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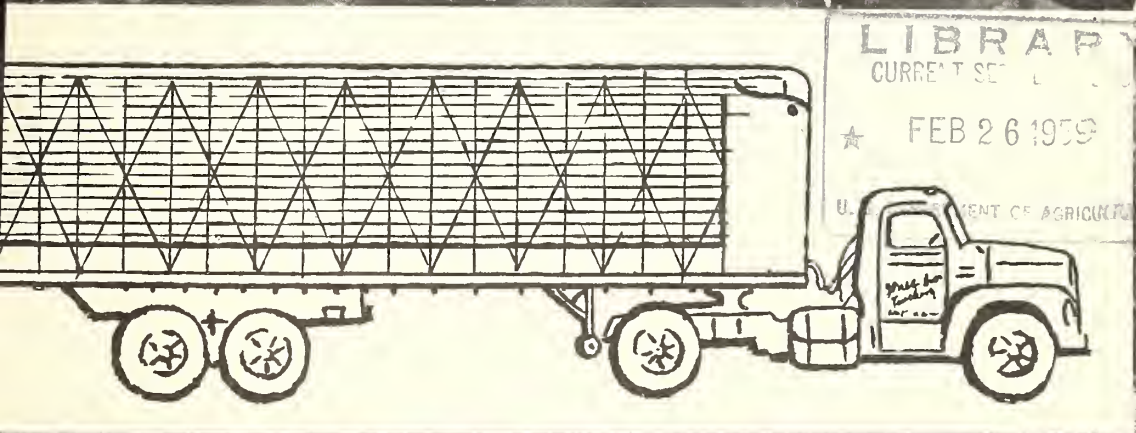
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HIRED TRUCK TRANSPORTATION IN MARKETING LIVESTOCK



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SUMMARY

Over three-fourths of the livestock received at terminal public markets and practically all of the animals received at auction markets are hauled by truck.

Livestock sold by farmers and ranchers using "for-hire" trucks are usually hauled a greater distance to terminal public markets than to other types of market outlets. Length of haul is greater in the West than other regions for all species of livestock sold at auction markets. It is greatest in the West for sales at terminal markets also, except for hogs. Hogs sold at terminals move the longest distances in the North Central Region.

Within all regions except the Northeast, sheep and lambs are hauled greater distances to terminal and auction markets than other species of livestock. In the Northeast, sheep and lambs were hauled a greater distance to auction markets, but hogs were hauled a longer distance to terminal markets.

Analysis of farmers' expenditures in 1955 reveals that average transportation cost per head for hauling to terminal markets was: For cattle \$3.38, for calves \$1.43, for hogs 74 cents, and for sheep and lambs 96 cents. Average cost per head for hauling to auction markets was \$1.51 for cattle, 87 cents for calves, and 38 cents per head for hogs as well as for sheep and lambs.

Transportation costs per head varied by regions, partly because of variation in length of haul. Costs in the West were generally the highest. However, distance is only one factor influencing per head transportation costs. Other factors such as size and consistency of the loads, the number of stops truckers have to make to complete a load, the bargaining ability of the truckers, State regulations, and taxes, affect transportation costs in hauling livestock to market.

HIRED TRUCK TRANSPORTATION IN MARKETING LIVESTOCK

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INTRODUCTION

Transportation costs comprise a large proportion of the expense of marketing livestock. Producers in the United States paid about 207 million dollars in 1955 for transportation of livestock to market and for services such as commission, yardage, and insurance at the market. An estimated 87 million dollars of this was for hired transportation by motor truck for moving livestock from farms and ranches to markets. 1/

Livestock producers and consumers of meat are concerned with the costs and efficiency with which livestock are hauled to market. The costs incurred in hauling livestock reduce producers' net returns if paid by him or increase prices for meat at retail if shifted to consumers.

This report is concerned with hired motortruck transportation of livestock from the farm and ranch to the market, with particular attention to average length of haul to markets and average transportation cost per head paid by producers. This report shows variations in length of haul and "for-hire" motortruck transportation costs by species of livestock, market outlets, and regions.

