MARKETING MICHIGAN LIVESTOCK

{Survey of Transportation Trends and Market Outlets}

Thesis for the Degree of M. A.

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Fordyce A. Voss

1940

This is to certify that

thesis entitled

"Marketing Michigan Livestock: A Survey of Transportation Trends and Market Outlets"

presented by

Fordyce A. Voss

has been accepted towards fulfilment of requirements for

M. A. degree in Economics

R. V. Gunn

H. Hutton

MARKETING MICHIGAN LIVESTOCK
Survey of Transportation Trends and Market Outlets

by

Fordyce A. Voss

A THESIS

Submitted to the Graduate School of Michigan State College of Agriculture and Applied Science in partial fulfilment of the requirements for the degree of

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MARKETING MICHIGAN LIVESTOCK

Survey of Transportation Trends and Market Outlets

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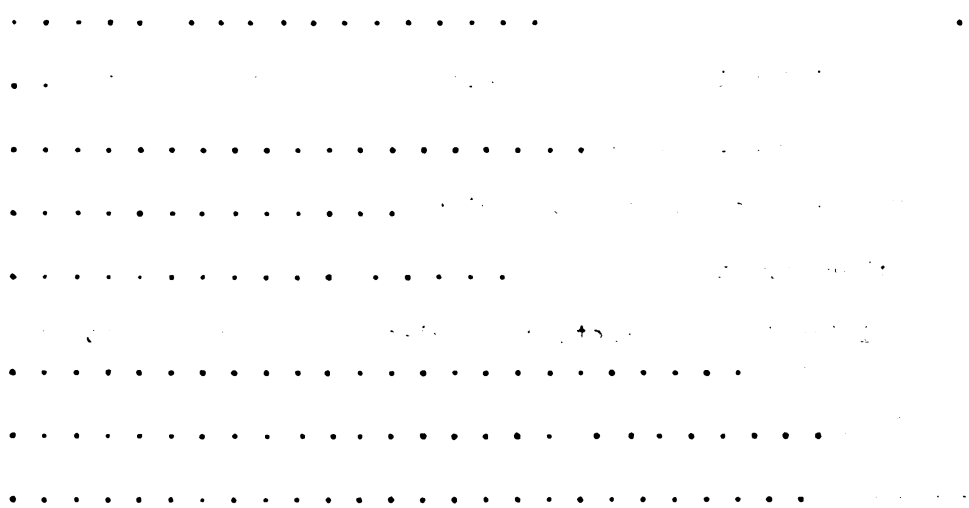

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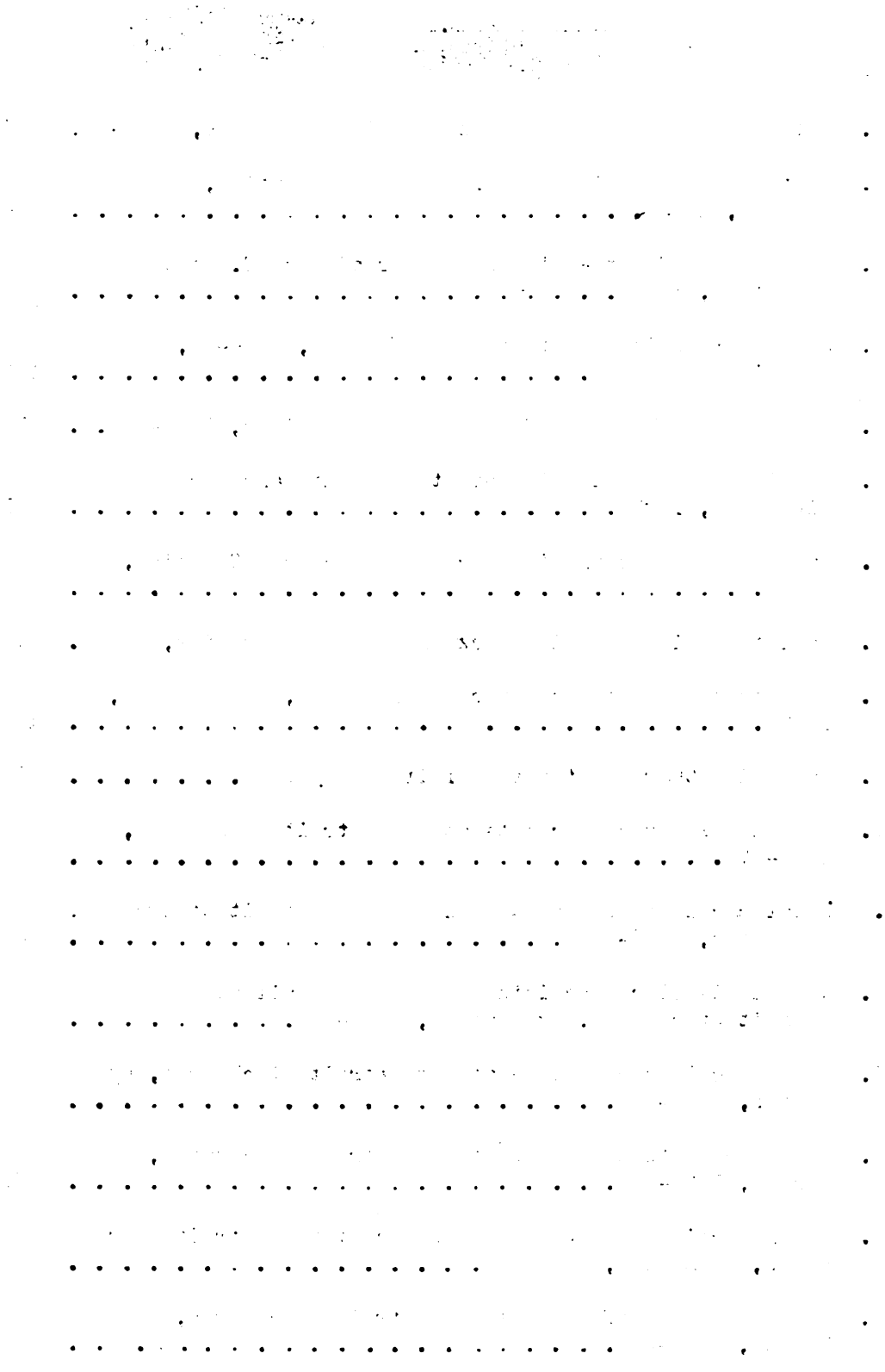

