 1933 chicken prices declined over 50 per cent—about the same rate of decline for all farm products between 1929 and 1932. Even with this precipitous decline, chicken prices in 1932 and 1933 were more favorable than general farm-products prices. The recovery in chicken prices between 1933 and 1937 was not so great as that of other farm-products prices. In 1938, however, the decline in farm-products prices which had set in during the fall of the previous year was not in evidence in chicken prices. This latter situation was caused by the small number of chickens from the farm in the first part of 1938. In 1939, however, there was both an actual and relative decrease in chicken prices.

Relative prices of chickens and eggs were in fairly close agreement from 1910 until 1920 (fig. 24). Beginning in 1921 and continuing through 1939, chicken prices have been relatively higher than those of eggs. One of the reasons for this change has been the more rapid increase of egg supplies when compared with trend in chicken numbers (table 1 and fig. 1). Efficiency of egg production has been emphasized, and one of the practical results has been a divergence in egg- and chicken-supply trends. This emphasis has not been wrongly placed, since the main business of most poultrymen is egg production. There is nothing unique to the poultry business in this situation. There are many illustrations of similar main and by-products relations in agriculture; for example, lamb and wool, cotton and cottonseed, milk and meat, etc. If the ratio of chicken production to the human population is maintained during the next few years on about the same level as existed between 1921 and 1929, it is reasonable to suppose that the relatively more favorable position of chicken prices in comparison with those of eggs will continue unless unforeseen events should bring about a greatly increased production of broilers and fryers. It would appear that attention will continue to be directed toward increased efficiency in egg production. This would indicate a more slowly increasing chicken production and a continuance of the more favorable price position of chickens as compared with eggs.

One difficulty blurring the future is the human-population trend. If the outlook were for a continually increasing population, forage-animal numbers in the United States would probably decrease, and those ani-

mals consuming cereals for forage and easily kept in confinement would probably increase. Under such circumstances, chicken numbers would probably increase. That the population of the United States will soon reach a peak is predicted by many of the students of population problems. With a declining population, chicken numbers would probably not increase.

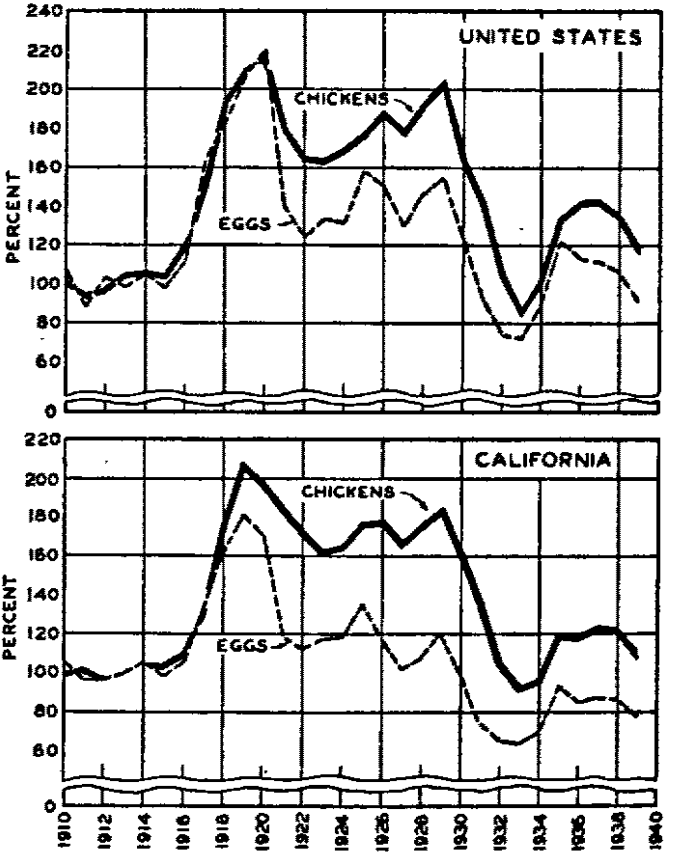

Fig. 24.—Relative farm prices of chickens and eggs in the United States and California, 1910–1939. (1910–1914 = 100.)

Data from table 21.

Farm prices of both chickens and turkeys declined more rapidly than those of farm products during the years 1929–30 to 1933–34. This can be explained partly by the fact that among urban people both turkeys and chickens are considered to be luxury products. A decline in general purchasing power is usually reflected by a far more rapid decline in the prices of products that fall in the luxury class than in those of staple foods. By the same token a general improvement in purchasing power among urban people will cause chicken prices to increase more rapidly

than those of staple foods. This was the case between 1933 and 1937 (fig. 37).

Another important factor that may influence the general trend and level of chicken prices is a change in the habits of the American people with regard to chicken consumption. While no known statistical evidence is available, it is highly probable that there has been some tendency for chickens to be consumed more regularly the year around. There is every evidence of a growing year-round use of turkeys, especially in hotels, restaurants, and resorts. The heavier chickens more normally come onto the market during the five months beginning in October. The great development in specialized egg production and the production of lighter broilers and fryers has undoubtedly made for larger supplies of chicken meat in the late spring and summer months. The production of "hothouse" broilers during the winter period has augmented the supplies of poultry at the time of the year when poultry prices have started to rise. The increase in broiler supplies over a considerable period is partly shown by the downward trend in broiler prices—in evidence since 1921.[46]

The consumption habits of the American people for chickens are changing in another important respect. In the past few decades the average size of the American family has declined. With this decline has developed the demand for lighter birds—broilers and fryers. Another factor which has contributed to this increased consumption of lighter birds has been an increasing tendency for urban residents to dine out in restaurants and hotels. These smaller birds are well adapted for the restaurant and hotel trade because they can be served conveniently as a half-chicken. They also fulfill the luxury requirements which many consumers demand when dining out.[47] If "out-of-season" broiler production should become general in many of the present poultry sections of the United States, a given number of chickens in the future will represent a smaller total volume of chicken meat than in the past.

Trends in the California Chicken Prices.—Chicken prices tend to conform to a fairly definite geographic pattern. Highest prices (based upon prices to producers—table 48) are found in deficit areas in the densely populated north Atlantic states and in California. California chicken prices have generally averaged from a fifth to two fifths higher than the average for the country as a whole. During the thirty years (1910–1939) for which producer prices are available, they have averaged 4.432 cents more per pound—36.5 per cent greater. California producer prices have followed those of the United States fairly consistently since 1910, with

[46] Termohlen, W. D., and J. W. Kinghorne. An economic survey of the commercial broiler industry. U. S. Dept. Agr. Agricultural Adjustment Administration General Inform. Ser. G 61:1–54. 1936.

[47] Radabaugh, J. H. Broilers the year round. The Agricultural Situation 23(7):21–22. 1939.

certain exceptions. From 1915 to 1918 chicken prices in the nation rose far more rapidly than in California. From 1919 until 1925 the two sets of relative prices were in fairly close agreement. During 1926–1929 chicken prices throughout the country were on a relatively higher level than in California. The decline during the four years 1929 to 1933 was relatively greater in the country as a whole than in California. The recovery between 1933 and 1937 was noticeably less in California, but this is probably accounted for by the decrease in chicken numbers in the Midwest occasioned by the droughts of 1934 and 1936. In 1938 and 1939 California chicken prices declined relatively less than those in the entire country.

Since the World War, chicken prices have been relatively favorable as compared with the prices of most farm products in California. During the ten years beginning in 1920 farm prices averaged over 70 per cent higher than the five-year pre-War average price. Even during the five years beginning in 1930, chicken prices held to relatively higher levels than most other farm products.

Egg prices showed an advance of only about 20 per cent in 1920–1929 as compared with 1910–1914. In the ten years 1930–1939 chickens were almost 20 per cent higher in California than they were before the War; eggs were almost an equal per cent lower. On account of this condition an index of chicken and egg prices combined has been relatively unfavorable as compared with an index made up of some 24 California agricultural products.[45]

Relative prices of eggs and chickens were fairly close in California from 1910 until 1917 (fig. 24). In 1918 relative prices began to show the same tendency evident throughout the country three years later. The differential between chicken and egg prices within the state has been larger than in the country as a whole over the past two decades. While some of the divergency is the result of the continued emphasis upon the efficiency of egg production, a change occurred during the first two decades of the present century which profoundly weighed in the California egg-chicken price relation. Shipments of eggs from other states and imports of eggs had their beginnings in the 1850's, whereas out-of-state shipments are comparatively recent. No record of outgoing shipments is available prior to 1920, when 920 cars of eggs were shipped. Evidently between 1912 and 1920 out-shipments began to gather momentum. In the winter of 1911–12 the agricultural press[46] stated: "The state is having

[45] Peterson, G. M. Index numbers of farm prices in California. Contribution of the Giannini Foundation of the University of California, monthly issues. (Mimeo.) (This publication has been discontinued.)

[46] An account of the shipments prior to 1926 will be found in: Voorhies, Edwin C. The California poultry industry: a statistical study. California Agr. Exp. Sta. Bul. 413:67–73. 1926. (Out of print.)

a new experience in egg shipments. During the week 4 cars of eggs have been exported to the frozen East." Some 42 carloads were shipped during that winter. California has been on an out-of-state-shipment basis since the second decade of the present century.

Differentials between producer prices of eggs in the country as a whole and those in California have shown a tendency to decrease since the 1910–1914 period. The trend in the chicken price differential has been downward since the 1920–1924 period. The smaller chicken price differential for the five years 1935–1939 (table 22) is accounted for partly by the 1936 drought.

The emphasis upon the quality as well as on the efficiency of egg production throughout the United States has also had an effect on the trends of relative producer prices of eggs and chickens in California. Other

TABLE 22

PRODUCER PRICE DIFFERENTIALS BETWEEN THE UNITED STATES AND CALIFORNIA FOR CHICKENS AND EGGS, 1910–1939*

Period	Chicken price differentials*	Egg price differentials*
	cents per pound	*cents per dozen*
1910–1914	3.62	7.86
1915–1919	3.96	7.30
1920–1924	5.10	5.70
1925–1929	4.98	3.06
1930–1934	4.12	2.64
1935–1939	2.56	2.48

* In every case the California price is higher.

Source of data:
Calculations by authors based upon table 21.

areas have undoubtedly been placed in a better position to compete with quality eggs originating in California. Increases have come about in the production of fall and winter eggs in other states. All of these influences and perhaps others have operated toward declining out-of-state egg shipments in the past decade (1928–1938). The peak of out-of-state egg shipments was reached in 1928 when 2,238 cars were reported as having been shipped beyond the California borders.

The largest cost item in California chicken and egg production is feed. In a study made for the United States as a whole it has been shown[80] that during 1910–1914, 1 pound of chicken would buy 8.9 pounds of poultry feed, and during 1920–1934 it would buy an average of 12.8 pounds—an increase of almost 44 per cent.

For several years prices paid by poultrymen for feed have been ob-

[80] United States Department of Agriculture Economics Handbook. Poultry and poultry products. 21 p. Sept., 1935. (Mimeo.)

tained by the authors from the Poultry Producers of Central California and have been used in computing an egg-feed price ratio for central California. During 1910–1914 100 pounds of poultry feed would purchase 7.05 dozen eggs, whereas for 1920–1939 the number of dozen was 7.64 (fig. 25). Stated in terms of the feed that 1 dozen eggs would

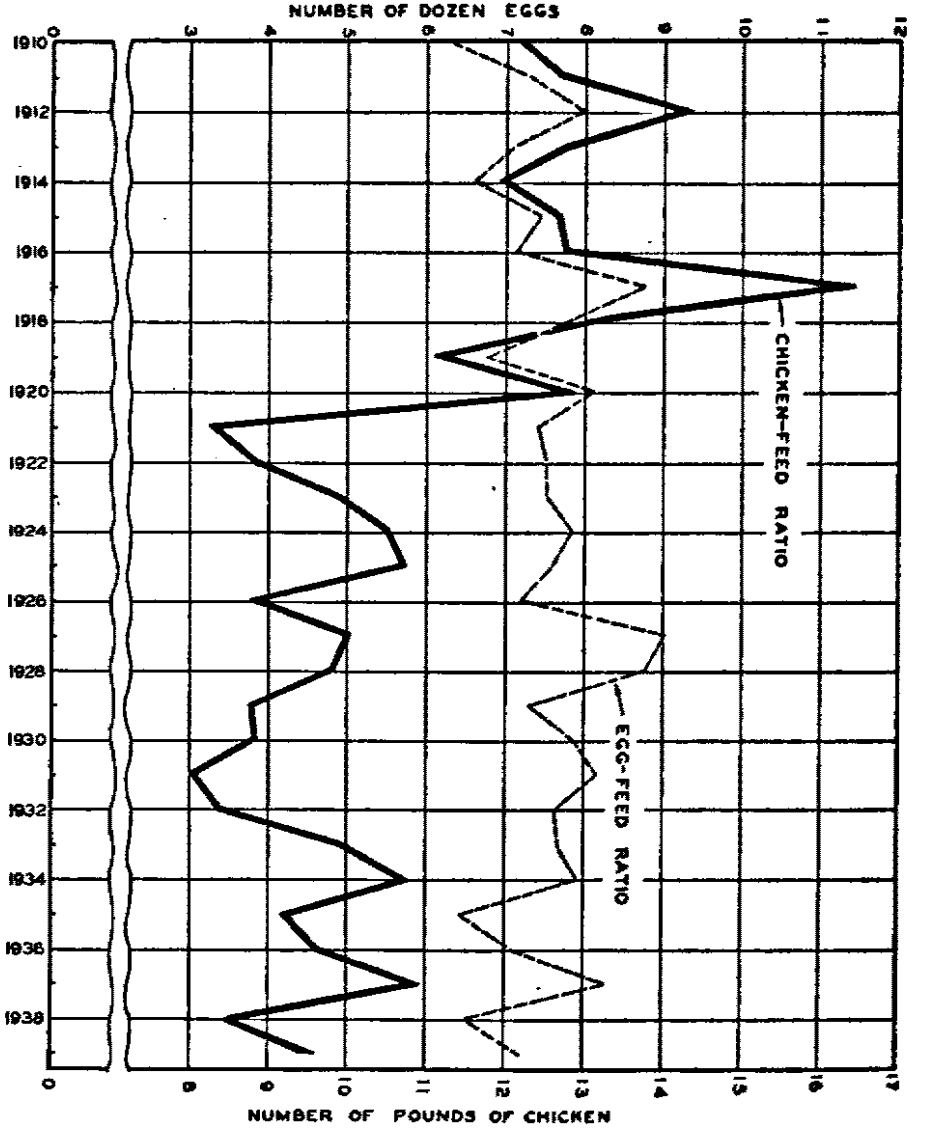

Fig. 25.—Egg-feed ratio and chicken-feed ratio, central California, 1910–1939. (Number of pounds of chickens and number of dozens of eggs equal in value to 100 pounds of feed.)

Data computed by authors from table 21 and from feed prices furnished by the Poultry Producers of Central California.

purchase, the number of pounds of feed decreased from 14.2 to 13.1 pounds between the periods above mentioned, or a decrease of 8.7 per cent. The opposite tendency was shown in California by chicken prices. If these same periods are compared, 1 pound of chicken would purchase one third (33 per cent) more feed in the latter period than in the first. Using the same periods as were utilized in making comparisons for the United States, chicken prices in terms of feed were relatively more favorable for the country as a whole than for California.

It must not be supposed that all factors have been working in the direction of maintaining a relatively high chicken price in California. The growth of turkey production in the western states and the extended period of turkey-meat consumption have been among the factors working in the opposite direction.[a]

Regional Trends in Farm Chicken Prices.—Chicken numbers are among the most important factors influencing chicken prices. While the number of chickens raised in the United States had increased between 1909 and 1934 (table 4) the proportion raised in the mountain and Pacific divisions had increased even more rapidly. The United States Department of Agriculture Bureau of Agricultural Economics estimates on the number of chickens raised annually indicate that between the periods 1920–1923 and 1936–1939 the number of chickens raised in the United States increased by over a fourth (28.8 per cent); the number raised in the western states gained by almost one half (48.4 per cent). In the decade 1910–1920, eggs were first shipped from California to the East in quantity. It is highly probable that eastern shipments from other now important egg-producing states—Washington, Oregon, Idaho, Utah, etc.—began at a somewhat later period. This increase in egg production was accompanied by an increase in the number of chickens raised. In the western states outside of California the local human population was not sufficiently numerous to absorb the increased supplies of chickens raised. Another factor of prime importance in affecting chicken prices has been the proportionately increased supplies of turkeys in the western states.[b]

Farm prices of agricultural products tend to conform to a fairly definite geographic pattern. The highest farm prices are usually found in deficit areas—that is, areas which produce a small part or even none of the farm products consumed in those areas. For most agricultural products the highest farm prices are found in the densely populated north Atlantic states. On the other hand, the lowest prices are found in those surplus areas which are located farthest from the consuming centers.

[a] Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bul. 612:9, 41–42. 1937.

[b] Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bull. 612:42–47. 1937.

Prices gradually decrease the farther surplus areas are from the consuming centers to which their goods are shipped, because of increasing transportation and handling charges.[28] The pattern varies for different agricultural products according to the location of the surplus areas in relation to the deficit areas.

Previous to 1920 the highest farm prices for chickens were found in the Atlantic Coast states (north Atlantic and south Atlantic divisions) and the western states (Pacific and mountain divisions), and the lowest

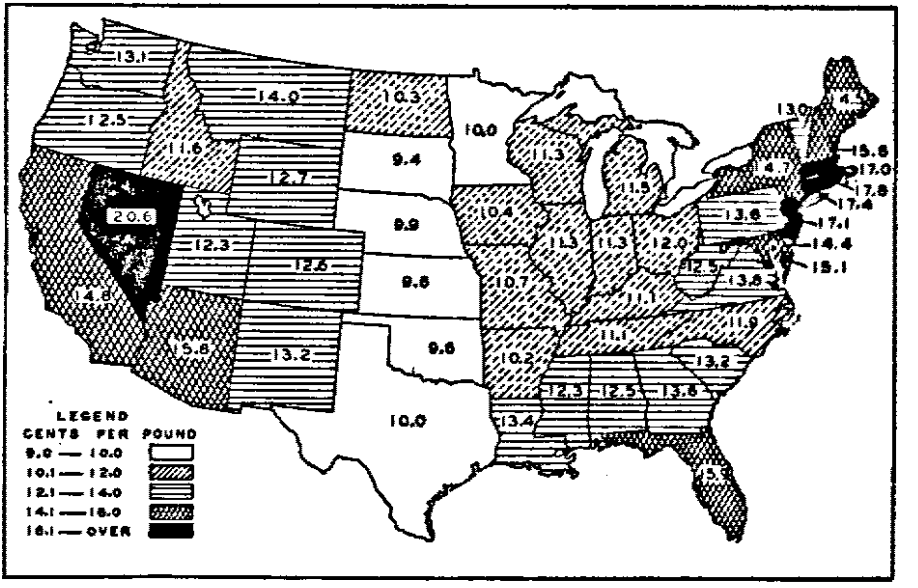

Fig. 26.—Geographic distribution of farm prices of chickens, 1912–1914.
Data from table 48.

prices in the Mississippi Valley states (west north central, east north central, and south central divisions). In the period 1912–1914 the states of Minnesota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas had average farm chicken prices of from 9.4 cents to 10.0 cents a pound (table 48 and fig. 26). Only slightly higher prices prevailed in the other Mississippi Valley states north of the tier of Gulf states. Higher prices radiated out in an easterly and westerly direction. The average farm price in California was 14.8 cents or 0.1 cent higher than in New York State.

After 1920 the western states showed a greater increase in the number of chickens raised than did any other section of the country. Because of this greatly accelerated production, farm prices of chickens in the

[28] Changes in transportation rates, zoning, and differences between local and through rates may modify this general principle but will not invalidate it.

western states tended to gain less rapidly than those in any other section of the country. The center of low prices by 1937–1939 had definitely moved westward (fig. 27). In the last-named period, chicken prices in the Great Plains states were still lower than in any other section of the country. The lowest chicken prices in the United States were found in Minnesota, Kansas, North Dakota, Oklahoma, and Texas.

The effect of the increase in production in the western states can be seen by contrasting the average level of prices in the various divisions

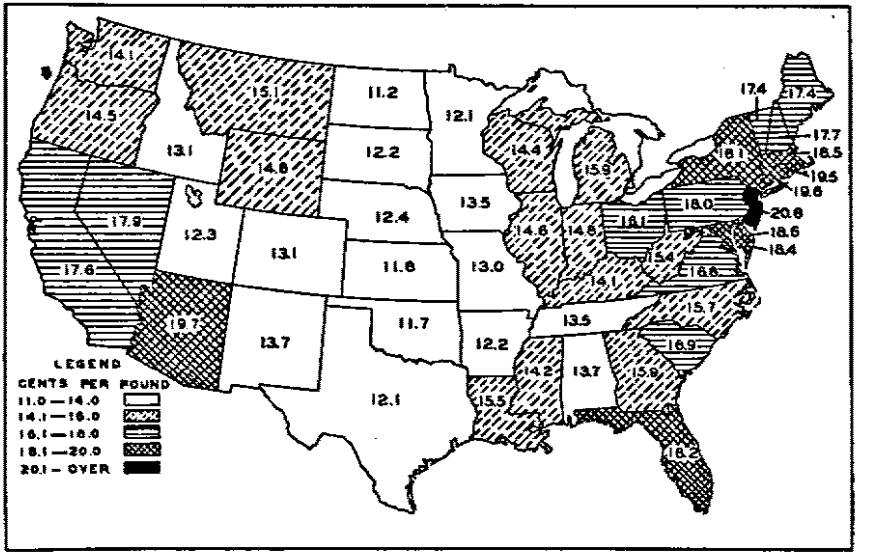

Fig. 27.—Geographic distribution of farm prices of chickens, 1936–1939.
Data from table 48.

for the three years 1937–1939 with those in 1912–1914. Farm prices of chickens in the United States averaged 24.8 per cent higher in 1937–1939 than in 1912–1914. While the average level of prices had increased in every major division of the United States the increases in the mountain and Pacific divisions were far less, 5.7 and 14.1 per cent, respectively (table 48).

Since chickens and turkeys compete with each other, attention should be called to the regional trends in turkey farm prices. Between the two periods (November and December farm prices) mentioned above, turkey farm prices increased in the United States as a whole by 16.4 per cent. In the mountain and Pacific divisions, however, prices in 1937–1939 were 4.6 and 5.5 per cent lower, respectively.

Producer chicken prices in New York and California have shown a high degree of correlation. Over the past twenty-nine years the average

annual difference in the producer price between the two states has been almost negligible (table 49 and fig. 28). During the last part of this period New York prices have had a tendency to be a fraction of a cent above those in California. Nebraska, Texas, and Idaho have shipped appreciable quantities of poultry to California in recent years. Up until 1929 chicken prices in Nebraska and Texas were on about the same relative

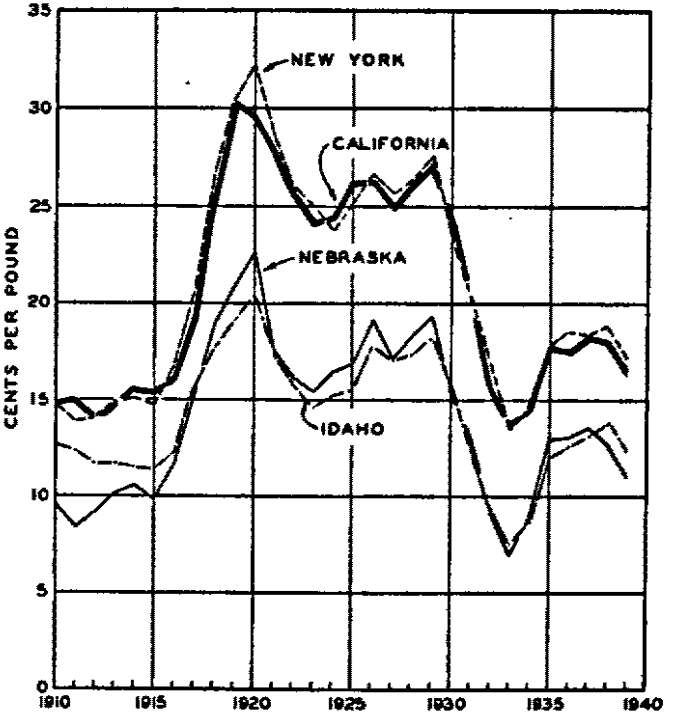

Fig. 28.—Average farm prices of chickens in California, New York, Nebraska, and Idaho, 1910–1939.

Data from table 49.

level as in California (1910–1914=100). From 1929 to 1933 prices dropped to a greater extent than in California. Some of this decline in producer prices might be attributable to the failure of such fixed charges as handling, transportation, etc., to change in a downward direction as rapidly as price. From 1935 to 1937 chicken-price recovery was more rapid in these states—owing to the improved economic situation and to a temporary shortage of chickens which arose as a result of the 1934 and 1936 drought.

Idaho chicken prices never rose to the same extent as did those in the other states listed in table 49 and they have been on relatively lower levels ever since. Idaho was affected by being at a greater distance from

the center of chicken consumption than the other states. Growth in chicken numbers has been rapid. Idaho reported for the 1935 Census of Agriculture the largest number of chickens raised per capita among the western states. Most of the growth has been in the Leghorn breed. Another contributing factor in the Idaho price situation has been the growth of the turkey industry in the mountain states.[84] If egg production expands in the mountain or Pacific Coast states relative to an increase in production elsewhere, it would indicate that a relatively lower farm chicken price might prevail in both areas.

SEASONAL VARIATION IN FARM PRICES OF CHICKENS

Seasonal movements of prices of farm products often differ as between the farm and wholesale markets. In the case of chickens this is due to several factors. In the first place, the seasonal variation in the prices of individual classifications and grades of chickens varies; for example, the low price of Leghorn broilers in the California markets occurs in June or July, that of colored roasters normally in November, whereas the low farm price for all chickens in California usually is recorded for August. Second, geographic differences with varying climatic conditions make for a lack of uniformity. Chicken prices in the United States reach a low point in December (p. 104), whereas in California bottom prices are usually in August. Third, most chickens pass out of the hands of producers soon after they are ready for market. From then on they are carried by dealers or coöperative associations and fed into the retail markets.

This section will be devoted to a consideration of seasonal variations of chicken prices received by farmers. In the next section consideration will be given to seasonal variation of prices in the wholesale market.

The normal seasonal movements of prices of individual farm products are influenced by several factors, the most important of which are: (1) Seasonal variations in production and marketing; (2) seasonal changes in consumption habits; (3) storage holdings at different times of the year; (4) accuracy of knowledge of potential supply at the beginning of and during the marketing period.

The area of greatest production is in the Mississippi Valley, and this production primarily influences the seasonality of chicken prices. In this area poultry raising is highly seasonal in character since chickens and other classes of poultry are normally hatched and reared during the spring and summer.

Poultry receipts on the main markets of the United States are generally lowest in March, April, and May—the period of heaviest egg pro-

[84] Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bul. 612:1–78. 1937.

duction. A slight rise in poultry receipts generally occurs during June and July, but the surplus poultry available for sale is usually not large until after August. From then until November or December receipts rise rapidly—a considerable part of the increase being caused by the highly seasonal receipts of turkeys. Farm prices of chickens show a seasonal trend opposite to that of poultry receipts. Higher prices are generally realized between April and August. A slump in price usually comes about between late summer and early winter. The decline in farm chicken prices during the fall is due not only to increased receipts but also to changes in sizes and decreases in quality. After the holiday season, recovery usually sets in, culminating in highest prices in the spring months. While seasonal variation in receipts is pronounced, that in price is slight, although fairly regular. Normally highest monthly prices are approximately 15 per cent above those of the low month.

On many farms in the Midwest where the bulk of the poultry is produced, many hens and even pullets are marketed in September, October, and November because they are molting and while not laying they must be fed. Again the disposal of chickens at this time of the year depends, among other factors, on the prices of chickens, eggs, and feed. In some years if egg prices are relatively high and feed low farmers tend to keep the hens through the early part of the egg-laying season.

Calculations of the average seasonal variation in prices paid for chickens in the United States and California over the past few years show the following:[*]

Month	United States	California
January	96	100
February	98	99
March	100	100
April	103	101
May	105	101
June	105	100
July	103	98
August	102	95
September	101	102
October	99	101
November	95	103
December	93	100

Seasonal variations in producer prices is even less pronounced in California than in the nation. In the most recent years June, July, and August have been reported as the months of slightly lower prices—probably on account of the large amount of culling of Leghorn hens during these months. The seasonal variation of the several classes of

[*] Computations by authors from tables 46 and 47. (Average month = 100.)

poultry in the state tends to even out the general chicken-price differences throughout the year.

As compared with many other agricultural products, poultry prices show less seasonality. A combination of factors affect the conditions under which poultry is produced and sold. In farm flocks, the hatching season generally extends from February through June, although in some years the season is extended into July and January. In California the five months January to May are the months of largest hatchings (table 18). The proportion of all chickens hatched at any one period differs from year to year, and hatching is controlled by the producer and not by the weather, although the producer may be influenced by considerations of the weather. The earliness or lateness of the hatch may, and often does, influence the time of marketing the young chickens as well as the weight per bird at that time.

The relation between feed and egg prices has a material influence on the size of the hatch. In addition, feed prices exert an influence on the marketing of chickens within the year. As in the case of various classes of livestock, chickens may be disposed of at different weights during the year. High feed prices relative to those for colored fryers would undoubtedly cause the producer to retain fewer birds to be marketed as roasters at a later date. Lack of feed and high prices for the same would cause many farmers to dispose of hens. This latter situation was clearly the case in 1936 when the drought in the Middle West caused farmers to market their hens. The increase in marketings can be seen in the returns from storage holdings of fowl (table 63).

Tables 17 and 18 give indications of month-to-month and year-to-year differences in hatchings between California and the rest of the country. Data for the entire country have been available for only the first seven months of each year, hence comparisons cannot be made for the last five months of the year.

WHOLESALE-PRICE QUOTATIONS

Almost all of the price material used in this publication relates to live poultry because price data are available. While the dressed-poultry trade is larger in volume, differences and changes in classifications and an actual lack of price data make it almost impossible to analyze dressed-poultry prices.

The method of arriving at quotations was described on pages 79–82. In many classifications a range, usually of 1 or 2 cents, is quoted (table 21). Calculations in this publication are based on the average of the high and low of the range. As a result of a number of obstacles, exact classification and grading have not been uniform and frequent changes

have occurred. Chickens do not lend themselves to such an exact classification as do many agricultural products, for example, wheat or eggs. Considerable confusion exists among poultrymen concerning grading as well as class.

Difficulties are encountered in presenting a comparable series of prices for many classes since the product is not uniform within the class. Furthermore, one class often shades into another, as for example, broilers

TABLE 23

NET PRICES PAID PRODUCERS FOR NO. 1 QUALITY POULTRY (LIVE) AND GAME (LIVE) AT LOS ANGELES, FRIDAY, MAY 10, 1940

Class and weight	Paying price	Class and weight	Paying price
	cents per pound		*cents per pound*
Leghorn broilers		Colored hens	
Under 1¼ pounds	14–15	Under 5 pounds	15–16½
1¼–1½ pounds	14–15	5 pounds and over	17–18
Over 1½–2 pounds	15–16		
Over 2–2½ pounds	15–16	Leghorn roosters	5– 6
		Colored roosters	7– 8
Leghorn fryers			
Over 2½ pounds	15–16	Young ducks	
		5 pounds and up	14–16
Colored chickens		Squabs	
Fryers, under 3¼ pounds	17½–18	All sizes	22–24
Roasters, 3¼–4 pounds	19–20		
Roasters over 4 pounds	20–22	Pigeons	
		All sizes	—*
Leghorn hens			
Under 3½ pounds	12–13	Domestic rabbits	
3½ pounds and over	12–13	All sizes	11–12

* Dash indicates data not available.

Source of data:
Federal-State Market News Service. Daily Poultry and Game Report. Los Angeles Office, May 10, 1940. (Mimeo.)

into fryers. The great variation in wholesale prices of different classes of poultry for one day (May 10, 1940) is shown in table 23.

Leghorn Broilers.—Leghorn-broiler wholesale quotations for Los Angeles and San Francisco have been published in certain of the agricultural journals of the state since the World War. Up to 1934 two quotations were usually issued: one for birds under 1.5 pounds in weight; the second for those above 1.5 pounds. In 1934, quotations for three weight classifications appeared for San Francisco (in pounds per dozen birds)—12–18; 19–21; 22–24.

In 1922 the Federal-State Market News Service began issuing jobbers' prices on broilers and other classes of poultry, and these have been continued up to the present (July, 1940). In November, 1928, at San Francisco, and in Los Angeles in October, 1931, wholesale or "paying

prices to producers" were first issued (tables 50, 51). These represent the "net prices paid producers for live poultry delivered. They apply to purchases by dealers and operators of dressing plants in lots of one coop or more. Unless otherwise stated, prices are on prime quality."[88] Quotations were established at first on birds weighing from 12 to 21 pounds and from 22 to 24 pounds per dozen. This arbitrary division has been

TABLE 24

AVERAGE ANNUAL FARM PRICES OF CHICKENS IN CALIFORNIA AND PRODUCER PRICES FOR LIGHTWEIGHT BROILERS RECEIVED AT LOS ANGELES, CALIFORNIA, 1920–1939

Year	Farm price	Broiler (light weight) price	Differential in favor of broilers
	cents per pound	*cents per pound*	*cents per pound*
1920	29.3	32.8	+3.5
1921	27.3	30.4	+3.1
1922	25.5	31.6	+6.1
1923	24.0	33.3	+9.3
1924	24.8	32.1	+7.3
1925	26.1	29.0	+2.9
1926	26.2	28.3	+2.1
1927	24.7	26.5	+1.8
1928	26.0	30.8	+4.8
1929	27.1	25.0	−2.1
1930	23.8	24.2	+0.4
1931	20.1	21.7	+1.6
1932	15.5	16.0	+0.5
1933	13.7	13.9	−0.8
1934	14.3	15.8	+1.5
1935	17.7	17.7	0.0
1936	17.5	18.0	+0.5
1937	18.2	19.8	+1.6
1938	18.1	17.2	−0.9
1939	16.3	16.6	+0.3

Sources of data:
Farm price from table 47.
1920–June, 1939, broiler (lightweight) price from Pacific Rural Press, weekly prices averaged by authors.
July 1939–December 1939 from Southern Pacific Rural Press, fortnightly prices averaged by authors.

changed frequently—some 38 changes having been made from December, 1928, through June, 1939, at San Francisco. In March, 1934, three broiler classifications were quoted for the first time at both San Francisco and Los Angeles: (1) under 1½ pounds, (2) from 1½ to 1¾ pounds, and (3) from 1¾ to 2¼ pounds.

