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Labor in the Marketing of Farm Food Products

By Kenneth E. Ogren and Kathryn Parr

Farm-retail price spreads and the farmer's share of the consumer's dollar have long been the concern of both producers and consumers, as well as legislative bodies and other public policy groups. The farm-retail price spread for many farm products is a large part of the retail price—about 85 percent of the costs of tobacco products, household textiles, and clothing at retail, and more than half of the retail-store cost of food. To develop an understanding of the size of these spreads and the variations between products and time periods, it is necessary to consider the services performed in getting the products from the farmers to the consumers and the costs of performing these services. This article describes the statistics compiled in the Agricultural Marketing Service for measuring labor costs as a component of the farm-retail spread and the uses of these statistics.

THE services of many workers are required to get products from farmers to consumers in the form, time, and place desired. More workers are now engaged in marketing¹ farm products than are employed in the production process on the farm. In 1954, about 5 million workers on a full-time basis were employed in the assembly, transportation, processing, wholesaling, and retailing of food products (table 1). Although no official series are available, an equal number of workers probably were performing similar functions for nonfood farm products—cotton and wool products, tobacco products, alcoholic beverages, leather products, and many others. This means that about 10 million workers on a full-time basis are engaged in marketing agricultural products. What we might call the "direct labor costs" of these 10 million workers amounts to about half of the total spread between what the farmer receives for his products and what the consumer pays. Numbers, wage rates, and productivity of labor

are therefore major factors affecting trends in farm-retail price spreads.

What the Labor Series Measure

Agricultural Marketing Service prepares annual estimates of the total number of workers in the local assembly, transportation, processing, wholesaling, and retailing of farm food products (table 1). Workers in restaurants and other places that sell food for on-premise consumption are included in retailing. This series measures the full-time equivalent employment² of all wage earners and salaried employees, active proprietors of unincorporated businesses, and unpaid family labor.

The series on labor cost includes wages and salaries plus estimates for proprietors and family workers. Also included are estimates of supplements to wages and salaries. Among these supplements are employer contributions to social insurance, private pensions, welfare funds, compensation for injuries, and pay of military reservists. These payments are small compared with wages; they totaled about 0.5 billion dollars in 1953.

Estimates for proprietors and family labor are based on less reliable data than those for paid employees. Because many small retail stores are operated mainly by owners and members of their families, the number of persons engaged in re-

¹"Agricultural economists have rather generally followed a broad definition of marketing, covering not only buying and selling but also such subjects as transportation, processing, and storage."—Waugh, Frederick V., Ed. READINGS ON AGRICULTURAL MARKETING. Iowa State College Press. Ames, Iowa. 1954. Page 2. As Agricultural Marketing Service measures it, the marketing margin refers to the total price spread between the producer and consumer. In this context, marketing includes all operations involved in moving agricultural products from farms on which they are produced to consumers at the time and in the form they are desired. It should be recognized that this broad definition of marketing differs from the concept of marketing accepted in some industries.

²"Full-time equivalent employment" measures man-years of full-time workers and the estimated equivalent in work performed by part-time workers. All statistics on numbers of workers in this article are computed in this way.

TABLE 1.—*Estimated number of persons and labor costs in marketing all farm food products, 1929-54*¹

Year	Number of persons		Labor cost	
	Total	1947-49=100	Total	1947-49=100
	Millions	Percent	Billion dollars	Percent
1929.....	3.42	73	4.56	39
1930.....	3.40	72	4.48	38
1931.....	3.25	69	4.11	35
1932.....	3.12	66	3.50	30
1933.....	3.16	67	3.24	28
1934.....	3.44	73	3.65	31
1935.....	3.46	74	3.79	32
1936.....	3.55	76	3.98	34
1937.....	3.74	80	4.46	38
1938.....	3.71	79	4.47	38
1939.....	3.83	81	4.66	40
1935-39 average.....	3.66	78	4.27	37
1940.....	3.95	84	4.86	42
1941.....	4.08	87	5.35	46
1942.....	4.16	89	5.89	50
1943.....	4.02	86	6.26	54
1944.....	4.11	87	6.91	59
1945.....	4.22	90	7.61	65
1946.....	4.46	95	9.14	78
1947.....	4.64	99	10.75	92
1948.....	4.71	100	11.82	101
1949.....	4.74	101	12.44	107
1947-49 average.....	4.70	100	11.67	100
1950.....	4.72	100	12.96	111
1951.....	4.85	103	14.20	122
1952.....	4.95	105	15.13	130
1953.....	5.02	107	15.98	137
1954 ²	5.0	107	16.5	141