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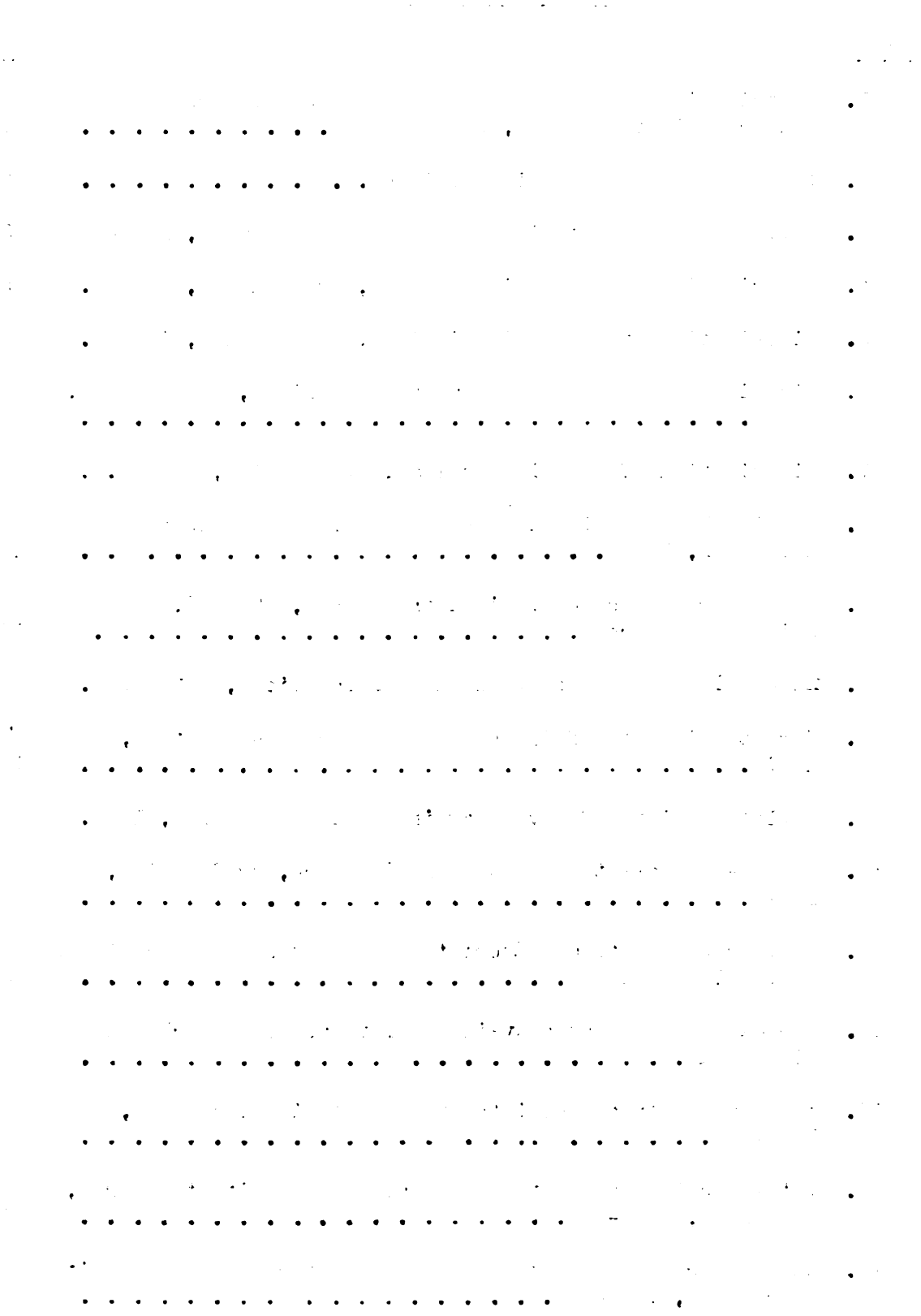

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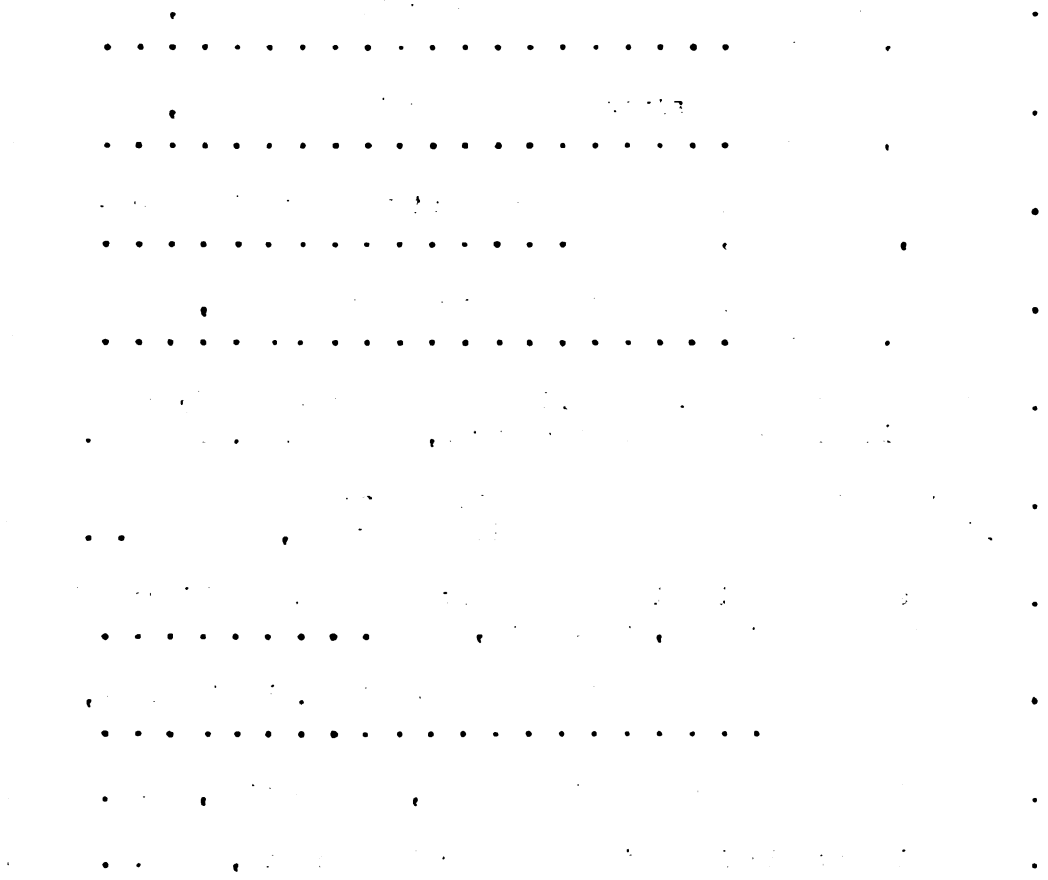