In comparison with California producer chicken prices (table 21), wholesale prices of Leghorn broilers gave evidence of a downward trend between 1920 and 1929 (table 24). From 1920 to 1924 the average farm

[88] *From:* Federal-State Market News Service. Daily poultry and game report. San Francisco, May 25, 1937. (Mimeo.)
United States Department of Agriculture Bureau of Agricultural Economics. Tentative United States standards for grades of live poultry. 2 p. Revised April 1, 1932. (Mimeo.)

price for chickens was 26.1 cents a pound. Using the wholesale quotations of the agricultural press for the same period, the average price of light broilers was 33.2 cents a pound. For the next five years 1925–1929 the average chicken price was 26.0 cents—almost identical with that for the previous five years. The wholesale price of light broilers had dropped to 27.9 cents. While these comparisons are between producer and wholesale prices they do serve to bring out the changing relation between broiler prices and those of chickens in general in the state.

Since 1929, data are available on wholesale prices of the various poultry classes in California. No marked trend in broiler prices as compared with those of other classes is at all evident—whether the Federal-State Market News Service quotations or the agricultural-press quotations are used. The same general change in price relation between broilers and other poultry classes seems to be apparent on the east coast. In the early twenties broiler prices in New York City during certain periods were at least twice as high as fowl prices. In 1935 and 1936 broiler prices were only slightly higher than fowl prices—partly owing to the large increase in commercial broiler production. It would appear to be very doubtful that broilers will again have a high differential over other classes of poultry.

A partial explanation of the decline in Leghorn broiler prices in California from 1920 to 1929 can be found in the increase in the number of chickens raised in the western states (table 5). From 1920 through 1930 there was a continuous rise in numbers until in the latter year output was over twice that in the former. This increase was largely in White Leghorns; and since a very large percentage of these were sold as broilers and fryers, the explanation given above appears to be plausible. The last year of any considerable price differential between farm prices of chickens and broiler prices was 1928. In 1929, with an increase of over 10 per cent in the number of chickens raised, the broiler price fell below that of the general farm price of chickens for the first time. The increase in chickens raised in the western states was apparently stopped in 1931. Since 1929 the differentials between the two sets of prices have been slight.

Until sexing of chickens became feasible it was but natural that large numbers of broilers be raised. Being a by-product in this state of egg production, they have been raised in areas fairly close to centers of consumption and this in itself is of decided advantage. On account of the increase in disease larger replacements have probably been necessary, and this would have tended to increase the number of broilers raised.

Seasonal Variation in Broiler Prices.—The seasonal variation in Leghorn broiler prices is greater than that in prices of most other chicken

classes. On both the Los Angeles and San Francisco markets lowest prices for small Leghorn broilers have come in April, May, and June while those for large Leghorn broilers have occurred a month later. Prices generally rise from the latter month until September or October, after which a slight recession occurs in November or December. In these latter months a secondary crop of broilers is marketed. From December a rise usually occurs until January or February; prices then move downward during April and afterwards until the low point is reached in May or June (table 25). Medium-sized and large broilers show the same general sea-

TABLE 25

INDEXES OF SEASONAL VARIATION IN PAYING PRICES OF SEVEN CLASSIFICATIONS OF LIVE POULTRY IN SAN FRANCISCO

(Average for year = 100)

Month	Leghorn fryers	Colored fryers	Small Leghorn broilers	Large Leghorn broilers	Leghorn hens	Colored hens	Colored roasters
January	99	100	108	99	101	97	98
February	103	97	108	104	98	95	100
March	108	102	98	105	105	101	105
April	102	105	83	94	104	106	111
May	90	106	76	83	104	104	110
June	81	102	78	77	96	98	108
July	86	98	88	83	90	98	105
August	101	98	108	104	93	99	98
September	115	106	121	121	101	102	94
October	107	98	119	120	101	102	90
November	107	99	111	113	108	101	91
December	101	95	103	98	99	97	90

Source of data:
Calculations by authors based upon data in tables 50, 51, 52, 53, 54, 55, and 56.

sonal variation as small broilers, with some minor differences. The seasonal low and high price of the smaller broilers usually is earlier than that of the heavier birds (fig. 29).

There has been a tendency over the last few years for broiler prices to flatten out over the year even though there is still a decided price seasonality. Lower prices have prevailed in February, March, and April and in November and December. During the eleven complete years for which quotations are available at San Francisco this change has been noticeable. From 1929 through 1933 prices during the peak month were from 66 to over 100 per cent higher than during the low month of the year, whereas from 1935 through 1939 this differential varied from 38 to 74 per cent. This tendency has been noticeable at New York over an even longer period. At times the extreme differentiation between the highs and the lows during the course of a year has been greater in New York than on the west coast. From all indications, however, extreme seasonal price variations will not occur in the future as they have in the past.

The explanation for the changed price seasonality in California is the trend toward earlier brooding which has brought broilers to market earlier. Fall hatching, which has been gaining since the World War, has had an effect on the November and December markets. The earlier

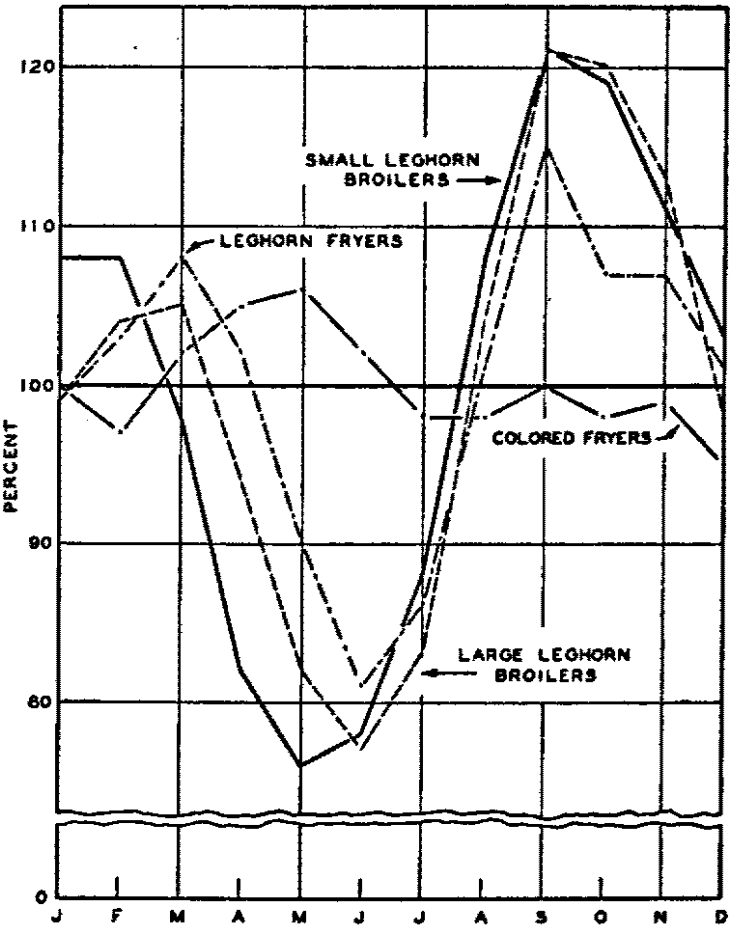

Fig. 29.—Indexes of seasonal variation of paying prices in San Francisco for small and large Leghorn broilers, Leghorn fryers, and colored fryers. Data from table 25.

brooding also has had the effect of allowing California broilers to be placed on the eastern markets in February.

Leghorn-broiler prices apparently have averaged higher in San Francisco than in Los Angeles from 1932 to 1939. The greatest differential in price has been in the smaller classification. The price differential is different during the various months of the year—April, May, June, and July showing the smallest differentials. The price differential between

the two cities in the light-weight broilers for these four months has been 1.2 cents as compared with an average differential of 2.4 cents for the remaining eight months (1932–1939). Indications point to a lesser price differential between the larger broilers in the two cities than with the lighter weights.

On the Los Angeles market the average annual price of large Leghorn broilers has been from 0.2 to 1.0 cent a pound higher than that of the small broilers (table 51). This differential is usually somewhat greater from April through June. In these months the differential has reached 2.9 cents a pound higher for the larger broilers.

Conditions on the San Francisco market have been slightly different. In six of the years from 1933 to 1939 the annual average for the smaller broilers has been higher (table 50). In a review of past quotations this apparently came about since 1932. While this is true of the average annual prices it is not the case in all of the heaviest production months. In April and May the prices of the larger broilers usually exceed those of the smaller birds. Since 1932 and through 1939 the smaller broilers have usually been higher-priced in June, and in July they have always averaged higher.

Leghorn Fryers.—On the two principal California markets both Leghorn and colored fryers are usually quoted (tables 52 and 53). The dividing line between large Leghorn broilers and Leghorn fryers is apt to be somewhat indistinct. Instead of 2½ pounds being the dividing weight between Leghorn fryers and broilers, the Federal-State Market News Service has set 2¼ pounds.

Over any considerable number of past years it is difficult to obtain comparable prices. From such information as is available (agricultural press), it would appear that from 1920 to 1939 Leghorn fryers have not declined in price in California so rapidly as light Leghorn broilers. Leghorn fryers apparently have commanded a higher price in San Francisco than in Los Angeles, although there have been exceptions in certain months. This has been particularly evident in months of larger production (April through August). At times a higher quotation has prevailed for a period at Los Angeles (June, 1932; August, 1933; April, 1935; June, 1937; May, 1939), although the average annual quotation has been from 1.8 to 3.8 cents a pound lower in the 1932–1939 period.

Seasonal Variation in Leghorn-Fryer Prices.—The average (unweighted) quotations of Leghorn fryers at Los Angeles and San Francisco have been lower than those on large Leghorn broilers. When comparing the prices during the months of maximum production, differences of a fraction of a cent usually occur—at times the large broilers commanding the higher price, at other times the fryers. In the month

of high prices (September), fryers usually average from 0.5 cent to 4.0 cents a pound lower in price than larger broilers. The question of whether to sell Leghorns as broilers or as fryers depends not alone on price but on potential supplies, feed costs, storage holdings, and a number of other items. While the seasonal price movement of Leghorn fryers is fairly regular (tables 25 and 52), the variation is more pronounced for broilers. In the eight years 1932–1939 the price differential between the high and low months for small broilers at Los Angeles has averaged 6.1 cents and that for Leghorn fryers 1.4 cents. The low point lags behind that of broilers—although it usually occurs in June. From the latter month prices usually rise to a high point in September. After slipping somewhat to the end of the year, they rise again, culminating in a March high point which, during some years, has been higher than the September price. A decline sets in ending with the June low.

Leghorn fryers compete with colored fryers, and probably the failure of fryer prices to rise simultaneously with those of Leghorn broilers to as high a September or October peak comes about because of the relatively larger number of colored fryers marketed in the fall. The producer chicken price throughout the country drops in the latter part of the year and this in turn reacts on both colored and Leghorn fryers.

Colored Fryers.—There are differences between Leghorn and colored fryers in price, seasonal price variation, storage holdings, etc. Average annual colored-fryer quotations have been higher than those for Leghorns at both Los Angeles and San Francisco, the differential at Los Angeles usually being slightly higher.

Changes in the weight classification of colored fryers have rendered exact comparisons over a period of time somewhat difficult. A quotation for colored birds from 2½ to 3 pounds in weight usually has been published and a second one for those between 3 and 3½ pounds. The heavier colored fryers generally have commanded slightly higher prices. In January, 1939, a new classification, "colored chickens," was published by the Federal-State Market News Service (table 23) and colored fryers and roasters were included. The weight of the colored fryer was set at "under 3¼ pounds" and only one quotation was issued.

Annual quotations at Los Angeles averaged from 0.3 to 1.4 cents a pound higher than at San Francisco from 1932 to 1937 (table 53). In 1938 and 1939 quotations in the latter city were 0.2 and 0.5 cent higher, respectively. The smaller differentials occur from July to November. No exact data are available as to the reason for the higher Los Angeles quotation. One supporting reason may be the presence of large numbers of persons originally from the Middle West in the Los Angeles area. These are no doubt more favorably disposed toward colored chickens.

From 1920 through 1938 a comparison of producer prices for all classes of chickens in the United States and wholesale colored fryer prices in California indicates a high degree of correlation. Colored-fryer prices apparently are geared to the general chicken prices in the United States. Although California poultrymen are especially interested in the Leghorn breed, they are indirectly concerned with other breeds on account of the influence exerted on Leghorn prices. Since 1929 the price relation between the two classes of fryers—Leghorn and colored—has apparently shown little change.

Seasonal Variation in Colored-Fryer Prices.—Seasonal price for colored fryers varies from that prevailing for Leghorns, being influenced more largely by production conditions in the Midwest. Higher prices most usually prevail from January through June. Influenced no doubt by the production of Leghorn broilers and fryers and by an increasing production of other colored birds, the price usually starts to decline in June, ushering in the period of lower prices through December. Storage holdings indicate that the into-storage movement usually begins in August and continues through the remainder of the year. Enlarged supplies are accompanied by lowered prices during the last part of the year.

Colored Roasters.—Data on colored-roaster prices as published by the agricultural press since 1923 indicate a fairly close correlation between these and the producer price for chickens. Quotations have been issued by the Federal-State Market News Service (table 54) on two weights, but very little difference is to be noted between them. From 1929 through 1939, prices at San Francisco have averaged annually from 1.1 to 3.6 cents a pound higher than colored-fryer prices—the average being 2.43 cents. Even though the gain of weight per head may be approximately constant, the rate of gain is inversely proportional to the age and weight of the birds. Given constant feed prices, the cost of producing a pound of gain on a roaster would be greater than the cost on a fryer. In the years of very low prices, 1932 and 1933, colored-fryer prices weakened to a greater extent than those of colored roasters, owing no doubt to the desire of many producers to unload poultry as soon as possible.

Comparisons between Los Angeles and San Francisco roaster prices indicate that the quotations in San Francisco have varied from 0.3 to 1.2 cents higher annually. The San Francisco differential disappears in December and in six of the eight Decembers (1932–1939) the Los Angeles price has been the higher.

Seasonal Variation in Colored-Roaster Prices.—Since the bulk of the California roaster supply originates in the midwestern states where the spring months of March, April, and May account for the larger number

of chicks hatched, October, November, and December are months of larger roaster supplies. Seasonal price variation is fairly regular on the California markets as a result of this seasonal production. The price variation has a general correspondence to that in general chicken prices in the United States. Highest prices occur at the time when larger hatchings come about—March, April, and May (fig. 30). The higher prices

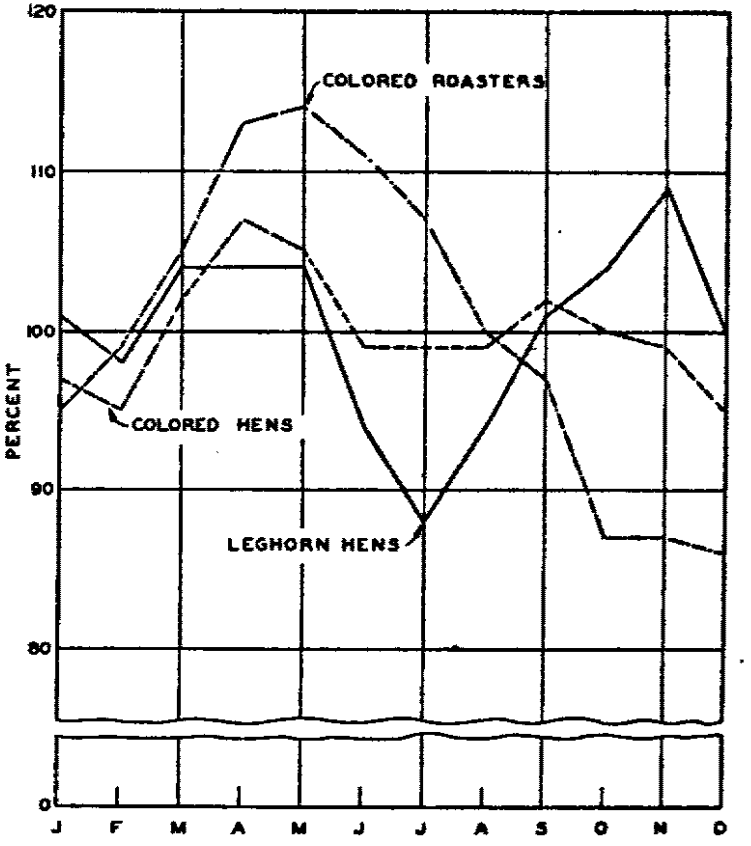

Fig. 30—Indexes of seasonal variation of paying prices in San Francisco for Leghorn hens, colored roasters, and colored hens. Data from table 25.

therefore are obtained for birds brooded in November and December. Peak colored-fryer prices usually are obtained from birds of the same brooding although the high prices for the fryers are reached a month or two earlier. After May a price decline sets in and usually continues until the lows are reached. January sees an upward price movement—generally reaching a peak in April.

Leghorn Hens.—Quotation on only one weight was published by the Federal-State Market News Service up to September 28, 1936. Since

the latter date two quotations have been issued on (*a*) Leghorn hens under 3½ pounds and (*b*) Leghorn hens over 3½ pounds. The quotations in table 55 since the above-mentioned date are an average of the two wholesale prices.

Wholesale prices have followed farm prices for the state rather closely and this would be expected since the number of Leghorn hens marketed was large among the chickens marketed. Wholesale Leghorn-hen prices like those of farm chickens remained relatively favorable from 1920 through 1929. The drop to the lower level of prices in 1932 and 1933 was not so severe as that experienced by other classes of poultry. One explanation may be that people turned to the purchase of lower-priced chickens. The more likely explanation is that from 1931 through 1934 chickens raised decreased in the western states while they increased elsewhere. In 1934 and 1935 the Leghorn-hen-price rise was relatively the same as that for other chicken classes. In the five years 1935–1939, inclusive, Leghorn-hen prices were on the same relative level as colored-hen prices.

For eight years, 1932–1939, San Francisco wholesale quotations have averaged annually from 0.3 to 2.0 cents a pound over those at Los Angeles. The greatest differential has occurred in the low-price months, which indicates that the prices in the southern California area have been more severely depressed at that time.

Seasonal Variation in Leghorn-Hen Prices.—From March through May prices usually remain relatively high (fig. 30). Thereafter, in June they begin to decline until the year's lows are reached in July and August. In the past, few laying birds have been sold in the spring months when laying is at a peak. Seasonality of price is not so pronounced as is that of broilers or fryers. Hens marketed in the spring months are materially influenced in price by the supplies of younger birds of the Leghorn breed marketed. A slight increase usually holds from September through November followed by a slight December drop and a more abrupt decline in February, which has been at times as much as 3 or 4 cents. This drop is undoubtedly caused by an increase in White-Leghorn-hens offerings. Some poultrymen, especially when egg prices are favorable, force some of the flock for egg production in high-price periods in the fall and early winter, and sell the hens after the season of high egg prices. Furthermore, these birds are usually heavier during February than during the summer. This practice has at times been recommended by the Agricultural Extension Service of the University of California.

Over the past two decades there has been a tendency to lessen the price variations during the year. In the latter months of the year poultry prices in the country as a whole are lower, and this in turn prevents

Leghorn-hen prices from rising relatively higher. In the eight years 1932–1939 the average difference between the low and high monthly quotations on the California markets during each year has been approximately 2.5 cents.

It is not the intention to point out the most advantageous time for selling Leghorn hens, since other considerations perhaps do and will determine the most profitable marketing time. The most efficient job of culling cannot be done in early spring. If this were done it would necessitate another culling in the fall. However, there might be little loss from this practice and the gain in the market price per bird and saving in floor space might be worth consideration.

Colored Hens.—The Federal-State Market News Service has issued quotations on colored hens at both California markets for birds under and over 5 pounds (table 56). The price trend in California since 1920 has been strikingly similar to that for the chicken prices in the country as a whole; and there is a high degree of correlation between the chicken prices in the country as a whole and in California. The various classifications of chickens, with the possible exception of broilers and fryers, follow the ups and downs of general chicken prices rather closely. California colored-roaster and hen prices follow trends for the country, since the bulk of the colored poultry sold originates outside of the state. There apparently are fewer fluctuations in the colored-hen prices on this account. Colored hens have averaged from 2.8 to 7.5 cents higher a pound than Leghorn hens on the two California markets since 1929.

From available data indications are that from 1923 through 1926 the differential between the two hen classifications was fairly regular. In the next five years, 1927–1931 the differential widened considerably. One of the probable factors influencing this tendency was the increase in the number of Leghorn chickens in California. In the years of very low chicken prices, 1932–1934, the differential narrowed appreciably. A return to a higher differential came about in 1935 and 1936 and this continued through 1939. The droughts of 1934 and 1936 in the Middle West undoubtedly had some influence in bringing about these higher differentials as did the upward trend in industrial activity. These facts point to the necessity of analyzing poultry prices over a considerable period before conclusions are made.

Poultry numbers can be increased or decreased more rapidly than those of other livestock classes and price relations are apt to change more rapidly. When quotations were first published at San Francisco, lighter-weight colored hens were in greater demand than heavier weights. This difference in wholesale prices almost disappeared by 1935, but during 1936 it again reappeared and continued through 1938. In 1939 differ-

ences appeared only in March, April, and May. In Los Angeles, the heavier bird usually has commanded the higher wholesale price. In both cities the heavier weights are in greater demand during the last months of the year.

In comparing Los Angeles and San Francisco prices, there has been but little difference except in 1938 when Los Angeles prices were over a cent higher (table 56). Over the period 1932–1937 the heavier hens in Los Angeles commanded a half cent premium over quotations issued in San Francisco, while exactly the reverse situation was the case with the lighter-weight hens.

Seasonal Variation in Colored-Hen Prices.—Seasonality in colored-hen quotations usually is not pronounced. In some years January, February, and March prices have weakened appreciably. Numbers marketed are probably partly associated with the egg-price outlook. If the egg-price situation appears to be favorable hens are very likely to be withheld from market. In the country as a whole March, April, and May are heavy egg-production months, and hen marketings are likely to be small. A price decline usually starts in June and extends into July. In the latter month the California price is likely to be somewhat depressed by Leghorn-hen marketings. August, September, and October are normally months of slightly higher prices although a price decline often starts in September continuing through December. The quality, however, is probably not so high in the latter part of the year as it is in the earlier months.

Unlike broilers, fryers, and roasters, a large potential supply of colored hens exists in the nation throughout the entire year. Supplies are not therefore highly seasonal—nor do the prices evidence pronounced uniformity in movement. Sufficiently favorable prices may attract supplies to market at any season.

Roosters.—At both California markets Leghorn- and colored-rooster quotations (tables 57 and 58) have been issued regularly. The latter birds usually command from 0.5 to 3.0 cents more a pound than the former. San Francisco Leghorn-rooster prices averaged approximately 0.5 cent more than those in Los Angeles in the 1932–1936 period, but in 1937 and 1938 prices in the latter city averaged higher. In 1939 San Francisco prices were again higher; colored roosters generally have commanded a premium of a cent or less as compared with Leghorn roosters. Changes in rooster classifications have been infrequent. For the years in which quotations have been issued there has not been a distinct seasonal price variation.

Ducks.—Los Angeles quotations have been issued regularly since October, 1931, and those at San Francisco have been continuous only since

September, 1933 (table 59). The lack of a continuous series of quotations prevents a clear picture of price trends. Quotations of the Los Angeles Produce Exchange are available since 1923. Indications point to a downward trend in Los Angeles duck prices from 1926 through 1929. The drop during the depression years does not seem to have been any more pronounced than with chickens. Los Angeles quotations have been slightly higher than those at San Francisco, especially during the higher-price season. Los Angeles summer prices often dip under those at San Francisco. The higher summer temperatures at the former city account in some measure for the lower prices because duck is preferred during cooler seasons.

San Francisco is in the larger duck-producing area, and this in part probably accounts for some of the price difference between the two cities.

Price variation has a fairly regular pattern throughout the year, higher prices usually being reached in December prior to the holidays. For the first five months of the year prices hold fairly steady, although a considerable break in price often occurs in May. The pronounced break more often appears in June, and prices continue downward until a low is reached in August. A gradual climb then begins, culminating in a December high.

Squabs, Pigeons, and Other Classes of Poultry.—In the larger markets a limited demand arises for squabs, mainly from the more expensive hotels and restaurants. California squabs are often shipped east. On the two major California markets, the five months beginning in May are those of lower prices since this is the larger production period. Beginning in September a price upswing begins which usually continues to December. Higher levels are held until March or April when the decline begins, culminating in the seasonal lows in June, July, and August.

Squab demand, being somewhat limited, makes at times for wide fluctuations in prices (table 60). The average quotation for April, 1932, at Los Angeles was 28.5 cents a pound, while in May the average had decreased to 21.4 cents. Quotations in San Francisco in some months vary markedly from those in the southern California city, for example, November, 1938, quotations at Los Angeles averaged 24.5 cents a pound, while at San Francisco the average was 28.8 cents. Caution should be exercised in making for any considerable increase in supplies.

Pigeon quotations have been published by the Federal-State Market News Service for several years at San Francisco (table 61). Owing to the infrequent changes, little can be obtained by an examination of the quotations even over a period. Pigeon prices appear not to have responded to price increases which have come about with other classes of poultry since 1933.

Quotations on geese and other classes of poultry have not been issued by the Federal-State Market News Service at either Los Angeles or San Francisco. The agricultural press of the state has, since 1920, published prices on geese somewhat intermittently. Indications are that goose prices from 1920 through 1929 did not remain on the same relatively high levels as did other poultry classes. The greatest demand occurs in December when certain nationalities favor goose for the Christmas table. That the supply at times has been plentiful, even at the Christmas season, is evidenced by the drop during December in one or two years of the record. Demand is small and caution might well be exercised before embarking on a venture with geese—or other poultry not commonly used.

WHOLESALE QUOTATIONS ON DOMESTIC RABBITS

By all types of classification from strictly zoölogical down to utilitarian agriculture, rabbit is not a form of poultry. The justification for including a short discussion of rabbit quotations in this bulletin is that there are so many instances where rabbit meat is classified with poultry owing to its similar market status. Yet there is so much difference between rabbits and poultry from a structural and physiological standpoint that one would be better justified in using the hog as an animal more strictly comparable with poultry.

In a study[87] of the diets of employed wage earners and clerical workers, returns indicated that the per-capita consumption for Pacific Coast cities was 10.4 pounds of poultry and 1.9 pounds of rabbit and other game; for north Atlantic cities, 16.1 pounds and less than 0.1 pound; for east south central cities, 9.0 pounds and 0.4 pound; and for southern cities (Negro families) 12.3 pounds and 0.3 pound.

On the Los Angeles market the competition between the rabbit and poultry industries is especially keen. In 1938 approximately 1,600,000 pounds of rabbit meat was consumed in the Los Angeles market alone.[88]

One rabbit classification has been quoted regularly at both California markets (table 62).

While there is a lack of continuity in the quotations, which makes it difficult to detect trends over long periods, prices published in the agricultural press of the state point to a decline in rabbit prices beginning in 1926 or 1927. This downward trend was partly the result of the greatly increased production in the state. The movement became more pronounced with the depression years and at times in 1932, 1933, and 1934 quotations were less than 40 per cent of what they had been in 1925.

[87] Stiebeling, Hazel K., and Esther F. Phipard. Diets of families of employed wage earners and clerical workers in cities. U. S. Dept. Agr. Cir. 507:1–141. 1939.

[88] Butterfield, H. M., and W. E. Lloyd. Rabbit raising. California Agr. Ext. Cir. 9:3. Revised 1940.

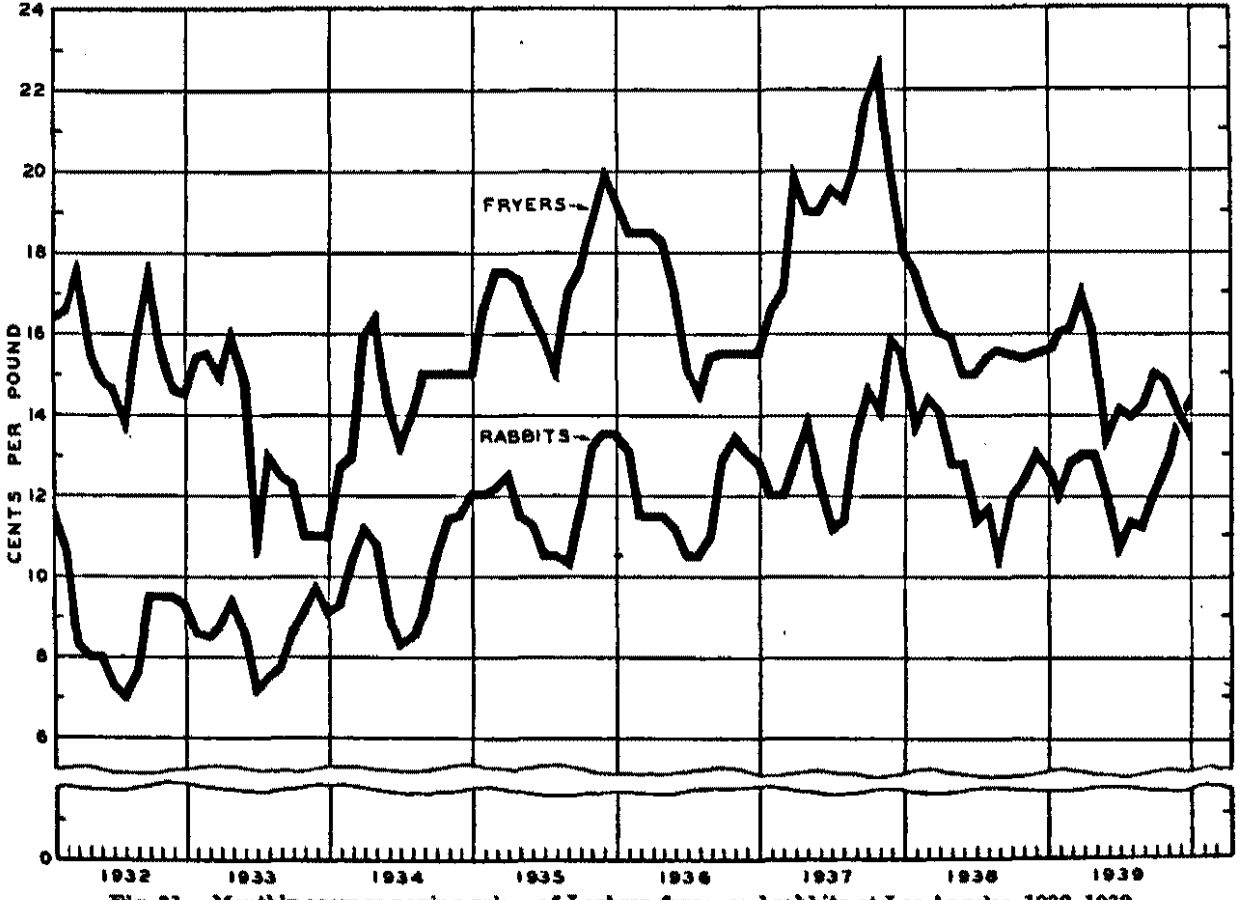

Fig. 31.—Monthly average paying prices of Leghorn fryers and rabbits at Los Angeles, 1932–1939.

Data from tables 52 and 62.

With the recovery of poultry prices from 1933 to 1937 rabbit prices advanced relatively more since the low prices of 1933–1934 than general chicken prices in the state.

In the past there have been evidences of a fairly distinct seasonal variation, June and July covering the period of lowest prices. From the latter month there is usually a gradual rise until the peak is reached—usually in November, although in past years it has sometimes come in October or December. There is a slight weakening in January, and in May prices start to slide toward the June and July lows.

Domestic-rabbit prices are usually a fraction of a cent higher in San Francisco than in Los Angeles during the months of higher prices; the reverse has been the case during the season of lowest prices. The average annual differential between the two cities for the eight years 1932–1939 was less than 0.02 cent a pound in favor of Los Angeles.

Apparently the degree of correlation is not high between rabbit prices and those of a specific class of poultry. In general Leghorn-fryer and rabbit prices are most closely related (fig. 31). The low months of Leghorn-fryer prices at both Los Angeles and San Francisco are usually the same as those of low rabbit prices.

COMPARISON OF PRICES PAID LOS ANGELES PRODUCERS AND QUOTATIONS OF THE FEDERAL-STATE MARKET NEWS SERVICE AND THE LOS ANGELES PRODUCE EXCHANGE

Considerable dissatisfaction has been voiced by poultrymen concerning quotations of the reporting agencies in Los Angeles (p. 85). Several producers furnished prices which they had received for Leghorn broilers and hens, and colored fryers, hens, and roasters. The largest number of prices furnished by producers were for Leghorn broilers and colored fryers and these fell largely between February, 1934, through November, 1935. Considerable difficulty was experienced in obtaining prices that might be compared because so few poultrymen possessed records for any considerable time. Furthermore, most poultrymen sell chickens comparatively few times during the year, and whether the poultry grades are prime or otherwise is not known definitely.

In comparing such producer prices with the Federal-State Market News Service and the Los Angeles Produce Exchange quotations, a fairly close correspondence is shown. In the 83 weeks for which producer prices for Leghorn broilers were obtained, they fell within the range of prices quoted by the Federal-State Market News Service in 35 of the weeks and within those quoted by the Los Angeles Produce Exchange during 24 of the weeks. Prices received were actually above the range of the quoted prices of the Federal-State Market News Service during

45 of the weeks and below during 17. The corresponding data for the Los Angeles Produce Exchange were 41 and 21 weeks. In some weeks producer prices fell both below and above the quotation range, prices being reported for more than one day of the week. Since the Market News Service and Produce Exchange quotations are f.o.b. Los Angeles, producer prices would normally be somewhat lower.

A noticeable tendency was for poultrymen to receive the higher-than-quoted prices for broilers in the six months of seasonally higher prices prevailing from September through February. Lower-than-quoted prices were more prevalent from March through August—the months of seasonally low prices. This latter tendency was slightly more noticeable when comparisons were made with the Produce Exchange quotations.

Producer prices for colored fryers were closely correlated with both sets of quotations issued by the reporting agencies. Poultrymen furnished prices which they had received in 77 different weeks. In 33 of these the producer price fell within the quotation range of the Federal-State Market News Service, in 38 weeks the producer price was below the range quoted by the Market News Service and in 6 it was above. The corresponding data in comparison with the Los Angeles Produce Exchange were 22, 49, and 6. The producer price of colored fryers was seldom more than 2 cents outside the quotation range of either of the reporting agencies. Indications point to the Market News Service quotations as being somewhat more in line with producer prices of colored fryers than was the case with the Produce Exchange quotation.

Producer roaster prices were obtainable from poultry raisers for only occasional days during 13 weeks. In every case they fell either within or above the ranges quoted by both agencies.