¹ Includes number (on a full-time equivalent basis) and compensation of all persons engaged in assembling, processing, wholesaling, retailing, and transporting farm food products. Data for later years and revised data will be published annually in *The Marketing and Transportation Situation*.

² Preliminary estimate.

Compiled from statistics published by Departments of Commerce and Labor and Interstate Commerce Commission.

tailing food would be considerably understated if they were not included. Around a third or more of the workers in retailing are estimated to be proprietors or unpaid family labor. Family workers and proprietors are relatively unimportant in processing, wholesaling, and transportation.

As all the farm food marketed does not move into domestic civilian consumption, numbers and labor costs in table 1 include also the part of labor that is engaged in marketing farm food products that are sold to military services and those moved into export channels. Adjustments in overall estimates which are sometimes necessary for special analysis are described in the section on applications and limitations of these series.

How the Series Are Compiled

The series on labor numbers and costs are compiled from separate estimates made for processing, wholesaling (including local assembly), retailing, and transportation. These estimates are based upon data published by the Departments of Commerce and Labor and the Interstate Commerce Commission. As many adjustments of the original data are necessary in the derivation of these labor series, a somewhat detailed account of the assumptions and procedures are presented here. This will give potential users of the series an insight into the reliability of the series and the purposes for which they may be adapted.

Data for numbers of workers and labor cost are more complete for years in which Censuses of Manufacturers and Business are taken than for intervening years. Benchmark estimates were therefore made in certain census years for each of the marketing functions. Estimates for other years were determined from trends in available annual employment and wage statistics series. The several censuses vary in detail and coverage. To establish benchmark estimates, we used the latest census year for which adequate data were available. Census data for other years were used, where possible, to verify the annual estimates made from the trend series. Procedures for each function are described in succeeding paragraphs.

PROCESSING.—Number of employees engaged in processing farm food products in 1947 and total wages, salaries, and other payments they received were estimated from data given for the Food and Kindred Products group in the Census of Manufactures for that year. Minor industries whose *principal* products were not food made from domestic farm products were excluded from the estimates. Data for the remaining industries were combined into six major food commodity groups that are similar to industry groups for which the Bureau of Labor Statistics reports data currently.³

For the years after 1947, estimates are computed by applying to the 1947 estimates for each of these six food commodity groups, the trends in numbers and earnings in those industries as reported by BLS. Trends in these major groups may introduce some errors. In the canning and preserving industry, the trend in labor numbers and earnings could be influenced by changes in the subgroups of industries whose principal products are from nonfarm products such as canned and cured fish and other seafood. Total labor cost by groups is obtained by multiplying average annual earnings by the estimated number of employees. Data are not available for supplements to wages and salaries by subgroups, so we used for the trend the aver-

ages computed from Department of Commerce data for the major industry group, food and kindred products.

Comparable employment and payroll series by the commodity groups are not available before 1947. Estimates of the number of employees before 1947 were obtained by applying to the 1947 estimate the trend in total number of employees in the food and kindred products group—full-time basis as reported by the Department of Commerce—after correcting the trend for estimated number in alcoholic beverage industries. The trend in average annual earnings in the food and kindred products group was applied to the 1947 estimate of average earnings of food processing employees. Average compensation—annual earnings plus supplements—was multiplied by estimated number of employees to obtain estimated labor cost.

WHOLESALE.—Number of persons engaged in wholesaling farm food products, which includes local assembly, and the total cost of this labor were estimated from the Census of Wholesale Trade for 1939 instead of 1948, because commodity-sales data were less detailed in the 1948 Census. It was assumed that for each kind of wholesaler, number of employees and labor cost represented the same proportion of totals that value of sales of farm foods bore to their total sales. The 1939 sales by type of commodity were reported for three groups of wholesalers—service and limited function wholesalers, manufacturers' sales branches, and assemblers of farm products. The other two general classes of wholesalers—manufacturers' sales offices and agents and brokers—were assumed to sell only the commodities of the trade in which they were reported. For example, agents and brokers classified in the fresh fruit and vegetable trade were assumed to handle only fresh fruits and vegetables. No adjustments were made for imported produce.