Data on miles traveled and on transportation costs per head incurred by farmers and ranchers when using "for-hire" motortrucks in transporting their livestock to different types of market outlets in 1955 were collected in a comprehensive survey of farmers' 1955 expenditures. 2/ The survey was made under the supervision of the United States Department of Agriculture and the Bureau of the Census.

The sample of approximately 6,600 farms was drawn from names of farm operators enumerated in the 1954 Census of Agriculture.

For the most part, this report is a source of data rather than an interpretive statement. These basic statistics may be used for further analysis in more specialized studies, for example, national or regional studies of livestock marketing costs and margins. This report deals only

1/ Farmers' Expenditures for Farm Living and Production with Tables on Off-Farm Income, Vol. III, Part II, 1954, Census of Agriculture, table 4, p. 22.

2/ The survey was made in 1956 by the Agricultural Marketing Service, U. S. Department of Agriculture, with the cooperation of the Agricultural Research Service and the Bureau of the Census. A description of the sample, survey methods, and detailed results are presented in items 6 and 7 of the list of selected publications, page 16.

with the year 1955 and only with services used by livestock producers in transporting their livestock to market by hired trucks. Comparable data for more recent years are not available. 3/ Because of changes in transportation rates, wage rates, and in the nature of the transportation industry, costs determined for 1955 may not be directly applicable to those in earlier years or later years without some adjustment for changes in cost levels.

Transportation in Marketing Livestock

Since the advent of the truck, transportation of livestock has undergone revolutionary changes. The truck has practically replaced driving on foot and farm wagons as methods of transporting livestock off farms, and, in a large measure, rail transportation for more distant movements. Since World War II, a large percentage of livestock has been moved from farm to market by motor-truck. A large proportion is transported by truck the entire distance to market, either in single movements or by stages. Three significant trends apparently have been under way as a result of this innovation: (1) An increase in the volume of livestock picked up at the farm by "for-hire" trucks, (2) an increase in the volume of livestock hauled to market by farmers' own trucks, and (3) an increase in the volume of livestock transported by "country dealers" who purchase the animals at the farm.

In 1955, over three-fourths of the livestock received at terminal public markets in the United States were hauled by motortruck. Truck receipts as a percentage of total terminal market receipts for the various species of livestock were: Cattle 82 percent, calves 85 percent, hogs 87 percent, and sheep and lambs 54 percent. 4/ These percentages were for all receipts hauled by truck regardless of ownership of the livestock or trucks. Livestock received at public terminal markets by rail may have been hauled by hired motor truck from farm to the loading point. The percentage of livestock hauled to other market outlets is not available. However, it is generally known that practically all livestock sold at auction markets are hauled by trucks.

Transportation as used in this report concerns the physical movement of livestock by "for-hire" truck from the farm or ranch to the market. It is concerned only with movement to the initial market, that is, the initial point of sale by the farmer, not with transportation of animals from the farm at the buyers' expense.

3/ The Transportation and Facilities Branch of Agricultural Marketing Service is currently preparing a report based on a study of the transportation of livestock to and from terminal markets by rail, for-hire trucks, and private trucks in the calendar year 1956. Data were obtained from a sample of terminal markets in all regions of the United States, instead of from farmers and ranchers as in this report, and represent all types of shippers from whom the terminal markets receive livestock as well as all types of receivers to whom shipments move from such markets.

4/ Agricultural Marketing Service. Livestock Market News Statistics and Related Data, 1955. Statis. Bul. No. 178, U. S. Dept. Agr., p. 11, June 1956.

Length of Haul to Markets 5/

The average distance that livestock was hauled varied by species, by region, and by type of market outlet (table 1).

Cattle

In 1955, the distance cattle were transported to terminal public markets by farmers in hired trucks averaged 120 miles for the United States as a whole (fig. 1). 6/ Those sold through auctions were hauled an average of