Producer prices were obtainable for Leghorn hens during 16 weeks. Paying prices in 7 of these weeks were within the Federal-State Market News Service quotation range; in 3 they were higher and in 6 lower. The corresponding data for the Exchange were 6, 3, and 7. Colored-hen prices paid producers were obtained for 13 weeks. Producer prices were within the range quoted 5 of the weeks, and higher than the Market News Service range 8 of the weeks; and in comparison with the Exchange they were within the range in only 1 week, above during 7, and below during 8.

COMPARISON OF QUOTATIONS OF THE FEDERAL-STATE MARKET NEWS SERVICE AND THE LOS ANGELES PRODUCE EXCHANGE

From 1932 through 1939 the quotations at the Federal-State Market News Service at Los Angeles and those of the Los Angeles Produce Exchange have been compared for several poultry classifications. An effort

has been made to ascertain points of similarity and differences between them.

Direct comparisons between the two sets of quotations on Leghorn broilers are less accurate because of some differences in the grades or weights of broilers quoted. The Federal-State Market News Service quotation is for no. 1 broilers, whereas the Produce Exchange price

TABLE 26

AMOUNT AND NUMBER OF CHANGES IN POULTRY QUOTATIONS ISSUED BY FEDERAL-STATE MARKET NEWS SERVICE (LOS ANGELES) (I)* AND LOS ANGELES PRODUCE EXCHANGE (II)*, 1932–1939

Amount of change in cents per pound	Number of changes									
	Leghorn broilers		Leghorn fryers		Colored fryers		Leghorn hens		Colored hens	
	I*	II*	I*	II*	I*	II*	I*	II*	I*	II*
0.25	22	0	2	0	1	0	14	0	19	0
0.50	115	0	51	0	91	1	121	0	85	1
0.75	9	0	3	0	0	0	6	0	3	0
1.00	88	125	43	43	85	80	87	140	68	99
1.25	3	0	0	0	1	0	2	0	0	0
1.50	18	0	13	0	13	1	13	0	7	1
1.75	1	0	1	0	0	0	0	0	1	0
2.00	15	53	12	24	10	47	8	25	6	20
2.50	2	0	0	0	1	0	0	0	0	0
3.00	3	5	1	7	3	4	0	2	0	0
4.00	0	1	0	1	0	2	0	0	0	0
5.00	0	1	0	0	0	0	0	0	0	0
Total	280	195	126	75	215	135	251	167	194	121

* I refers to Federal-State Market News Service changes; II refers to Los Angeles Produce Exchange changes.

Source of data:
Computations by authors on the basis of quotations published by the Federal-State Market News Service (Los Angeles) and the Los Angeles Produce Exchange.

covers all broilers within the weights specified. The quality range in the former quotation is therefore smaller than that in the latter.

The comparisons made below are for Leghorn broilers of slightly different weights. The quotations of the Federal-State Market News Service used were for larger broilers for different periods from: January 1, 1932, to June 14, 1933, weights quoted were 18–24 pounds per dozen; June 15, 1933, to March 27, 1934, weights were 19–24 pounds; March 28, 1934, to January 7, 1938, weights were 22–24 pounds; January 10, 1938, to December 31, 1938, weights were 21–24 pounds; and January 1, 1939, to December 31, 1939, weights were 21–27 pounds. The Los Angeles Produce Exchange quotations compared were for the larger-sized broiler class for different periods from: January 1, 1932, to April 25, 1939,

weights were 18–27 pounds per dozen; April 26, 1939, to December 31, 1939, weights were 21–27 pounds.

For the years under consideration the averages of the two quoting agencies for Leghorn broilers show a close agreement, annual differences of 0.1 to 0.8 cent being in favor of the Federal-State Market News Service quotation. The average of the range of the latter agency's quotation has been used. The Produce Exchange issued one price quotation daily. If the lows of the range of the Market News Service had been used, there would have been little difference or none between the annual averages of the two sets of quotations. If the four months of low prices—usually April, May, June, and July—are selected, the Produce Exchange quotations show to a greater disadvantage. Market News Service quotations averaged from 0.4 to 1.4 cents higher during these months, and in the two or three months of peak quotations they have averaged from 0.1 cent lower to 0.8 cent higher. This situation might easily be explained by quality differences (see p. 85).

Price changes in the Market News Service quotations have been more frequent, and in general, have been smaller than those of the Produce Exchange (table 26). During the eight years 195 changes were made in Leghorn-broiler quotations by the latter agency averaging 1.41 cents. Changes of 1.0 and 2.0 cents were most frequent although the range was from 1.0 to 5.0 cents. In the same period the Market News Service quotations changed 280 times, changes averaging 0.86 cent, those of 0.5, 1.0, and 0.25 cent in the order named being the most common. The range was from 0.25 cent to 3.0 cents.

Conditions surrounding a comparison of Leghorn-fryer quotations are similar to those enumerated with broiler comparisons. The weight of the bird quoted by the Federal-State Market News Service was generally "over 2 pounds," whereas that for the Exchange was for weights of 2¼ to 3 pounds. There is close agreement between average annual prices, the Exchange quotations for the eight years ranging from 0.1 to 0.8 cent lower. In 1934 the Exchange quotation would have been higher had it been compared with the low of the Market News Service quotation range. Differentials between the two quotations were far larger in June (the low-price month) than in September, the month of seasonal high quotations. In the first month differentials for the eight years averaged 0.8 cent; in the second month less than 0.6 cent. It is emphasized, as in the case of broilers, that quality differences might account for this situation.

Quotation changes on Leghorn fryers made by the Federal-State Market News Service at Los Angeles totaled 126 during the period under consideration (table 26). The average change was 0.95 cent. Those of the Produce Exchange were varied only 75 times during the same period,

the average change being 1.55 cents. The most frequent changes in the Market News Service quotations have been 0.5 and 1.0 cent while most changes in the Exchange quotations have been 1.0 and 2.0 cents.

On colored fryers the Los Angeles Produce Exchange annual quotations have averaged from 0.0 to 0.9 cent lower than those of the Federal-State Market News Service. The weights of the birds quoted upon for the period under study have varied: Produce Exchange, between limits of 2¼ and 3½ pounds; Federal-State Market News Service, up to limits of 3, 3¼, and 3½ pounds. Generally over these eight years differentials between these two sets of quotations have been far greater in the three months from April through June, whereas for October and November differentials practically disappear. No doubt the seasonal variation in the price of Leghorn broilers and fryers in the California markets affects these varying differentials in colored-fryer quotations (fig. 29). In the late spring, Leghorns are marketed in quantity and it is probable that colored fryers originating in the state are also marketed in largest numbers. Highest prices for the Leghorn broilers and fryers prevail in the period when the differentials between the two sets of quotations disappear. It is highly probable that the demand for birds of these weights at that time makes those responsible for the Produce Exchange less critical of grade.

The study of changes in the quotations issued by the two agencies shows up in a fashion similar to those already discussed. In the eight years the Produce Exchange quotation changed 135 times with an average change of 1.45 cents. This simple average is misleading, as the changes listed indicate. Market News Service quotations changed 215 times with an average change of 0.94 cent.

Both agencies have published comparable quotations, but in view of the fact that so few roasters are produced in the state comparisons are omitted for this classification.

Produce Exchange quotations have been published for Leghorn hens weighing from 3¼ to 4 pounds except for May 24, 1939, to June 15, 1939, when weights were 3 to 4 pounds. The Federal-State Market News Service quotations were for all sizes of Leghorn hens until October, 1936, when a quotation was issued for two weights, 3½ pounds and up, and under 3½ pounds. The quotations for 3½ pounds and up, have been used since that date. A comparison between the Produce Exchange quotation mentioned above and that for "all weights" issued by the Market News Service shows that the annual average of the latter quotation has topped the former by from 0.1 to 0.8 cent. In 1937, 1938, and 1939 Exchange quotations ran almost identical with those of the Market News Service for Leghorn hens under 3½ pounds. No pronounced sea-

sonal differentials can be detected in the quotations for the eight years studied.

While changes were made no more frequently in the Produce Exchange quotations on Leghorns, they were smaller than in the case of either broilers or fryers. In the years under consideration 167 changes were made averaging 1.17 cents. The changes were 1.0, 2.0, or 3.0 cents (table 26). The Market News Service quotation was changed 251 times with an average of 0.77 cent, the most common changes being 0.5, 1.0, and 0.25 cent.

Produce Exchange quotations on colored hens, 4 pounds and up, topped those of the Market News Service on birds 5 pounds and up in all save one of the seven years studied. A close correspondence is found with the annual average of the Produce Exchange from 0.0 to 0.6 cent higher. In the colored-hen class the quotations of both agencies probably were largely on birds shipped into the state, and it is highly probable that the same birds were quoted upon. That the quotations of the two agencies were different even though the annual averages varied but little can be realized when comparing amounts and number of colored-hen-quotation changes (table 26).

The Federal-State Market News Service quotations seem to average somewhat higher than those of the Produce Exchange on all classes of poultry studied save colored hens. There is a tendency for prices of the latter agency to be somewhat lower during low-price periods. These differences may perhaps be partly explained by differences in quality. There can be but little doubt that the Market News Service quotations are changed more frequently and with less abruptness.

RELATIONS BETWEEN WHOLESALE POULTRY QUOTATIONS IN CALIFORNIA AND OTHER MARKETS

New York.—New York is the center of the area of great poultry consumption in the United States. A large proportion of the price contracts in cities east of the Rockies are based upon New York quotations. Benjamin and Pierce[29] state: "These [New York prices] have a direct influence on the trading for probably 80 per cent of the poultry moving in the wholesale trade channels of the United States." Most of the poultry unloads originate in areas at a considerable distance. In some years California has furnished an appreciable amount of dressed poultry to that metropolis. In 1936, 1937, 1938, and 1939 the unloads at New York from California were 6,650,000, 4,132,000, 3,856,000, and 2,830,000 pounds, respectively. The bulk of the receipts arrive in four months beginning in February. The territory contiguous to New York is primarily an egg-

[29] Benjamin, Earl W., and Howard C. Pierce. Marketing poultry products. p. i–xi, 1–401. J. Wiley and Sons, New York. 1937.

producing section comparable to the areas near Los Angeles and San Francisco. The bulk of the colored chickens originate in the Mississippi Valley.

In making price comparisons between Los Angeles or San Francisco and New York, two sets of wholesale quotations have been used—those of the Urner-Barry Company published (daily quotations) in the *American Creamery and Poultry Produce Review* (since January, 1940, quotations appear in *American Poultry and Egg Review*) and those printed in the daily *Producers' Price Current*. These sets of quotations have checked closely. The wholesale prices issued by the Federal-State Market News Service at Los Angeles and San Francisco have been used for the California markets.

The annual average Leghorn-broiler quotations over the ten years 1930–1939 have been approximately the same at New York and San Francisco but wide variations occur in monthly quotations (fig. 32). The New York price has averaged higher for three separate years but in four years California prices have been higher. While trends in prices present a certain pattern, nevertheless, single years may vary widely from it. This is especially true with broilers that can be produced within a very short period. The 1937 situation illustrates this latter point.

From 1930 through 1939 the San Francisco price of Leghorn broilers in March, April, May, and June has averaged nearly 4 cents lower than that in New York. This season is one of surplus Leghorn broilers and fryers in California. In 1937, however, the New York price topped the San Francisco price in only two months—April and December. The following monthly averages for the 1930–1939 period show the relation between wholesale broiler prices in New York City and in San Francisco and from this can be discerned the general differences in the seasonal movement of broiler prices.

Month	San Francisco price, in cents per pound	New York price, in cents per pound	Differential between San Francisco and New York price, in cents per pound
January	22.5	20.8	− 1.7
February	23.3	21.6	− 1.7
March	20.7	23.9	+ 3.2
April	17.1	21.7	+ 4.6
May	15.8	19.8	+ 4.0
June	15.9	18.2	+ 2.3
July	18.0	17.6	− 0.4
August	22.0	18.8	− 3.2
September	24.7	——	——
October	24.1	——	——
November	22.2	——	——
December	20.6	——	——

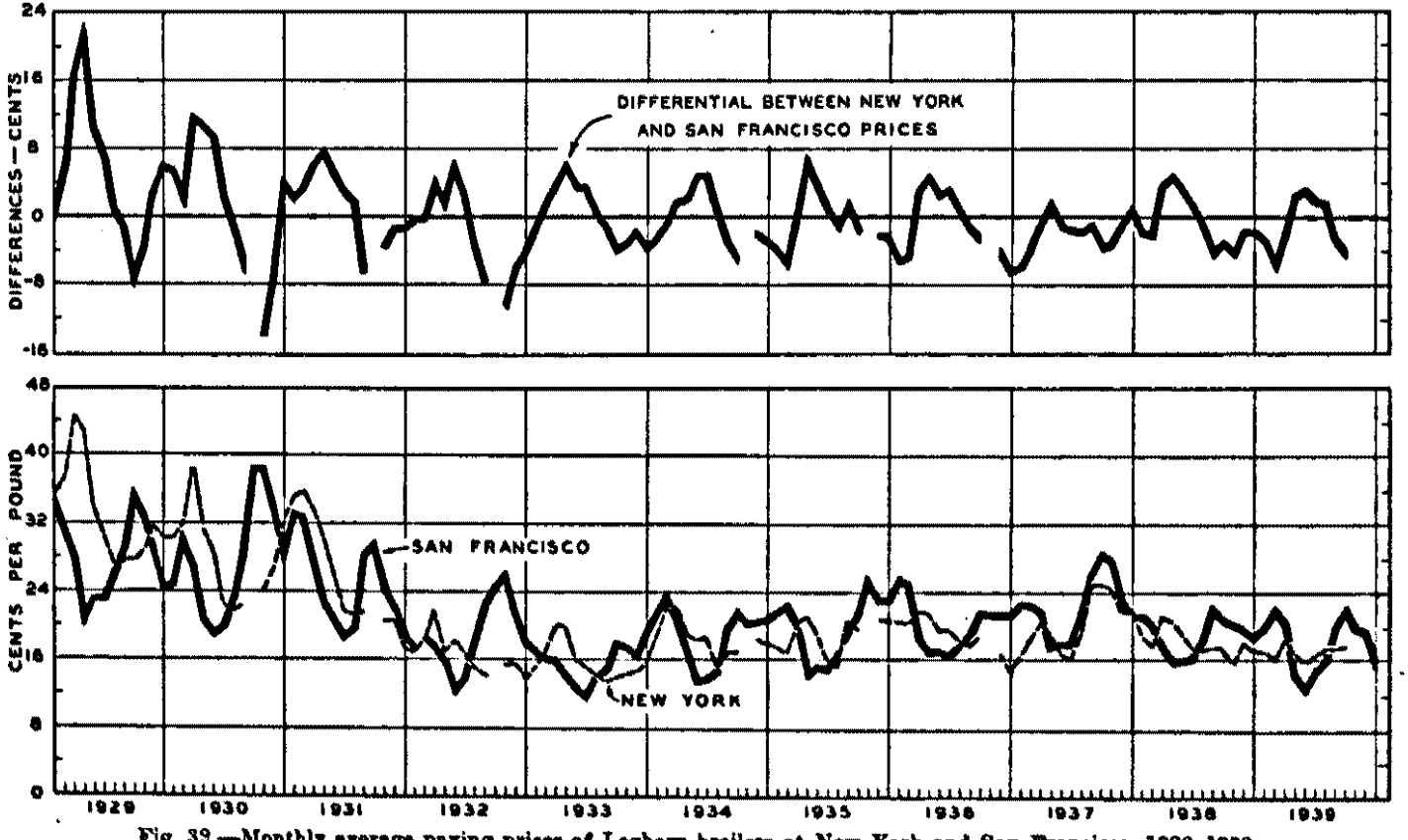

Fig. 32.—Monthly average paying prices of Leghorn broilers at New York and San Francisco, 1929–1939.
Data from table 50 and from *Producers Price Current*, New York.

In the above compilation New York quotations in September were published only for 1933–1939. The averages of these years were: New York, 18.7 cents; San Francisco, 22.0 cents; differential, –3.3 cents. In October New York quotations were published only for 1930–1933, 1937, and 1938 and for these years averages were: New York, 19.2 cents; San Francisco, 27.3 cents; differential, –8.1 cents. November quotations for New York were published for 1930–1938 and the averages for these years were: New York, 19.4 cents; San Francisco, 22.5 cents; differential, –3.1 cents. December quotations for New York were published only for 1930–1938 and the averages for these years were: New York, 19.1 cents; San Francisco, 21.1 cents; differential, –2.0 cents.

The lowest Leghorn-broiler prices occur a month to two months later in New York than in San Francisco, and the decline from February through June is more rapid in the latter city. While at any one time, in the months of a high differential in favor of New York, prices may look attractive to the western shipper, transportation may delay arrival in New York, and prices may then have declined materially. It would be highly desirable for shipments to arrive in New York before broiler prices begin to decline. But to ship when prices are declining on both the California and the New York markets would be somewhat precarious. The greater part of the dressed-poultry shipments from California to New York arrive in February and March. The peak of broiler prices on the New York market from 1929 through 1939 occurred rather regularly between March 14 and March 29. About this time the volume of broilers received in New York City begins to increase rapidly, receipts gaining until a peak is reached in June. The latter month plus May, July, August, and April in the order named are the months of heaviest receipts at New York. In the remainder of the year, September-December, New York broiler prices are influenced to a considerable degree by the large supplies of other poultry classes marketed.

A comparison of colored-fryer prices at Los Angeles or San Francisco and colored-broiler (red) prices at New York over a ten-year period indicates a high correlation. There is a tendency for New York prices to be slightly higher in March, while Pacific Coast prices generally range higher from April through August. In the late fall and winter (November through February) there is a tendency for the average monthly quotations, or over the ten years, to be approximately the same, although in specific years differentials may be large. Monthly average prices for colored (red) broilers at New York and colored-fryer prices at San Francisco from 1930 to 1939 are found in the table on page 130.

In this compilation New York quotations in September were published only for 1933–1939. The averages of these years were: New

York, 18.7 cents; San Francisco, 19.2 cents; differential, –0.5 cent. In October, New York quotations were published for 1930–1933, 1935, 1937, and 1938 and for these years averages were: New York, 20.3 cents; San Francisco, 20.4 cents; differential, –0.1 cent. November quotations for New York were published for 1930–1938 and the averages for these years were: New York, 19.9 cents; San Francisco, 20.1 cents; differential, –0.2 cent. December quotations for New York were published only for 1930–1938 and the averages for these years were: New York, 19.6 cents; San Francisco, 19.5 cents; differential, +0.1 cent.

Month	San Francisco price, in cents per pound	New York price, in cents per pound	Differential between San Francisco and New York price, in cents per pound
January	21.6	20.6	−1.0
February	21.7	21.4	−0.3
March	22.9	23.5	+0.6
April	23.7	22.1	−1.6
May	22.5	20.5	−2.0
June	20.9	19.5	−1.4
July	19.9	18.7	−1.2
August	19.9	18.5	−1.4
September	20.1	——	——
October	19.8	——	——
November	20.0	——	——
December	19.2	——	——

High Leghorn-broiler prices in New York in February and March (fig. 32) undoubtedly influence colored-fryer prices in those months. With the coming of increased Leghorn-broiler supplies to New York colored-fryer prices drop. Prices in New York are depressed somewhat in the latter part of the year on account of the large poultry supplies available at that time.

Quotations issued for the same eight months (September through December excepted) from 1930 to 1939 show an average of 20.3 cents a pound for Leghorn broilers at New York, while at San Francisco the average quotation for this same period was 19.4 cents. Colored-fryer prices at New York for the same period averaged 0.3 cent higher than those of Leghorn broilers, while at San Francisco the differential was 2.2 cents in favor of the colored fryers. A large broiler industry has grown up in Maryland, Delaware, and Virginia, which supplies New York city with broilers of the colored breeds. The development of this industry may be one of the contributing causes in the decline of dressed poultry receipts from California in New York from 1936 to 1939. (On California markets these colored broilers would probably be classed as fryers.) New York thus has access to a large supply at a not very great distance from the city. Leghorn broilers, on the other hand, are in relatively greater abundance on the California markets than at New York.

The average monthly price of Leghorn hens over the ten years has been 17.0 cents a pound in New York and 16.2 cents in San Francisco. Although both cities are primarily in egg-producing areas, New York is nevertheless in a deficit area whereas the reverse is true of San Francisco. On the other hand, colored hens during the same ten years averaged 19.8 cents a pound in New York as compared with 20.7 cents in San Francisco. (If Los Angeles prices had been available over these same years, the same general relation would hold.) Neither market is in an area producing colored hens, and since New York is closer to the center of supplies, prices are somewhat lower.

Leghorn-hen prices have a greater seasonal change at New York as the following table shows:

Month	San Francisco price, in cents per pound	New York price, in cents per pound	Differential between San Francisco and New York price, in cents per pound
January	17.4	19.0	+1.6
February	16.4	19.2	+2.8
March	17.3	20.2	+2.9
April	17.2	19.6	+2.4
May	16.6	18.8	+2.2
June	14.9	16.5	+1.6
July	14.3	15.5	+1.2
August	14.8	15.5	+0.7
September	16.2	15.9	−0.3
October	16.1	14.3	−1.8
November	17.2	14.9	−2.3
December	15.7	14.8	−0.9

Seasonal price variation at New York has points of similarity with the seasonal price pattern presented of other poultry classes. The three months of high prices are generally February, March, and April. A price decline usually sets in in April or May which generally carries through until October when the low price occurs most frequently. In California, on the other hand, Leghorn hens do not evidence so much seasonality in price movements. Between the months of high and low prices the average differential for the years listed above was 3.1 cents as compared with 5.9 cents for New York. California prices generally reach a summer low after which there is usually some recovery, whereas in New York the decline usually extends for two or three months into late summer and early fall showing the effect of the arrivals of poultry of many classes.

California prices rather consistently fall below those in New York in the first seven months (fig. 33). In August during seven of the years, New York prices were higher but in eight of the ten Septembers they were lower. By October the differential in favor of California prices has been widened. This widening of the differential continues into Novem-

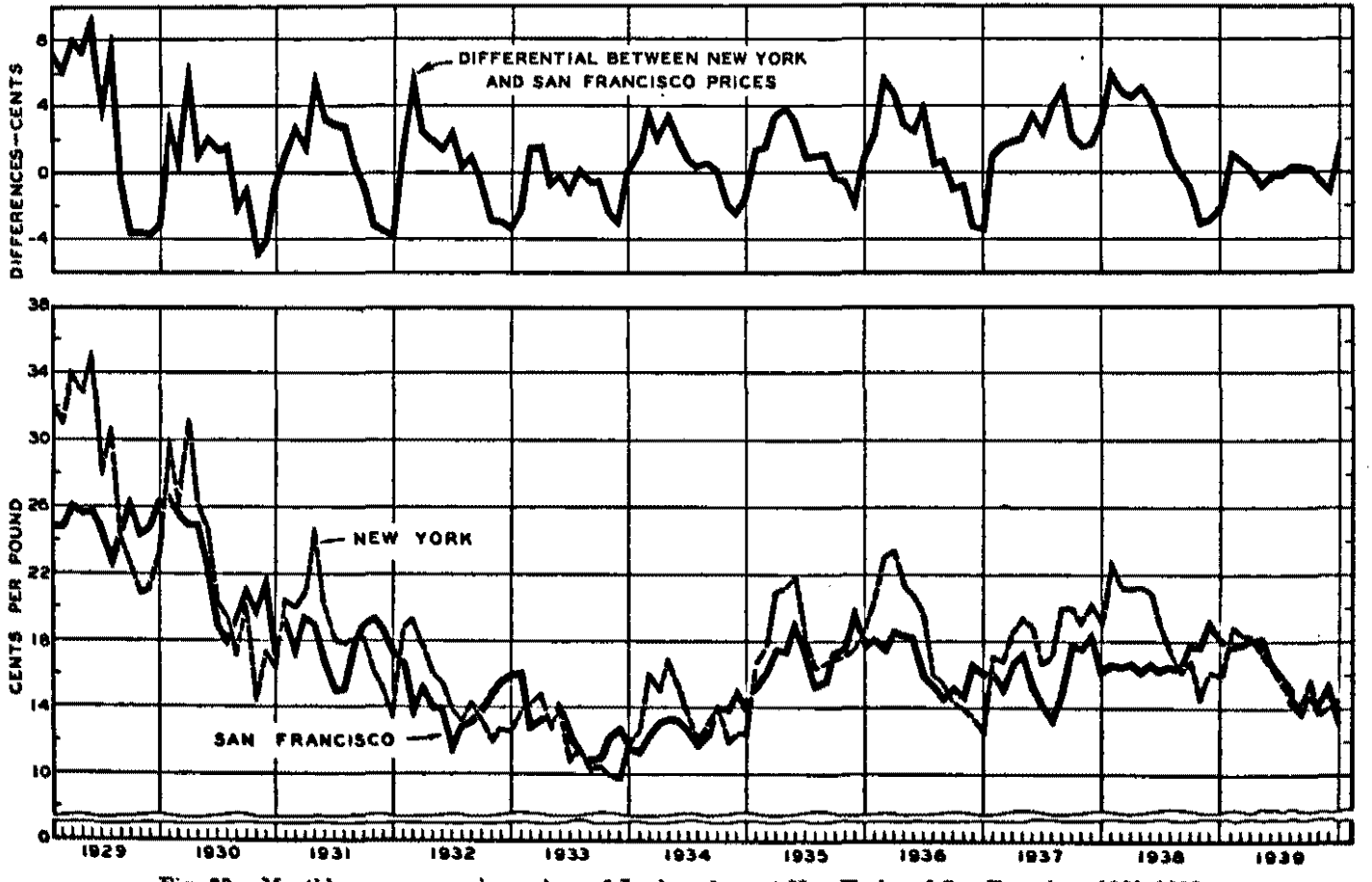

Fig. 33.—Monthly average paying prices of Leghorn hens at New York and San Francisco, 1929–1939.

Data from table 55 and from *Producers Price Current*, New York.

ber. New York December prices sometimes equal those in San Francisco, but more often the higher price in New York is not reached until January.

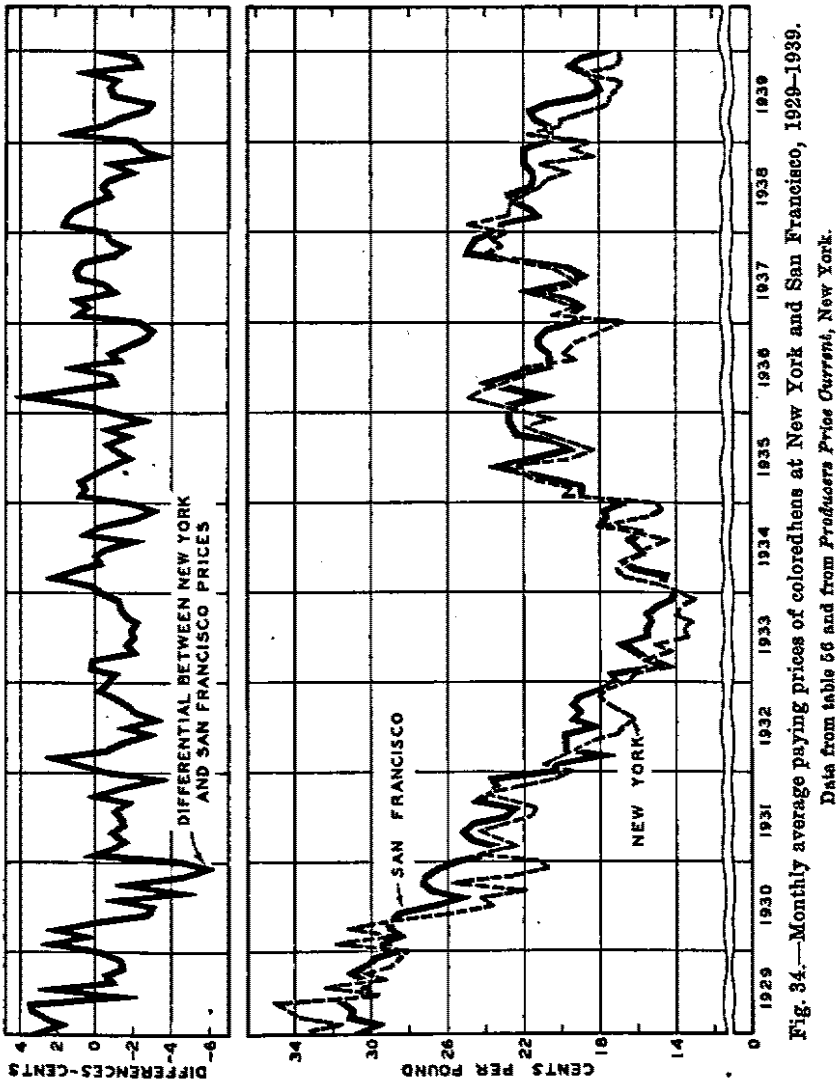

Fig. 34.—Monthly average paying prices of coloredhens at New York and San Francisco, 1929–1939. Data from table 56 and from *Producers Price Current*, New York.

In the first three months of the year colored-hen prices frequently have averaged from about 0.5 cent to 1.0 cent higher in New York City than on the California markets (fig. 34), but the range between separate years has been large. During the remaining months prices on the Pacific Coast markets generally average higher. Seasonal price variation varies

as between east and west coasts. Little regularity prevails in California. The following are the monthly average prices for colored hens for 1930–1939:

Month	San Francisco price, in cents per pound	New York price, in cents per pound	Differential between San Francisco and New York price, in cents per pound
January	21.0	21.8	+0.8
February	20.0	20.9	+0.9
March	21.1	21.6	+0.5
April	21.9	20.9	−1.0
May	21.4	20.0	−1.4
June	20.0	19.1	−0.9
July	19.8	18.6	−1.2
August	20.4	18.9	−1.5
September	21.3	20.3	−1.0
October	21.2	19.1	−2.1
November	20.9	18.4	−2.5
December	19.7	18.3	−1.4

In the above-mentioned years the range at New York between the high and low month was 3.5 cents as compared with 2.2 cents at San Francisco.

Since rabbits compete with poultry, a comparison has been made between New York and San Francisco prices. Prices in the eastern city are usually higher than at California points throughout the year, differentials in favor of New York being higher in the four or five months beginning with February. Comparable rabbit prices since 1936 are not available so that the following cover the seven years 1930–1936:

Month	San Francisco price, in cents per pound	New York price, in cents per pound	Differential between San Francisco and New York price, in cents per pound
January	12.6	14.5	+1.9
February	12.0	16.1	+4.1
March	11.7	16.9	+5.2
April	11.5	16.1	+4.6
May	10.6	16.2	+5.6
June	9.3	13.8	+4.5
July	8.5	11.7	+3.2
August	9.7	12.7	+3.0
September	10.7	12.7	+2.0
October	11.9	13.0	+1.1
November	12.4	14.0	+1.6
December	12.5	15.1	+2.6

Comparable quotations have been obtainable on pigeons in the two markets. New York prices generally follow the pattern set by most poultry classes—highest prices prevailing for three or four months beginning in February. A drop then occurs usually ending in an October low. Differentials between the two markets are far greater from February

through May. Unlike other poultry prices, those for pigeons in the West seldom rise above those in New York.

Chicago.—Chicago is not only the center of a large poultry-consumption area, but it is in proximity to the largest chicken- and egg-producing

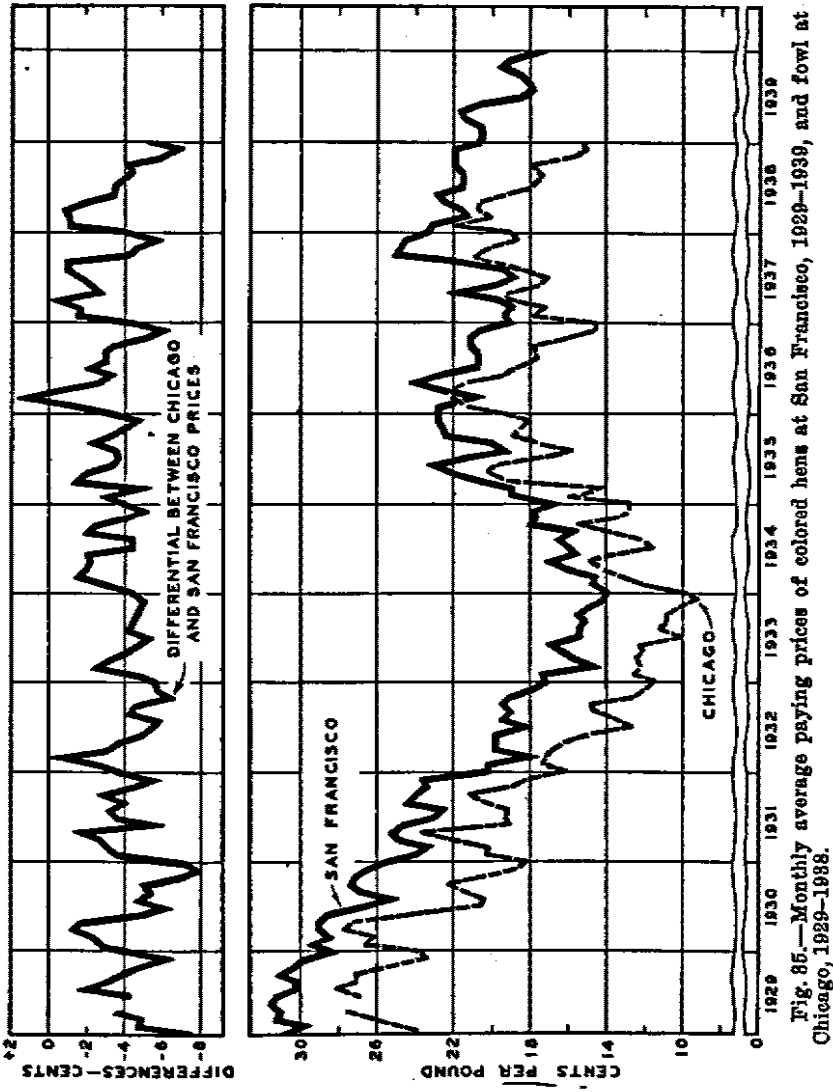

Fig. 85.—Monthly average paying prices of colored hens at San Francisco, 1929–1939, and fowl at Chicago, 1929–1938.

Data from table 56 and from *Dairy Produce Yearbooks*, Chicago.

area in the United States. Most of the unloads of live poultry and the bulk of the dressed poultry in the seaboard cities of the middle and north Atlantic states originate in the upper Mississippi Valley states.

Unfortunately price comparisons between Chicago and California

markets are difficult to make, largely on account of the absence of quotations for similar chicken classifications.

Fowl prices have been quoted in Chicago for a period of years and these have been compared with San Francisco colored-hen prices in figure 35. A high degree of correlation is evident. The average annual differential of San Francisco over Chicago for the ten years 1929–1938 has been 3.7 cents a pound; with a range of 2.8 cents in 1936 to 4.7 cents in 1930. The lower Chicago price would be expected because the city is close to the center of the chicken production in the United States.