It is difficult to obtain accurate trends for wholesaling of farm food in noncensus years because annual data for employment and earnings are available only for total wholesale trade. The Department of Commerce publishes annual estimates of both food sales and total sales for merchant wholesalers. These data on food and total sales were deflated by the Bureau of Labor Statistics wholesale price indexes separately for food and for all commodities. Then for each year, we com-

³ Some establishments that process farm foods but whose major function is wholesaling or retailing—wholesalers and retailers who dress poultry, single-unit bakeries, and fluid milk distributors—are not included under processing. Estimates for wholesaling and retailing cover these firms. Some of the establishments that are included in the estimates process nonfood products as side lines; it was not possible to allow for labor required for these side lines.

puted a percentage that deflated food sales represent of deflated wholesale sales of all commodities. These percentages were used to allocate to food trade a portion of all employees in wholesale trade. This provided a series to indicate trend in number attributed to farm foods. The trend series was applied to 1939 estimates, and 1948 Census data were used to check the estimates obtained. We followed a similar procedure in allocating total wages and salaries to food. Estimates of numbers and labor costs by this method apparently were more valid than those obtained by using the trend in all wholesale trade as the trend in farm food wholesaling.

RETAILING.—The number of persons engaged in retailing food—including both off-premise and on-premise consumption—were estimated from the Census of Retail Trade for 1939. The 1939 Census reported more detail on sales by commodity lines for all types of retail stores than the 1948 Census. As retail food stores sell nonfarm foods and nonfood items, only part of the total number of workers can be included in estimates relating to farm foods. Workers in retailing in 1939 were allocated according to the proportion that farm food sales represented of total sales. Allocations were made for each type of store in which sales of food were reported, including grocery stores, restaurants, drug stores, and many others. The same percentages were used to allocate employees, proprietors of unincorporated businesses, and family workers who received no stated wages. No correction for nonfarm food was made in numbers selling meals and fountain service. It was not possible to separate out all sales of nonfarm food for on-premise consumption.

For years after 1939, annual estimates of the number of paid employees in the off-premise consumption segment of the retail-food trade were derived from trends in employment reported by BLS for retail-food stores. Before 1939, census data were used for 1929, 1933, and 1935. Intervening years were filled in by the trend reported for all retail trade. The trend in employees engaged in retailing food for on-premise consumption after 1939 was established from an unpublished BLS series of numbers of employees in eating and drinking places. Before 1939, census data and the trend in all retail trade were used.

Labor costs of paid employees were computed by multiplying numbers by estimated average an-

nual earnings, including supplements. The cost of supplements to wages and salaries for retailing food was included by applying annual percentages derived from statistics reported for all retail trade. Average annual earnings in the two segments of retailing for 1929, 1935, 1939, and 1948 are available from census data. For intervening years after 1939, a trend series was established for each segment from the BLS series on weekly earnings in retail food stores. Before 1939, average annual earnings of employees in all retail trade reported by the Department of Commerce was used for establishing the trend in intercensal years.

The numbers of proprietors and unpaid family labor in retail trade are reported for census years.⁴ For noncensus years after 1939, we used the trends in number of firms in retail food stores and in eating and drinking places; before 1939, the trends in paid employees were used to make estimates in the intercensal years. Compensation of proprietors and family members was assumed to average the same as earnings of paid employees.

TRANSPORTATION.—Available data are inadequate for making accurate estimates, but the labor in transportation represents a relatively small part of total labor cost in marketing food products. Estimates apply only to intercity transportation by rail and motor carriers. Estimates of numbers and labor cost in rail transportation of farm food products are based on data published by the Interstate Commerce Commission.⁵ Revenues received by Class I railways for handling farm foods were obtained by totaling food items, with allocations of such products as grains to food and nonfood uses. To obtain compensation of employees handling food products, the proportion of all freight revenue represented by food was applied to the compensation allocated to freight. Compensation for freight employees was estimated by applying to all freight expense the ratio of total compensation of employees to total expense. Numbers of employees were obtained by dividing the compensation allocated to food products by the average annual earnings of railway employees, on the assumption that the average compensation of

⁴ To estimate family labor on a full-time basis, we assumed that part-time labor worked 30 percent of the time. Approximately half of the family workers reported in the 1939 Census worked only part of the time.