INTRODUCTION

Purpose of the Study. This survey of the localization of livestock production in Michigan and of the sources and destinations of market movements was undertaken with a view to presenting, in statistical and graphical form, the significant changes of the last decade and a half in the shipping and marketing of the various types of livestock produced or finished on Michigan farms. A particular objective of the study has been to examine the extent to which producers make use of the marketing outlets and agencies which have developed as alternatives to direct consignment to terminal markets; and to analyze the comparative advantages and limitations of each of these methods of livestock disposal as indicated by producers and shippers.

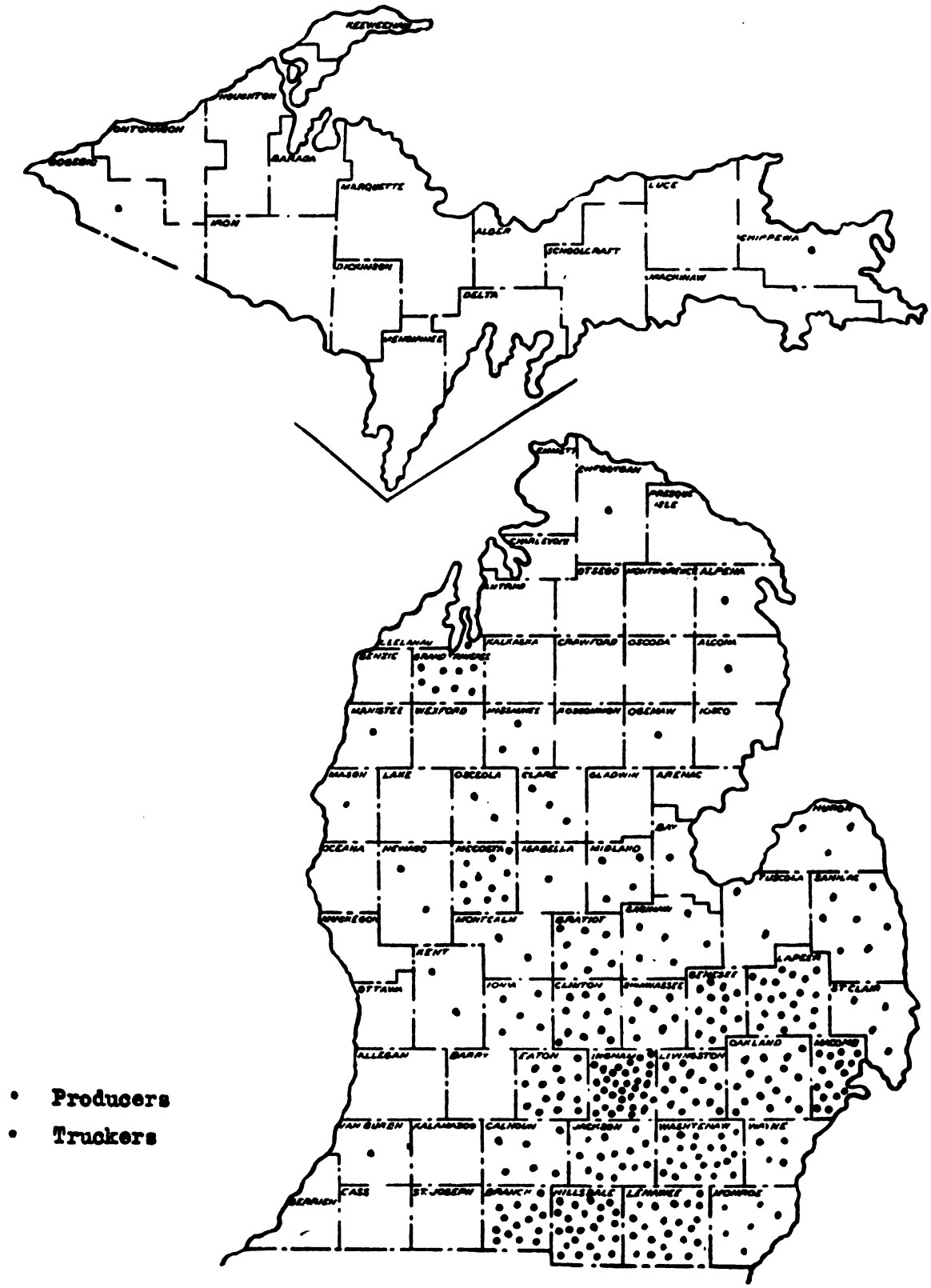
Scope and Sources of Data. Statistics presented in Section I on the numbers of different types of livestock in Michigan counties are from the 1935 Census of Agriculture and from the Annual Livestock Summaries issued by the United States Department of Agriculture. Those showing carload shipments of livestock to and from Michigan counties (for the year 1937) were obtained from the records of the New York Central System and of the Grand Trunk and Pere Marquette railroad companies. Comparative data on gross income of Michigan farmers by principal sources are taken from annual summaries of "Farm Values, Gross and Cash Income from Farm Production," issued by the Bureau of Agricultural Economics. Indexes of Michigan farm and livestock prices, used in this section, are from published

compilations by Dr. Orion Ulrey of the Economics Department, Michigan State College.