Seasonal variation in fowl prices is far more pronounced at Chicago than at San Francisco as the following comparison for the ten years 1929–1938 shows:

Month	San Francisco price, in cents per pound	Chicago price, in cents per pound	Differential between San Francisco and Chicago prices, in cents per pound
January	22.0	19.0	−3.0
February	20.9	18.8	−2.1
March	22.1	20.1	−2.0
April	22.8	20.3	−2.5
May	22.5	——	——
June	21.3	17.3	−4.0
July	21.0	17.4	−3.6
August	21.6	18.2	−3.4
September	22.6	18.7	−3.9
October	22.3	17.2	−5.1
November	22.0	16.1	−5.9
December	20.8	16.1	−4.7

The May price for Chicago is available for nine of the ten years; the average price for these nine years was 17.7 cents.

April prices on the average at Chicago have been approximately 25 per cent higher than the low prices which normally come in November and December. While the high San Francisco price generally comes in April, it has averaged only about 10 per cent more than the December price. The greater differential in favor of prices on the west coast occurs in the seven months beginning with June. This would be expected since the latter period is that of great supply in the Midwest.

Wholesale quotations on "springers" are available at Chicago. In live-poultry terminology, particularly in the central west, this term refers to what are commonly called "spring chickens," or "roasting chickens." "Springers," or "springs" as they are often called, may be of either sex and are the next larger classification in weight above frying chickens. In California on the other hand, the three sizes of chickens are known as "broilers," "fryers," and "roasters." Most of the broilers and fryers in the state are Leghorns, and roasters are colored birds. Comparisons be-

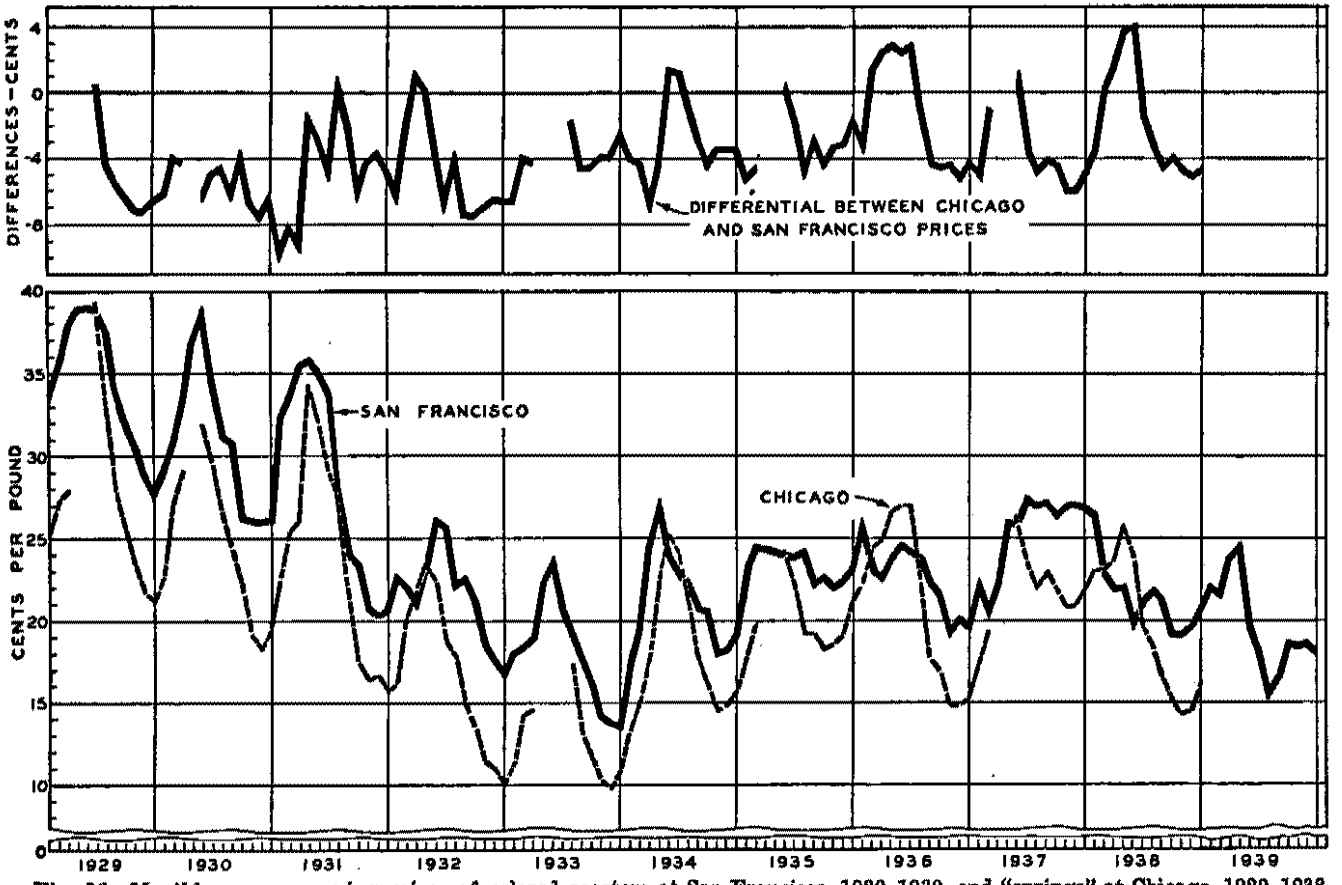

Fig. 36—Monthly average paying prices of colored roasters at San Francisco, 1929–1939, and "springs" at Chicago, 1929–1938.
Data from table 54 and from *Dairy Produce Yearbooks*, Chicago.

tween colored-roaster prices at San Francisco (or Los Angeles) and those of "springs" at Chicago show a high degree of correlation (fig. 36). Prices in the latter city have been materially lower as the following data for the period 1929–1938 show:

Month	San Francisco price, in cents per pound	Chicago price, in cents per pound	Differential between San Francisco and Chicago prices, in cents per pound
January	25.0	19.2	−5.8
February	25.1	21.6	−3.5
March	26.2	——	——
April	28.0	——	——
May	28.0	——	——
June	27.3	——	——
July	25.6	22.6	−3.0
August	24.2	19.7	−4.5
September	22.9	17.9	−5.0
October	21.5	16.4	−5.1
November	21.4	16.1	−5.3
December	21.4	16.7	−4.7

March prices for eight of the ten years at Chicago average 23.3 cents a pound; April prices for five years average 26.5 cents; May prices for eight years average 26.6 cents; and June prices for nine years average 25.9 cents.

Differentials in favor of the Pacific Coast cities are normally higher in the months beginning in September when the "springs" begin to appear in quantity. The seasonal pattern on the Pacific Coast markets is similar to that at Chicago. The pattern for "springs" in turn is similar to that for colored hens.

Such data as are available on Leghorn-hen quotations at Chicago indicate that Los Angeles (or San Francisco) prices normally average somewhat higher. There have been exceptions, as occurred in 1937, when the prices at Chicago topped those of Los Angeles by a fraction of a cent. In the first half of the year Chicago quotations are generally about the same as those in California or somewhat higher. Beginning in the late spring or early summer the midwestern Leghorn-hen prices start a pronounced downward tendency, ending in the year's low in November or December. The difference in seasonal production, as well as in the poultry classes produced in the Midwest and in California, make for a widening of the differential in favor of the western markets as the year goes into its third and fourth quarters. With the large volume of poultry coming on to the main markets in the latter months, the competition of Leghorn hens with other chicken classes—roasters, fowl and broilers and fryers—becomes more severe. The price drops as the result of the increased supplies, and the into-storage movement occurs. On the California markets

broilers and fryers are in quantity prior to the offerings elsewhere. The main product of the industry in California is eggs, and outside of broilers and fryers, the only sizable offerings from within the state are Leghorn hens. The chief reason for these offerings is culling and not price. As a result of these various factors the midwestern and eastern offerings of poultry are more seasonal than in California.

Comparisons between quotations on other classes of poultry at Chicago and on California markets are difficult, if not impossible to make. While poultry shipments made from the Midwest to California loom large, shipments from California to Chicago are very small. At times in the first half of the year shipments are made which are attracted by an occasional price premium in Chicago.

RETAIL CHICKEN PRICES

Retail chicken prices for various cities and for the country as a whole are issued once a month by the United States Department of Labor Bureau of Labor Statistics. These have shown the same general tendencies as prices paid producers for chickens with certain differences, characteristic of retail-wholesale price relations. In a rapidly rising price period (1915 to 1919) producer prices rose more rapidly than retail prices. From 1933 through 1936 producer prices rose somewhat more rapidly than retail prices. (Compare tables 27 and 46.) On the other hand, with falling prices those for producers have declined more rapidly (1920–1921 and 1929–1933). A lag can usually be noticed—retail prices trailing those paid producers; for example, the price paid producers declined in 1938 as compared with 1937 (table 46), while retail prices changed but slightly (table 27). Both wholesale and retail prices moved downward in 1939.

As compared with retail food prices those for chickens for the United States as a whole were relatively higher from 1923 through 1929 (1923–1925 = 100). Increased urban prosperity in the latter twenties brought chicken prices in Los Angeles and San Francisco to higher levels than retail food prices generally (table 28). The relative drop in prices (1929–1933) was greater for chickens than for foods in general. Retail chicken prices increased more rapidly than general retail food prices from 1933 through 1938. This tendency did not continue through 1939. As compared with most other foods, the general preparation of chickens for market after leaving the farm is not great. Manufacturing and processing costs entering into the preparation of many other foods are more important than in the case of chickens, and hence general retail food prices decline less rapidly than those of chickens (fig. 37). Furthermore, chicken is placed in the luxury food class by a considerable part of the

TABLE 27

AVERAGE AND RELATIVE RETAIL PRICES OF HENS* AND EGGS FOR UNITED STATES, LOS ANGELES, AND SAN FRANCISCO, 1913–1939

Year	United States				Los Angeles				San Francisco			
	Hens		Eggs		Hens		Eggs		Hens		Eggs	
	Average price	Relative price	Average price	Relative price	Average price	Relative price	Average price	Relative price	Average price	Relative price	Average price	Relative price
	cents per pound	*1913=100*	*cents per dozen*	*1913=100*	*cents per pound*	*1913=100*	*cents per dozen*	*1913=100*	*cents per pound*	*1913=100*	*cents per dozen*	*1913=100*
1913	21.3	100	34.5	100	26.6	100	38.3	100	24.2	100	37.3	100
1914	21.8	102	35.2	102	27.1	102	39.2	102	24.4	101	39.2	105
1915	20.8	98	34.1	99	25.6	96	36.3	95	24.2	100	38.2	102
1916	23.6	111	37.5	109	26.7	100	38.9	102	26.3	109	38.1	102
1917	28.6	134	46.1	130	29.1	109	45.4	119	28.9	119	46.5	125
1918	37.7	177	56.9	165	39.2	147	58.2	152	42.1	174	59.5	160
1919	41.1	193	63.5	182	46.3	174	62.6	163	48.7	201	63.3	170
1920	44.7	210	68.1	197	49.0	184	64.5	168	50.4	208	65.3	175
1921	30.7	186	50.9	148	44.3	166	50.2	131	46.2	191	50.2	135
1922	25.0	160	44.4	129	41.3	155	44.8	117	40.5	167	42.9	115
1923	25.5	168	49.9	145	39.7	149	46.5	121	40.4	167	44.5	119
1924	26.4	171	51.0	148	40.2	151	46.4	121	41.0	169	44.5	119
1925	28.0	178	55.4	161	42.9	158	50.5	132	42.1	174	46.5	125
1926	40.2	189	51.9	150	44.4	167	46.3	121	44.7	185	45.3	121
1927	28.2	179	48.7	141	42.8	161	41.6	109	42.3	179	41.0	110
1928	23.9	152	50.3	146	44.0	166	43.7	114	42.4	175	42.0	113
1929	41.2	193	53.7	153	46.1	173	47.5	124	44.2	183	46.1	121
1930	25.7	172	44.5	129	41.1	155	38.8	101	40.8	169	39.3	107
1931	23.2	151	35.0	101	35.1	132	32.8	86	35.2	145	31.1	83

1932	25.6	120	30.2	88	28.8	108	28.1	73	28.5	118	27.1	78
1933	21.8	102	28.8	83	26.3	99	28.0	73	26.5	110	29.1	78
1934	25.9	122	32.5	94	27.9	105	30.1	79	32.4	134	30.9	88
1935	30.3	142	38.8	111	33.0	124	35.0	91	35.2	145	35.6	95
1936	32.0	150	37.8	110	35.0	132	32.0	84	34.8	144	33.0	88
1937	33.5	157	36.9	107	34.4	129	32.7	85	38.2	158	33.3	89
1938	33.6	158	36.0	104	34.6	130	34.3	90	36.3	150	33.5	90
1939	30.1	141	32.6	94	32.2	121	31.8	83	35.1	145	31.5	84

*Designated as roasting chickens in recent years.

Sources of data:

United States:

1913–1922: from United States Department of Labor Bureau of Labor Statistics. Retail prices. Bul. 495:33, 1929.
1923–1936: from United States Department of Labor Bureau of Labor Statistics. Retail prices of food, 1923-1936. Bul. 635:80–87. 1938.
1937–1938: from United States Department of Labor Bureau of Labor Statistics. Retail prices, monthly issues. January, 1938, and January, 1939.

Los Angeles and San Francisco:

1913–1927: from United States Department of Labor Bureau of Labor Statistics. Retail prices. Buls. 270, 300, 315, 334, 396, 445, and 495.
1928–1936: from United States Department of Labor Bureau of Labor Statistics. Retail prices of food 1923–1936. Bul. 635:142, 144.
1937–1938: from United States Department of Labor Bureau of Labor Statistics. Retail prices, monthly issues. (Mimeo.)

population. The tendency for chicken prices to hold to relatively higher levels than those for eggs is evident in retail prices (table 27).

Between the retail prices of hens in San Francisco and the nation as a whole, prices in the city have averaged approximately 4.1 cents a

TABLE 28

AVERAGE AND RELATIVE RETAIL PRICES OF HENS* IN UNITED STATES, LOS ANGELES, AND SAN FRANCISCO, AND INDEX OF RETAIL FOOD PRICES, 1923–1939

Year	United States			Los Angeles			San Francisco		
	Hens		Retail food index	Hens		Retail food index	Hens		Retail food index
	Average price	Relative price		Average price	Relative price		Average price	Relative price	
	cents per pound	*1923–1925 = 100*	*1923–1925 = 100*	*cents per pound*	*1923–1925 = 100*	*1923–1926 = 100*	*cents per pound*	*1923–1925 = 100*	*1923–1926 = 100*
1923	35.8	97.5	97.9	39.7	97.7	97.3	40.4	98.1	96.4
1924	36.4	99.1	97.0	40.2	98.9	96.4	41.0	99.6	97.3
1925	38.0	103.4	105.0	42.0	103.4	104.2	42.1	102.3	106.9
1926	40.2	109.4	108.5	44.4	109.3	108.2	44.7	108.6	108.2
1927	38.2	104.0	104.5	42.8	105.3	100.3	42.8	105.2	103.1
1928	38.9	105.9	103.3	44.0	108.3	98.7	43.4	108.6	102.4
1929	41.3	112.2	104.7	46.1	113.5	100.3	44.3	107.6	104.9
1930	36.7	99.9	99.6	41.1	101.1	93.9	40.8	99.1	101.5
1931	33.2	87.7	83.0	35.1	86.4	75.1	35.2	85.5	88.6
1932	28.6	69.7	68.3	28.8	70.9	63.6	28.5	69.2	73.0
1933	21.5	59.3	66.4	26.3	64.7	64.6	26.5	64.4	71.6
1934	25.9	70.5	74.1	27.9	68.7	68.1	33.4	76.7	77.3
1935	30.3	82.5	80.5	33.0	81.2	73.7	36.2	85.5	83.9
1936	32.0	87.1	82.1	35.0	86.1	74.8	34.8	84.5	82.7
1937	33.5	91.2	85.1	34.4	84.7	79.1	38.2	92.8	85.6
1938	33.6	91.5	78.9	34.6	85.2	72.0	36.8	88.2	81.4
1939	30.1	81.9	77.0	32.2	79.3	70.7	35.1	85.3	80.1

* Designated as roasting chickens in recent years.

Sources of data:

United States:

1923–1936: United States Department of Labor Bureau of Labor Statistics. Retail prices of food, 1923–1936. Bul. 635:15–17, 80–87. 1938.

1937–1938: United States Department of Labor Bureau of Labor Statistics. Retail prices. p. 12, January, 1938; p. 10 and 12, January, 1939. (Mimeo.)

Los Angeles and San Francisco:

1923–1927: United States Department of Labor Bureau of Labor Statistics. Retail prices. Buls. 396, 445, and 496.

1928–1936: United States Department of Labor Bureau of Labor Statistics. Retail prices of food, 1923–1936. Bul. 635:60–63, 142, 144. 1938.

1937–1938: United States Department of Labor Bureau of Labor Statistics. Retail prices. p. 15, January, 1938; and p. 15, January, 1939, for annual indexes. Annual prices are averages of monthly prices as given in monthly mimeographs.

pound higher during the twenty-seven years 1913–1939. There is a high degree of correlation between the two sets of relative prices. From 1913 to 1939 they have averaged 0.5 cent a pound lower than those in San Francisco.

Although large supplies of both live and dressed poultry are shipped into California, retail prices within the state show a closer correlation to producer prices within the state than to those in the entire country.

Prior to 1930 San Francisco retail chicken prices were more closely geared to California producer prices than were those in Los Angeles. Since 1930 the reverse has been the case. This change would indicate to

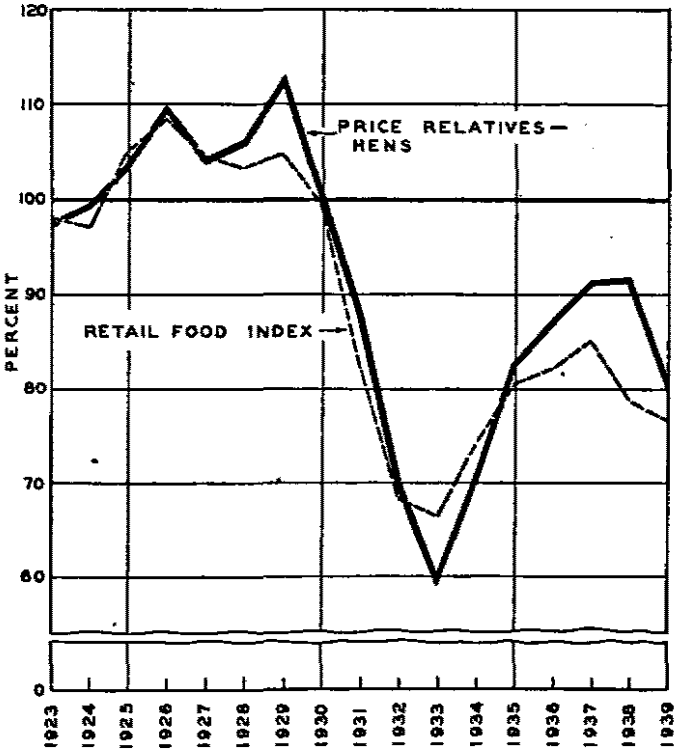

Fig. 37.—Relative retail prices of hens and index of retail food prices, United States, 1923–1938. (1923–1925=100.)
Data from table 28.

some extent a change in the demand of the southern California area for chickens within the state. Furthermore, it may be that the area contiguous to Los Angeles furnishes a larger proportion of the chickens entering that market.

COLD-STORAGE HOLDINGS OF POULTRY

Owing to seasonal poultry production, storage plays a not inconsiderable influence on price. Poultry storage holdings show a pronounced seasonal variation for the United States (table 29) and for the Pacific section (table 30.) Over the whole country poultry accumulates in the coolers in the early fall, with a large volume of young chickens marketed, and holdings rise to a peak toward the end of the year (January 1

usually being the peak). This seasonal rise is accelerated by the marketing of the greater part of the annual turkey supply. Net out-of-storage movement usually starts in January, is greatest in March, and generally ends in late summer. The variation in holdings is from 173 per cent of the average annual holdings on January 1 to about 57 per cent on August 1.

In the Pacific section poultry storage holdings show far less seasonal variation than for the United States (fig. 38). This is partly accounted for by the lack of pronounced climatic changes on the Pacific Coast. In this section there are, moreover, two peaks and two low points in poultry storage holdings, the peaks coming usually in February and August and the valleys in May and November.

TABLE 29

INDEXES OF SEASONAL VARIATION IN COLD-STORAGE HOLDINGS OF VARIOUS CLASSES OF POULTRY IN THE UNITED STATES

(Average for year = 100)

Date	All poultry	All poultry minus turkeys	Broilers	Fryers	Roasters	Fowls	Turkeys
January 1	173	177	153	194	200	178	139
February 1	167	164	136	180	196	164	160
March 1	145	139	117	156	170	141	156
April 1	111	106	90	124	131	103	142
May 1	80	75	64	85	94	67	118
June 1	63	58	47	57	67	58	99
July 1	58	55	44	39	46	66	86
August 1	57	54	58	29	31	70	73
September 1	58	58	85	29	34	67	87
October 1	67	74	117	58	31	86	46
November 1	88	101	138	101	73	89	91
December 1	134	139	151	163	138	139	78

Source of data:
Calculations by authors based upon data in table 68.

Unlike the cold-storage holdings of turkeys, which have shown an upward trend in the peaks of each year and a somewhat less pronounced downward trend in the low points of storage holdings,[*] there has been no pronounced trend in the peaks or low points of the totals of all other poultry classes in the coolers of the country (fig. 39).

There is considerable correlation between chicken storage holdings and prices at different times of the year. When supplies are leaving storage from January through June prices are rising (table 50). Generally, while storage supplies are accumulating from August until December, prices are falling (table 46).

[*] Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bul. 612: 69. 1937.

Total poultry cold-storage holdings include not only various chicken classes but, in addition, other poultry types; for example, turkeys, ducks, and geese. A breakdown of the total storage data into component parts gives a clearer picture of the storage movement in the different classifications and a somewhat better understanding of the seasonal variations in storage holdings.

Table 63 indicates that the most important poultry meat in the United States from the standpoint of the amount placed in storage is the roaster. This is followed by fowls, closely trailed by broilers, and last by fryers.

TABLE 30

INDEXES OF SEASONAL VARIATION IN COLD-STORAGE HOLDINGS OF VARIOUS CLASSES OF POULTRY IN THE PACIFIC SECTION

(Average for year = 100)

Date	All poultry	All poultry minus turkeys	Broilers	Fryers	Roasters	Fowls	Turkeys
January 1	110	125	105	128	147	135	77
February 1	123	108	82	97	151	114	163
March 1	122	85	54	80	136	101	211
April 1	101	78	39	64	113	89	171
May 1	88	63	37	54	99	76	143
June 1	90	73	65	77	85	75	123
July 1	101	98	119	102	80	88	103
August 1	103	112	148	113	68	93	76
September 1	98	115	154	118	67	98	47
October 1	87	114	145	122	58	107	28
November 1	83	115	133	119	79	113	16
December 1	94	126	119	125	116	114	42

Source of data:
Calculations by authors based upon data in table 64.

Turkeys rank ahead of fryers if comparisons are made with various chicken classes. In the Pacific section holdings present an entirely different picture. Turkeys have far outweighed any single chicken classification in total holdings in any one year since 1931 (table 64), while in chicken holdings broilers have usually been first. Fowls rank next, followed by roasters and fryers in the order named. In 1939 fowls ranked all other chicken classes. The volume of the various types of poultry placed in storage in the country is somewhat indicative of production conditions.

Turkey numbers in the Pacific Coast and mountain states are larger in proportion to the human population than in any other part of the nation.[41] From the chicken standpoint, the Leghorn is outstanding on account of specialized egg production. This accounts for the relatively

[41] Tinley, J. M., and E. C. Voorhies. Economic problems affecting turkey marketing in California. California Agr. Exp. Sta. Bul. 612:14–15. 1937.

large production of the two products which would normally be the result of utilizing the Leghorn—broilers and fowls. Large numbers of colored fowls are shipped into the state from the Midwest and no separation is made between these and Leghorn fowls in issuing statistics.

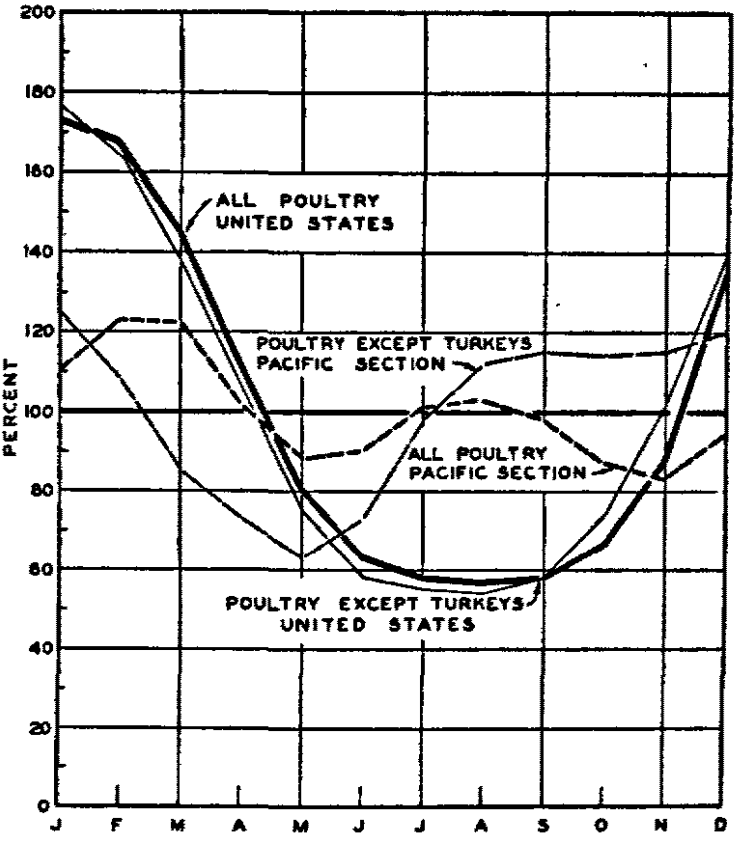

Fig. 38.—Indexes of seasonal variation of cold-storage holdings of all poultry and all poultry except turkeys, in the United States and the Pacific section.

Data from tables 63 and 64.

The roaster classification plays a minor rôle in the chicken storage supplies of the West. A large part of the roasters are shipped into the state and placed in storage until needed.

Broiler storage holdings in the United States are less highly seasonal than all poultry or individual classes of poultry (table 29 and fig. 40). The broiler market is somewhat limited and if storage is to be avoided the bird can be grown to the fryer stage—or, in the case of colored birds, can be allowed to reach the roaster stage. On account of the relatively limited broiler production, however, storage supplies are usually not

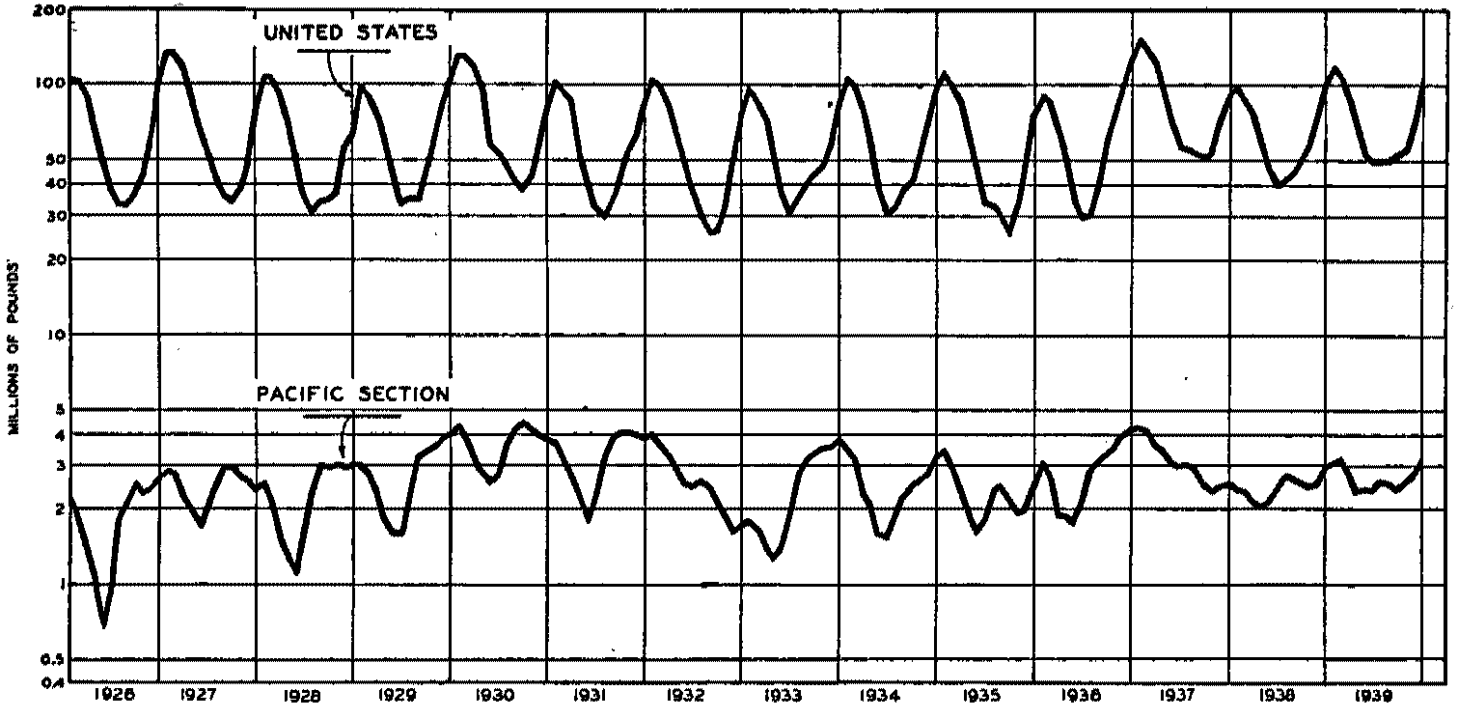

Fig. 39.—Cold-storage holdings of all poultry (except turkeys) on the first of each month in the United States and the Pacific section, 1926–1939.

Data computed by authors from tables 63 and 64.

allowed to be so greatly depleted as those of either fryers or roasters. June or July is usually the low point in holdings, and beginning in the latter month broilers are placed in the coolers (fig. 41). This into-storage movement largely continues into September, although the peak holdings are usually reported on January 1. In some years the peak is reached

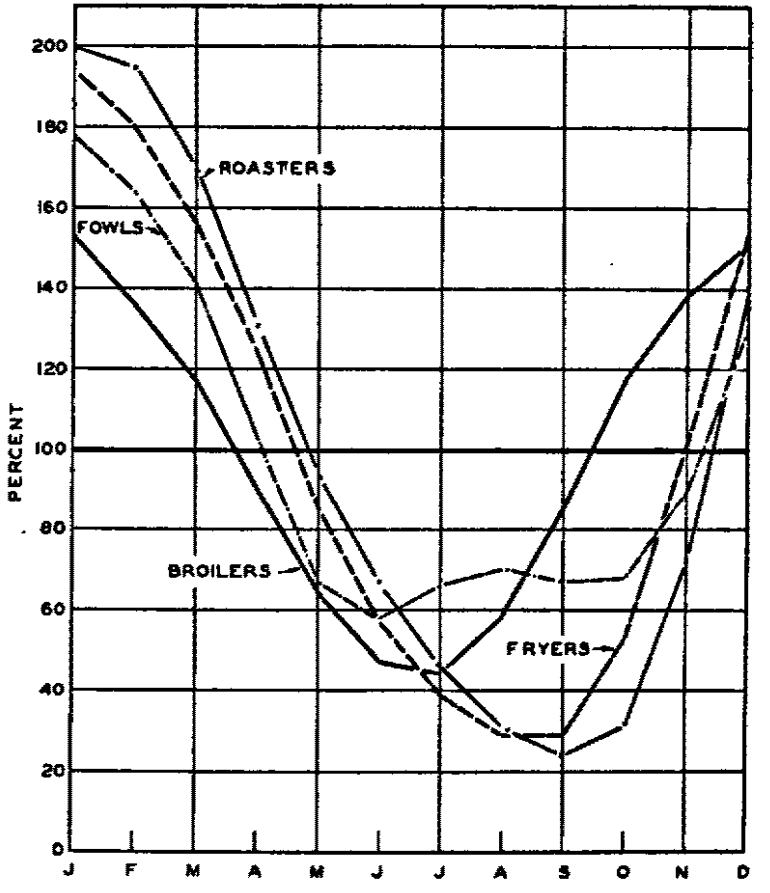

Fig. 40.—Indexes of seasonal variation of cold-storage holdings of broilers, fryers, roasters, and fowl in the United States.

Data from table 29.

a month earlier. It becomes necessary to use frozen broilers from November or December until May. Usually the out-of-storage movement is small in volume until March, and in this and the two following months, April and May, the bulk of the holdings moves.