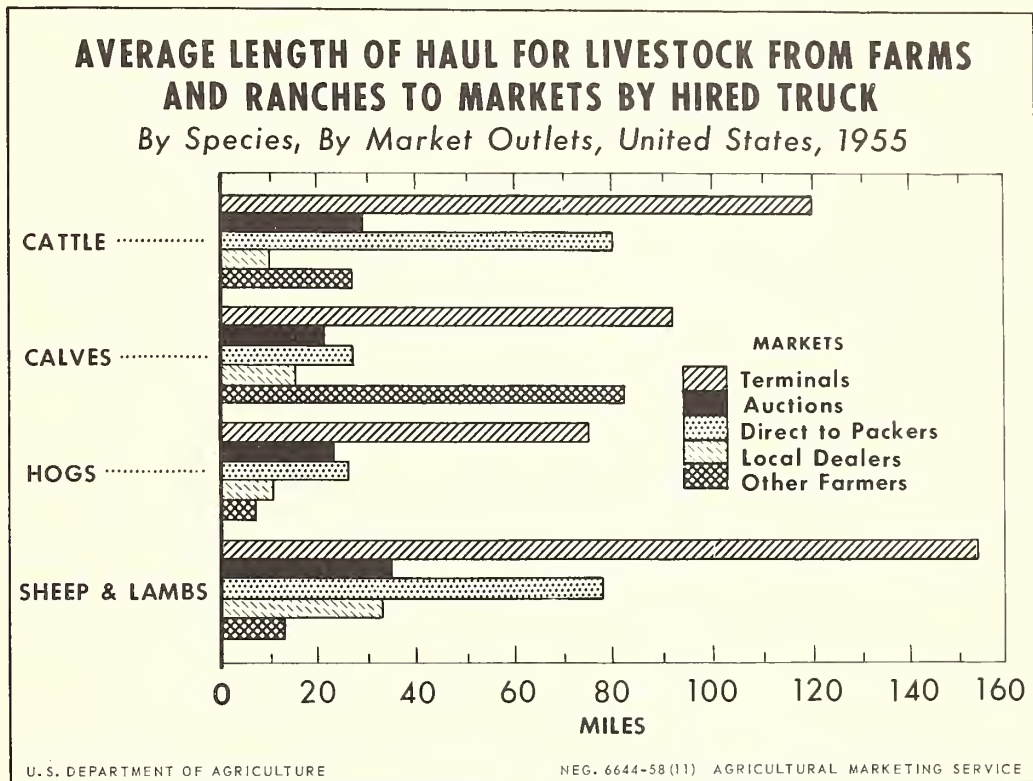


Figure 1

5/ The average distance livestock was hauled to a given type of market outlet was ascertained by weighting the total number of miles hauled by "for-hire" trucks for each species by the number of head hauled.

6/ Terminal public markets (also referred to as terminal markets, central markets, public markets, and public stockyards) are livestock trading centers having complete facilities for receiving, caring for, handling, and sale of livestock on a "private treaty basis." Various numbers of commission firms, depending on size of market, sell livestock at these markets. All buyers and sellers of livestock are privileged to use these facilities.

Table 1.--Average distance livestock was hauled by hired truck to various types of markets, by species and by regions, 1955 ^{1/}

Kind of livestock and region	Terminal markets	Auction markets	Country sales		
			Direct to packers	Local dealers	Farmers
	Miles	Miles	Miles	Miles	Miles
Cattle:					
Northeast	20	20	19	4	7
North Central	119	27	73	12	28
South	73	27	117	3	28
West	192	56	154	27	24
United States	120	29	80	10	27
Calves:					
Northeast	20	16	19	5	3
North Central	110	20	33	9	16
South	53	21	24	10	7
West	155	40	13	33	162
United States	92	21	27	15	82
Hogs:					
Northeast	26	11	<u>2/</u>	<u>2/</u>	<u>2/</u>
North Central	78	22	26	10	9
South	39	23	49	7	6
West	59	29	21	<u>2/</u>	<u>2/</u>
United States	75	23	26	11	7
Sheep and lambs:					
Northeast	23	37	<u>2/</u>	<u>2/</u>	<u>2/</u>
North Central	133	32	<u>2/</u>	<u>2/</u>	<u>2/</u>
South	112	24	<u>2/</u>	<u>2/</u>	<u>2/</u>
West	300	59	<u>2/</u>	<u>2/</u>	<u>2/</u>
United States	154	35	78	33	13

^{1/} These estimates are based on data obtained in February and March 1956 in a survey of farmers' 1955 expenditures made by the Agricultural Marketing Service of the United States Department of Agriculture. The estimates contained in the report are subject to sampling errors of varying magnitudes by kind of livestock, kind of market, and geographic region. Generally speaking, sampling errors will be inversely related to the number of observations involved; thus the averages for markets for the United States can be expected to be more reliable than regional averages.