⁵ U. S. INTERSTATE COMMERCE COMMISSION. FREIGHT COMMODITY STATISTICS AND STATISTICS OF RAILWAYS. Annual Report.

freight employees handling food was the same as the average for all employees.

Estimates for motor carriers were derived in a somewhat similar manner. Revenue for all trucks is obtained by multiplying highway ton-miles by revenue per ton-mile, published by the American Trucking Association. Revenue from trucking food products was not available; this was estimated by assuming that the percentage ratios of revenue from food to total freight revenue (excluding products of mines) derived from rail statistics, would apply to revenue of motor carriers. To estimate the labor cost in trucking food, data on compensation to employees for Class I motor carriers were used. Compensation of these employees as percentage of operating revenue was applied to the estimated revenue from transporting food. The wage and salary cost divided by average annual earnings of employees of Class I motor carriers is the estimate of number of employees engaged in trucking food.

Applications and Limitations

From the foregoing discussion it is evident that these statistics are not as accurate and reliable as we should like to have them. Several adjustments which are made in the primary data are based on rather broad assumptions. Perhaps the most serious limitations are in the estimates for retailing. Estimates for proprietors and unpaid family labor are based on inadequate data, yet they are a relatively important component of the total. In 1939 the estimated number of proprietors and family workers was slightly larger than the number of paid employees in food stores. In eating and drinking places the total number of proprietors and family workers was about half the number of paid employees. These proportions were considerably lower in 1948. Estimates for wholesaling and transportation are also based on some sketchy data but these functions account for a small part of the total.

These series probably measure year-to-year trends more accurately than they do actual levels. Estimates derived from census data are likely to underestimate the total number of laborers directly engaged in marketing farm foods. Many street vendors or local country truckers, for example, may not be included in any census.

Despite these limitations, we believe that these series have several useful applications in economic analyses of developments in marketing. Some of these suggested uses are outlined briefly, with a more detailed discussion of the index of unit labor cost and its application. A more detailed discussion of the importance of labor in marketing farm products, together with some additional statistical series, are given in recent articles in *The Marketing and Transportation Situation*.⁶

Analysis of contribution of labor services in moving products from farm to consumer.—During the last quarter of a century, workers in food-marketing firms increased about 50 percent whereas workers on farms decreased about a third. A significant part of the increase in number of workers has arisen from the expansion in services performed by the marketing system. More foods are now processed and prepared in factories. The growth in the proportion of our population living off farms has increased the need for transportation and other services. Because of this shift in population, the quantity of food products marketed has increased at a somewhat greater rate than the quantity produced.

As the workers on farms include those producing both food and nonfood products, a continuing series on numbers of all workers engaged in marketing all farm products would be most useful for this purpose. Breakdowns by component parts—food and major nonfood products—would also aid in the analysis of the contribution of labor in marketing various farm products.

Output per man-hour in marketing food products.—The increase in productivity of labor in marketing in comparison with increased productivity in agriculture is a significant question related to the analysis of change in numbers. This is discussed in detail later, with an example of a special application of these series.

Labor as cost factor in marketing.—These data can be used to measure the proportion that labor costs are of the total spread between farmers and consumers. Other data collected in connection

⁶ AGRICULTURAL MARKETING SERVICE. LABOR IN THE MARKETING OF FARM FOOD PRODUCTS. The Marketing and Transportation Situation—106, pp. 17-24, May-July 1952; LABOR IN MARKETING FARM PRODUCTS. The Marketing and Transportation Situation—113, pp. 19-30, May 1954.

with the basic series such as hourly earnings, length of work week, and cost of supplements to wages and salaries are useful in explaining changes in labor costs and their importance in the total marketing bill.