Since broilers are usually from 8 to 12 weeks old when marketed, and since production can and does take place out of season in or near the more densely populated areas of largest poultry consumption, the idea

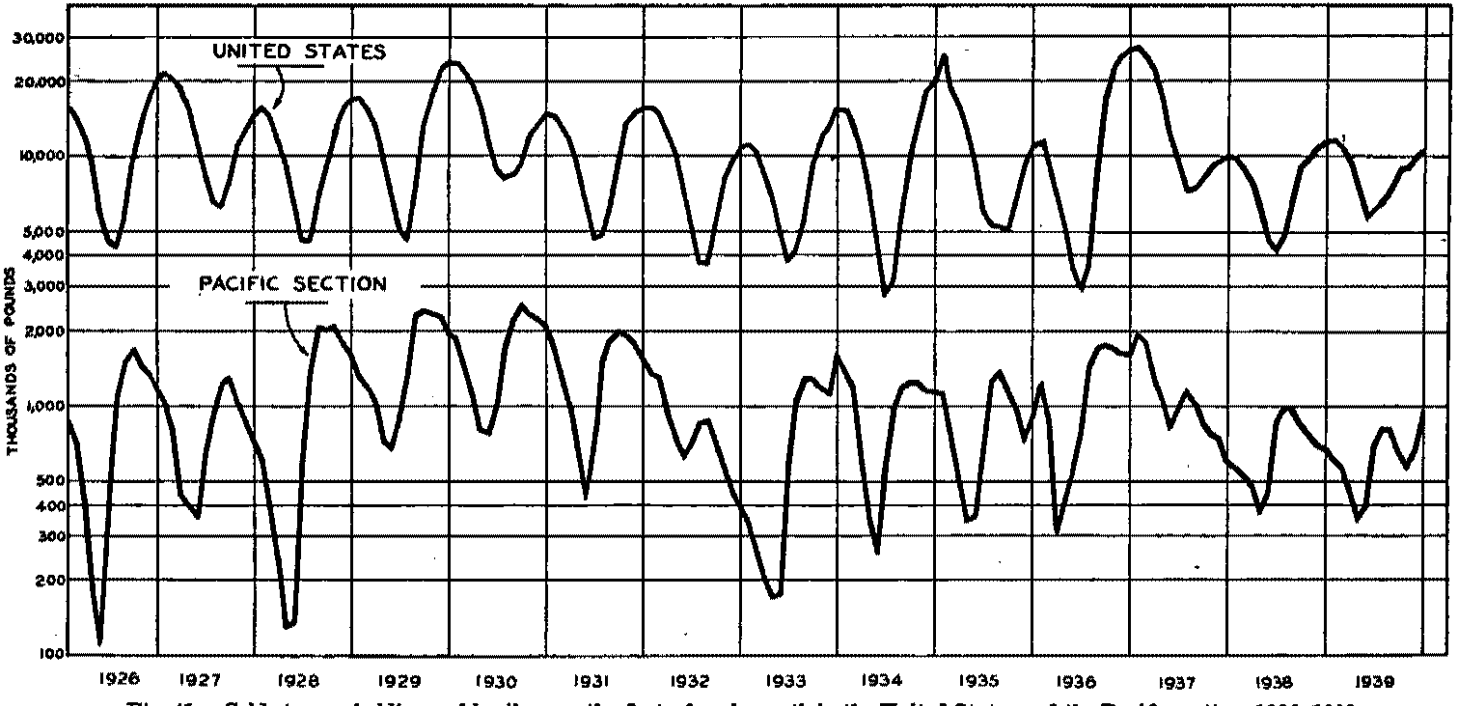

Fig. 41.—Cold-storage holdings of broilers on the first of each month in the United States and the Pacific section, 1926–1939.
Data from tables 63 and 64.

has been expressed that the "hothouse" broiler would do away with the necessity for frozen broilers. This situation has not come about, as figure 41 shows. From 1926–1927 until 1932–1933 there was a slight downward trend in broiler holdings in the United States, but since the latter period there has not been a pronounced upward or downward trend. This latter

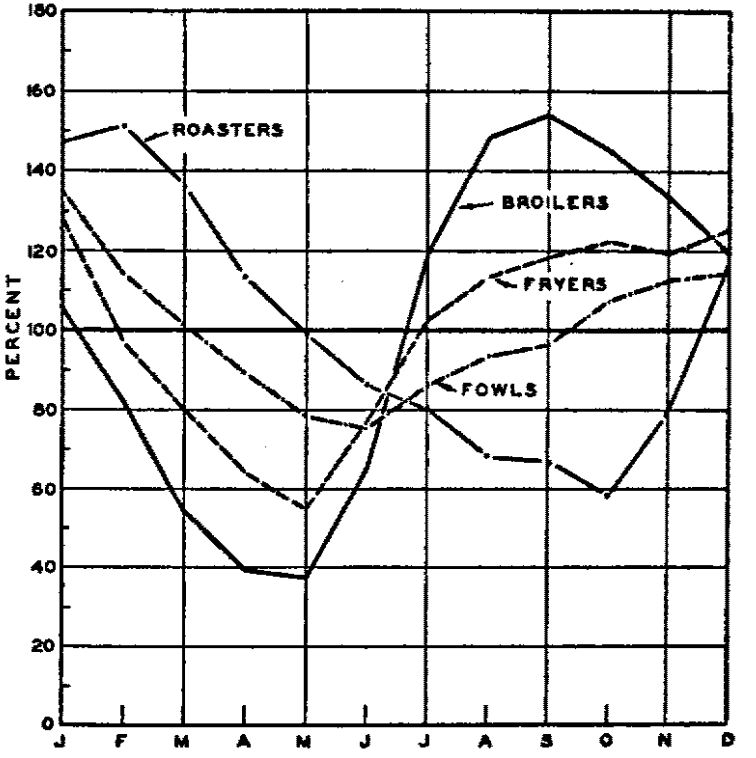

Fig. 42.—Indexes of seasonal variation of cold-storage holdings of broilers, fryers, roasters, and fowl in the Pacific section.
Data from table 80.

situation, of course, was complicated by the droughts in 1934 and 1936, which caused somewhat abnormal shipments of many poultry classes to markets.

The Pacific section presents a somewhat different seasonal storage pattern for broilers. Surplus Leghorn-broiler production on commercial egg-producing farms of the West usually starts in early spring and storage holdings begin to accumulate in April or May (fig. 42). Holdings are usually at the lowest point of the year on May 1, although those on April 1, and even March 1, have been in this position during some years. Then in May and June usually come the largest increases to cooler supplies, and by September 1 holdings are usually at a peak (August 1

and October 1 have at times been the dates of peak holdings). During the late fall and early winter, supplies are drawn upon rather slowly, withdrawals usually being heavy during the first three months of the year.

Peaks and valleys in holdings usually occur in the Pacific section from one to three months before the upper and lower maximums in the country as a whole (fig. 42). At the peak of high holdings in the Pacific section, supplies for such markets as New York are not readily available and in many years prices are not quoted, but on account of the accumulating supplies of other classes of poultry, broiler prices tend to be lower in the last half than in the first half of the year; for example, in New York.

Not only is the pattern of seasonal variations in broiler holdings different in the Pacific Coast states from that in the remainder of the country but also actual variation in storage supplies has been relatively greater in the Pacific Coast states (fig. 42). The droughts of 1934 and 1936 made for somewhat abnormal variations in storage holdings in those years for the country at large.

Fryer holdings are not separated into those of the Leghorn and colored breeds in storage-holdings reports. All birds, regardless of breed, are included in the fryer classification. Holdings are at a low point from 6 to 8 weeks later than those of broilers. In the past few years this point has been reached in the summer for the United States as a whole—usually in August (table 63). On account of seasonally low prices the largest additions to stocks of colored fryers are made in October and November. Peak holdings are almost invariably reached about January 1. Withdrawals usually start in considerable volume in February and continue through May.

In the Pacific section fryer holdings present a somewhat different pattern (fig. 42). The combination of the Leghorn breed and efforts for early hatching brings larger and earlier production than in other sections. Heaviest into-storage movements usually occur in May and June. Peak holdings usually are reached about September 1. At times, largely owing to fall broiler production, the peak comes in November, December, or even January. Poultry raising being more of a year-round business in California than in the midwestern or some of the eastern states, holdings do not evidence so great a seasonal variation (fig. 42). Since 1926 the trend in storage holdings of fryers in the entire country and the Pacific section has been upward.

The in-and-out-of-storage movements of roasters are highly regular. With a high fall poultry production and relatively low prices, supplies accumulate shortly after the low point in storage is reached in Septem-

ber. The into-storage movement is in full swing from October through December. Another factor making for a rapid increase of total holdings is the marketing at this period of large turkey supplies, turkey partly taking the place of chicken in consumption. Roasters are not usually removed in considerable volume until after February 1, and in the months of relatively high prices, March through May. Removals are relatively small in July and August.

The Pacific section, in contrast to the remainder of the country, gives evidence of far less seasonality in roaster holdings. Since most of these birds are produced in the Midwest, the great bulk of holdings is reported from east of the Rockies, the western section of the country playing a very minor rôle. The peaks and valleys in storage holdings for the Pacific section correspond with those of the nation.

Fowls usually accumulate during the fall and early winter, and by January holdings are at a peak. The largest out-of-storage movements take place from February through April. In some years the low point is reached by June. In several recent years summer and early fall supplies have fluctuated considerably and the low point in storage was not reached until October 1. They show clearly the irregularity in the seasonal cold-storage movement (as compared with other classes of chickens). There are always potential supplies on hand, and holdings are largely influenced by considerations that are somewhat different from those which bear upon holdings of other classes. Egg and feed prices, as well as poultry prices, play a decided rôle in determining supplies of fowls in the coolers. With the 1934 drought in the Middle West, large numbers were marketed and a considerable number of these were placed in storage. In 1935 eggs were commanding a relatively high price (tables 21 and 27) and one result was that chickens were retained on farms. In the following year (1936) large numbers of fowls were again stored as the result of the 1936 drought, lower egg prices, and a chicken price which held relatively better than egg prices. In addition, feed prices were high. All of these factors caused farmers to market fowls in larger numbers, and the greatest number of fowls in the history of holdings found their way into the coolers.

On the Pacific Coast the differential between the high and low holdings of fowl is not so great as in the other poultry classes. The largest supplies are usually found in January, and the low point is most often reached in June. This is by no means regular. Storage facilities on the Pacific Coast probably are used to hold supplies over short periods, since the hen production is not so seasonal as the production of other types of poultry.

Duck holdings were first reported separately in July, 1932. Since then

the seasonal in-and-out movements have been rather regular. A low point in supplies has occurred on May 1 from 1933 through 1939 (April 1 in 1937). Accumulations tend to be accelerated in the relatively warm months of June, July, and August—with the largest in-movements in July. Peak holdings are consistently found on approximately October 1—three months before the peak of all poultry holdings. Supplies of other poultry classes are being sent into storage in volume at this time—with the exception of turkeys. The out-of-storage movement is usually heaviest during the first three months of the year. Holdings in the Pacific section are small, usually following the seasonality pattern for the nation.

APPENDIX OF TABLES

TABLE 31

CHICKENS ON FARMS, ON JANUARY 1, 1935, AND CHICKENS RAISED AND EGGS PRODUCED, BY GEOGRAPHIC DIVISIONS AND STATES, 1934

Geographic division and state	Chickens on farms on January 1, 1935 (over 3 months old)				Chickens raised in 1934				Chicken eggs produced in 1934		
	Human population 1934	Farms reporting	Per cent of all farms	Number of chickens	Farms reporting	Number of chickens	Chickens per farm	Chickens per capita	Farms reporting eggs	Number of dozens	Eggs per farm
	thousands	*number*	*per cent*	*thousands*	*number*	*thousands*	*number*	*number*	*number*	*thousands*	*dozens*
North Atlantic:											
Maine	837	27,619	65.9	1,519	22,272	3,083	138	3.7	25,668	12,844	500
New Hampshire	406	11,651	65.8	1,204	9,464	3,158	334	6.4	10,811	10,694	989
Vermont	374	18,344	67.8	743	14,943	1,225	82	3.3	16,827	5,923	352
Massachusetts	4,326	21,759	62.0	2,518	18,246	6,038	331	1.4	20,285	24,080	1,187
Rhode Island	681	2,955	68.3	304	2,309	656	273	0.9	2,774	2,457	886
Connecticut	1,699	19,754	61.4	1,947	16,624	4,561	274	2.7	18,592	16,208	872
New York	12,839	136,387	77.0	12,648	104,553	17,229	165	1.3	128,672	96,167	755
New Jersey	4,247	22,541	76.7	4,820	18,707	7,812	418	1.8	21,216	36,445	1,718
Pennsylvania	9,994	167,368	87.5	16,520	144,128	23,598	164	2.4	150,549	112,217	699
Total	35,493	428,378	77.1	42,223	351,446	67,353	192	1.9	405,389	318,035	784
East north central:											
Ohio	6,697	224,684	88.1	19,619	194,127	29,473	152	4.4	211,701	120,976	571
Indiana	3,398	181,480	90.4	14,417	165,883	26,721	161	7.9	171,935	80,685	469
Illinois	7,786	215,363	93.1	20,769	201,857	33,401	165	4.3	207,143	109,541	529
Michigan	4,580	163,385	93.1	11,114	135,995	15,942	117	3.4	155,340	79,081	509
Wisconsin	2,908	173,762	86.9	14,369	148,228	18,942	128	6.5	169,126	93,195	551
Total	25,469	958,674	88.5	80,188	846,090	124,470	147	4.9	915,245	483,478	528
West north central:											
Minnesota	2,617	173,888	85.5	15,664	156,855	24,578	157	9.4	168,841	102,576	608
Iowa	2,524	205,657	93.1	27,362	195,134	42,303	217	16.7	201,606	147,422	731
Missouri	3,866	251,004	90.1	20,157	232,704	33,294	143	8.6	230,941	118,284	493
North Dakota	697	70,273	83.1	3,469	64,198	5,693	89	8.2	68,806	19,795	288
South Dakota	678	72,339	86.8	5,524	65,209	9,087	139	13.4	71,269	29,836	419
Nebraska	1,364	121,630	91.0	11,454	116,735	24,745	212	18.1	119,210	68,423	582
Kansas	1,840	155,735	89.2	15,141	144,115	29,034	201	15.8	151,053	91,385	605
Total	13,586	1,051,526	89.1	98,771	974,950	168,824	173	12.4	1,020,726	577,721	566

(*Concluded on next page.*)

TABLE 31—(*Concluded*)

CHICKENS ON FARMS, ON JANUARY 1, 1935, AND CHICKENS RAISED AND EGGS PRODUCED, BY GEOGRAPHIC DIVISIONS AND STATES, 1934

South Atlantic:											
Delaware	253	9,039	87.1	1,073	8,095	5,174	763	24.4	8,549	6,531	764
Maryland	1,663	39,416	88.8	3,589	30,059	7,031	195	4.2	37,610	21,065	560
Virginia	2,602	175,948	89.0	8,542	165,398	15,517	100	6.3	169,430	43,067	254
West Virginia	1,801	93,951	89.7	4,124	82,664	5,355	65	3.0	89,007	21,696	244
North Carolina	3,376	265,607	88.3	8,806	246,180	16,180	66	4.8	253,289	33,601	133
South Carolina	1,967	146,135	88.3	2,894	137,844	7,437	54	2.8	141,226	12,377	88
Georgia	3,273	222,636	88.9	6,539	206,771	11,530	56	3.5	213,517	23,034	108
Florida	1,586	50,457	69.3	2,190	43,034	3,239	75	3.0	47,481	11,699	246
Total*	17,081	1,003,433	87.5	38,760	926,111	73,480	79	4.3	960,152	173,177	180
South Central:											
Kentucky	2,808	244,403	87.4	11,063	220,423	18,501	81	6.6	234,856	39,706	169
Tennessee	2,856	239,643	88.3	10,811	229,367	16,730	73	5.9	231,926	41,171	178
Alabama	2,803	243,240	86.1	6,778	222,260	10,436	47	3.7	234,042	28,170	120
Mississippi	1,961	263,775	74.3	8,715	238,832	10,679	45	5.4	253,110	23,844	94
Arkansas	1,975	224,355	80.5	6,870	204,555	10,773	53	5.5	214,321	27,424	128
Louisiana	2,117	149,781	79.6	4,331	134,932	6,487	48	3.1	143,524	14,007	98
Oklahoma	2,490	191,848	87.9	9,656	169,205	16,241	96	6.5	179,595	45,743	255
Texas	6,035	425,891	81.7	20,541	371,854	27,747	76	4.6	404,140	106,786	264
Total	23,045	1,982,936	87.2	76,765	1,800,428	117,593	65	5.1	1,895,514	326,850	173
Mountain:											
Montana	331	38,779	79.9	1,989	33,831	2,985	88	5.6	37,495	13,221	353
Idaho	473	34,933	77.9	1,980	28,056	2,729	97	5.8	32,803	13,530	413
Wyoming	231	13,711	79.6	690	11,990	1,114	93	4.8	13,129	4,578	349
Colorado	1,058	81,966	81.7	3,359	44,192	5,574	126	5.3	49,336	20,928	424
New Mexico	402	28,745	67.5	1,007	22,317	1,280	57	3.2	26,828	5,256	196
Arizona	356	10,979	64.1	554	8,809	786	89	2.0	9,989	3,722	373
Utah	814	19,876	66.9	2,104	13,313	2,599	195	5.1	18,985	18,892	995
Nevada	98	3,759	76.5	224	2,413	297	122	3.0	2,629	1,884	717
Total	3,693	201,798	74.4	11,907	164,979	17,364	105	4.7	191,194	82,123	430
Pacific:											
Washington	1,632	82,231	74.9	5,881	47,103	7,704	184	4.7	58,224	56,535	971
Oregon	999	50,329	77.6	3,064	37,562	3,911	104	3.9	46,797	25,308	432
California	5,639	93,774	61.7	14,043	64,102	18,159	283	3.2	85,958	117,779	1,370
Total	8,260	206,334	68.9	22,988	148,767	29,774	200	3.6	190,979	199,622	1,045
United States*	126,636	5,833,079	85.6	871,903	5,212,762	593,587	115	4.7	5,579,198	2,169,906	387

* Includes District of Columbia.

Sources of data:
United States Department of Commerce Bureau of the Census. Census of Agriculture, 1935, vols. 1 and 2. 1936.
United States Department of Commerce Bureau of Foreign and Domestic Commerce. Statistical Abstract for the United States, 1936.

TABLE 32

FARMS REPORTING CHICKENS ON APRIL 1, 1930, AND JANUARY 1, 1935, GROUPED BY SIZES OF FLOCK* AND GEOGRAPHIC DIVISIONS

Size of flock*	North Atlantic		East north central		West north central		South Atlantic	
	1930	1935	1930	1935	1930	1935	1930	1935
Under 50	191,118	222,018	276,888	343,215	209,282	334,251	735,034	782,977
50- 99	103,109	94,977	293,247	301,056	278,168	305,016	117,187	156,579
100- 199	62,350	60,303	238,693	238,082	383,691	302,799	39,839	46,786
200- 399	29,051	31,627	68,448	66,503	158,587	108,784	11,317	12,541
400- 699	10,093	11,856	7,211	7,895	14,274	9,458	3,145	2,977
700- 999	3,058	3,485	1,117	1,149	1,059	859	526	761
1,000-2,499	2,420	3,589	588	703	406	353	722	719
2,500-and over	281	523	49	66	24	26	117	93
Total	401,490	428,378	881,241	958,674	1,025,491	1,051,526	908,187	1,003,433

Size of flock*	South Central		Mountain		Pacific		United States	
	1930	1935	1930	1935	1930	1935	1930	1935
Under 50	1,328,737	1,474,195	100,999	127,901	106,577	131,862	2,948,635	3,406,319
50- 99	317,986	385,595	48,266	45,777	31,119	33,928	1,189,082	1,302,928
100- 199	116,616	118,778	22,530	19,478	16,024	17,067	859,753	803,293
200- 399	25,636	21,353	6,926	5,935	10,824	10,428	305,791	257,171
400- 699	3,383	2,293	1,940	1,755	7,361	6,188	47,407	42,427
700- 999	649	403	552	482	3,454	2,630	10,715	9,769
1,000-2,499	388	272	487	497	4,606	3,540	9,617	9,658
2,500-and over	40	42	59	73	1,027	691	1,597	1,514
Total	1,793,435	1,982,936	181,761	201,798	180,992	206,334	5,872,597	5,833,079

* Size of flock based on numbers of chickens 3 months old or over on hand on census dates.

Source of data:
United States Department of Commerce Bureau of the Census. Chickens and eggs by size of flock. p. 4-10. 1939.

TABLE 33

PERCENTAGE OF CHICKENS RAISED IN 1929 AND 1934 BY SIZE OF FLOCK IN GEOGRAPHIC DIVISIONS OF THE UNITED STATES

Size of flock*	North Atlantic		East north central		West north central		South Atlantic		South central		Mountain		Pacific		United States	
	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934
None on hand†	1.7	1.9	0.8	0.7	0.4	0.9	0.7	3.6	0.5	0.4	1.0	0.9	2.5	2.9	0.8	1.3
Under 50	14.0	11.2	13.0	12.9	7.1	12.2	53.9	47.9	48.8	48.7	22.9	27.4	12.1	13.4	22.0	24.2
50– 99	16.0	13.0	26.1	24.6	18.4	22.2	18.7	22.0	26.0	26.4	24.6	24.5	7.9	8.8	20.8	22.2
100– 199	18.8	16.2	36.7	36.6	40.4	27.7	11.3	13.3	15.5	15.4	20.5	18.5	7.6	8.6	26.7	25.6
200– 399	18.3	17.9	16.9	18.1	23.1	22.4	6.6	6.9	6.0	4.0	13.1	11.2	11.3	10.3	16.7	14.5
400– 699	12.4	14.5	4.0	4.4	4.5	3.5	3.3	3.1	1.7	1.1	7.6	7.0	13.6	13.4	5.3	5.0
700– 999	6.6	7.1	1.1	1.1	0.6	0.6	1.5	1.2	0.6	0.4	3.4	3.2	9.2	8.3	2.6	1.9
1,000–2,499	9.3	13.2	1.1	1.3	0.4	0.4	2.4	2.1	0.9	0.4	5.2	5.3	21.4	20.9	3.2	3.4
2,500 and over	3.0	5.0	0.3	0.3	0.1	0.1	1.1	0.9	0.3	0.3	1.6	2.1	14.4	12.9	1.5	1.6

* Size of flock based on numbers of chickens 3 months old or over on hand on census dates.

† None on hand on census dates.

Source of data:
Calculations by authors based on data in: United States Department of Commerce Bureau of the Census. Chickens and eggs by size of flock. p. 4-10. 1930.

TABLE 34

PERCENTAGE OF CHICKEN EGGS PRODUCED IN 1929 AND 1934 BY SIZE OF FLOCK IN GEOGRAPHIC DIVISIONS OF THE UNITED STATES

Size of flock*	North Atlantic		East north central		West north central		South Atlantic		South central		Mountain		Pacific		United States	
	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934	1929	1934
None on hand†	0.6	0.5	0.4	0.3	0.3	0.5	0.3	0.2	0.3	0.2	0.7	0.5	1.2	0.4	0.4	0.4
Under 50	12.7	11.1	10.5	10.5	5.5	9.6	40.8	36.5	39.3	38.3	20.4	23.4	8.6	9.9	17.1	17.1
50– 99	15.9	12.3	24.6	22.6	16.4	20.2	21.0	22.9	27.0	29.1	23.2	21.6	6.3	7.3	19.5	20.0
100– 199	19.0	16.3	36.8	35.3	39.2	37.9	14.9	15.9	19.5	20.1	20.9	18.0	7.0	8.2	27.1	26.4
200– 399	19.0	19.1	19.8	21.5	31.3	25.8	9.6	10.5	9.1	8.4	14.1	13.0	10.9	11.9	19.2	18.2
400– 699	13.5	14.9	5.0	5.6	5.8	4.6	5.7	5.8	2.6	2.1	8.6	8.7	14.8	14.5	7.0	7.1
700– 999	7.0	7.5	1.4	1.4	0.8	0.7	2.5	2.5	1.0	0.6	4.0	4.1	10.9	10.2	2.9	3.0
1,000–2,499	9.5	13.2	1.2	1.5	0.6	0.6	3.9	4.4	0.9	0.8	6.2	7.3	24.7	23.5	4.6	5.4
2,500 and over	2.8	5.1	0.3	0.3	0.1	0.1	1.3	1.3	0.3	0.4	1.9	3.4	15.6	14.1	2.2	2.4

* Size of flock based on numbers of chickens 3 months old or over on census dates.

† None on hand on census dates.

Source of data:

Calculations by authors based on data in: United States Department of Commerce Bureau of the Census. Chickens and eggs by size of flock. p. 4–10. 1939.

TABLE 35

HUMAN POPULATION, CHICKENS RAISED, AND EGG PRODUCTION BY COUNTIES, CALIFORNIA, 1934

Region of State	Human population	Chickens raised				Eggs produced		
		Farms reporting	Chickens	Chickens per farm	Chickens per capita	Farms reporting	Number of dozens	Eggs per farm
	number	*number*	*number*	*number*	*number*	*number*	*thousands*	*dozens*
Del Norte	5,290	174	8,867	51	1.7	187	46	241
Humboldt	46,980	1,010	98,584	98	2.1	1,508	884	587
Trinity	3,900	368	15,130	56	3.9	200	70	241
Mendocino	24,270	1,116	162,182	145	6.7	1,348	1,096	816
Lake	8,610	578	54,505	94	6.3	618	294	480
Sonoma	65,150	3,064	3,937,231	1,299	60.4	4,687	24,776	5,343
Napa	24,210	661	200,726	296	8.3	950	1,406	1,477
Marin	45,250	327	479,848	1,467	10.6	587	2,952	5,029
North coast total	223,760	7,208	4,957,123	688	22.2	10,045	31,419	3,128
San Francisco	655,460	51	48,616	918	0.1	51	64	1,256
Alameda	479,840	825	479,972	582	1.0	1,768	4,296	2,290
San Mateo	88,130	387	63,406	164	0.7	427	342	801
Contra Costa	87,700	848	126,059	149	1.4	1,310	982	750
Santa Clara	157,390	2,438	563,581	231	3.6	2,315	2,093	814
Santa Cruz	43,390	748	433,122	579	10.0	1,246	2,308	1,848
San Benito	10,770	448	86,215	193	8.0	637	695	1,091
Monterey	57,620	710	195,397	275	2.9	1,175	1,422	1,210
San Luis Obispo	31,720	1,018	338,638	333	10.7	1,303	1,584	1,127
South coast total	1,622,020	7,470	2,335,005	312	1.4	11,323	14,315	1,264
Shasta	16,260	529	79,054	95	4.9	957	458	479
Tehama	15,120	917	216,382	236	14.3	1,506	1,040	796
Glenn	11,580	968	145,957	151	12.6	1,084	699	645
Butte	38,160	1,175	141,130	120	3.7	1,772	944	533
Yuba	13,970	408	38,584	93	2.4	509	249	489
Colusa	10,960	588	80,342	137	7.3	606	372	614
Sutter	16,650	882	120,073	136	7.2	1,056	977	925
Nevada	14,190	319	38,115	119	2.7	376	212	564
Placer	27,350	797	119,504	150	4.4	1,049	633	603
Sacramento	154,560	1,905	753,259	395	4.9	2,549	4,880	1,913
Yolo	25,790	733	113,594	145	4.4	931	668	668
Solano	41,400	804	141,591	176	3.4	1,045	923	883
El Dorado	10,560	521	39,342	75	3.7	566	205	362
Amador	9,650	263	24,362	93	2.5	270	136	504
Sacramento Valley total	406,200	11,159	2,046,380	183	5.0	14,076	12,374	879

TABLE 35—(*Concluded*)

HUMAN POPULATION, CHICKENS RAISED, AND EGG PRODUCTION BY COUNTIES, CALIFORNIA, 1934

Region of state	Human population	Chickens raised				Eggs produced		
		Farms reporting	Chickens	Chickens per farm	Chickens per capita	Farms reporting	Number of dozens	Eggs per farm
	number	*number*	*number*	*number*	*number*	*number*	*thousands*	*dozens*
San Joaquin	109,010	3,024	451,183	149	4.1	3,948	3,130	793
Calaveras	6,520	391	31,561	81	4.8	468	205	438
Stanislaus	60,910	3,030	658,181	217	10.8	4,255	4,690	1,102
Tuolumne	9,270	200	18,562	93	2.0	304	90	296
Merced	39,570	2,612	326,603	125	8.3	3,042	2,259	743
Mariposa	4,220	179	11,811	66	2.8	222	83	374
Madera	16,630	1,046	139,581	133	8.4	1,261	722	573
Fresno	148,700	4,963	553,247	111	3.7	6,796	4,237	623
Tulare	78,490	3,148	561,675	178	7.2	4,524	4,522	1,000
Kings	26,040	1,331	140,129	105	5.4	1,703	881	517
Kern	88,590	1,479	190,722	129	2.2	1,789	1,029	592
San Joaquin Valley total	587,950	21,403	3,083,255	144	5.2	28,262	21,848	773
Santa Barbara	73,200	534	122,789	230	1.7	817	697	853
Ventura	61,380	610	126,041	207	2.1	890	825	927
Los Angeles	2,424,450	5,246	2,773,155	529	1.1	6,881	18,374	2,670
San Bernardino	150,210	2,131	995,958	467	6.6	2,609	6,964	2,669
Orange	120,850	1,191	189,257	159	1.6	1,822	1,265	694
Riverside	95,830	2,071	492,591	238	5.1	2,993	3,562	1,190
San Diego	245,830	2,194	710,600	324	2.9	2,781	4,357	1,567
Imperial	69,260	956	157,009	164	2.3	1,263	655	519
Southern California total	3,241,010	14,935	5,567,400	373	1.7	20,036	35,699	1,830
Siskiyou	29,840	777	65,190	84	2.3	917	471	514
Modoc	7,510	495	41,998	85	5.6	537	210	391
Lassen	12,660	303	37,388	123	3.0	349	303	868
Plumas	8,440	139	11,299	81	1.3	148	59	399
Sierra	2,970	54	3,119	58	1.0	55	15	273
Alpine	370	7	522	75	1.4	9	6	667
Mono	2,010	38	1,891	50	0.9	48	8	167
Inyo	5,540	114	8,842	78	1.4	134	52	388
Northern and eastern mountain total	70,340	1,927	170,249	88	2.4	2,197	1,124	512
State total	6,161,280	64,102	18,159,412	283	2.9	85,958	117,779	1,370

Sources of data:
United States Department of Commerce Bureau of the Census. Census of Agriculture, 1935. 2:949-51. 1936.
Population data from estimates by: California Taxpayers' Association. The Tax Digest. 14(3):106. 1936.
Calculations on chickens and eggs per farm and chickens per capita by authors.

TABLE 36

RECEIPTS OF LIVE POULTRY AT SAN FRANCISCO, 1925–1939

Geographic division and state of origin	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
	Carlot receipts														
Indiana	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Iowa	7	1	3	2	0	0	2	3	6	5	0	0	0	2	1
Kansas	8	4	8	0	9	19	7	6	1	12	3	0	0	0	0
Missouri	3	2	0	12	0	0	2	0	0	0	0	0	0	0	0
Nebraska	235	188	224	142	103	81	78	60	124	163	119	46	26	56	37
South Dakota	0	0	1	0	0	0	0	2	1	1	0	0	0	0	0
Total: East north central and west north central divisions	253	195	232	157	112	100	89	71	132	181	122	46	26	58	38
Colorado	10	17	0	1	1	3	1	0	0	11	1	9	6	7	0
Idaho	4	3	3	20	14	16	11	1	28	18	15	16	4	1	0
Montana	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Nevada	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Utah	1	4	3	7	33	32	15	23	41	46	28	19	19	5	14
Wyoming	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total: Mountain division	15	25	6	29	50	51	27	24	69	75	44	44	29	13	14
Mississippi	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
Oklahoma	0	0	6	1	1	0	0	1	4	0	0	0	0	0	0
Texas	25	1	1	16	5	1	0	1	4	4	12	0	5	0	0
Total: South central division	25	10	9	25	6	1	0	2	8	4	12	0	5	0	0
Washington	0	0	1	0	3	4	5	0	0	0	0	0	0	0	0
Oregon	0	0	3	0	3	1	1	1	0	0	0	0	0	0	0
California	0	0	0	1	3	3	1	0	0	0	0	0	0	0	0
Total: Pacific division	0	0	4	1	7	7	7	1	0	0	0	0	0	0	0
Total: All states	293	230	253	311	174	159	123	98	209	260	178	90	60	71	52
Method of arrival	Receipts in coops														
Express	—*	—	16,195	16,129	17,989	16,896	13,979	8,786	7,230	5,277	3,963	3,989	4,630	2,075	1,404
Truck	—	—	—	—	85,944	92,821	104,518	106,062	115,309	112,473	118,976	151,619	142,620	167,209	184,347
Boat	—	—	—	—	6,821	6,110	3,174	3,227	2,681	1,773	1,340	772	65	114	20
Total coops	—	—	—	—	110,754	115,827	121,671	118,075	125,220	119,523	124,279	156,380	147,315	169,396	185,771

* Dashes indicate data not available.

Sources of data:
1925 and 1926: Furnished by California State Department of Agriculture Division of Animal Industry, Sacramento, California.
1927–1939: Federal-State Market News Service, San Francisco. Annual reports on receipts of live poultry by months at San Francisco. (Mimeo.)

TABLE 37

RECEIPTS OF DRESSED POULTRY AT SAN FRANCISCO, 1922–1939
(Thousand pounds, i.e., 000 omitted)

Geographic division and state of origin	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Illinois	102	255	164	147	93	52	147	0	26	0	0	24	32	171	71	140	65	55
Indiana	0	0	0	0	0	0	0	0	0	0	0	0	0	18	20	0	34	0
Iowa	26	0	73	0	52	125	144	101	36	58	49	98	230	290	136	167	513	218
Kansas	496	349	459	648	476	257	195	261	207	0	107	212	122	46	0	77	11	0
Minnesota	0	0	24	52	26	47	0	0	0	22	24	50	101	102	25	255	267	63
Missouri	152	0	0	0	86	0	0	0	23	0	72	206	175	263	65	278	164	54
Nebraska	52	0	54	128	86	297	61	148	168	523	595	826	1,420	754	841	693	1,257	1,748
North Dakota	0	0	0	0	0	0	0	0	0	20	30	26	25	0	0	0	0	0
South Dakota	0	0	0	0	0	0	0	0	0	0	0	0	0	49	32	0	0	0
Wisconsin	0	0	0	0	0	0	0	0	0	6	0	0	0	*	0	0	0	0
Total: East north central and west north central divisions	826	349	774	975	820	778	547	510	460	629	877	1,442	2,105	1,698	1,190	1,610	2,311	2,138
Colorado	0	0	0	0	0	0	0	0	27	0	0	11	133	31	0	2	25	3
Idaho	*	218	336	633	1,280	1,041	941	1,111	618	616	497	850	739	681	554	268	87	130
Montana	0	0	113	440	261	102	52	187	45	103	70	220	51	2	1	0	0	0
Nevada	57	175	250	58	135	218	77	176	147	0	322	329	216	182	408	91	68	38
Utah	0	0	0	0	0	24	*	62	0	11	142	7	174	308	796	631	392	448
Wyoming	0	0	0	20	0	0	0	0	0	0	6	0	0	0	0	0	0	0
Total: Mountain division	57	393	699	1,151	1,676	1,385	1,070	1,536	1,037	930	1,037	1,417	1,313	1,204	1,759	992	572	618
Arkansas	0	0	0	0	0	0	0	0	0	0	0	59	0	0	0	0	0	0
Mississippi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
Oklahoma	2	0	24	49	147	48	0	28	24	0	0	65	96	12	16	33	6	24
Texas	0	0	24	0	74	50	0	0	0	0	0	30	0	0	0	0	33	190
Total: South central division	2	0	48	49	221	98	0	28	24	0	0	154	96	12	16	33	64	214
California	3,397	4,178	4,178	2,708	2,907	3,296	3,406	5,879	5,335	5,563	5,513	4,665	6,739	7,468	9,521	9,544	6,439	6,213
Oregon	280	278	414	464	495	856	1,233	1,010	1,580	1,368	1,913	1,707	2,057	3,182	4,147	3,094	3,386	3,211
Washington	149	339	339	268	260	785	567	1,014	585	281	746	314	262	249	135	65	44	2
Total: Pacific division	3,826	4,795	4,931	3,440	3,662	4,937	5,206	7,903	7,500	7,212	8,172	6,686	9,058	10,899	13,803	12,703	9,869	9,426
Total: All other states	252	376	0	0	0	33	97	20	0	0	0	7	2	0	74	26	0	0
Grand total	4,966	5,913	6,453	5,615	6,378	7,231	6,921	9,996	9,020	8,770	10,086	9,705	12,574	13,808	16,842	15,364	12,839	12,396

* Less than 500 pounds.