Data presented in Section II, on receipts of livestock by rail and truck at the Detroit terminal market, were furnished by the Detroit Stockyards Company and the Michigan Livestock Exchange. These were obtained over a sufficiently long period (1920 or 1926 to 1938) to afford a basis for determining and analyzing significant trends, both by types of livestock and by mode of transporation.

The main portion of the study, dealing with the actual marketing practices of Michigan livestock producers, is based on information obtained directly by the writer from producers and truckers, covering operations during 1937. Questionnaires (See Appendix B, Exhibit II) were mailed to some four hundred producers (whose names were supplied by county agents), and replies were received from two hundred and forty-four of these. A separate questionnaire was prepared for livestock truckers (Exhibit I) of whom ninety-three were interviewed by the writer during the period of April-June, 1938. Of these, twelve per cent were producer-truckers, who trucked only livestock raised on their own farms, two per cent operated entirely as dealer-truckers, and two per cent exclusively for hire. Of the remaining eighty-four per cent who did not confine their operations to any one of these classifications, about one-half represented a combination of two types, and the other half, a combination of all three types. While the livestock producers and truckers contacted were representative of all parts of the state, they were rather largely concentrated in the area lying south of the Bay City-Muskegon line. (Fig. 1)

Fig. 1. Distribution of Livestock Producers and Truckers Contacted in this Study, by Counties



The lists of livestock shipping associations (operating in 1930 and 1939), of packing houses in the state, and of livestock auction markets, together with much of the information regarding activities of these and other marketing agencies, were supplied by Mr. D. H. Stark, Extension Livestock Marketing Specialist in the Department of Economics, Michigan State College.

SECTION I

CLASSIFICATION AND LOCALIZATION OF MICHIGAN LIVESTOCK

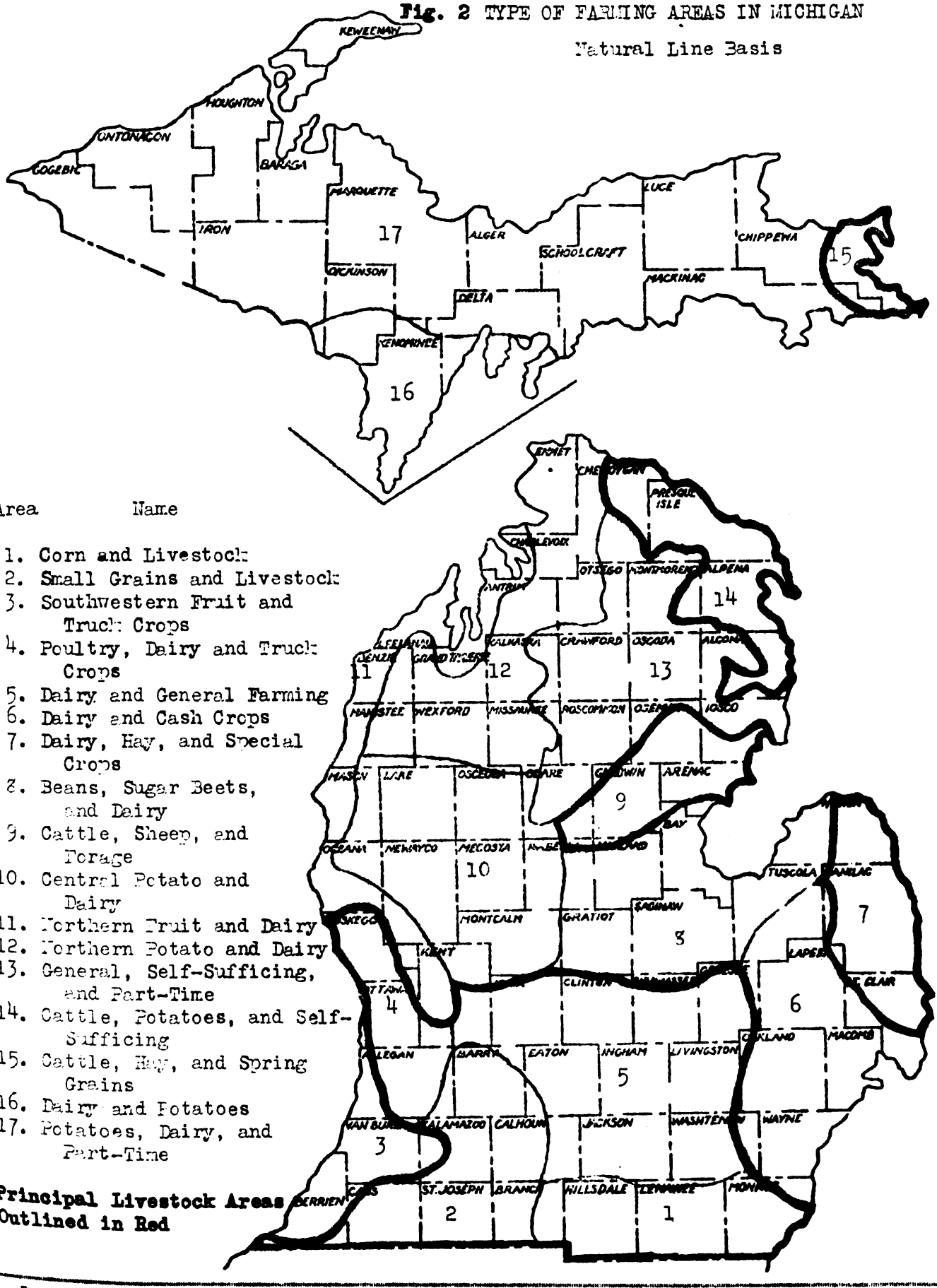
In a study of the marketing of livestock in Michigan, it is necessary to consider first some of the more general aspects of the industry within the state. These factors include the localization of the industry, the reasons for this localization, the relative economic importance of livestock and its products, and the movements of livestock to and from the various markets within the state.

Principal Livestock Producing Areas in Michigan. A study of the variation in the type of agriculture found in different sections of Michigan indicates that the bulk of the livestock production in the state is found in that section lying to the south of a line passing through Muskegon, Grand Rapids, Lansing and Detroit (Fig. 2). Smaller areas are shown in the eastern part of the "Thumb" area, in the region just west and north of Saginaw Bay, and in the extreme eastern part of the Upper Peninsula. Livestock is, of course, found in practically all sections of the state, but it is in the above mentioned that a major part of the land is used for this purpose.