^{2/} Insufficient data for reliable regional estimates.

29 miles to market. 7/ The average haul for cattle sold at "country points" was 10 miles to local dealers and 80 miles when sold direct to packers. 8/ However, many animals are sold at the farm with the buyer providing the transportation from the point of sale.

Regionally, the average distance that cattle were hauled by hired truck to terminal markets ranged from 20 miles in the Northeast to 192 miles in the West. Cattle were hauled an average of 20 miles to auction markets in the Northeast, but 56 miles in the West.

Calves

For the United States as a whole, calves delivered by farmers by hired truck were hauled an average of 92 miles to terminal public markets. Average lengths of haul to this outlet ranged from 20 miles in the Northeast to 155 miles in the West. Calves were hauled an average of 21 miles to auction markets for the United States as a whole. Average distance to auction markets was longest in the West and shortest in the Northeast.

The relatively short length of haul for calves in the Northeast is partly explained by the fact that in this dairy region, many of the calves are vealers hauled to nearby markets. In other regions, calves are sold as replacements and feeders through more widely scattered markets.

Hogs

Data from the survey indicate that hogs on farms in the United States were hauled an average of 75 miles when delivered to terminal public markets by hired trucks. The length of haul to auction markets averaged 23 miles, direct to packers 26 miles, and to local dealers 11 miles.

With few exceptions, hogs were hauled shorter distances to market than other species of livestock. Hog production is more highly concentrated geographically than is other livestock. The North Central Region accounts for more than three-fourths of the production of hogs in the United States. Therefore, it can be expected that for the United States as a whole, the average distance that hogs were hauled to market would be more similar to that of the North Central Region than to other regions.

7/ Livestock auction markets are trading centers having complete facilities for receiving, caring for, handling, and for sale of livestock, principally by "public bidding," to the buyer who offers the highest price per hundredweight or per head. All buyers and sellers of livestock are privileged to use these facilities.

8/ "Country selling" or "country points" as used in this report refers to producers' sales of livestock direct to packers, local dealers, or farmers without the support of commission men, selling agents, buying agents, or brokers.

Average length of haul for hogs to terminal markets ranged from a low of 26 miles in the Northeast to a high of 78 miles in the North Central Region. Length of haul to auction markets was shortest in the Northeast and longest in the West.

Sheep and Lambs

Sheep and lambs were hauled a greater distance to terminal and auction markets than any other species of livestock. Sheep and lambs delivered at terminals were hauled an average of 154 miles to market. The average length of haul to auction markets was 35 miles. In the West, where market outlets are more widely scattered, sheep and lambs were hauled an average of 300 miles to terminal markets in contrast to 23 miles in the Northeast. The average length of haul to auction markets ranged from 24 miles in the South to 59 miles in the West.

Transportation Costs in Marketing Livestock

Transportation costs for moving livestock from the farm or ranch to the point of sale comprise a sizable portion of the total marketing costs for livestock. ^{9/} This is true not only for the direct costs paid by producers, as concerns this report, but also for costs paid by direct buying agencies, which generally affect producers indirectly in the form of reduced prices for livestock.

Per head transportation costs vary considerably by markets by species and by regions (table 2).

Cattle

In 1955, the United States average cost to farmers and ranchers for hauling cattle to terminal public markets by hired truck was \$3.38 per head, to auction markets \$1.51, and to country buying points \$1.54 per head. Transportation costs per head for cattle sold at terminals were highest in the Western Region and lowest in the South. Average per head costs for cattle hauled to auctions were highest in the Northeast and lowest in the South (table 2).

Calves

Average transportation costs per head for calves did not vary as widely among markets and regions as was true for cattle. Per head cost for hauling

^{9/} Transportation costs as used in this report refer to the expense (or deduction from proceeds of sale of livestock) paid by the producer for hired truck in moving livestock from farm or ranch to point of sale. Any attempt to translate them into actual rates must necessarily be based on calculations made in somewhat arbitrary manner.