Sources of data:
1922–1926: United States Department of Agriculture. Yearbook of Agriculture. 1926: 1161. 1927.
1927–1939: Federal-State Market News Service, San Francisco. Annual reports on receipts of dressed poultry at San Francisco. (Mimeo.)

TABLE 38

RECEIPTS OF LIVE POULTRY BY SECTIONS AT LOS ANGELES, 1925–1939

(Number of cars)

Geographic division and state of origin	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Illinois	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0
Indiana	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Iowa	2	3	2	0	0	0	18	31	13	7	5	3	3	17	10
Kansas	33	46	14	4	6	19	12	0	0	7	9	0	0	0	3
Minnesota	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Missouri	15	39	44	24	16	44	16	5	12	7	4	0	3	0	0
Nebraska	214	135	124	41	68	142	148	71	39	75	55	46	6	15	0
South Dakota	9	10	3	0	0	1	1	0	0	0	0	0	0	0	0
Total: East north central and west north central divisions	274	235	191	70	90	206	195	107	64	96	73	49	10	32	13
Colorado	30	59	22	24	33	25	31	16	13	23	10	3	4	0	3
Idaho	10	0	3	1	1	5	0	0	3	3	3	1	29	31	20
New Mexico	3	0	7	3	0	4	0	0	1	0	0	0	0	0	0
Utah	4	3	4	0	1	25	15	18	14	11	20	13	3	6	3
Wyoming	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Total: Mountain division	48	85	36	28	40	80	47	34	31	43	33	17	36	37	26
Oklahoma	14	31	30	5	2	8	1	0	0	1	0	0	0	0	24
Texas	97	62	66	58	12	20	16	9	15	22	20	9	15	20	7
Total: South central division	111	93	96	63	14	28	17	9	15	23	20	9	15	20	31
California	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Oregon	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total: Pacific division	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Grand total	433	363	323	161	144	302	259	150	111	161	126	75	61	91	69

Sources of data:
1925–1930: From records of California State Department of Agriculture Division of Animal Industry, Sacramento, California.
1931–1938: From records of Palace Live Poultry Car Company, Los Angeles, California.
1939: Data furnished by Dr. L. M. Hurt, County Livestock Inspector, Los Angeles County.

TABLE 39

RECEIPTS OF DRESSED POULTRY BY SECTIONS AT LOS ANGELES, 1925–1939

(Thousand pounds, i.e., 000 omitted)

Geographic division and state of origin	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Illinois	69	115	104	62	1	1	0	0	0	25	51	0	49	0	57
Iowa	44	30	118	148	49	4	112	127	198	105	292	233	228	156	170
Kansas	1,033	1,032	721	662	1,126	889	432	316	385	497	399	272	204	154	225
Minnesota	0	0	24	0	2	*	1	25	115	59	77	24	101	0	0
Missouri	0	0	26	170	32	26	32	186	298	407	228	233	476	360	156
Nebraska	192	176	159	661	239	479	484	771	1,271	1,626	1,413	875	1,128	1,615	2,029
North Dakota	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
Wisconsin	73	31	0	0	0	0	0	0	0	0	0	0	0	0	0
Total: East north central and west north central divisions	1,411	1,384	1,152	1,703	1,449	1,399	1,061	1,425	2,267	2,809	2,460	1,637	2,186	2,308	2,636
Arizona	170	94	196	306	235	187	88	76	95	44	40	3	0	43	1
Colorado	104	99	203	106	119	111	69	117	178	220	91	130	28	26	33
Idaho	515	871	895	800	1,423	1,462	947	1,586	1,762	1,290	825	857	983	737	802
Montana	86	215	38	0	38	23	37	182	104	0	78	0	0	0	0
Nevada	60	76	125	196	347	334	171	218	193	216	110	78	80	0	21
New Mexico	155	148	101	12	69	34	110	64	131	39	7	0	2	0	0
Utah	261	294	327	295	391	380	338	409	670	434	372	1,388	955	682	518
Wyoming	113	29	0	0	24	0	0	0	0	0	0	0	0	0	0
Total: Mountain division	1,464	1,826	1,885	1,715	2,646	2,531	1,760	2,652	3,133	2,243	1,528	2,456	2,049	1,488	1,375
Oklahoma	526	263	505	458	10	34	*	49	158	81	0	25	42	24	10
Tennessee	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
Texas	465	372	321	94	125	324	473	176	873	858	557	152	557	788	719
Total: South central division	991	635	826	552	135	358	473	225	1,031	939	557	177	599	824	729
California	623	603	1,400	2,069	1,985	1,900	1,103	1,336	1,464	1,644	2,250	1,960	2,214	3,515	6,976
Oregon	161	204	231	443	861	1,048	1,345	1,308	1,297	1,165	1,868	2,253	1,615	1,605	1,898
Washington	36	147	57	140	71	355	183	25	28	60	122	88	31	152	103
Total: Pacific division	820	954	1,688	2,652	2,917	3,303	2,631	2,669	2,789	2,869	4,240	4,301	3,860	5,273	8,977
Total: All other states	115	148	46	128	377	258	161	246	23	67	64	6	19	0	0
Grand Total	4,801	4,947	5,598	6,751	7,521	7,849	6,085	7,215	9,244	8,928	8,834	8,577	8,712	9,892	13,717

* Less than 500 pounds.

Sources of data:

1925–1926: United States Department of Agriculture, Yearbook of Agriculture 1926: 1161. 1927.

1927–1938: Federal-State Market News Service, Los Angeles. Annual reports on receipts of dressed poultry at Los Angeles. (Mimeo.)

TABLE 40

AVERAGE MONTHLY RECEIPTS OF LIVE AND DRESSED POULTRY AT SAN FRANCISCO, 1935–1939

Month	Dressed poultry							Live poultry							
								Carlot receipts				Coop receipts			
	Pacific	California*	East and west north central	Mountain	West south central	Other divisions†	All divisions	East and west north central	Mountain	West south central	All divisions	Truck	Express	Boat	Total coop receipts
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*cars*	*cars*	*cars*	*cars*	*coops*	*coops*	*coops*	*coops*
January	1,589	1,349	179	85	5	0	1,858	5.8	4.0	0.4	10.2	10,322	342	36	10,700
February	1,339	1,126	153	50	0	0	1,542	1.2	2.0	0.8	4.0	9,909	209	38	10,156
March	670	538	149	72	3	0	894	3.4	1.4	0.6	5.4	11,934	213	30	12,176
April	574	446	147	54	8	0	783	2.8	0.4	1.2	4.4	13,925	198	42	14,161
May	641	531	105	44	6	5	801	3.2	1.0	0.4	4.6	16,016	226	53	16,295
June	431	231	82	49	12	0	574	2.6	0.4	0.0	3.0	16,560	261	77	16,918
July	204	135	109	47	11	0	371	3.4	2.0	0.0	5.4	14,390	231	41	14,652
August	223	136	84	69	6	0	382	6.0	3.0	0.0	9.0	13,520	271	35	13,826
September	321	188	139	107	8	0	575	7.8	3.6	0.0	11.2	12,386	282	34	12,702
October	469	314	181	99	0	1	750	7.0	2.8	0.0	9.8	12,062	252	36	12,350
November	2,188	1,171	212	197	9	0	2,606	8.0	3.2	0.6	11.8	10,540	376	14	10,930
December	2,690	1,780	253	150	0	14	3,107	7.6	3.4	0.0	10.4	11,400	338	26	11,764
Total	11,339	7,837	1,793	1,023	68	20	14,343	58.0	26.8	3.4	90.2	152,954	3,213	462	156,629

* Included in total for Pacific region.

† New York, Maryland, and Tennessee.

Sources of data:
Federal-State Market News Service, San Francisco, California. Annual reports of receipts of dressed and live poultry by months at San Francisco, 1935-1939. (Mimeo.)

TABLE 41

PERCENTAGE DISTRIBUTION OF LIVE-POULTRY RECEIPTS AT SAN FRANCISCO BY MONTHS, BY DIVISIONS OF ORIGIN, AND BY METHOD OF SHIPMENT, AVERAGE 1935–1939

Month	Carloads								Coops							
	Relative importance by months of receipts from each division				Relative importance by divisions of monthly receipts				Relative importance by months of coop receipts by method of shipment				Relative importance by method of shipment in monthly coop receipts			
	East and west north central	Mountain	West south central	All divisions	East and west north central	Mountain	West south central	All divisions	Truck	Express	Boat	All coop shipments	Truck	Express	Boat	All coop shipments
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
January	10.0	13.9	11.8	11.3	56.9	39.2	3.9	100.0	6.7	10.7	7.8	6.8	96.5	3.2	0.3	100.0
February	2.1	6.9	23.5	4.4	30.0	50.0	20.0	100.0	6.5	6.5	8.2	6.5	97.6	2.0	0.4	100.0
March	5.9	4.9	17.6	6.0	63.0	25.9	11.1	100.0	7.8	6.6	6.5	7.8	98.0	1.7	0.3	100.0
April	4.8	1.4	35.3	4.9	63.6	9.1	27.3	100.0	9.1	6.0	9.3	9.0	98.3	1.4	0.3	100.0
May	5.5	3.5	11.8	5.1	69.6	21.7	8.7	100.0	10.5	7.0	11.5	10.4	98.3	1.4	0.3	100.0
June	4.5	1.4	0.0	3.3	86.7	13.3	0.0	100.0	10.8	8.8	16.7	10.8	97.9	1.7	0.4	100.0
July	5.9	10.4	0.0	7.1	53.1	46.9	0.0	100.0	9.4	7.2	8.9	9.4	98.1	1.6	0.3	100.0
August	10.3	10.4	0.0	10.0	66.7	33.3	0.0	100.0	8.8	8.4	7.6	8.8	97.8	2.0	0.2	100.0
September	13.1	12.5	0.0	12.4	67.9	32.1	0.0	100.0	8.1	8.8	7.3	8.1	97.5	2.2	0.3	100.0
October	12.0	9.7	0.0	10.9	71.4	28.6	0.0	100.0	7.9	7.8	7.8	7.9	97.7	2.0	0.3	100.0
November	13.8	13.2	0.0	13.1	67.8	32.2	0.0	100.0	5.9	11.7	3.0	7.0	96.4	3.5	0.1	100.0
December	12.1	11.8	0.0	11.5	67.3	32.7	0.0	100.0	7.5	10.5	5.4	7.5	96.9	2.9	0.2	100.0
Total or average	100.0	100.0	100.0	100.0	64.3	31.9	3.8	100.0	100.0	100.0	100.0	100.0	97.7	2.0	0.3	100.0

Source of data:
Calculated by the authors from data in table 40.

TABLE 42

PERCENTAGE DISTRIBUTION OF RECEIPTS OF DRESSED POULTRY AT SAN FRANCISCO BY MONTHS AND BY DIVISIONS OF ORIGIN, AVERAGE 1935–1939

Month	Relative importance by months of receipts from each division							Relative importance by divisions of origin of monthly receipts						
	Pacific	California*	East and west north central	Mountain	West south central	All other divisions	All divisions	Pacific	California*	East and west north central	Mountain	West south central	All other divisions	All divisions
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
January	14.0	15.9	10.0	8.3	7.4	0.0	13.1	85.5	67.2	9.6	4.6	0.3	0.0	100.0
February	11.8	14.4	8.5	4.9	0.0	0.0	10.8	86.6	73.3	9.9	3.3	0.0	0.0	100.0
March	5.9	6.7	8.3	7.0	4.4	0.0	6.3	74.9	59.1	16.7	8.1	0.3	0.0	100.0
April	5.1	5.7	8.2	5.3	11.8	0.0	5.5	73.3	57.0	18.8	6.9	1.0	0.0	100.0
May	5.7	6.8	5.9	4.3	8.8	25.0	5.6	80.0	66.3	13.1	5.5	0.8	0.6	100.0
June	3.8	3.0	4.6	4.8	17.6	0.0	4.0	75.1	40.2	14.3	8.5	2.1	0.0	100.0
July	1.8	1.7	6.1	4.6	16.2	0.0	2.6	55.0	36.4	29.4	12.7	2.9	0.0	100.0
August	2.0	1.7	4.7	6.7	8.8	0.0	2.7	58.4	35.6	22.0	18.0	1.6	0.0	100.0
September	2.8	2.4	7.7	10.5	11.8	0.0	4.0	55.8	32.7	24.2	18.6	1.4	0.0	100.0
October	4.1	4.0	10.1	9.7	0.0	5.0	5.3	62.5	41.9	24.1	13.2	0.0	0.0†	100.0
November	19.3	15.0	11.8	19.2	13.2	0.0	18.3	84.0	44.9	8.1	7.6	0.3	0.0	100.0
December	23.7	22.7	14.1	14.7	0.0	70.0	21.8	86.6	57.3	8.1	4.8	0.0	0.5	100.0
Total or average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	79.6	55.0	12.6	7.2	0.5	0.1	100.0

* Included in total for Pacific division.

† Less than 0.1 per cent.

Source of data:
Calculated by the authors from data in table 40.

TABLE 43

AVERAGE MONTHLY RECEIPTS OF LIVE AND DRESSED POULTRY AT LOS ANGELES, 1935–1939

Month	Dressed poultry							Live poultry				
	Pacific	California*	East and west north central	Mountain	East and west south central	Other divisions	All divisions	East and west north central	Mountain	West south central	Pacific	All divisions
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*cars*	*cars*	*cars*	*cars*	*cars*
January	264	201	123	128	49	0	564	2.0	2.0	2.0	0.0	6.0
February	151	142	97	94	24	3	379	0.8	1.6	1.8	0.0	4.2
March	220	133	135	60	99	1	515	1.0	0.4	6.0	0.0	7.4
April	156	117	123	45	76	1	401	1.4	0.4	4.4	0.0	6.2
May	226	223	109	40	67	†	442	1.6	0.6	3.0	0.0	5.2
June	164	154	96	65	39	1	365	1.6	2.4	1.0	0.0	5.0
July	125	105	78	41	36	†	280	4.0	3.0	0.4	0.0	7.4
August	127	104	169	88	32	0	416	4.0	3.0	0.2	0.2	7.4
September	95	88	177	68	18	0	358	6.6	3.4	0.0	0.0	10.0
October	107	101	294	76	19	0	496	4.8	3.6	0.0	0.0	8.4
November	1,420	785	409	433	80	0	2,342	3.8	5.6	0.2	0.0	9.6
December	2,265	1,230	441	640	43	0	3,389	3.8	3.4	0.0	0.2	7.4
Total	5,330	3,383	2,251	1,778	582	6	9,947	35.4	29.4	19.0	0.4	84.2

* Included in totals for Pacific division.

† Less than 500 pounds.

Sources of data:

Dressed poultry: Federal-State Market News Service, San Francisco. Origin of receipts, annual summaries, 1935–1939. (Mimeo.)

Live poultry: 1935–1938: records of Palace Poultry Car Company, Los Angeles.

1939: Data furnished by Dr. L. M. Hurt, County Livestock Inspector, Los Angeles County.

TABLE 44

PERCENTAGE DISTRIBUTION OF RECEIPTS OF LIVE POULTRY AT LOS ANGELES BY MONTHS AND BY DIVISIONS OF ORIGIN, AVERAGE 1935–1939

Month	Relative importance by months of receipts from each division					Relative importance by divisions of monthly receipts				
	East and west north central	Mountain	West south central	Pacific	All divisions	East and west north central	Mountain	West south central	Pacific	All divisions
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
January	5.7	6.8	9.2	0.0	7.1	33.3	33.3	33.3	0.0	100.0
February	2.3	5.4	30.7	0.0	5.0	19.0	38.1	42.9	0.0	100.0
March	2.8	1.4	27.7	0.0	5.8	13.5	5.4	81.1	0.0	100.0
April	4.0	1.4	20.3	0.0	7.3	23.6	5.4	71.0	0.0	100.0
May	4.5	2.0	13.8	0.0	6.3	30.8	11.5	57.7	0.0	100.0
June	4.5	8.2	4.6	0.0	5.9	32.0	48.0	20.0	0.0	100.0
July	11.3	10.2	1.9	0.0	8.8	54.1	40.5	5.4	0.0	100.0
August	11.3	10.2	0.9	50.0	9.8	54.1	40.5	2.7	2.7	100.0
September	13.6	11.6	0.0	0.0	11.9	66.0	34.0	0.0	0.0	100.0
October	13.6	12.2	0.0	0.0	10.0	57.1	42.9	0.0	0.0	100.0
November	10.7	19.0	0.9	50.0	11.4	39.6	58.3	2.1	0.0	100.0
December	10.7	11.6	0.0	0.0	8.8	51.4	45.9	0.0	2.7	100.0
Total or average	100.0	100.0	100.0	100.0	100.0	42.0	34.9	22.6	0.5	100.0

Source of data:
Calculated from data in table 43.

TABLE 45

PERCENTAGE DISTRIBUTION OF RECEIPTS OF DRESSED POULTRY AT LOS ANGELES BY MONTHS AND BY DIVISIONS OF ORIGIN, AVERAGE 1935–1939

Month	Relative importance by months of receipts from each division						Relative importance by divisions of monthly receipts					
	East and west north central	Mountain	East and west south central	Pacific	Other divisions	All divisions	East and west north central	Mountain	East and west south central	Pacific	Other divisions	All divisions
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
January	5.5	7.2	6.4	5.0	0.0	5.7	21.8	22.7	8.7	46.8	0.0	100.0
February	4.3	5.3	4.1	3.0	50.0	3.8	25.6	24.8	8.3	42.5	0.8	100.0
March	6.0	3.4	17.0	4.1	16.6	5.2	26.2	11.7	19.2	42.7	0.2	100.0
April	5.5	2.5	13.1	2.9	16.7	4.0	30.7	11.2	19.0	38.9	0.2	100.0
May	4.8	2.2	11.5	4.3	*	4.4	24.7	9.0	15.2	51.1	*	100.0
June	4.3	3.7	6.7	3.1	16.7	3.7	26.3	17.8	10.7	44.9	0.3	100.0
July	3.5	2.3	6.2	2.4	*	2.8	27.9	14.6	12.9	44.6	*	100.0
August	7.5	4.9	5.5	2.4	0.0	4.2	40.6	21.2	7.7	30.5	0.0	100.0
September	7.8	3.8	3.1	1.8	0.0	3.6	49.5	19.0	5.0	26.5	0.0	100.0
October	13.0	4.3	3.3	2.0	0.0	5.0	59.3	15.3	3.8	21.6	0.0	100.0
November	18.2	24.4	13.7	26.6	0.0	23.5	17.5	18.5	3.4	60.6	0.0	100.0
December	19.6	36.0	7.4	42.5	0.0	34.1	13.0	18.9	1.3	66.8	0.0	100.0
Total or average	100.0	100.0	100.0	100.0	100.0	100.0	22.5	17.9	5.8	53.6	0.1	100.0

* Based on data of less than 500 pounds.

Source of data:
Calculated from data in table 43.

TABLE 46

MONTHLY FARM PRICES AND YEARLY AVERAGE AND PRICE RELATIVES OF CHICKENS IN THE UNITED STATES, 1910–1939

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Weighted average	Price relatives
	cents per pound	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*1910–1914 = 100*
1910	11.0	11.4	11.8	12.3	13.4	12.4	12.2	12.0	11.8	11.4	11.0	10.6	11.3	101
1911	10.6	10.6	10.7	10.9	11.0	11.1	11.2	11.2	11.0	10.6	10.0	9.7	10.4	93
1912	10.0	10.4	10.6	11.0	11.1	10.0	11.2	11.3	11.4	11.4	11.0	10.3	10 9	97
1913	10.8	11.0	11.4	11.7	11.9	12.0	13.0	12.8	12.7	13.0	11.4	11.3	11.7	104
1914	11.5	12.0	12.4	13.0	12.7	13.1	13.4	13.1	12.8	12.0	11.1	10.7	11.8	105
1915	10.9	11.3	11.7	11.9	12.0	12.2	12.2	12.3	13.0	11.8	11.5	11.2	11.6	103
1916	11.5	12.1	12.5	13.1	13.6	14.0	14.1	14.1	14.2	14.4	13.9	13.6	13.4	119
1917	14.1	15.1	15.7	17.3	17.5	17.7	17.4	16.7	18.4	18.5	17.0	17.5	16.9	151
1918	18.4	20.2	20.2	20.7	20.6	21.2	22.2	22.4	22.6	22 2	21.7	22.4	21.8	193
1919	22.1	21.8	23.4	25.7	26.7	26.4	26.8	26.1	25.0	23.5	23.0	23.0	23.4	209
1920	23.3	25.7	26.9	25.4	26 0	27.4	25.4	26.6	26.9	24.6	23.9	20.6	24.3	217
1921	21.7	22.3	23.8	23.2	21.8	21.5	21.7	21.4	20.2	19.1	18.6	18.2	20.1	179
1922	18.9	19.0	19.4	20.0	20.2	20.6	20.7	18.9	18.6	18.1	17.2	17.2	18.4	164
1923	17.3	18.5	18.8	19.4	20.1	20.3	20.6	19 8	19.7	19.0	17.7	16.6	18.3	163
1924	17.8	18.2	18.9	19.4	20 3	20.5	20.2	20.0	19.8	19 4	18.5	17.9	18.8	168
1925	18.5	19.1	20.0	21.1	22.0	21.6	21.4	20.3	20.4	20 0	19.2	19.5	19.9	177
1926	20.9	21.5	21.9	23.1	23.7	23 9	23.6	22.1	21.4	20 3	20.0	19.5	21 2	189
1927	20.1	21.1	21.3	21.8	21.7	20.2	19.9	19.7	19.4	19.7	19 4	19 2	20.0	178
1928	19.8	20.1	20.1	20.3	21.5	21.5	21.9	21.6	23 3	23.0	21 5	21.2	21 5	192
1929	21.6	22.1	22.7	23.3	24 4	24.6	23.7	23.7	22 4	21 5	20 3	19 1	23.3	208
1930	19.8	20.4	20.6	21.1	20.9	19.6	17.4	17.3	17.3	17.6	16.1	15 3	18.4	164
1931	15.7	15.1	16.1	16.7	15.9	16.1	15 3	16.2	15.7	14.4	14.4	13.9	15.8	141

1932	13.3	12.6	12.6	12.6	12.2	11.4	11.7	11.7	11.6	10.7	10.1	9.2	11.8	105
1933	9.3	9.4	9.1	9.8	10.4	10.0	10.4	9.8	9.5	9.3	8.8	8.6	9.5	85
1934	9.4	10.2	10.7	11.1	11.2	11.2	11.7	11.4	12.7	11.8	11.7	11.7	11.8	101
1935	12 4	13.4	14.2	15.5	15.7	15.6	14.0	14.1	15.4	15.7	15.9	16.0	14.9	132
1936	16.5	16.9	16.6	16.9	16.6	16.4	16.1	15.1	14.9	14.0	13.2	12.6	15.8	141
1937	13.4	13.6	14.4	15.2	14.8	14.8	15.3	16.8	17.4	17.6	16.9	16.4	15.9	142
1938	16.7	16.0	15.9	16.2	16.1	15.7	15.0	14.2	14.2	13.6	13.6	13.5	15.0	134
1939	14.0	14.2	14.3	14.4	13.9	13.4	13.7	13.0	13.5	12.7	13.4	11.7	13.4*	119

* Preliminary.

Sources of data:
1910–1926: United States Department of Agriculture. Crops and Markets 13:46. 1936
1927: United States Department of Agriculture. Crops and Markets 14:35. 1937.
1928–1938: United States Department of Agriculture. Crops and Markets 16:37. 1939.
1939: United States Department of Agriculture. Crops and Markets, monthly issues.

TABLE 47

MONTHLY FARM PRICES AND YEARLY AVERAGE AND PRICE RELATIVES OF CHICKENS IN CALIFORNIA, 1910–1939

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Weighted average	Price relatives
	cents per pound	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*cents per pound*	*1910–1914 = 100*
1910	14.8	14.7	14.4	15.1	15.3	14.2	14.2	14.6	14.4	14.8	15.4	15.3	14.7	99
1911	15.0	14.9	15.2	15.4	14.9	15.0	15.0	14.8	15.1	14.8	14.6	14.9	15.0	101
1912	14.6	14.5	14.4	14.2	14.0	14.1	14.3	14.0	14.0	14.2	14.3	14.2	14.2	96
1913	13.8	13.7	13.6	13.7	14.4	14.8	14.2	14.6	15.5	17 4	15.2	15.5	14.7	99
1914	15.8	15.4	16.0	17.0	14.8	17 2	14.5	15.7	15.0	15.0	15.0	15.4	15 6	105
1915	15.4	15.0	15.4	15.8	15.4	15.2	15.1	15.6	15.7	15.2	15.2	15.2	15.2	103
1916	15.0	14.7	15.2	16.6	16.5	16.5	16.3	16.3	16.2	16.7	16.6	17.3	16.2	109
1917	17.6	17.7	18.7	19.2	18.7	18.3	18.7	17.8	20.0	20 7	22.2	22.3	19 1	129
1918	23.9	24.0	24.0	24.5	26.0	24.0	26.5	25.0	27.1	27.8	29.4	27.8	25.6	173
1919	30.7	28.0	31.0	33.0	32.0	31.5	31.0	29 0	28.0	29.0	30.0	29.6	30.5	206
1920	29.0	29.2	29.7	30.4	30.2	29.8	28.8	28.0	30.0	30.0	30 0	30 0	29.3	197
1931	30.0	29.0	29 0	29.0	27.0	27.0	26.0	25.0	28.0	26 0	26.0	27.6	27.2	184
1922	27.0	27.0	26.0	27.0	26.0	26.0	25 0	23.0	25.0	25.0	26.0	28.0	26.5	179
1923	23.8	23.4	24.0	24.0	24.3	24 0	24.0	23.0	26.0	25 0	25.1	23.0	24.0	162
1924	24.3	23.0	24.0	23.8	24.0	23.6	26 0	24.0	24.2	26 0	25.2	24.5	24.3	164
1925	24.9	24.8	26.1	26.0	25.2	26.6	25.8	26.9	27.1	26.2	27.6	26.2	26.1	176
1926	25.4	25.8	26.2	28 0	23.0	26.1	27.1	23.1	26.8	26 0	27.7	26.2	26 2	177
1927	26.0	26.2	26.1	23.7	25.4	24.0	23.4	21.8	24.7	24.5	25.4	25.4	24.4	164
1928	25.2	24.2	26.4	26.5	26.4	25.4	25.8	26.8	26.2	26.9	26.6	26.8	26.0	175
1929	27.0	27.5	27.6	27 8	27.2	26.5	26.2	27.2	28 0	26.2	27.2	26 4	27 1	183
1930	26.0	25.6	25.7	24.9	25.1	23.9	21.6	23.6	23.8	23.7	23 1	22 9	23.8	160
1931	22.2	21.1	21.0	21.6	20.6	19.5	19.0	19.0	21.0	20.0	19 2	19.6	20.1	135

1932	17.9	15.9	16.4	16.0	15.0	14.1	14.7	15.0	16.0	16.0	15.9	15.0	15.5	104
1933	15.0	14.0	13.4	14.1	14.2	13.8	13.5	14.0	13.0	13.0	13.3	13.0	13.7	92
1934	13.0	13.3	13.3	14.2	13.5	13.5	14.2	14.4	15.6	16.0	15.6	16.3	14.3	96
1935	16.5	16.5	17.9	17.4	18.0	17.5	17.2	16.5	17.5	19.0	19.5	19.5	17.7	119
1936	19.6	19.3	18.9	17.5	17.5	17.1	17.5	16.5	17.0	17.5	17.2	16.2	17.5	118
1937	17.3	17.3	17.8	18.5	18.0	17.8	17.0	*18.0	19.0	21.0	20.7	18.0	18.2	123
1938	19.0	19.0	19.0	19.0	18.0	18.0	17.7	17.2	17.2	17.4	18.0	18.0	18.1	122
1939	17.0	17.6	18.1	17.6	17.0	15.1	15.2	15.8	16.4	16.3	16.3	15.8	16.3	110

* The following weights were used in computing averages: Jan., 7; Feb., 6; Mar., 5; Apr., 7; May, 11; June, 17; July, 13; Aug., 8; Sept., 6; Oct., 7; Nov., 7; Dec., 6.

Sources of data:

1910-1925: United States Department of Agriculture Bureau of Agricultural Economics. Prices of farm products received by producers. Four mountain and Pacific states. U. S. Dept. Agr. Stat. Bul. 17:147. 1927. Subsequent and current data are published in: Crops and Markets.

TABLE 48

COMPARISON OF THE AVERAGE FARM PRICES OF CHICKENS BY STATES, 1912–1914 AND 1937–1939

State and geographic division	Average price		Actual gain or loss from 1912–1914 to 1937–1939	Percentage gain or loss from 1912–1914 to 1937–1939
	1912–1914	1937–1939		
	cents per pound	*cents per pound*	*cents per pound*	*per cent*
North Atlantic division	15.6	18.5	+2.9	+18.6
Maine	14.5	17.4	+2.9	+20.0
New Hampshire	15.6	17.7	+2.1	+13.5
Vermont	13.0	17.4	+4.4	+33.8
Massachusetts	17.0	18.5	+1.5	+8.8
Rhode Island	17.8	19.5	+1.7	+9.6
Connecticut	17.4	19.6	+2.2	+12.6
New York	14.7	18.1	+3.4	+23.1
New Jersey	17.1	20.8	+3.7	+21.6
Pennsylvania	12.6	16.0	+4.4	+32.4
East north central division	11.5	15.2	+3.7	+32.2
Ohio	12.0	16.1	+4.1	+34.2
Indiana	11.2	14.6	+3.5	+31.0
Illinois	11.3	14.6	+3.3	+29.2
Michigan	11.5	15.9	+4.4	+38.3
Wisconsin	11.3	14.4	+3.1	+27.4
West north central division	10.1	12.3	+2.2	+21.8
Minnesota	10.0	12.1	+2.1	+21.0
Iowa	10.4	13.5	+3.1	+29.8
Missouri	10.7	13.0	+2.3	+21.5
North Dakota	10.2	11.2	+0.9	+8.7
South Dakota	9.4	12.2	+2.8	+29.6
Nebraska	9.9	12.4	+2.5	+25.3
Kansas	9.8	11.8	+2.0	+20.4
South Atlantic division	13.8	17.0	+3.2	+23.2
Delaware	14.4	18.6	+4.2	+29.2
Maryland	15.1	18.4	+3.3	+21.8
Virginia	13.8	16.8	+3.0	+21.7
West Virginia	12.5	15.4	+2.9	+23.2
North Carolina	11.9	15.7	+3.8	+31.9
South Carolina	13.2	16.9	+3.7	+28.0
Georgia	13.6	15.9	+2.3	+16.9
Florida	15.9	18.2	+2.3	+14.5
South central division	11.3	13.4	+2.1	+18.6
Kentucky	11.1	14.1	+3.0	+27.0
Tennessee	11.1	13.5	+2.4	+21.6
Alabama	12.5	13.7	+1.2	+9.6
Mississippi	12.3	14.2	+1.9	+15.4
Arkansas	10.2	12.2	+2.0	+19.6
Louisiana	13.4	15.5	+2.1	+15.7
Oklahoma	9.5	11.7	+2.1	+21.9
Texas	10.0	12.1	+2.1	+21.0
Mountain division	14.1	14.9	+0.8	+5.7
Montana	14.0	15.1	+1.1	+7.9
Idaho	11.6	13.1	+1.5	+12.9
Wyoming	12.7	14.6	+1.9	+15.0
Colorado	12.6	13.1	+0.5	+4.0
New Mexico	13.2	13.7	+0.5	+3.8
Arizona	15.8	19.7	+3.9	+24.7
Utah	12.3	12.3	0	0
Nevada	20.6	17.9	−2.7	−13.1
Pacific division	13.6	15.4	+1.9	+14.1
Washington	13.1	14.1	+1.0	+7.6
Oregon	13.5	14.5	+2.0	+16.0
California	14.8	17.5	+2.5	+18.9
United States	11.7	14.6	+2.9	+24.8

Sources of data:
1912–1914: United States Department of Agriculture. Prices of farm products received by producers. Statis. Bul. nos. 14, 15, 16, and 17. 1927.
1937–1939: United States Department of Agriculture. Crops and Markets, monthly issues. Average prices received by farmers for farm products.