Trends in the Number of Livestock on Michigan Farms. The trend in the number of livestock on Michigan farms has varied greatly during the past twenty years (Fig. 3). The number of cattle decreased from 1,536,000 in 1920 to 1,391,000 in 1930-31 and has since increased to a new high of 1,675,000 in 1939. The variation in the number of sheep and lambs has been less than for the other classes of livestock, varying only from 1,002,000 to 1,380,000 during the twenty-year period, 1925-39. The number of hogs has fluctuated more widely

Fig. 2 TYPE OF FARMING AREAS IN MICHIGAN

Natural Line Basis



Area Name

1. Corn and Livestock
2. Small Grains and Livestock
3. Southwestern Fruit and Truck Crops
4. Poultry, Dairy and Truck Crops
5. Dairy and General Farming
6. Dairy and Cash Crops
7. Dairy, Hay, and Special Crops
8. Beans, Sugar Beets, and Dairy
9. Cattle, Sheep, and Forage
10. Central Potato and Dairy
11. Northern Fruit and Dairy
12. Northern Potato and Dairy
13. General, Self-Sufficing, and Part-Time
14. Cattle, Potatoes, and Self-Sufficing
15. Cattle, Hay, and Spring Grains
16. Dairy and Potatoes
17. Potatoes, Dairy, and Part-Time

Principal Livestock Areas Outlined in Red

1. **Basic map prepared by Farm Management Department, Michigan State College.**

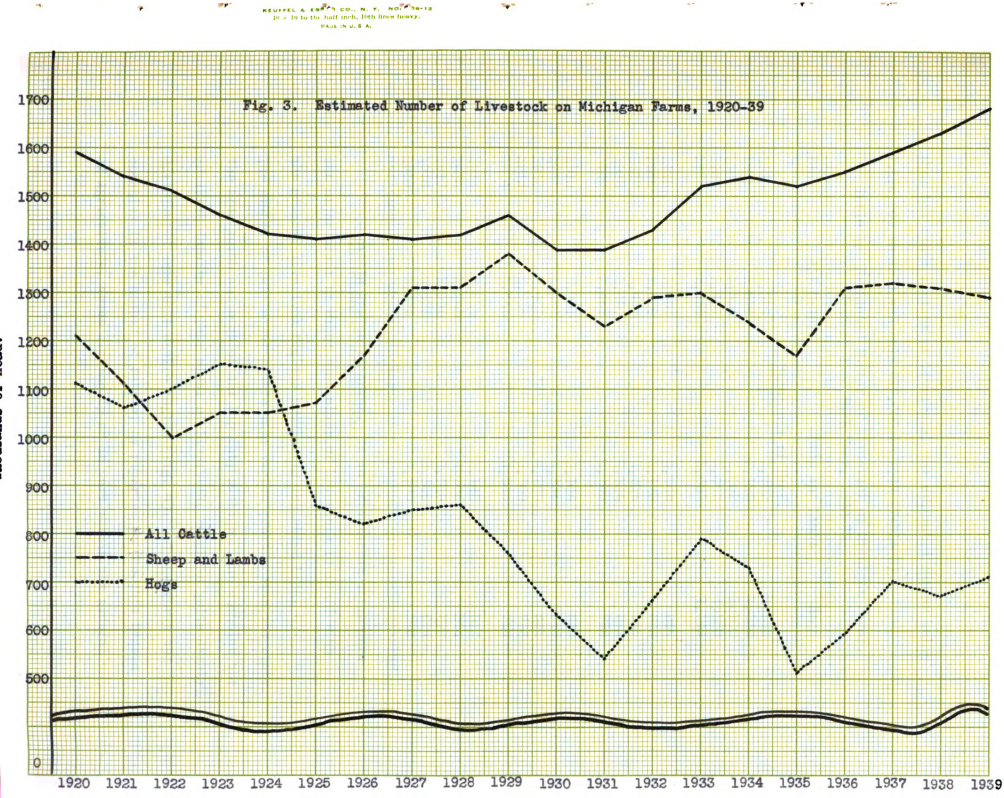


Fig. 3. Estimated Number of Livestock on Michigan Farms, 1920-39
All Cattle
Sheep and Lambs
Hogs
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
0
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939

than the other classes of livestock, the estimated number being 1,150,000 in 1923 and only 512,000 in 1935 (Table 1).

Table 1. Estimated Number of Livestock on Michigan Farms, January 1 of Each Year, 1920-39

Year	All Cattle	Sheep and Lambs	Hogs
		Thousands of Head.	
1920	1,586	1,209	1,106
1921	1,536	1,113	1,060
1922	1,506	1,002	1,100
1923	1,460	1,052	1,150
1924	1,420	1,052	1,143
1925	1,406	1,066	855
1926	1,420	1,173	820
1927	1,406	1,314	845
1928	1,420	1,314	862
1929	1,463	1,380	759
1930	1,391	1,304	630
1931	1,391	1,234	542
1932	1,433	1,288	661
1933	1,516	1,300	793
1934	1,544	1,240	730
1935	1,518	1,165	512
1936	1,548	1,306	594
1937	1,594	1,315	701
1938	1,626	1,309	666
1939	1,675	1,290	713

Cattle Producing Areas. It is of interest to compare the major areas in which each class of livestock is found with the general livestock regions previously indicated (Fig. 2). The number of cattle per square mile varies greatly over the state. The area south and east of the Bay City-Muskegon line contains the greatest density of this class of livestock, which is quite evenly distributed over this entire region (Fig. 4). Of the first ten counties in the number of cattle, as reported in the 1935 Census of Agriculture, seven lie wholly or in part within the general

Fig. 4. Distribution of Cattle in Michigan, by Counties, 1935

First 10 counties in number of cattle outlined in red.