Table 2.--Average trucking expense per head of livestock hauled to market in motortrucks hired by farmers and ranchers, by market outlets, and by regions, 1955 ^{1/}

Kind of livestock and region	Terminal markets	Auction markets	Country sales
	Dollars	Dollars	Dollars
Cattle:			
Northeast	2.20	3.56	<u>2/</u>
North Central	3.29	1.56	1.70
South	1.95	1.20	<u>2/</u>
West	5.56	2.15	<u>2/</u>
United States	3.38	1.51	1.54
Calves:			
Northeast .....	.98	.74	<u>2/</u>
North Central	1.54	.72	<u>2/</u>
South	1.28	.85	<u>2/</u>
West	1.44	.95	<u>2/</u>
United States	1.43	.87	.54
Hogs:			
Northeast	1.24	.65	<u>2/</u>
North Central .....	.74	.32	.26
South .....	.59	.43	<u>2/</u>
West	1.79	<u>2/</u>	<u>2/</u>
United States .....	.74	.38	.28
Sheep and lambs:			
Northeast .....	.89	.45	<u>2/</u>
North Central .....	.70	.29	<u>2/</u>
South .....	.59	.28	<u>2/</u>
West	2.61	.67	<u>2/</u>
United States .....	.96	.38	.28

^{1/} See footnote 1, table 1, page 8.

The above transportation expenses are costs to farmers and ranchers using "for-hire" trucks in hauling their livestock to market. These estimates of average per head marketing costs, therefore, may not necessarily represent costs to farmers and ranchers using their own transportation facilities.

^{2/} Insufficient data for reliable regional estimates.

calves to terminal markets averaged \$1.43 for the United States as a whole. Regionally, transportation cost ranged from 98 cents in the Northeast to \$1.54 per head in the North Central Region. Transportation costs per head for calves hauled to auction markets averaged a little more than half as much as costs for hauling to terminal markets. This relationship, however, is to be expected since terminal markets are generally located greater distances from farms and ranches than are auctions.

Hogs

The United States producers' average transportation cost per head for hogs hauled to terminal markets in hired trucks was 74 cents, to auction markets 38 cents, and to country buying points 28 cents. Average per head transportation costs for hogs sold to terminals averaged lower in the South than in other regions. Per head costs for hogs delivered to auction markets were lowest in the North Central Region. Transportation costs for hogs hauled to terminal markets were higher in the West than in other regions. The United States average cost was about half as much as that in the West. The average transportation costs per head in the North Central Region were the same as the United States average. This was probably due to the predominance of this region in swine production.

Sheep and Lambs

In 1955, farmers and ranchers in the United States paid an average of 96 cents per head for sheep and lambs to be hauled to terminal markets in hired trucks. Regionally, average per head costs ranged from a low of 59 cents in the South to a high of \$2.61 cents in the West. Per head transportation costs for sheep and lambs hauled to auction markets averaged 38 cents. They averaged lowest in the South and highest in the West. The relatively high per head transportation costs (\$2.61) for sheep and lambs in the West can be explained in part by the fact that the average length of haul to market was more than twice that of sheep and lambs hauled to terminal markets in other regions.

Factors that May Influence Transportation Costs

On the basis of data in the 1955 survey of farmers' expenditures, the average per head transportation costs for all species of livestock hauled to terminal public markets were greater than per head costs for all species of livestock hauled to auction markets and country points. This same pattern was true for all regions except the Northeast where average per head transportation costs for cattle hauled to auction markets were greater than hauling costs to terminal public markets.

Considerable variation in transportation costs was found among regions by markets and species of livestock. There were several factors influencing these

differences. The most important to these was distance. The number and distribution of outlets through which livestock in a region is marketed, to a large extent, account for variations in distances livestock were hauled to terminal and auction markets.