TABLE 49

AVERAGE AND RELATIVE PRICES (UNWEIGHTED) OF CHICKENS IN CALIFORNIA, NEW YORK, NEBRASKA, TEXAS, AND IDAHO, 1910–1939

Year	California		New York		Nebraska		Texas		Idaho		Differential* between California prices and those in		
	Average price	Relative price	Average price	Relative price	Average price	Relative price	Average price	Relative price	Average price	Relative price	New York	Nebraska	Idaho
	cents per pound	*1910–1914 = 100*	*cents per pound*	*1910–1914 = 100*	*cents per pound*	*1910–1914 = 100*	*cents per pound*	*1910–1914 = 100*	*cents per pound*	*1910–1914 = 100*	*cents per pound*	*cents per pound*	*cents per pound*
1910	14.8	100	14.8	102	9.6	100	9.4	97	12.7	108	0.0	+ 5.2	+ 2.1
1911	15.0	101	13.9	96	8.4	88	9.1	94	12.4	103	+ 1.1	+ 6.6	+ 2.6
1912	14.2	96	14.1	97	9.2	96	9.2	95	11.7	98	+ 0.1	+ 5.0	+ 2.5
1913	14.7	99	14.8	102	10.1	106	10.0	103	11.7	98	- 0.1	+ 4.6	+ 3.0
1914	15.5	104	15.1	104	10.5	110	10.7	111	11.5	96	+ 0.4	+ 5.0	+ 4.0
1915	15.4	104	14.7	101	9.8	103	10.4	107	11.4	95	+ 0.7	+ 5.6	+ 4.0
1916	16.2	109	16.7	115	11.6	121	11.6	120	12.3	103	- 0.5	+ 4.6	+ 3.9
1917	19.3	130	20.6	142	15.3	160	14.6	151	15.5	129	- 1.3	+ 4.0	+ 3.8
1918	25.7	173	26.7	184	18.9	198	18.7	193	17.7	147	- 1.0	+ 6.8	+ 8.0
1919	30.2	204	30.4	209	20.9	219	21.6	223	19.1	159	- 0.2	+ 9.3	+11.1
1920	29.4	198	32.2	222	22.6	236	22.2	229	20.4	170	- 2.8	+ 6.8	+ 9.0
1921	27.6	186	28.5	196	17.5	183	17.8	184	17.4	145	- 0.9	+10.1	+10.2
1922	25.4	171	25.9	178	16.1	168	16.8	174	16.8	132	- 0.5	+ 9.3	+ 9.6
1923	24.0	162	24.9	171	15.4	161	16.7	173	14.6	122	- 0.9	+ 8.6	+ 9.4
1924	24.3	164	23.7	163	16.4	172	16.1	166	15.2	127	+ 0.6	+ 7.9	+ 9.1
1925	26.1	176	25.1	173	16.9	177	17.3	179	15.5	129	+ 1.0	+ 9.2	+10.6
1926	26.2	177	26.6	183	19.1	200	19.2	198	17.8	148	- 0.4	+ 7.1	+ 8.4
1927	24.9	168	25.6	176	17.1	179	17.8	184	17.0	142	- 0.7	+ 7.8	+ 7.9
1928	26.1	176	26.3	181	18.3	191	18.5	191	17.4	145	- 0.2	+ 7.8	+ 8.7
1929	27.2	183	27.6	190	19.3	202	19.5	201	18.2	152	- 0.4	+ 7.9	+ 9.0
1930	24.0	162	23.5	162	15.2	159	16.4	169	15.7	131	+ 0.5	+ 8.8	+ 8.3
1931	20.3	137	20.2	139	13.1	137	13.2	136	12.5	104	+ 0.1	+ 7.2	+ 7.8
1932	15.7	106	16.9	116	9.2	96	9.3	96	9.4	78	- 1.2	+ 6.5	+ 6.3
1933	13.7	92	13.5	93	7.0	73	7.9	82	7.5	62	+ 0.2	+ 6.7	+ 6.2
1934	14.4	97	14.5	100	8.8	92	9.0	93	8.7	72	- 0.1	+ 5.6	+ 5.7
1935	17.8	120	17.8	122	13.0	136	12.7	131	12.0	100	0.0	+ 4.8	+ 5.8
1936	17.6	119	18.5	127	13.1	137	13.1	135	12.6	105	- 0.9	+ 4.5	+ 5.0
1937	18.4	124	18.4	127	13.6	142	13.1	128	13.1	109	0.0	+ 4.8	+ 5.3
1938	18.1	122	18.8	129	12.7	133	12.6	130	13.8	115	- 0.7	+ 5.4	+ 4.3
1939	16.5	111	17.0	117	10.9	114	11.4	118	12.4	103	- 0.5	+ 5.0	+ 4.1

* A plus sign indicates a higher California price; a minus sign, a lower California price.

Sources of data:
1910–1925: United States Department of Agriculture. Prices of farm products received by producers. Statis. Bul. no. 14 for New York, no. 15 for Nebraska, no. 16 for Texas, and no. 17 for California and Idaho.
1926–1939: United States Department of Agriculture, Crops and Markets, monthly issues.
Averages and relatives computed by the authors.

TABLE 50

AVERAGE PAYING PRICES FOR BROILERS AT SAN FRANCISCO, 1928–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Small Leghorn broilers* (generally 13–18 pounds per dozen)													
1928	—†	—	—	—	—	—	—	—	—	—	—	25.4	—
1929	34.7	31.5	28.1	20.7	23.0	23.0	26.1	29.4	35.1	33.2	28.4	24.3	28.1
1930	24.7	29.9	26.7	20.6	19.0	19.8	22.9	28.2	33.4	33.3	33.6	28.8	27.5
1931	33.3	33.6	27.8	22.9	20.8	19.8	19.8	28.2	29.6	24.3	22.3	18.8	24.9
1932	17.4	18.7	17.7	16.0	12.5	13.9	18.4	22.4	24.5	26.0	21.3	18.1	19.0
1933	17.0	16.1	15.9	14.2	12.8	11.7	14.0	14.9	18.1	17.8	16.7	19.5	15.7
1934	21.6	23.4	20.6	17.2	13.7	13.9	14.7	20.0	21.8	20.4	20.6	20.9	19.1
1935	21.5	23.3	19.9	14.5	15.4	15.1	16.4	19.4	21.3	25.3	23.1	23.2	19.8
1936	25.6	25.0	18.6	17.0	17.3	16.7	17.3	19.3	21.6	21.5	21.3	21.5	20.3
1937	22.8	22.6	21.8	17.9	18.1	18.0	21.1	25.9	28.5	27.6	23.1	21.2	22.4
1938‡	21.4	20.1	17.7	16.0	16.2	16.5	18.4	22.1	20.8	20.2	19.9	18.9	19.0
1939§	20.1	22.1	20.6	14.4	12.9	15.0	16.1	20.1	21.9	19.8	19.6	19.0	18.2
1940	19.6	20.8	18.6	16.6	15.3								
Medium* (generally 19–21 pounds per dozen)													
1934	—	—	—	18.5	13.9	14.0	14.5	19.9	21.8	19.7	20.5	20.8	—
1935	20.5	21.0	20.6	15.4	16.0	15.1	15.4	18.6	21.5	25.3	23.4	21.8	19.6
1936	23.6	24.7	19.1	15.2	17.5	16.2	17.1	18.3	20.9	21.6	20.6	20.7	19.8
1937	21.9	20.7	23.0	18.2	19.6	17.5	20.1	25.6	27.8	23.1	23.1	20.6	22.2
1938‡	19.7	19.2	17.5	16.4	16.2	16.2	17.9	22.1	20.2	19.5	19.9	18.2	18.6
1939§	18.7	22.0	20.9	14.4	12.8	14.8	15.5	20.0	21.9	19.7	19.6	18.9	18.0
1940	18.6	20.6	18.6	17.6	15.7								

Large* (generally 22-24 pounds per dozen)

1934	—	—	—	20.5	15.1	14.1	14.4	18.1	19.7	18.1	19.8	20.8	—
1935	19.7	20.7	21.4	15.3	16.6	15.2	15.4	18.3	21.3	25.0	23.4	21.1	19.5
1936	21.6	24.5	19.5	18.5	17.9	16.2	17.1	17.3	20.6	20.2	19.8	20.6	16.5
1937	21.4	19.2	23.7	19.9	21.9	17.5	19.9	24.9	27.6	28.1	23.0	19.8	22.2
1938‡	17.6	18.4	17.2	16.5	16.6	16.2	17.7	22.0	20.2	19.2	19.4	18.0	18.2
1939§	17 5	21.6	21.9	15.0	12.8	15.0	14.9	19.4	21.9	19.7	19.6	15.7	17.9
1940	16.7	20.6	19.4	18.8	15.9								

Large* (generally 19-24 pounds per dozen)

1928	—	—	—	—	—	—	—	—	—	—	—	35.0	—
1929	33.7	29.6	32.9	24.5	28.0	24.3	26.1	26.6	35.3	34.6	28.4	24.3	29.0
1930	24.7	28.2	35.7	27.7	19.5	19.5	22.7	23.9	35.3	41.0	35.5	30.4	28.7
1931	32.2	32.3	28.3	25.1	21.6	18.0	18.5	24.6	28.9	23.8	22.2	18.9	24.5
1932	15.7	18.2	18.5	18.6	14.7	18.6	17.5	21.7	24.5	25.9	21.8	18.0	19.1
1933	16.2	14.0	17.1	16.5	14.0	11.7	13.5	13.6	18.5	16.6	16.1	19.5	15.6
1934	21.3	22.9	23.1	19.5	14.5	14.0	14.4	19.0	20.8	18.9	20.2	20.8	19.0
1935	20.1	20.8	21.0	15.6	16.3	15.2	15.4	18.4	21.4	25.2	23.4	21.4	19.5
1936	22.6	24.6	19.3	18.4	17.7	16.2	17.1	17.5	20.8	20.6	19.9	20.6	19.6
1937	21.6	20.0	23.4	19.0	20.8	17.5	20.0	25.2	27.7	28.1	23.0	19.9	22.2
1938‡	18.6	18.8	17.4	16.4	16.4	16.2	17.8	22.0	20.2	19.4	19.6	18.1	18.4
1939§	18.1	21.8	21.4	14.7	12.8	14.9	15.2	19.7	21.9	19.7	19.6	15.8	18.0
1940	17.7	20.6	19.0	18.2	15.8								

* Prior to March 28, 1934, nos. 1 and 4 were quoted daily. On that date class 4 was divided into 2 and 3. Beginning in April, 1934, class 4 quotations are simple averages of quotations listed under 2 and 3.

† Dashes indicate data not available.

‡ January 10, 1938, through July 17, 1938, Leghorn broilers were classified as 12-16 pounds, 17-20 pounds, 21-24 pounds, to the dozen; July 18, 1938 to December 31, 1938, 12-17 pounds, 18-20 pounds, 21-24 pounds.

§ Beginning January 3, 1939, Leghorn broilers were classified as under 1½ pounds, 1½-1¾ pounds, over 1¾-2¼ pounds each. On April 15, 1940, the last-named class was changed to over 1¾-2 pounds each.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Game Reports. (Mimeo.)

TABLE 51

AVERAGE PAYING PRICES FOR BROILERS AT LOS ANGELES, 1931–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Small Leghorn broilers* (generally 12–18 pounds per dozen)													
1931	—†	—	—	—	—	—	—	—	—	25.7	21.2	18.5	—
1932	17.1	16.5	15.5	13.0	13.2	11.9	14.0	16.6	21.9	21.6	17.6	13.6	16.2
1933	14.8	13.2	12.5	12.9	11.6	10.6	14.0	14.0	15.0	15.5	14.9	13.4	13.5
1934	14.7	15.3	17.6	13.3	12.0	11.4	14.5	17.6	19.9	20.0	19.6	16.8	16.1
1935	18.4	19.5	18.3	16.2	14.9	14.8	15.2	18.3	20.1	22.2	22.3	21.2	18.4
1936	22.0	21.2	18.2	16.6	15.4	15.4	15.6	17.5	19.4	19.5	19.0	18.5	18.2
1937	20.0	18.1	19.7	16.4	17.4	17.3	18.9	22.4	24.7	26.5	24.5	20.1	20.5
1938‡	19.5	20.4	18.4	15.7	14.7	14.1	16.5	19.9	20.2	18.8	18.5	17.2	17.8
1939§	17.2	17.6	17.0	14.4	13.3	14.3	15.2	17.1	20.1	20.5	16.0	16.4	16.9
1940§	19.8	19.3	18.1	15.6	14.7								
Medium* (generally 19–21 pounds per dozen)													
1934	—	—	—	16.2	14.1	13.2	14.5	17.6	19.9	20.0	19.6	16.8	—
1935	18.7	20.6	19.5	16.0	15.3	15.3	15.8	18.1	20.1	22.2	22.0	21.2	19.3
1936	22.1	22.3	19.5	18.1	16.0	15.5	15.7	18.1	20.4	20.5	19.2	18.6	18.8
1937	20.0	18.1	20.8	16.9	17.4	18.3	19.2	22.4	24.7	26.3	24.4	20.1	20.7
1938‡	19.4	20.3	18.3	15.9	15.2	14.6	16.2	19.9	20.0	19.7	19.2	17.2	18.0
1939§	17.2	18.0	18.2	15.0	13.3	14.3	15.2	17.1	20.1	20.5	19.6	16.4	17.0
1940§	19.8	19.3	18.1	15.6	14.7								

Large* (generally 22–24 pounds per dozen)

1934	—	—	—	16.2	14.1	13.2	14.5	17.1	19.2	19.5	19.1	17.2	—
1935	18.9	21.2	21.0	17.4	15.5	15.2	15.1	17.3	18.6	21.9	23.0	21.2	18.9
1936	22.1	22.3	19.9	18.2	16.1	15.6	16.1	18.1	20.4	20.5	19.2	18.5	18.9
1937	20.0	18.2	22.0	18.0	18.4	19.6	19.9	23.0	24.8	26.2	24.4	20.6	21.8
1938‡	19.4	20.3	18.5	16.5	15.7	15.2	16.2	19.0	20.0	19.7	19.2	17.2	18.2
1939§	17.2	18.0	18.2	15.0	13.3	14.4	15.2	17.3	20.2	20.5	19.5	16.9	17.1
1940§	19.9	21.5	20.9	17.6	16.0								

Large* (generally 19–24 pounds per dozen)

1931	—	—	—	—	—	—	—	—	—	24.1	21.9	19.0	—
1932	17.8	17.4	18.0	14.1	14.8	13.5	13.8	18.2	21.9	21.6	18.6	13.9	17.0
1933	15.8	14.5	14.1	14.5	12.7	10.6	14.0	13.8	15.0	15.5	15.5	13.4	14.1
1934	16.5	17.3	20.1	16.2	14.1	13.2	14.5	17.4	19.6	19.8	19.4	17.0	17.1
1935	18.8	20.9	20.2	16.7	15.4	15.2	15.2	17.7	19.4	22.0	23.0	21.2	18.8
1936	22.1	22.3	19.7	18.2	16.0	15.6	15.9	18.1	20.4	20.5	19.2	18.5	18.9
1937	20.0	18.2	21.4	17.4	17.9	19.0	19.6	22.7	24.8	26.2	24.4	20.4	21.0
1938‡	19.4	20.3	18.4	16.2	15.4	14.9	16.2	19.9	20.0	19.7	19.2	17.2	18.1
1939§	17.3	18.0	18.2	15.0	13.3	14.4	15.2	17.3	20.2	20.5	19.2	16.6	17.1
1940§	19.9	20.4	19.5	16.6	15.4								

* Prior to March 28, 1934, nos. 1 and 4 were quoted daily. On that date class 4 was divided into 2 and 3. Beginning in April, 1934, class 4 quotations are simple averages of quotations listed under 2 and 3.

† Dashes indicate data not available.

‡ January 10, 1938, to July 17, 1938, Leghorn broilers were classified as 12–16 pounds, 17–20 pounds, 21–24 pounds to the dozen; July 18, 1938 to December 31, 1938, 12–17 pounds, 18–20 pounds, 21–24 pounds.

§ Beginning January 3, 1939, Leghorn broilers were classified as under 1¼ pounds, 1¼–1¾ pounds, over 1¾–2¼ pounds each. On April 15, 1940, the last-named class was divided into 1¾–2 pounds and 2–2¼ pounds each.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Game Reports. (Mimeo.)

TABLE 52

AVERAGE PAYING PRICES FOR LEGHORN FRYERS, LOS ANGELES, 1931–1940; SAN FRANCISCO, 1929–1940
(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—†	—	—	—	—	—	—	—	—	18.0	18.0	17.5	—
1932	16.4	16.6	17.6	15.5	14.9	14.6	13.7	15.9	17.5	15.6	14.6	14.5	15.6
1933	15.4	15.5	14.9	16.0	14.9	10.9	13.0	12.5	12.3	11.0	11.0	11.0	13.2
1934	12.7	13.0	15.9	16.4	14.4	13.3	14.1	15.0	15.0	15.0	15.0	15.0	14.6
1935	16.7	17.5	17.5	17.3	16.5	15.9	15.1	17.0	17.5	18.3	19.9	19.2	17.4
1936	18.5	18.5	18.5	18.3	16.9	15.2	14.5	15.4	15.5	15.5	15.5	15.5	16.5
1937	16.5	17.0	19.3	19.0	19.0	19.5	19.3	20.1	21.7	22.5	20.0	18.0	19.4
1938*	17.5	16.6	16.0	15.9	15.0	15.0	15.4	15.6	15.5	15.4	15.5	15.6	15.5
1939*	16.0	16.1	17.0	16.0	13.4	14.1	13.9	14.2	15.0	14.8	14.0	13.5	14.8
1940	15.3	15.6	16.0	16.2	15.3								
San Francisco													
1929	—	—	—	—	—	—	—	—	—	30.7	29.2	27.7	—
1930	27.1	27.3	35.1	33.8	30.3	21.0	22.0	23.7	26.4	27.3	28.0	28.0	26.7
1931	33.0	33.1	28.7	26.9	24.4	19.8	17.8	21.6	25.2	28.2	21.0	18.4	24.2
1932	16.0	15.2	16.1	19.9	16.9	13.5	17.0	21.0	24.0	20.0	20.0	18.6	18.6
1933	16.2	13.6	16.4	17.9	15.3	11.7	13.4	12.2	16.0	14.1	15.6	17.3	15.0
1934	18.1	21.3	22.2	22.3	15.4	14.4	14.4	17.2	19.6	17.9	18.2	18.4	18.4
1935	18.6	20.1	21.5	17.1	17.2	15.9	15.3	17.6	19.8	23.6	22.6	21.2	19.2
1936	20.9	21.5	20.1	18.5	18.1	16.2	17.1	16.4	19.0	19.2	15.6	19.6	18.8
1937	20.2	18.0	20.6	20.4	21.8	17.5	19.9	22.5	24.4	26.6	23.0	19.7	21.2
1938	17.4	18.1	16.7	16.5	16.8	16.2	17.5	22.0	20.2	18.9	19.4	17.9	18.1
1939	17.1	21.6	21.9	16.0	13.8	15.2	14.8	18.7	21.2	19.6	19.5	15.7	17.8
1940	16.2	19.4	19.7	19.0	16.7								

* From February 1, 1938, to May 15, 1939, the Los Angeles price was "at the ranch."

† Dashes indicate data not available.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Grams Reports. (Mimeo.)

TABLE 53

AVERAGE PAYING PRICES FOR COLORED FRYERS, LOS ANGELES, 1931–1940; SAN FRANCISCO, 1928–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles*													
1931	—†	—	—	—	—	—	—	—	—	19.8	20.8	21.5	—
1932	19.9	17.9	20.0	21.8	24.4	24.2	20.5	20.1	20.4	17.0	17.0	17.2	20.0
1933	18.0	16.3	16.8	20.6	21.1	16.9	17.2	16.6	15.2	14.6	15.4	15.6	17.0
1934	16.5	22.5	25.2	26.2	21.8	18.1	17.9	18.0	17.8	18.0	19.5	22.2	20.3
1935	23.4	20.5	20.7	21.7	20.9	20.8	20.8	22.5	20.6	21.3	23.4	23.3	21.7
1936	23.9	22.0	22.5	23 7	21.0	18.6	18.0	18.6	18.2	18.6	19.8	20.2	20.5
1937	21.0	21.3	22.9	24.7	25.4	25.5	23.3	22.5	25.0	24.0	23.4	21.4	23.5
1938	20.6	19.5	20.4	21.6	19.8	19.0	18.9	18.4	19.4	18.5	18.0	17.1	19.3
1939	17.3	18.6	21.4	21.2	18.5	16.3	15.6	15.8	17.5	17.3	17.3	18.5	17.9
1940	20.3	21.4	21.1	18.2	17.7								
San Francisco‡													
1928	—	—	—	—	—	—	—	—	—	—	—	30.5	—
1929	32.0	31.2	33.1	33.0	34.0	32.9	28.4	29.0	29.8	30.3	29.3	27.7	30.9
1930	27.6	26.5	31.8	32.7	33.0	29.1	26.6	26.0	25.1	26.3	26.0	26.0	28.1
1931	31.5	33.0	31.3	31.8	31.3	27.0	20.9	20.8	21.0	20.5	20.7	19.0	25.8
1932	18.8	18.3	18.2	19.9	19.1	18.3	18.4	20.0	20.6	18.7	18.5	17.7	18.6
1933	18.0	16.0	16.0	18.6	18.3	15.7	15.9	14.8	14.5	18.5	13.6	14.5	15.8
1934	17.5	20.2	24.2	25.0	20.4	18.5	17.6	17.6	18.0	17.2	17.5	17.7	19.3
1935	21.2	22.0	23.1	22.2	22.2	21.4	20.5	19.6	20.1	20.4	21.0	21.0	21.2
1936	23.0	21.7	20.6	21.2	21.8	19.8	19.8	18.4	19.5	19.0	18.5	18.6	20.2
1937	19.9	19.0	20.9	23.2	23.7	24.0	23.9	24.6	24.5	24.8	25.2	23.0	23.1
1938	21.4	19.8	19.9	20.4	18.6	18.8	19.8	20.2	18.8	18.8	19.5	18.4	19.5
1939	19.2	20.5	22.2	21.8	16.0	16.3	15.5	16.7	19.0	18.5	18.9	15.7	18.4
1940	18.0	19.4	20.0	19.3	20.4								

* Beginning in March, 1934, two classifications of colored fryers were quoted: (a) 2½-3 pounds; (b) over 3 pounds. Previous to March, 1934, quotations were for only one class, "colored fryers." From March, 1934, to December, 1938, the above quotations are an average of colored fryers 2½-3 pounds and over 3 pounds. Beginning in January, 1939 one classification only was listed—"colored chickens (fryers)," under 3¼ pounds.

† Dashes indicate data not available.

‡ Average of light and heavy colored-fryer quotations. From December, 1928, through February, 1930, quotations were for fryers under 3 pounds; from March, 1930, to August, 1930, two quotations were issued—birds over and under 3 pounds; from September, 1930 to September, 1933, with the exception of July, 1932, all quotations for birds under 3 pounds; from October, 1933, to December, 1938, two sets of quotations—over and under 3 pounds; beginning January, 1939, one quotation for colored chickens (fryers) under 3¼ pounds.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Game Reports. (Mimeo.)

TABLE 54

AVERAGE PAYING PRICES FOR COLORED ROASTERS,* LOS ANGELES, 1931–1940; SAN FRANCISCO, 1928–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—†	—	—	—	—	—	—	—	—	20.0	19.8	19.8	—
1932	19.6	18.4	20.5	22.1	24.7	24.9	21.9	20.2	20.5	17.6	17.3	17.4	20.4
1933	18.1	17.5	17.7	20.6	21.1	17.4	17.5	16.8	15.7	14.6	14.6	14.5	17.2
1934	15.9	18.4	23.2	24.8	24.4	20.0	18.7	18.4	18.0	18.1	19.1	20.4	20.0
1935	22.5	23.2	22.6	23.8	22.5	22.5	22.5	23.2	21.6	21.6	23.2	23.5	22.7
1936	23.7	22.5	22.8	23.4	23.0	21.4	20.6	20.0	20.0	19.8	19.4	19.7	21.4
1937	20.7	21.1	23.2	24.5	24.5	24.6	—	—	25.6	25.1	24.8	24.4	23.8‡
1938	23.8	22.5	22.5	23.3	—	—	—	21.0	21.0	19.7	19.0	18.4	21.2‡
1939	19.0	20.3	23.5	23.1	21.5	18.2	16.6	16.2	18.0	17.8	17.8	18.8	19.2
1940	20.4	23.4	23.2	20.7	20.3								
San Francisco													
1928	—	—	—	—	—	—	—	—	—	—	—	21.2	—
1929	33.7	35.4	37.8	38.8	39.0	36.8	37.5	33.7	21.9	20.6	23.9	27.7	34.5
1930	29.0	30.9	32.4	26.9	33.5	34.6	31.2	30.8	26.2	26.0	26.0	26.1	30.6
1931	33.5	33.6	35.4	35.7	35.0	33.9	27.2	24.0	23.4	20.7	20.4	20.6	28.5
1932	22.5	22.0	21.0	23.3	25.0	25.6	22.1	23.5	21.2	18.6	17.6	16.7	21.6
1933	18.0	18.4	18.9	22.4	23.5	20.6	19.2	17.7	16.2	14.1	13.7	13.5	18.0
1934	17.5	19.5	24.8	26.9	23.9	22.8	22.1	20.7	20.6	18.0	18.2	19.1	21.2
1935	23.1	24.4	24.8	24.1	24.0	23.8	24.1	22.2	22.6	22.0	22.4	23.1	23.3
1936	25.6	23.1	22.6	23.8	24.6	24.2	23.7	23.2	21.5	19.2	20.0	19.5	22.5
1937	22.1	20.6	23.3	25.9	25.8	27.3	26.9	27.1	26.4	26.9	27.0	26.8	25.4
1938	26.4	22.8	21.9	22.0	19.8	21.1	21.8	21.2	19.2	19.1	19.6	20.8	21.3‡
1939	21.9	21.8	23.7	24.4	19.6	17.9	15.5	15.6	18.5	18.4	18.5	18.9	19.5
1940	20.0	20.5	20.7	20.7	23.1								

* One weight quoted upon at San Francisco through June, 1930. Beginning in July, 1930, two weights were quoted upon at San Francisco. Los Angeles quotations have been upon two weights. Except for the months prior to July, 1930, all of the above quotations are averages of quotations issued for two weights of colored roasters.

† Dashes indicate data not available.

‡ Year incomplete.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Canner Reports. (Mimeo.)

TABLE 55

Average Paying Prices for Leghorn Hens,* Los Angeles, 1931–1940; San Francisco, 1929–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—†	—	—	—	—	—	—	—	—	13.0	13.8	17.4	—
1932	15.8	13.2	14.1	13.3	13.6	11.9	12.3	12.6	13.3	14.0	14.5	14.0	13.6
1933	13.6	12.0	12.4	12.7	12.2	10.8	10.2	10.0	10.6	11.0	11.0	10.6	11.4
1934	10.7	10.8	12.3	11.8	12.5	11.4	11.1	10.7	12.5	13.2	14.1	12.9	12.0
1935	14.0	15.6	17.1	17.6	18.6	17.2	14.7	14.6	16.5	18.1	19.1	18.6	16.8
1936	17.7	17.3	18.4	18.4	17.0	14.7	13.0	12.9	14.5	14.2	14.4	14.3	15.6
1937	14.2	13.5	15.1	16.0	14.4	12.6	12.0	13.5	15.0	16.0	15.2	15.2	14.5
1938	15.0	14.6	15.9	16 0	16.2	15.8	14.8	14.2	15.7	16.5	16.5	16.2	15.6
1939	15.3	16.0	17.7	15.2	14.6	13.4	13.0	11.6	12.8	12.2	13.4	11.6	13.9
1940	11.4	13.2	13.0	12.6	12.8								
San Francisco													
1929	24.9	24.8	26.0	25.6	25.8	24.9	22.6	24.5	26.1	24.2	24.7	26.2	25.0
1930	26.6	25.6	25.0	24.8	22.6	18.9	17.8	19.3	20.1	19.4	21.4	17.2	21.6
1931	19.1	17.2	19.4	18.9	16.7	15.0	15.1	17.6	19.0	19.3	18.4	16.6	17.7
1932	16.7	13.3	15.3	14.0	14.0	11.6	12.9	13.2	13.8	14.8	15.6	15.9	14.3
1933	15.0	12.8	13.3	13.5	14.0	12.1	11.3	10.8	10.9	12.2	12.7	11.5	12.6
1934	11.3	12.3	13.1	13.3	13.2	12.6	11.7	12.4	13.9	13.9	14.9	13.9	13.0
1935	15.4	16.1	17.5	17.4	18.9	17.2	15.3	15.6	17.3	17.6	19.5	17.7	17.1
1936	18.1	17.5	18.6	18.3	18.2	15.9	15.3	14.6	15.2	14.7	16.5	16.0	16.6
1937	16.0	15.0	16.6	17.2	15.3	14.1	13.2	14.8	17.3	17.5	18.4	16.2	16.0
1938	16.6	16.4	16.6	16.1	16.6	16.1	16.4	16.2	17.7	17.6	19.0	18.1	17.0
1939	17.7	17.8	18.1	18.1	15.7	15.8	14.4	13.8	15.2	14.2	15.2	13.4	15.9
1940	12.6	13.6	14.8	13.9	14.4								

* Beginning September 28, 1936, quotations on Leghorn hens were divided into those on (*a*) under 3½ pounds and (*b*) over 3½ pounds. The above quotations from October, 1936, on are an average of (*a*) and (*b*).

† Dashes indicate data not available.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Game Reports. (Mimeo.)

TABLE 56

AVERAGE PAYING PRICES FOR COLORED HENS,* LOS ANGELES, 1931–1940; SAN FRANCISCO, 1928–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—†	—	—	—	—	—	—	—	—	23.2	23.0	23.0	—
1932	22.4	19.8	19.8	19.6	19.0	17.8	18.2	19.2	19.6	18.8	17.4	17.0	19.0
1933	16.8	15.2	14.8	16.0	15.2	15.4	14.2	14.2	14.6	15.0	14.6	14.5	15.0
1934	15.2	14.9	16.0	16.5	16.0	15.2	15.8	15.4	18.6	17.5	17.5	17.3	16.2
1935	18.2	18.5	21.0	21.9	22.6	21.5	20.4	20.2	23.4	23.0	23.0	23.0	21.8
1936	22.9	22.6	23.2	24.3	22.2	20.9	21.0	20.8	21.5	21.4	20.2	19.5	21.7
1937	19.6	19.4	20.4	21.8	19.9	20.0	20.3	23.2	25.1	25.4	25.1	24.1	22.0
1938	24.0	21.9	23.2	24.4	24.2	22.4	22.6	22.0	23.3	22.6	22.5	22.5	23.0
1939	21.4	20.1	20.5	20.2	19.5	18.4	18.3	18.6	19.4	19.3	18.9	17.3	19.3
1940	17.7	17.1	17.8	17.5	17.7								
San Francisco													
1928	—	—	—	—	—	—	—	—	—	—	—	30.9	—
1929	30.7	29.8	31.2	31.0	31.5	31.2	30.2	30.2	31.0	30.2	29.8	28.4	30.4
1930	29.2	28.4	29.0	29.0	28.5	26.7	25.2	26.2	27.2	27.1	26.5	25.5	27.5
1931	23.9	23.2	24.8	25.2	24.6	23.0	22.5	24.4	23.9	23.4	23.6	20.2	23.6
1932	20.2	17.9	19.8	19.8	19.8	18.2	19.4	19.0	19.4	19.0	17.8	17.1	19.0
1933	17.3	14.6	15.6	16.2	16.9	15.4	15.4	15.2	15.8	15.0	14.2	14.0	15.4
1934	14.7	14.5	16.0	16.9	15.6	16.0	16.5	15.7	18.0	17.7	17.8	16.5	16.4
1935	19.0	19.0	20.6	22.0	22.1	21.3	19.4	20.1	23.4	22.6	22.8	22.8	21.5
1936	22.8	20.9	22.7	23.9	22.6	20.8	20.7	20.8	21.2	21.2	20.8	19.1	21.5
1937	19.4	19.0	19.7	21.8	19.8	18.8	19.5	21.8	25.0	24.8	24.5	23.4	21.5
1938	23.1	21.3	21.7	23.5	23.8	21.6	21.5	21.6	22.0	22.0	22.6	20.7	21.9
1939	20.5	20.6	21.4	21.6	20.6	18.5	17.9	18.1	18.6	19.5	19.0	17.6	19.5
1940	17.6	17.1	18.2	17.8	17.9								

* Averages of two quotations at both Los Angeles and San Francisco—(*a*) over 5 pounds and (*b*) under 5 pounds.

† Dashes indicate data not available.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Canner Reports. (Mimeo.)

TABLE 57

AVERAGE PAYING PRICES FOR LEGHORN ROOSTERS, LOS ANGELES, 1931–1940; SAN FRANCISCO, 1928–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—*	—	—	—	—	—	—	—	—	10.0	10.0	10.0	—
1932	10.0	10.0	9.5	6.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	7.0
1933	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
1934	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
1935	6.0	6.0	6.0	7.9	10.3	10.5	10.5	10.5	10.5	10.5	10.5	10.5	9.1
1936	10.5	10.5	10.5	10.5	10.5	10.5	9.8	9.0	9.0	9.0	9.0	9.0	9.8
1937	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.7	11.0	11.0	11.0	11.0	9.7
1938	11.0	11.0	11.0	10.7	9.0	9.0	9.5	10.0	10.0	10.0	10.0	10.0	10.1
1939	10.0	9.7	9.5	9.5	8.9	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.9
1940	8.5	8.5	8.5	8.0	5.5								
San Francisco													
1928	—	—	—	—	—	—	—	—	—	—	—	12.5	—
1929	12.3	12.4	13.0	13.8	13.0	14.0	14.0	14.0	14.0	13.1	13.0	13.0	13.7
1930	13.0	13.0	13.0	12.5	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.3
1931	12.0	12.0	12.1	12.0	10.2	9.4	8.0	8.0	8.0	8.0	8.0	8.0	9.6
1932	8.0	8.0	8.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.5	6.6
1933	6.5	6.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	6.1	6.0	6.0	6.8
1934	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.3	7.5	7.5	7.5	7.5	6.5
1935	7.5	7.8	8.8	10.4	10.5	10.0	8.5	8.5	8.5	9.8	11.9	12.5	9.6
1936	12.4	12.0	11.1	11.0	11.0	10.5	10.5	10.5	10.5	10.5	10.5	9.7	10.8
1937	9.5	9.5	9.5	8.9	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.8
1938	8.5	8.5	10.5	10.2	9.5	9.6	10.0	10.0	10.0	10.0	10.0	10.0	9.7
1939	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
1940	10.0	10.0	10.0	8.4	7.0								

* Dashes indicate data not available.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Game Reports. (Mimeo.)

TABLE 58

AVERAGE PAYING PRICES FOR COLORED ROOSTERS, LOS ANGELES, 1931–1940; SAN FRANCISCO, 1928–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—*	—	—	—	—	—	—	—	—	10.0	10.0	10.0	—
1932	10.0	10.0	9.7	8.6	8.5	8.5	8.5	8.5	8.6	8.5	8.5	8.5	8.9
1933	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	6.3	6.0	6.0	6.0	7.7
1934	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	7.3	8.5	8.5	8.5	6.8
1935	8.5	8.5	8.5	9.6	11.3	11.5	11.5	11.5	11.5	11.5	11.5	11.5	10.6
1936	11.5	11.5	11.5	11.5	11.5	11.5	10.5	9.5	9.5	9.5	9.5	9.5	10.6
1937	9.5	9.5	9.5	9.5	9.5	9.5	9.5	10.4	12.0	12.0	12.0	12.0	10.4
1938	12.0	12.0	12.0	11.2	9.5	9.5	10.0	10.5	10.5	10.5	10.5	10.5	10.7
1939	10.5	11.1	11.5	11.4	9.7	9.1	9.0	9.0	9.4	9.5	9.5	9.5	9.9
1940	9.5	9.5	9.5	9.0	7.6								
San Francisco													
1928	—	—	—	—	—	—	—	—	—	—	—	16.7	—
1929	15.9	15.5	17.3	18.0	14.0	18.0	18.0	18.0	18.0	17.1	17.0	17.0	17.0
1930	17.0	17.0	17.0	17.0	16.3	15.6	13.5	13.5	13.5	13.5	13.5	13.5	15.1
1931	13.5	13.5	14.3	14.1	14.0	12.7	10.0	10.0	10.0	10.0	10.0	10.0	11.8
1932	10.0	10.0	10.0	10.0	10.0	9.0	8.0	8.0	8.0	8.0	8.0	8.5	9.0
1933	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.0	8.0	8.0	8.4
1934	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.1	8.5	8.5	8.5	8.5	8.2
1935	8.5	8.3	9.3	12.2	12.0	12.2	11.5	11.5	11.5	11.5	12.9	13.5	11.5
1936	13.5	13.5	13.5	13.5	13.5	12.5	12.5	12.5	12.5	12.5	12.5	13.5	12.9
1937	12.5	12.5	12.5	11.7	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.8
1938	11.5	11.5	11.5	11.2	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.8
1939	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
1940	10.5	10.5	10.5	9.7	8.0								

* Dashes indicate data not available.