Importance of various functions in marketing.—Farm-retail price spreads often appear large unless related to all services performed by the marketing system. Distribution of laborers among marketing functions indicates the relative importance of each function.

Of the total persons engaged in marketing farm foods in recent years, about three-fifths were in retailing. Roughly, 40 percent of the total in retailing are employed in restaurants and other eating places. Employees in food-processing plants accounted for almost a fourth of the total and those in wholesaling and transportation made up the remainder. Retailing accounts for about half of the cost of labor in marketing farm food products, processing for slightly less than 30 percent, and wholesaling and transportation for approximately 10 percent each. Wage rates are lowest in retailing so that labor costs in retailing represent a smaller share of the total than indicated by the proportion of workers.

These estimates are not accurate enough for year-to-year comparisons of changes in the relative importance of each function. Census data for the processing industries are sufficiently detailed to permit more precise estimates and analysis by major groups of products.

Indexes of unit labor costs and hourly earnings.—These indexes are computed to compare trends in labor cost and hourly earnings with the trend in overall charges for marketing farm food products (table 2). The index of unit labor cost equals the index of (adjusted) total labor cost divided by an index of physical volume of food marketed for United States civilian consumption.⁷ This index is thus a rough approximation of the trend in cost of labor per unit of food marketed. Unit labor cost in 1954 was about 133 percent higher than the 1935-39 average, compared with an increase of 85 percent in the overall marketing margin. Other cost factors have apparently increased at a less rapid rate than labor costs. Hourly earnings, however, increased about 200 percent in this period, which indicates that actual

labor costs have increased much less than wage rates. Since 1951, unit labor cost has increased only a third as much as the rise in average hourly earnings. Data for hourly earnings in table 2 measures the trend in average compensation per hour of all persons engaged in marketing farm foods for civilian consumption. This series is obtained by dividing labor cost (adjusted as described in footnote 7) by estimates of total man-hours of labor.

The comparisons based on the series in table 2 indicate that productivity of labor in marketing food products has increased, especially in recent years. This conclusion is consistent with the stepped-up rate of increase in output per man-hour that apparently has occurred in the economy in the last year or two. Capital expenditures for new plant and equipment in the food processing and distributing industries have been large in recent years. Less rapid turnover and the availability of more skilled workers in food marketing activities also tend to increase output per man-hour.

A direct measurement of the trend in output per man-hour can be obtained from a comparison of the change in number of man-hours of labor with the change in volume of food marketed. The physical volume of food marketed for domestic civilian consumption in 1954 was about 55 percent higher than the 1935-39 average. During this same period, the number of man-hours of labor in marketing this food increased about 20 percent. Thus, the increase in physical output marketed was 30 percent greater than the increase in man-hours—equivalent to an annual average increase of around 2 percent. Output per *man* has

⁷ The total labor cost shown in table 1 was adjusted to exclude labor in marketing food for noncivilian use and labor in restaurants and other eating places as the marketing-margin series measures the price spread between the farm value and retail-store cost of a fixed quantity of food products. Estimates of labor costs in retail food stores (excluding eating places) were increased to allow for additional labor costs that would have been incurred if food sold in eating places had been purchased for off-premise consumption. Adjustments for the numbers and labor cost of persons engaged in marketing food for noncivilian use were based on Agricultural Marketing Service estimates of quantities of food for exports and military use. Except for war years, the proportion of food allocated to noncivilian use was relatively small.

increased less during this period than output per *man-hour* because of a substantial decrease in the average hours worked per week.

Labor inputs in marketing are easily defined either in form of man-hours or equivalent man-years, but as yet no one has come up with an adequate method for measuring physical output in marketing. We first used as a measure of output an index of physical volume of foods marketed which was computed by weighting retail quantities of farm food for civilian consumption, using 1947-49 average retail price weights.⁸ However, as marketing margins—or what might be called the “value added” in the marketing process—should be more appropriate indicators of marketing services performed than retail prices, we also computed an index of physical volume with the average 1947-49 margins of various food items as weights. With margin weights, products with low farmer's shares receive proportionately more weight than with retail prices as weights. The results obtained from these two sets were not significantly different. Apparently, long-time shifts in consumer purchases from flour to bread or other baked goods and increased purchases of other more highly processed foods with relatively low farmer's shares have been offset by increased purchases of poultry, eggs, and other products with relatively high farmer's shares. Actually, quantities and margins are not available for enough of frozen foods, bakery products, and other highly processed foods to give a precise measurement of output of marketing services by this latter method.