County figures in red represent number of head in thousands.

livestock areas shown on the type-of-farming map. The number of cattle in these ten "cattle counties" varied from 50,502 in Sanilac to 29,020 in Lapeer, with an average of 34,340 (Table 2A).[1] These counties lie within "the milkshed" of the major Michigan cities of Detroit, Grand Rapids, Flint, Saginaw and Port Huron. In most counties of the state the number of cattle is quite evenly divided between dairy and beef. However, the dairy types tend to predominate around the metropolitan areas, both on the large dairy farms found in those areas and on the small farms of the part time farmers.

Calf Producing Areas. All of the ten leading cattle counties, at the time of the 1935 Census of Agriculture, except Lenawee and Washtenaw, were also among the first ten in the number of calves (Fig. 5). The largest numbers of calves are usually found in the dairy areas, while the heavy beef producing areas, such as Washtenaw and Lenawee counties, purchase most of their feeder stock. Seven of the first ten counties in this group lie within the major livestock areas previously outlined. An average of 7,571 calves were recorded in the ten leading counties, with the number in individual counties ranging between 14,164 in Sanilac and 5,576 in Ionia (Table 2a).

Sheep and Lamb Producing Areas. The distribution of sheep and lambs (Fig. 6) shows that the heaviest concentration of these animals is found in the south central portion of the lower

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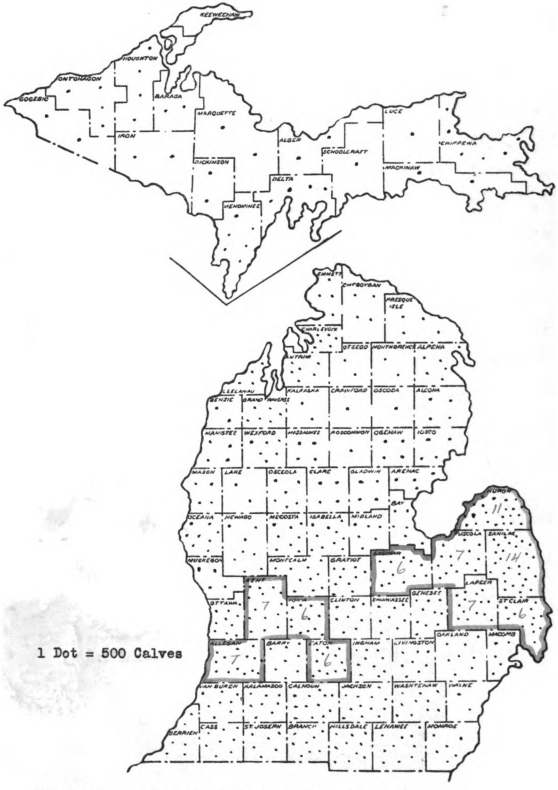
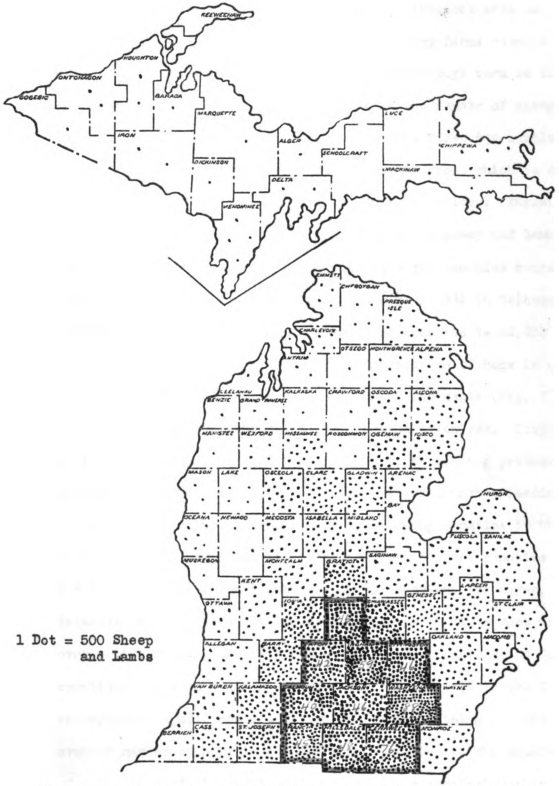
1. Throughout this study, an "A" in a table number indicates that the table is in Appendix A.

Fig. 5. Distribution of Calves in Michigan, by Counties, 1935



First 10 counties in number of calves outlined in red.
County figures in red represent number of head in thousands.

Fig. 6. Distribution of Sheep and Lambs in Michigan, by Counties, 1935

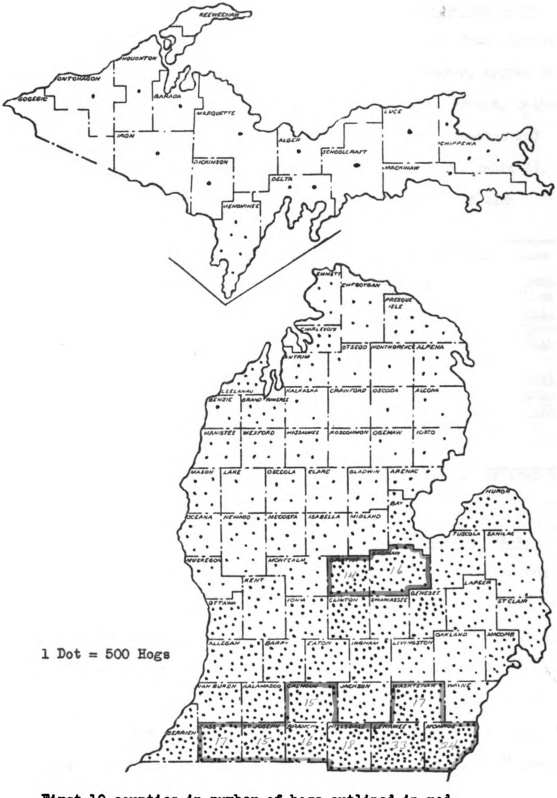


First 10 counties in number of sheep and lambs outlined in red. County figures in red represent number of head in thousands.

peninsula. Nearly all of the ten leading counties in this classification are included in the largest livestock area in Michigan. This is a deversified area with many farms capable of producing large quantities of alfalfa and enough corn to fatten the lambs. Two of the leading counties in the number of sheep and lambs (Lenawee and Washtenaw) are also in the first ten cattle counties, but Eaton is the only county in the group which is duplicated in the leading ten counties in number of calves. Variation between counties appears to be much greater for sheep and lambs than for cattle or calves. The first ten sheep counties range from 88,005 head in Washtenaw County down to 39,793 in Calhoun (Table 2A). The average for this group of counties is 53,633 head.