In 1955, there were about 63 terminal public markets and 2,322 auction markets located throughout the United States. Figure 2 shows the location of

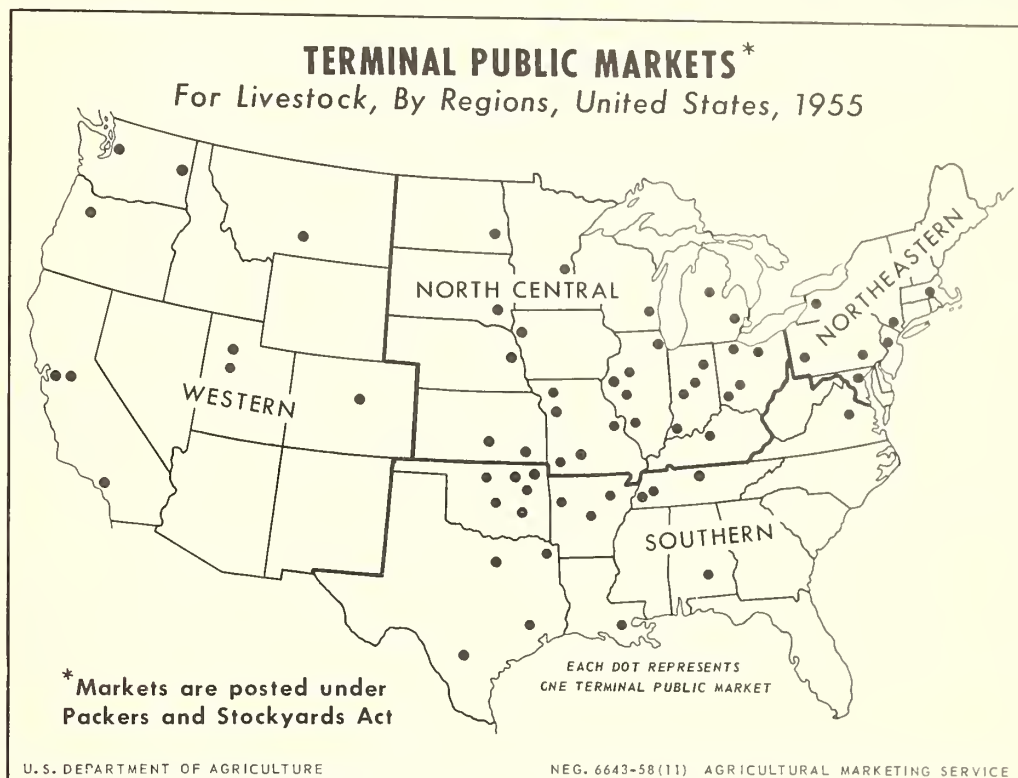


Figure 2

terminal markets in 1955 that were subject to regulation under provisions of the Packers and Stockyards Act of 1921. The greatest concentration of terminal markets is within and adjacent to the North Central Region. There are relatively few terminal markets located in the South, in the upper New England States, in the Great Lakes Region, or in the Mountain States of the West. On the other hand, auction markets are more evenly dispersed throughout the North Central Region, South, and Northeast (fig. 3). They are, nevertheless, more heavily concentrated in the North Central Region. Iowa, the leading State in number of auctions, accounted for 185 markets. Relatively few auction markets are located in the enormous expanse of territory in the West, especially in the Mountain States. All species of livestock were hauled longer distances to market in the West than in other regions. Per head transportation costs, to all market outlets, were higher for all species of livestock in the West than in