Monthly Series on Hourly Earnings

As a final note in this article, we shall discuss briefly the monthly series on hourly earnings of food marketing employees (table 3). Current wage statistics available from the Bureau of Labor Statistics and Interstate Commerce Commission are used to estimate average hourly earnings. These wage statistics by marketing functions are:

⁸ Basic data used are the total civilian disappearances of food used for the Agricultural Marketing Service index of per capita food consumption, with corrections made for imported and nonfarm food and food consumed on farms where produced.

Processing—Average Hourly Earnings, Food and Kindred Products, BLS.

Wholesaling—Average Hourly Earnings, All Wholesale Trade, BLS.

Retailing—Average Hourly Earnings, Food and Liquor Stores, BLS.

Transportation—Average hourly earnings for Class I railroad employees computed from ICC data on total man-hours and total compensation of employees.

TABLE 2.—*Marketing margin, labor cost per unit of product, and hourly earnings of persons engaged in marketing farm food products for United States civilian consumption, 1929-54*

Index numbers (1947-49=100)

Year	Marketing margin ¹	Unit labor cost ²	Hourly earnings ³
1929-----	77	61	-----
1930-----	78	60	-----
1931-----	66	55	-----
1932-----	59	48	42
1933-----	56	43	40
1934-----	59	47	43
1935-----	62	51	44
1936-----	63	50	43
1937-----	64	56	46
1938-----	61	54	47
1939-----	59	54	47
1935-39 average-----	62	53	45
1940-----	58	54	48
1941-----	59	56	52
1942-----	65	58	57
1943-----	69	60	61
1944-----	70	64	65
1945-----	70	69	70
1946-----	79	77	81
1947-----	95	91	93
1948-----	102	103	101
1949-----	103	106	106
1947-49 average-----	100	100	100
1950-----	101	108	112
1951-----	109	119	120
1952-----	112	122	126
1953-----	113	123	133
1954 ⁴ -----	115	124	138

¹ Calculated from the trend in the margin between retail cost of a fixed quantity of farm food products and payments to farmers for equivalent produce in the market-basket series which is published in each issue of *The Marketing and Transportation Situation*. Margin is adjusted for processing taxes in 1933-35 and for Government payments to processors in 1943-46.

² Unit labor cost is the quotient of indexes of labor cost and the physical volume of food marketed for civilian consumption.

³ Hourly earnings estimated by dividing labor cost by total man-hours.

⁴ Preliminary estimate.

increased less during this period than output per *man-hour* because of a substantial decrease in the average hours worked per week.

Labor inputs in marketing are easily defined either in form of man-hours or equivalent man-years, but as yet no one has come up with an adequate method for measuring physical output in marketing. We first used as a measure of output an index of physical volume of foods marketed which was computed by weighting retail quantities of farm food for civilian consumption, using 1947-49 average retail price weights.⁸ However, as marketing margins—or what might be called the “value added” in the marketing process—should be more appropriate indicators of marketing services performed than retail prices, we also computed an index of physical volume with the average 1947-49 margins of various food items as weights. With margin weights, products with low farmer's shares receive proportionately more weight than with retail prices as weights. The results obtained from these two sets were not significantly different. Apparently, long-time shifts in consumer purchases from flour to bread or other baked goods and increased purchases of other more highly processed foods with relatively low farmer's shares have been offset by increased purchases of poultry, eggs, and other products with relatively high farmer's shares. Actually, quantities and margins are not available for enough of frozen foods, bakery products, and other highly processed foods to give a precise measurement of output of marketing services by this latter method.