Hog Producing Areas. The distribution of hogs is quite uniform over the southern half of the lower peninsula (Fig. 7). It appears quite comparable to the distribution of calves. Inspection will show, however, that only one of the first ten hog producing counties (Saginaw) also appears in the list of counties leading in the number of calves. Eight of the ten leading counties in the production of hogs are found along the southern tier of counties where the corn belt "overflows" into Michigan. Berrien, Van Buren, and Kalamazoo counties are not included in the group since they are given over to the raising of fruit rather than corn. Saginaw and Gratiot counties, while outside of the corn belt proper, are in the Saginaw valley where conditions are favorable for the raising of corn. The average number of hogs in the first ten counties in the production of this class of livestock is 18,555,with the greatest number (33,106) in Lenawee and the smallest (13,776) in Gratiot Counties

Fig. 7. Distribution of Hogs in Michigan, by Counties, 1935



First 10 counties in number of hogs outlined in red.
County figures in red represent number of head in thousands.

(Table 2A).

Principal Livestock Producing Counties of Michigan. No one Michigan county leads in the production of all four classes of livestock. Lenawee, Saginaw, and Washtenaw, however, appear in three of the four classifications, while Allegan, Branch, Calhoun, Eaton, Hillsdale, Huron, Kent, Lapeer, St. Clair, Sanilac and Tuscola are found in two classifications (Fig. 8 and Table 3).

Table 3. Leading Ten Counties in the Number of Each Class of Livestock, 1935[1]

Cattle	Calves	Sheep and Lambs	Hogs
Sanilac	Sanilac	Washtenaw	Lenawee
Huron	Huron	Lenawee	Monroe
Allegan	Tuscola	Ingham	Hillsdale
Saginaw	Allegan	Hillsdale	Cass
Tuscola	Kent	Livingston	Washtenaw
Lenawee	Lapeer	Clinton	Saginaw
Kent	St. Clair	Jackson	Branch
St. Clair	Eaton	Branch	Calhoun
Washtenaw	Saginaw	Eaton	St. Joseph
Lapeer	Ionia	Calhoun	Gratiot

1. Counties found in three classifications are underlined in red, those found in two groups are underlined in black.

Economic Importance of Michigan Livestock Industry. The relative importance of the various classes of livestock in the agricultural economy of Michigan is indicated in Figure 9, which depicts the changes in the gross income of Michigan farmers during the period 1924-38. Also shown is the derivation of this income from (1) meat animals, (2) all livestock and livestock products, and (3) cash crops.

The first impression is likely to be that the income from the sale of meat animals is relatively unimportant in Michigan. It is true that, compared to the income from cash crops and from all

Fig. 8. Leading Ten Counties in the Number of Each Class of Livestock, 1935

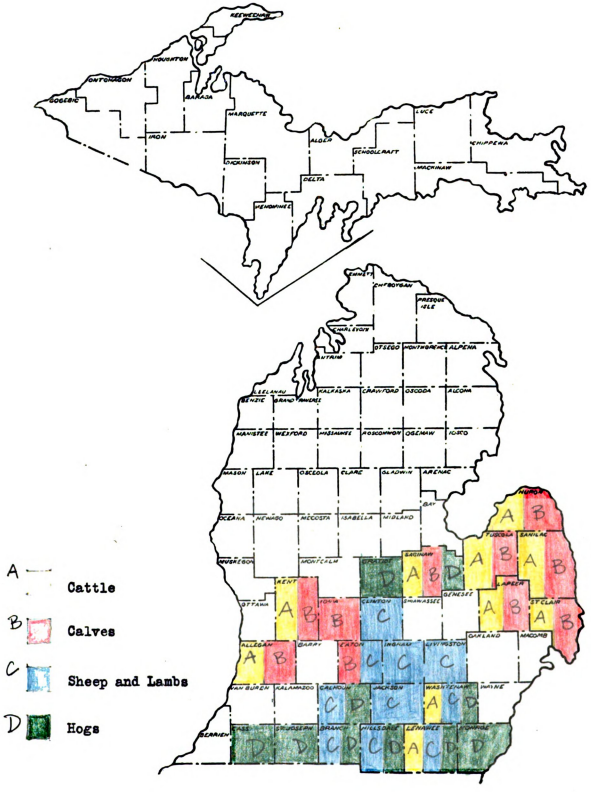
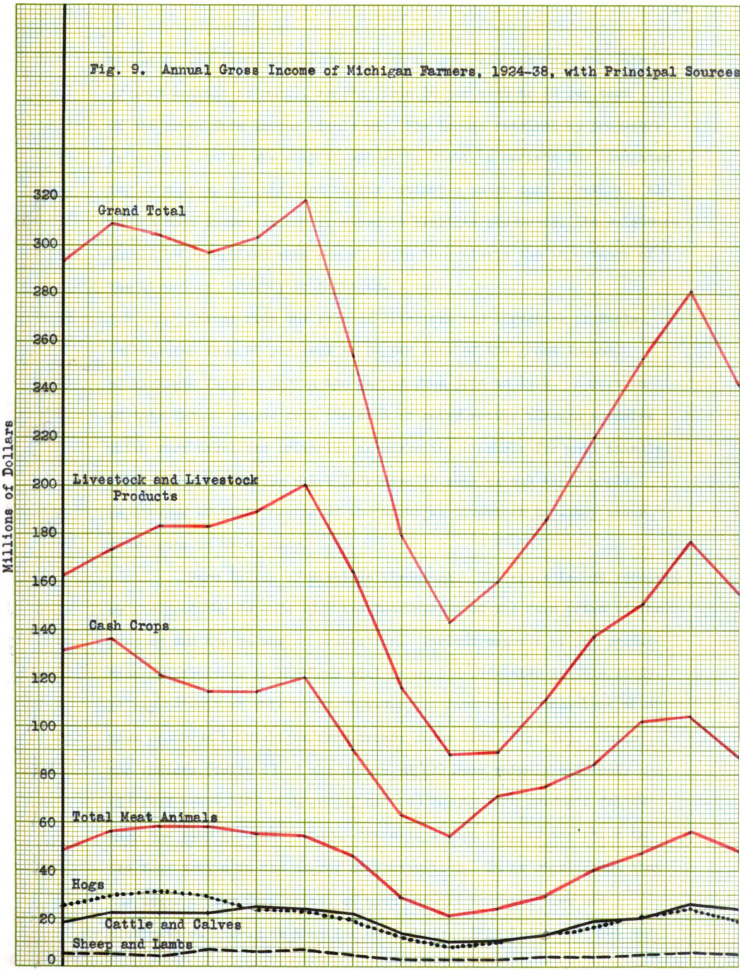