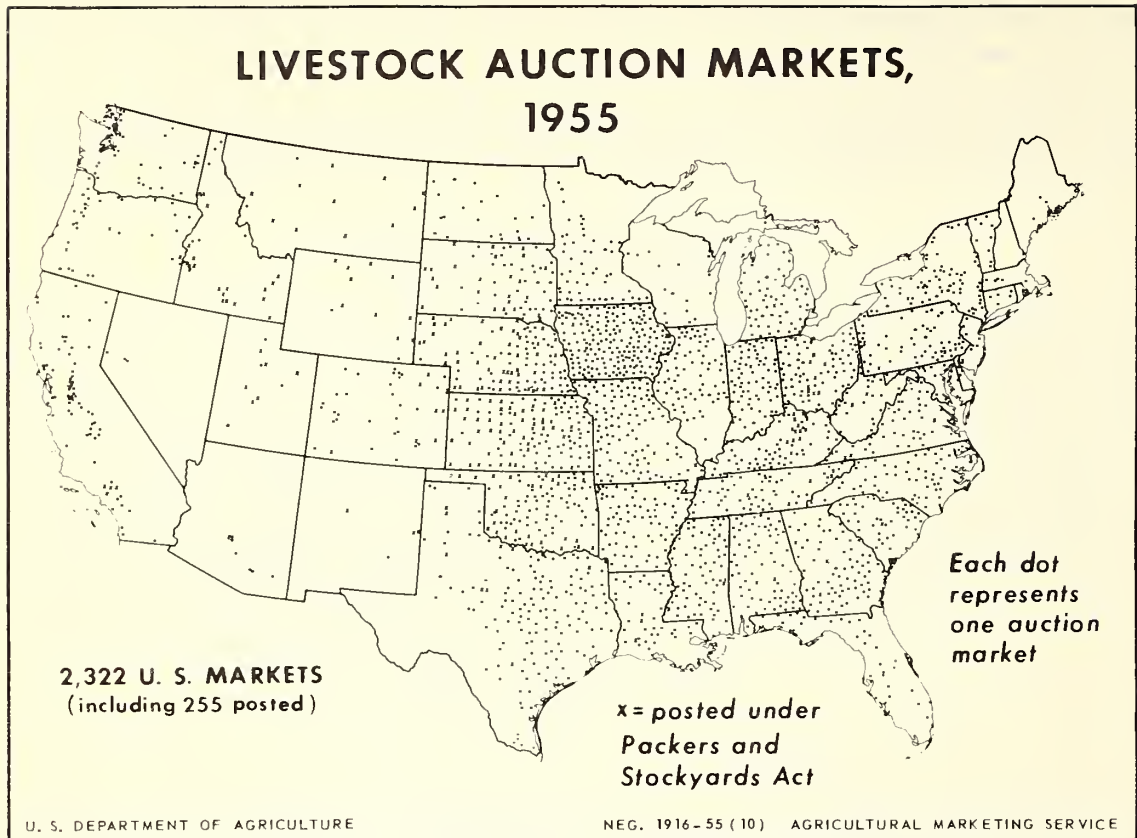


Figure 3

any other part of the United States with the exception that costs for cattle hauled to auction markets were highest in the Northeast.

Regional variation in transportation costs may also be influenced by factors other than distance. In some sections of the country, livestock truckers are able to obtain regular return loads, enabling them to operate at lower rates on a specific trip. The relative bargaining ability of the farmer and the trucker sometimes influences the rates charged. The size and consist of the load also influence the rates charged. In areas and regions where enough livestock is produced to furnish a steady and heavy volume for truckers, rates might be expected to be lower than in areas of sparse production.

Various States within a region have different truck weights and size limits, licensing regulations, taxes, etc. Such differences may be reflected in different transportation costs between regions.

The factors listed above can all influence transportation costs. The data in this report indicate that hired truck transportation costs to farmers and ranchers for different species of livestock differ greatly among types of markets and among regions. They also indicate the marked differences in size of the trade territory serviced by trucks covered by each type market, by region. The trucking territory of the terminal markets is much more extensive than that of auction markets and country buying points.

Selected Publications Based on Survey of Farmers'
Expenditures in 1955

- (1) Bertrand, A. L.
1958. Trends and Patterns in Levels of Living of Farm Families in the U. S. Agr. Inform. Bul. No. 181, 22 pp. Feb.
- (2) Bertrand, A. L., and Hay, D. G.
1958. Farmers' Expenditures for Health Care in 1955. Agr. Inform. Bul. No. 191, 33 pp. June.
- (3) Botts, Ralph R.
1958. Farm Insurance Expenditures in 1955, By Kind of Insurance, Region, and Value of Sales. Agr. Finance Rev., Vol. 20 (Reprint pp. 26-37). April.
- (4) Phillips, V. B., and Engelman, Gerald.
1958. Market Outlets for Livestock Producers. Mktg. Res. Rept. No. 216, 24 pp. March.
- (5) U. S. Department of Agriculture.
1958. Farm Family Spending in the United States. Some changes as Indicated by Recent U. S. Department of Agriculture Surveys. Agr. Inform. Bul. No. 192, 49 pp. June.
- (6) U. S. Department of Agriculture and U. S. Department of Commerce.
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1956. Farmers and Farm Production in the United States, Part-Time Farming. U. S. Bur. Census: U. S. Census of Agr: 1954. Vol. 3, Special Rpts., pt. 9, ch. 8, 53 pp. Dec.
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