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1938.....	61	54	47
1939.....	59	54	48
1935-39 average.....	62	53	45
1940.....	58	54	48
1941.....	59	56	52
1942.....	65	58	57
1943.....	69	60	61
1944.....	70	64	65
1945.....	70	69	70
1946.....	79	77	81
1947.....	95	91	93
1948.....	102	103	101
1949.....	103	106	106
1947-49 average.....	100	100	100
1950.....	101	108	112
1951.....	109	119	120
1952.....	112	122	126
1953.....	113	123	133
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¹ Calculated from the trend in the margin between retail cost of a fixed quantity of farm food products and payments to farmers for equivalent produce in the market-basket series which is published in each issue of *The Marketing and Transportation Situation*. Margin is adjusted for processing taxes in 1933-35 and for Government payments to processors in 1943-46.

² Unit labor cost is the quotient of indexes of labor cost and the physical volume of food marketed for civilian consumption.

³ Hourly earnings estimated by dividing labor cost by total man-hours.

⁴ Preliminary estimate.

TABLE 3.—*Hourly earnings of paid employees in marketing of farm food products, annual 1935-54, monthly 1950-54*¹

Year and month	Average hourly earnings	Year and month	Average hourly earnings	Year and month	Average hourly earnings
	<i>Dollars</i>		<i>Dollars</i>		<i>Dollars</i>
1935.....	0. 56	1950		1952	
1936.....	. 57	September.....	1. 38	November.....	1. 59
1937.....	. 60	October.....	1. 38	December.....	1. 59
1938.....	. 62	November.....	1. 40		
1939.....	. 61	December.....	1. 42	1953	
				January.....	1. 61
1940.....	. 62	1951		February.....	1. 61
1941.....	. 66	January.....	1. 43	March.....	1. 61
1942.....	. 73	February.....	1. 45	April.....	1. 62
1943.....	. 79	March.....	1. 45	May.....	1. 63
1944.....	. 84	April.....	1. 46	June.....	1. 63
1945.....	. 88	May.....	1. 46	July.....	1. 63
1946.....	1. 00	June.....	1. 48	August.....	1. 63
1947.....	1. 14	July.....	1. 47	September.....	1. 65
1948.....	1. 24	August.....	1. 47	October.....	1. 66
1949.....	1. 31	September.....	1. 48	November.....	1. 68
		October.....	1. 49	December.....	1. 67
1950.....	1. 37	November.....	1. 50		
1951.....	1. 47	December.....	1. 51	1954	
1952.....	1. 55			January.....	1. 70
1953.....	1. 64	1952		February.....	1. 69
1954 ²	1. 70	January.....	1. 53	March.....	1. 69
		February.....	1. 53	April.....	1. 69
1950		March.....	1. 53	May.....	1. 70
January.....	1. 35	April.....	1. 54	June.....	1. 70
February.....	1. 36	May.....	1. 54	July.....	1. 71
March.....	1. 35	June.....	1. 55	August.....	1. 69
April.....	1. 36	July.....	1. 55	September.....	1. 70
May.....	1. 36	August.....	1. 55	October.....	1. 71
June.....	1. 36	September.....	1. 55	November.....	1. 73
July.....	1. 37	October.....	1. 57	December.....	² 1. 72
August.....	1. 36				

¹ Weighted composite earnings of paid employees in steam railways, food processing, wholesale trade, and retail food stores. These data are published currently on the inside cover page of *The Marketing and Transportation Situation*.

² Preliminary estimates.

Compiled from data published by Department of Labor and Interstate Commerce Commission.

A weighted average of hourly earnings is computed with the following weights: Processing, 37 percent; wholesaling, 17 percent; retailing, 34 percent; transportation, 12 percent. These percentage weights are based on the 1947-49 average of estimated man-hours of paid employees in the marketing of farm food products for civilian consumption, excluding employees in eating places. These weighting factors are reasonably representative of the entire period, 1935 to date.

These hourly earnings are useful as an indicator of changes in labor costs in current analyses of factors that affect changes in farm-retail price spreads. This series differs from the index of an-

nual hourly earnings in table 2 in that it relates only to paid employees. In this monthly series constant weights are used, whereas the index of hourly earnings in the other series is derived from estimates of aggregate labor costs and man-hours for all marketing functions combined. The relative importance of each function may vary from one year to the next. Another limitation of the monthly series is that some of the wage statistics used to construct this series include some labor not engaged in marketing farm foods. The trend in the annual averages of this monthly series corresponds closely to the annual index of hourly earnings in table 2.