Source of data:

Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Canoe Reports. (Mimeo.)

TABLE 59

AVERAGE PAYING PRICES FOR YOUNG DUCKS, LOS ANGELES, 1931–1940; SAN FRANCISCO, 1930–1940
(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—*	—	—	—	—	—	—	—	—	14.6	16.5	16.5	—
1932	15.6	15.5	15.2	14.0	14.0	12.4	9.9	8.6	10.4	13.1	12.4	12.9	12.8
1933	12.6	12.0	11.5	11.2	12.0	10.7	9.2	8.5	11.4	12.0	12.0	12.8	11.3
1934	13.1	13.0	13.0	13.0	13.0	11.6	10.5	9.5	11.0	11.0	13.5	15.5	12.3
1935	15.5	15.5	16.5	17.0	16.3	12.4	11.0	11.0	13.1	15.0	16.2	18.0	14.8
1936	18.0	18.0	18.0	15.2	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	14.4
1937	13.5	15.0	15.0	15.0	15.0	15.0	13.9	13.5	13.5	14.6	17.4	18.5	15.0
1938	18.5	18.5	17.2	16.2	14.5	14.5	13.9	12.5	12.5	13.2	15.0	16.0	15.2
1939	16.0	14.9	14.0	14.0	13.7	13.0	12.2	11.2	12.7	13.0	14.2	15.0	13.7
1940	15.0	15.0	15.0	15.0	14.8								
San Francisco													
1930	15.5	15.5	15.5	15.5	15.5	17.5	18.0	—	—	—	—	—	—
1931	—	—	—	—	—	—	—	—	—	12.0	12.0	12.0	—
1932	12.0	12.0	12.0	12.0	12.0	11.4	10.0	10.0	11.6	12.5	13.5	12.0	11.7
1933	—	—	—	—	—	—	—	—	11.4	11.8	9.7	9.5	—
1934	10.0	11.8	13.5	13.5	12.9	13.2	13.1	13.5	13.5	13.5	13.5	13.5	13.0
1935	13.5	14.3	16.0	16.0	16.0	16.0	15.1	12.5	12.7	13.5	13.1	13.0	14.3
1936	13.2	14.0	14.0	14.0	14.0	13.9	12.3	12.0	12.0	12.0	12.0	12.0	13.0
1937	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.3	12.5	12.5	12.5	12.5	12.2
1938	12.5	14.6	15.0	15.0	14.9	13.1	12.5	12.5	12.5	12.5	12.5	12.5	13.3
1939	13.3	14.1	15.0	14.3	14.0	13.5	11.5	11.5	11.5	10.5	11.5	11.5	12.7
1940	11.5	11.5	11.5	11.5	12.0								

* Dashes indicate data not available.

Source of data:
Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Game Reports. (Mimeo.)

TABLE 60

AVERAGE PAYING PRICES FOR SQUABS, LOS ANGELES, 1931–1940; SAN FRANCISCO, 1930–1940

(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—*	—	—	—	—	—	—	—	—	30.0	30.0	30.0	—
1932	30.0	30.0	29.0	28.5	21.4	19.0	19.0	19.0	20.0	20.5	20.5	20.5	23.1
1933	19.5	20.0	20.0	19.0	19.0	19.0	19.0	19.0	20.4	22.5	24.5	24.5	20.5
1934	24.5	24.5	24.5	23.8	21.0	21.0	21.0	21.0	21.0	21.1	23.0	23.0	22.4
1935	23.0	23.0	24.1	23.1	21.5	21.5	21.5	21.5	22.7	24.0	25.7	27.3	23.2
1936	27.5	27.5	27.5	27.0	25.5	25.0	25.0	25.0	25.0	25.3	26.5	26.5	26.1
1937	30.3	31.3	31.5	28.5	28.0	28.0	28.0	28.0	28.0	28.0	29.0	30.9	29.2
1938	31.0	31.0	31.0	29.1	25.5	25.5	25.5	24.9	24.5	24.5	24.5	31.7	27.4
1939	32.0	32.0	32.0	25.9	21.7	21.0	21.0	21.0	21.0	21.3	25.3	26.8	24.6
1940	33.7	39.2	38.1	24.8	23.5								
San Francisco													
1930	31.8	33.9	33.1	25.0	25.0	23.9	22.0	22.0	23.2	28.4	30.6	27.2	26 8
1931	34.0	35.0	33.5	29.0	22.5	23.4	22 4	23.1	24.5	24.0	24.0	24.6	26 5
1932	25.2	27.7	21.9	20.5	18.8	18.7	16.3	16.5	21.1	23 0	28 6	20.0	21.2
1933	21 4	24 2	20.0	18.7	17.5	17.5	17.0	17.1	18.5	21.5	21.3	20 5	19 6
1934	23.4	29.7	23.3	21.6	21.8	19.6	18.4	18.9	23.8	24.5	25.0	24.5	22.8
1935	27.7	29.5	26.2	23.5	23.5	23.5	23.5	23.5	24.2	26 6	27.7	27 1	25 6
1936	30.7	32.7	28.6	26.5	25.5	25.5	25.5	25.5	26.0	27.6	30.7	29.6	27.8
1937	31.3	33.4	30.7	26.5	27.5	28.0	27.5	27.5	27.5	29.4	30.5	30.5	29.1
1938	31.9	33.1	30.4	26.5	25.5	25 1	23.5	23.5	23.7	25 9	28.5	30.5	27.6
1939	31.4	32 0	29.0	23.4	22 2	21 5	21.5	21.5	23 0	23.1	27.5	28.0	25 4
1940	29.6	31.3	28 6	24.5	23.8								

* Dashes indicate data not available.

Source of data:
Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Canne Reports. (Mimeo.)

TABLE 61

AVERAGE PAYING PRICES FOR PIGEONS, SAN FRANCISCO, 1930–1940

(Dollars per dozen)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1930	1.64	1.50	1.50	1.50	1.50	1.50	1.02	1.00	1.10	1.27	1.50	1.50	1.38
1931	1.50	1.60	1.79	1.75	1.39	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.47
1932	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
1933	1.38	1.38	1.38	1.38	1.31	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.22
1934	1.12	1.12	1.22	1.25	1.25	1.20	1.19	1.12	1.12	1.12	1.12	1.12	1.16
1935	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
1936	1.12	1.12	1.62	1.62	1.62	1.38	1.38	1.38	1.38	1.38	1.12	1.12	1.35
1937	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
1938	1.12	1.12	1.12	1.12	1.29	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.29
1939	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
1940	1.38	1.38	1.38	1.38	1.38								

Source of data:
Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Game Reports. (Mimeo.)

TABLE 62

AVERAGE PAYING PRICES FOR DOMESTIC RABBITS UNDER 5 POUNDS IN WEIGHT, LOS ANGELES, 1931–1940; SAN FRANCISCO, 1930–1940
(Cents per pound live weight)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Los Angeles													
1931	—*	—	—	—	—	—	—	—	—	12.5	12.5	12.4	—
1932	11.5	10.6	8.8	8.0	8.0	7.3	7.0	7.6	9.5	9.5	9.5	9.3	8.8
1933	8.6	8.5	8.8	9.4	8.6	7.2	7.5	7.7	8.6	9.1	9.7	9.1	8.6
1934	9.8	10.4	11.2	10.8	9.1	8.8	8.5	9.1	10.5	11.4	11.5	12.0	10.2
1935	12.0	12.2	12.5	11.5	11.3	10.5	10.5	10.3	11.5	13.2	13.5	13.5	11.9
1936	13.1	11.5	11.5	11.5	11.9	10.6	10.5	11.0	13.9	13.4	13.0	12.8	11.9
1937	12.0	12.0	12.9	13.8	12.4	11.2	11.4	13.4	14.6	14.1	15.8	15.5	13.3
1938	13.7	14.4	14.1	12.8	12.8	11.4	11.7	10.5	13.0	12.4	13.0	12.6	12.6
1939	12.0	12.8	13.0	13.0	12.0	10.7	11.3	11.2	13.0	12.7	13.8	14.2	12.4
1940	12.8	13.6	11.8	11.5	11.1								
San Francisco													
1930	15.8	16.0	15.7	15.0	15.0	13.5	10.9	10.0	11.7	14.3	16.5	16.5	14.2
1931	16.3	16.4	15.8	14.5	11.8	10.4	9.0	10.1	12.0	12.0	12.0	12.0	12.7
1932	11.6	10.3	8.7	8.8	8.8	6.9	6.5	8.5	8.7	11.4	11.5	10.7	9.4
1933	7.8	7.4	7.9	9.0	7.5	6.7	8.7	7.5	8.2	9.0	10.3	11.1	8.2
1934	11.5	10.5	9.9	9.5	9.2	8.5	8.5	9.1	9.7	10.5	10.5	10.5	9.8
1935	11.2	11.6	12.5	12.4	11.1	9.8	9.5	11.3	13.5	13.5	13.5	14.5	12.0
1936	13.9	11.7	11.5	11.5	10.3	9.5	9.5	11.3	11.5	12.8	12.5	12.5	11.5
1937	12.9	12.9	13.5	14.0	13.7	11.5	10.5	11.9	13.5	14.6	15.5	15.5	13.3
1938	14.5	14.5	14.0	13.6	13.0	10.8	11.0	11.4	12.9	13.0	13.8	13.6	12.8
1939	13.0	12.0	12.6	11.5	11.0	10.1	9.5	10.0	10.4	10.7	12.3	12.6	11.2
1940	11.6	11.5	11.5	10.5	10.5								

* Dashes indicate data not available.

Source of data:
Computations by authors based on the daily quotations as published in: Federal-State Market News Service, San Francisco office. Daily Poultry Cannes Reports. (Mimeo.)

TABLE 63

POULTRY COLD-STORAGE HOLDINGS BY CLASS, UNITED STATES, 1926–1939
(Thousands of pounds)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1926												
Broilers	15,521	13,702	11,685	8,945	6,074	4,496	4,320	5,627	9,544	13,789	17,555	20,550
Fryers	7,238	6,826	6,115	4,745	3,603	2,450	1,829	1,395	1,388	2,200	4,245	7,262
Roosters	38,543	37,645	33,336	25,593	18,593	14,370	10,163	6,867	5,287	6,347	14,647	29,091
Fowls	18,104	16,586	14,062	9,402	5,538	4,758	4,993	6,239	6,691	8,106	7,487	13,697
Turkeys	6,759	7,216	7,141	6,129	5,192	4,764	3,884	3,237	3,073	2,674	1,773	5,912
Miscellaneous	27,336	26,537	23,058	18,310	13,778	11,970	11,541	12,428	12,653	13,655	19,135	30,342
Total	111,501	108,512	95,397	73,124	52,783	42,808	36,730	35,793	38,634	44,771	64,842	106,854
1927												
Broilers	21,578	20,455	18,186	15,009	10,978	8,172	6,513	6,245	7,714	10,896	12,610	14,670
Fryers	9,717	9,417	8,359	6,957	5,093	3,985	2,460	1,828	1,616	1,938	3,282	6,304
Roosters	42,703	43,651	37,831	29,362	20,932	15,360	10,722	7,184	4,782	4,906	9,079	21,152
Fowls	20,332	20,137	17,560	13,360	8,569	7,088	7,032	6,976	5,159	5,085	6,290	13,354
Turkeys	10,820	12,188	12,128	11,020	9,719	8,584	7,571	6,452	5,815	5,166	4,170	5,242
Miscellaneous	39,287	39,228	35,446	28,989	21,971	18,336	15,766	14,608	14,625	15,210	16,884	25,308
Total	144,497	145,076	129,510	104,697	77,282	61,525	50,064	42,293	39,711	43,201	52,315	85,030

(Continued on next page.)

TABLE 63—(*Continued*)

POULTRY COLD-STORAGE HOLDINGS BY CLASS, UNITED STATES, 1926–1939

(Thousands of pounds)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928												
Broilers	15,570	14,285	11,818	9,088	6,122	4,559	4,518	6,657	9,038	12,015	15,605	16,973
Fryers	8,723	9,045	7,883	6,210	4,068	2,737	1,931	1,595	1,372	2,135	4,469	6,549
Roasters	33,709	35,600	31,101	25,168	16,544	11,205	7,257	5,060	3,732	4,639	12,025	20,902
Fowls	19,791	19,101	17,266	14,377	8,734	7,248	6,695	7,750	6,110	4,588	5,516	9,112
Turkeys	9,352	10,966	11,913	11,402	9,517	8,371	7,208	6,513	6,049	6,209	4,768	6,264
Miscellaneous	30,345	29,157	28,513	16,924	11,747	9,752	10,621	12,820	14,448	13,993	15,710	19,373
Total	117,490	118,154	108,494	83,169	56,833	43,872	38,230	40,395	40,749	43,578	58,093	79,173
1929												
Broilers	17,334	15,371	12,911	9,838	7,194	5,032	4,536	7,286	13,179	18,234	22,367	24,106
Fryers	10,095	9,171	7,946	6,016	4,360	2,884	2,259	1,505	1,529	2,763	5,874	9,098
Roasters	33,837	32,993	28,908	23,042	17,742	13,119	9,933	6,301	5,142	6,929	16,506	27,159
Fowls	13,752	10,965	8,417	5,637	3,723	3,049	3,384	5,728	6,620	8,311	11,962	14,991
Turkeys	10,466	13,058	14,467	11,547	10,308	8,452	7,196	6,420	5,673	5,173	3,719	6,320
Miscellaneous	24,200	20,823	16,439	12,648	9,575	9,137	11,693	13,656	16,667	20,566	26,445	34,317
Total	109,684	102,380	89,088	68,728	52,901	41,643	42,001	40,896	49,010	61,976	88,873	115,876
1930												
Broilers	23,792	21,847	19,482	15,631	11,339	8,788	8,089	8,274	9,190	11,595	13,505	16,819
Fryers	11,507	11,669	11,062	9,918	6,171	4,607	3,327	2,492	1,951	2,771	4,961	7,631
Roasters	38,677	41,344	37,424	28,924	20,761	15,133	10,290	6,857	4,784	5,429	11,340	20,761
Fowls	15,236	17,649	17,510	13,337	9,816	8,175	8,629	7,101	5,648	5,644	7,474	12,127
Turkeys	9,533	11,946	14,358	13,000	10,800	8,742	7,449	5,853	4,496	2,888	2,751	6,632
Miscellaneous	38,698	37,097	33,286	24,898	18,943	15,727	16,449	16,360	16,320	17,605	19,238	23,955
Total	140,723	141,552	133,172	105,708	77,429	61,167	54,253	46,967	42,589	46,983	59,269	82,925

1931

Broilers	14,586	13,057	11,532	8,873	6,258	4,623	4,772	6,345	9,345	13,673	15,126	15,355
Fryers	9,971	9,333	8,103	6,219	4,228	2,948	2,129	1,747	2,036	3,704	5,566	7,796
Roasters	31,275	30,564	27,927	20,463	12,442	8,652	5,393	3,363	3,145	6,345	12,134	24,138
Fowls	18,542	18,492	19,576	14,752	8,599	6,626	6,198	7,117	6,909	6,987	7,439	8,738
Turkeys	4,566	7,018	8,557	6,351	4,816	3,895	3,091	2,777	3,356	3,385	2,303	5,123
Miscellaneous	25,973	22,933	19,493	13,328	9,577	8,604	11,179	15,089	18,265	22,081	23,100	28,821
Total	104,913	101,307	95,188	69,986	45,920	35,348	32,762	36,438	43,056	56,215	65,668	89,971

1932

Broilers	15,432	14,481	12,640	10,282	7,436	5,141	3,711	3,680	5,417	7,864	9,530	10,874
Fryers	9,213	8,543	7,667	6,131	4,768	3,284	1,983	1,211	1,428	3,908	8,026	11,787
Roasters	35,220	33,005	28,084	21,354	15,985	11,042	6,618	4,174	3,292	5,556	14,328	27,691
Fowls	13,256	11,041	8,400	6,434	5,136	4,978	4,693	3,964	3,490	3,932	7,124	10,210
Turkeys	10,320	14,273	13,853	11,423	9,596	8,271	7,285	5,985	4,286	2,591	1,033	11,997
Ducks	*	*	*	*	*	*	2,778	4,049	4,828	4,989	4,737	5,072
Miscellaneous	33,259	30,211	25,778	19,036	13,753	12,113	9,593	8,408	7,504	7,843	10,212	13,487
Total	116,700	111,554	96,422	74,660	56,676	44,829	36,661	31,471	30,305	36,683	54,989	91,118

1933

Broilers	11,269	10,031	8,445	6,892	4,868	3,785	4,221	5,520	9,137	11,801	13,211	15,448
Fryers	14,122	12,893	11,037	8,039	6,185	4,088	2,686	1,602	1,057	3,097	5,338	9,962
Roasters	37,753	35,722	29,834	22,060	13,532	9,620	7,962	6,199	4,881	5,682	10,845	23,555
Fowls	13,132	11,490	9,501	6,868	5,069	4,057	9,323	12,178	12,526	10,839	11,702	15,143
Turkeys	14,586	16,728	15,744	12,765	9,179	7,817	7,260	5,709	4,062	2,769	1,620	6,500
Ducks	4,439	3,627	2,814	1,644	828	995	2,207	3,452	4,875	5,194	4,849	4,722
Miscellaneous	16,341	14,342	11,300	8,097	6,163	6,869	9,096	10,310	10,551	10,795	11,963	15,881
Total	111,642	104,833	88,675	67,285	45,824	38,131	42,705	44,970	47,789	50,177	59,528	91,211

* Included in "Miscellaneous" prior to July 1, 1932.

(*Continued on next page.*)

TABLE 63—(*Concluded*)

POULTRY COLD-STORAGE HOLDINGS BY CLASS, UNITED STATES, 1926–1939

(Thousands of pounds)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1934												
Broilers	15,118	13,343	10,494	7,302	4,473	2,794	3,306	5,782	9,588	14,447	18,515	20,203
Fryers	13,097	11,862	9,918	7,007	3,804	2,279	1,754	1,696	1,849	3,969	8,581	12,590
Roasters	38,156	37,519	32,377	24,900	17,704	12,701	9,598	7,134	6,639	7,272	13,409	23,947
Fowls	18,426	16,113	11,973	7,308	3,351	4,144	7,355	11,061	11,082	11,605	13,937	19,313
Turkeys	15,732	19,941	19,177	14,499	11,154	9,493	3,385	6,648	4,787	3,041	1,763	9,572
Ducks	4,287	3,489	2,252	987	364	568	1,503	2,892	3,666	3,962	3,853	3,749
Miscellaneous	18,667	17,910	15,585	12,194	8,362	7,811	8,708	9,690	9,462	10,966	12,343	16,191
Total	123,503	120,177	101,776	74,197	49,212	39,790	40,609	44,904	46,053	55,262	73,401	105,565
1935												
Broilers	20,560	18,186	15,651	12,542	8,734	5,862	5,206	5,103	4,984	6,900	9,223	11,179
Fryers	15,539	14,079	11,742	9,539	6,446	3,928	2,530	1,677	1,267	2,811	6,838	11,394
Roasters	32,439	30,009	26,180	20,622	14,942	9,281	6,217	3,420	2,097	4,412	11,435	23,451
Fowls	24,889	19,859	15,852	10,059	6,473	5,111	6,399	5,611	4,347	4,960	7,356	12,525
Turkeys	18,652	23,516	22,973	19,846	16,143	14,258	13,851	11,655	9,006	6,549	3,620	9,114
Ducks	2,948	2,134	1,439	809	544	929	2,029	3,641	4,359	4,238	4,159	4,065
Miscellaneous	16,974	14,502	12,939	10,396	8,533	8,905	10,819	10,155	8,851	9,700	10,822	14,371
Total	132,001	122,285	106,776	83,713	61,815	48,274	47,051	41,262	34,911	39,720	53,156	86,099
1936												
Broilers	11,556	8,819	6,679	5,184	2,566	2,915	3,663	8,230	16,413	22,586	25,755	27,080
Fryers	13,329	12,388	10,290	8,587	5,796	3,307	1,903	1,947	3,519	7,630	13,257	17,561
Roasters	31,244	29,686	23,913	19,348	12,694	8,724	5,562	3,986	3,733	6,254	14,646	28,080
Fowls	15,554	15,456	11,867	8,071	5,058	4,639	6,079	9,650	12,995	16,290	21,401	27,123
Turkeys	16,819	20,541	19,100	17,749	13,909	12,381	13,660	9,971	7,980	5,568	4,123	13,660
Ducks	3,134	1,509	864	604	566	1,061	2,336	3,995	5,019	5,402	5,362	5,247
Miscellaneous	14,741	15,534	12,979	9,953	7,740	8,699	10,948	13,229	15,826	18,260	20,435	25,782
Total	107,389	103,833	85,792	69,494	49,334	41,926	45,959	49,230	65,488	82,096	104,981	149,391

1937

Broilers	27,531	24,898	21,927	16,990	12,173	9,044	7,366	7,400	8,212	9,079	9,631	9,963
Fryers	20,113	18,118	15,636	11,734	8,046	5,125	3,396	2,514	2,297	4,187	7,899	10,234
Roasters	39,186	36,407	31,698	23,908	17,438	12,659	8,725	6,094	4,798	5,979	13,989	21,624
Fowls	32,699	27,983	25,465	17,904	14,095	13,041	14,996	14,136	12,223	11,641	15,333	19,919
Turkeys	35,189	40,841	37,763	30,417	26,750	25,106	21,915	17,441	12,312	7,315	5,208	19,695
Ducks	4,515	3,556	2,717	1,883	1,963	3,453	5,993	8,588	10,170	9,928	9,035	7,821
Miscellaneous	28,654	26,401	22,050	17,492	14,403	13,912	14,781	13,867	13,721	13,592	15,113	19,490
Total	187,887	178,304	157,858	120,328	94,888	82,340	77,173	70,040	63,733	61,721	76,208	108,746

1938

Broilers	9,805	8,886	7,862	6,252	4,351	4,258	4,878	6,553	9,060	9,798	10,759	11,460
Fryers	10,852	9,850	8,625	7,034	5,286	3,766	2,513	2,039	2,550	4,152	7,283	12,534
Roasters	26,458	23,344	20,161	15,794	11,962	8,826	6,948	5,449	5,055	7,497	15,253	25,804
Fowls	24,244	22,126	20,810	15,249	11,300	9,024	9,700	9,039	8,819	9,630	12,943	18,502
Turkeys	25,503	28,020	24,561	20,123	14,743	12,928	11,938	8,633	5,711	3,790	3,899	18,111
Ducks	5,747	4,290	2,717	1,448	1,458	3,143	6,050	9,196	11,260	11,495	10,780	9,276
Miscellaneous	20,891	18,589	15,757	12,919	10,353	10,106	11,407	11,731	12,476	13,579	16,775	22,401
Total	123,500	115,105	100,493	78,819	60,053	52,049	53,432	52,640	54,941	59,942	77,692	118,088

1939

Broilers	11,552	10,804	9,289	7,414	5,779	6,241	6,722	7,494	8,835	9,025	10,000	10,570
Fryers	15,078	13,696	11,635	9,232	6,586	4,892	3,395	2,490	2,520	3,748	7,257	11,387
Roasters	33,984	31,273	26,718	20,908	15,513	11,398	7,821	5,963	4,883	6,716	13,046	25,537
Fowls	23,823	20,883	18,391	13,970	10,907	11,983	13,683	12,925	12,276	11,095	15,836	23,602
Turkeys	22,762	28,264	26,958	22,368	17,332	17,414	17,373	14,211	9,994	7,994	8,026	26,498
Ducks	6,739	4,664	2,991	1,455	1,090	1,998	4,931	7,849	10,339	10,005	9,203	8,064
Miscellaneous	25,170	23,947	20,247	15,640	12,861	12,870	13,545	13,986	14,023	14,581	15,860	21,991
Total	139,108	133,531	116,229	90,987	70,568	66,796	67,470	64,918	62,870	63,164	79,228	127,649

Source of data:
United States Department of Agriculture Bureau of Agricultural Economics. United States cold-storage holdings on first of each month. Monthly reports, January, 1926, to January, 1939. (Mimeo.)

TABLE 64

POULTRY COLD-STORAGE HOLDINGS BY CLASS, PACIFIC SECTION, 1926–1939

(Thousands of pounds)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1926												
Broilers	848	899	397	175	115	406	1,095	1,491	1,647	1,463	1,327	1,168
Fryers	83	57	33	28	11	17	34	44	57	65	61	58
Roosters	337	309	232	191	164	104	76	53	95	82	221	303
Fowls	564	480	479	391	321	232	404	294	498	494	544	714
Turkeys	681	909	1,344	1,177	997	865	737	594	504	405	293	992
Miscellaneous	411	280	247	207	149	156	199	206	238	210	281	440
Total	2,924	2,734	2,732	2,169	1,657	1,780	2,545	2,682	3,039	2,719	2,727	3,675
1927												
Broilers	1,019	788	439	393	364	643	935	1,207	1,281	1,004	845	606
Fryers	62	65	52	54	54	76	91	124	82	100	97	112
Roosters	378	478	416	319	256	230	188	147	169	109	120	173
Fowls	865	839	753	699	646	672	734	806	797	633	812	710
Turkeys	1,259	1,663	1,536	1,618	1,481	1,340	1,155	913	723	510	221	729
Miscellaneous	515	600	544	484	434	447	560	686	719	669	708	734
Total	4,098	4,433	4,040	3,567	3,235	3,398	3,663	3,883	3,741	3,226	2,922	3,154

1928

Broilers	587	387	237	128	133	581	1,347	2,053	2,012	2,075	1,789	1,590
Fryers	93	57	51	26	22	44	73	127	133	31	200	219
Roosters	231	252	229	162	139	92	135	71	99	173	90	323
Fowls	360	682	522	456	421	327	323	328	280	321	301	359
Turkeys	668	1,466	2,083	1,979	1,795	1,589	1,238	1,075	816	603	289	627
Miscellaneous	770	739	512	473	357	424	354	423	461	482	511	548
Total	3,209	3,583	3,634	3,224	2,867	3,057	3,470	4,077	3,801	3,685	3,189	3,666

1929

Broilers	1,304	1,178	1,022	721	576	902	1,349	2,289	2,373	2,317	2,243	1,926
Fryers	93	52	28	30	28	31	48	85	75	105	122	106
Roosters	554	584	498	346	246	79	85	89	93	75	181	354
Fowls	425	338	256	183	181	165	254	299	309	474	688	825
Turkeys	895	1,648	2,231	1,841	1,496	1,202	970	669	308	185	145	349
Miscellaneous	647	641	619	519	453	403	443	495	518	627	683	801
Total	3,918	4,439	4,654	3,646	3,080	2,782	3,149	3,936	3,760	3,783	4,062	4,361

1930

Broilers	1,856	1,427	1,113	795	771	1,002	1,684	2,238	2,503	2,321	2,202	2,049
Fryers	123	114	96	79	75	81	107	118	145	116	100	85
Roosters	346	373	332	333	292	251	231	172	147	106	122	177
Fowls	966	820	755	765	686	713	876	817	623	674	709	713
Turkeys	780	2,020	2,961	2,704	2,458	2,161	1,785	1,346	948	623	294	287
Miscellaneous	1,061	1,046	699	820	774	746	777	870	1,049	977	841	781
Total	5,132	5,600	6,156	5,496	5,056	4,944	5,460	5,561	5,415	4,817	4,268	4,092

(*Continued on next page.*)

TABLE 64—(*Continued*)

POULTRY COLD-STORAGE HOLDINGS BY CLASS, PACIFIC SECTION, 1926–1939

(Thousands of pounds)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1931												
Broilers	1,701	1,300	990	670	431	712	1,509	1,865	1,987	1,903	1,738	1,522
Fryers	74	93	60	44	35	69	153	172	162	141	137	154
Roasters	210	187	193	156	145	162	148	138	129	125	190	224
Fowls	861	723	633	613	548	552	612	690	705	800	804	764
Turkeys	383	1,398	1,754	1,336	1,116	982	735	447	288	196	159	293
Miscellaneous	799	780	734	616	547	724	789	1,102	1,071	1,111	1,088	1,151
Total	4,023	4,410	4,364	3,435	2,922	3,201	3,946	4,404	4,342	4,276	4,116	4,113
1932												
Broilers	1,363	1,290	933	735	631	712	867	877	689	579	443	392
Fryers	192	118	97	67	59	55	53	48	65	55	43	56
Roasters	230	212	204	153	151	143	128	127	123	93	100	150
Fowls	912	832	884	817	794	713	657	611	561	510	458	496
Turkeys	1,019	2,767	3,334	2,691	2,579	2,233	1,908	1,567	915	521	156	1,045
Ducks	*	*	*	*	*	*	63	81	92	87	106	80
Miscellaneous	1,350	1,115	1,137	1,037	897	850	780	682	580	503	459	534
Total	4,966	6,334	6,589	5,490	5,110	4,706	4,481	3,993	3,024	2,348	1,775	2,753
1933												
Broilers	343	273	206	171	177	552	1,056	1,373	1,252	1,196	1,121	1,589
Fryers	54	41	45	33	42	82	103	109	106	111	156	154
Roasters	240	209	213	245	289	304	382	299	314	273	315	513
Fowls	492	491	536	470	490	488	570	659	753	904	925	968
Turkeys	843	1,912	2,910	2,041	1,546	1,241	1,138	774	426	202	102	316
Ducks	74	60	49	35	36	26	23	22	35	53	77	74
Miscellaneous	575	554	410	308	337	440	699	547	865	967	950	469
Total	2,631	3,560	4,364	3,303	2,917	3,233	3,976	3,983	3,799	3,713	3,645	4,967

* Included in "Miscellaneous" prior to July 1, 1932.

1934												
Broilers	1,202	1,192	617	353	258	563	967	1,180	1,226	1,236	1,141	1,131
Fryers	164	82	112	69	29	49	78	78	81	129	193	251
Roasters	525	483	347	367	263	141	99	83	60	78	128	372
Fowls	890	852	783	662	478	316	343	417	591	704	806	827
Turkeys	1,594	3,434	3,948	3,229	2,356	2,431	2,128	1,609	984	411	250	649
Ducks	58	52	45	52	41	41	48	56	80	109	102	84
Miscellaneous	457	507	434	600	506	418	390	402	364	337	355	601
Total	5,080	6,602	6,286	5,332	4,426	3,964	4,053	3,825	3,386	2,999	2,975	3,915
1935												
Broilers	1,113	755	500	350	360	681	1,249	1,268	1,166	984	733	893
Fryers	243	230	196	159	124	168	140	116	81	83	137	196
Roasters	544	623	517	493	432	386	372	322	269	213	286	415
Fowls	1,006	855	718	562	378	278	362	384	438	458	610	704
Turkeys	2,184	4,710	4,679	3,335	2,479	2,302	2,220	1,726	1,041	479	256	1,083
Ducks	57	45	22	19	16	17	28	41	61	79	79	57
Miscellaneous	470	395	363	327	293	283	244	214	153	140	132	219
Total	5,617	7,622	6,995	5,245	4,082	4,205	4,615	4,171	3,209	2,416	2,233	3,567
1936												
Broilers	1,199	849	323	416	559	800	1,450	1,702	1,767	1,700	1,615	1,601
Fryers	213	193	188	149	143	157	163	152	180	185	168	158
Roasters	557	553	516	475	375	395	289	244	203	245	328	295
Fowls	785	704	584	522	406	391	512	571	631	834	1,142	1,166
Turkeys	2,178	3,035	3,419	3,477	2,980	2,823	2,958	1,820	1,137	685	581	2,333
Ducks	31	15	12	13	34	70	108	145	205	229	256	241
Miscellaneous	318	322	260	280	277	284	291	316	327	331	427	681
Total	5,281	6,581	5,302	5,332	4,774	4,920	5,771	4,950	4,450	4,209	4,517	6,475

(*Concluded on next page.*)

TABLE 64—(*Concluded*)

POULTRY COLD-STORAGE HOLDINGS BY CLASS, PACIFIC SECTION, 1926–1939

(Thousands of pounds)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1937												
Broilers	1,914	1,781	1,300	1,007	817	963	1,133	1,013	856	781	744	599
Fryers	181	151	104	106	112	95	124	123	75	82	115	135
Roasters	320	297	348	354	432	339	252	233	136	101	269	298
Fowls	1,149	1,193	1,235	1,073	1,113	1,033	958	915	877	840	850	777
Turkeys	6,350	8,885	8,172	6,256	5,906	4,722	3,253	1,962	1,152	537	413	1,999
Ducks	207	179	159	139	124	106	114	143	189	211	202	165
Miscellaneous	508	535	457	731	446	426	457	490	359	342	319	540
Total	10,639	13,031	11,775	9,693	8,942	7,684	6,295	4,885	3,644	2,894	2,913	4,439
1938												
Broilers	570	536	484	376	448	867	983	985	850	788	706	673
Fryers	129	127	130	122	127	135	128	130	148	196	214	234
Roasters	300	319	215	210	187	166	205	204	201	179	285	401
Fowls	842	859	966	911	907	814	714	616	581	585	556	692
Turkeys	4,493	6,706	6,121	4,536	3,858	3,735	3,203	2,174	1,231	802	717	1,803
Ducks	107	64	50	39	43	61	127	215	277	280	279	230
Miscellaneous	479	476	358	383	415	454	572	524	483	428	459	668
Total	6,930	9,087	8,314	6,577	5,985	6,232	5,932	4,851	3,741	3,258	3,216	4,791
1939												
Broilers	612	567	461	353	397	688	809	805	661	578	665	919
Fryers	262	279	230	168	180	188	139	130	128	132	110	108
Roasters	557	575	521	407	415	374	310	696	171	219	266	277
Fowls	770	845	735	660	666	563	662	236	776	931	980	1,080
Turkeys	3,958	6,937	7,059	5,953	5,232	5,584	6,958	3,698	2,483	1,812	1,890	4,634
Ducks	136	111	77	76	62	62	81	142	171	184	227	196
Miscellaneous	706	779	795	718	626	534	577	535	512	539	496	522
Total	7,001	10,093	9,871	8,335	7,733	7,965	7,536	6,242	4,907	4,395	4,936	7,695

Source of data:
United States Department of Agriculture Bureau of Agricultural Economics. United States cold-storage holdings on first of each month. Monthly reports, January, 1926, to December, 1936. (Mimeo.) 1937, 1938 and 1939 by correspondence.