Fig. 9. Annual Gross Income of Michigan Farmers, 1924-38, with Principal Sources

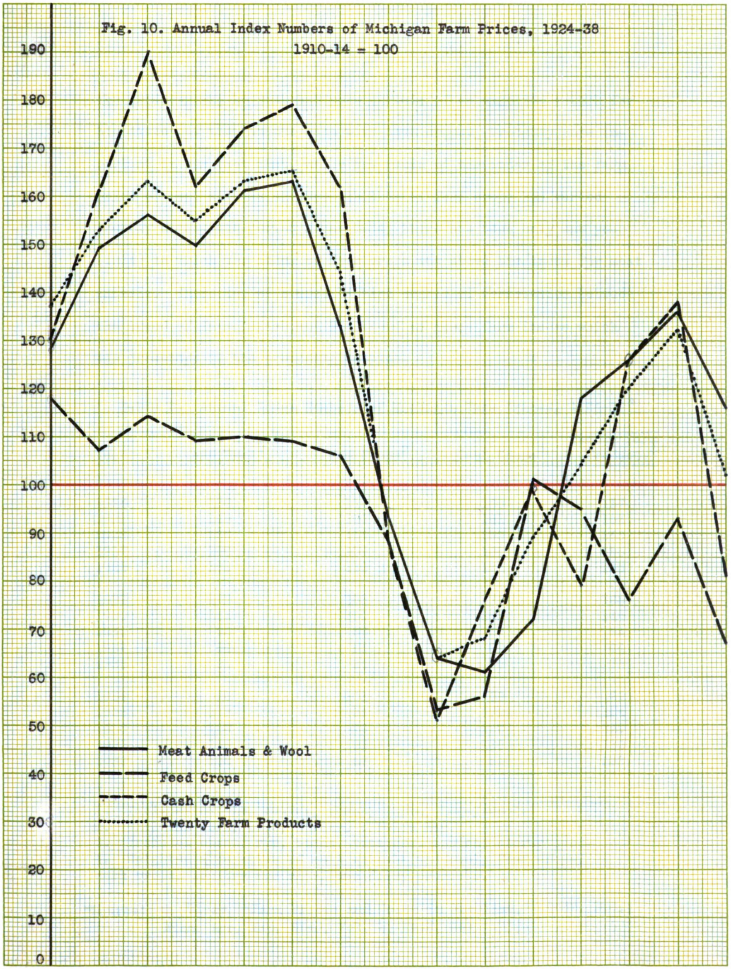


livestock and livestock products, the amount received from the sale of meat animals is small, ranging from 15 per cent to 20 per cent of the gross farm income (Table 4A). The income received by producers in western states who ship livestock to Michigan markets for slaughter is, of course, not included in the estimates under consideration. Although this income is not received by Michigan producers, its existence should be recognized when one attempts to evaluate the importance of the livestock industry in Michigan.

Income from the sale of livestock and livestock products constituted from 55 per cent to 65 per cent of the gross income of Michigan farmers during the period from 1924 to 1938. A portion of this income arises from the sale of dairy cattle through agencies which were developed primarily as marketing channels for meat animals. This is another factor which increases to some extent the economic importance of that portion of the Michigan livestock industry under discussion in this study.

Farm Prices of Michigan Livestock. The gross income received by the producer depends upon the two factors of the farm price of the product and the volume of production. Various aspects of the production of livestock in Michigan will be considered later in this study. It may be well at this point, however, to note the fluctuations which have occurred in Michigan farm prices since 1924 (Fig. 10). While the indices (Table 5) of the prices of (1) meat animals and wool, (2) feed crops, (3) cash crops, and (4) twenty farm products, follow much the same general pattern, there is a good deal of variation in the four series in the degree of fluctuation. It is significant that the index of the farm prices of meat animals and wool does not fluctuate as widely as that for cash crops. This indicates that the

Fig. 10. Annual Index Numbers of Michigan Farm Prices, 1924-38
1910-14 = 100



the producer may be somewhat more certain of an expected return for his livestock than is the case with cash crops. Probably more important is the fact that, while the ratio of the index of the farm price of meat animals and wool to that of feed crops has varied greatly during the period since 1924, there has been only one year (1934) in which the index of feed crops was above the index for meat animals. There is, of course, a high degree of correlation between the trend of farm prices and the trend of gross farm income which was presented in the preceding section.

Table 5. Annual Index Numbers of Michigan Farm Prices, 1924-38*

Year	Meat Animals and Wool[1]	Feed Crops[2]	Cash Crops[3]	Twenty Farm Products[4]
		1910-14=100		
1924	128	118	130	137
1925	149	107	161	153
1926	156	114	190	163
1927	150	109	162	155
1928	161	110	174	163
1929	163	109	179	165
1930	133	106	162	144
1931	93	88	87	94
1932	64	53	51	64
1933	61	56	76	73
1934	72	101	99	89
1935	118	95	79	104
1936	126	76	126	120
1937	136	93	138	132
1938	116	67	81	102

1. Includes cattle, calves, sheep, lambs, hogs, wool.
2. Includes corn, oats, barley, alfalfa hay.
3. Includes wheat, rye, beans, potatoes, apples, clover seed.
4. Weighted aggregative of meat animals and wool, feed crops, cash crops, poultry and eggs, and dairy products.

*Source: O. Ulrey, "Farm Prices and Costs in Michigan." Quar. Bul., Mich. Agr. Exp. Sta., Vol. 2, No.2, Nov. 1937.

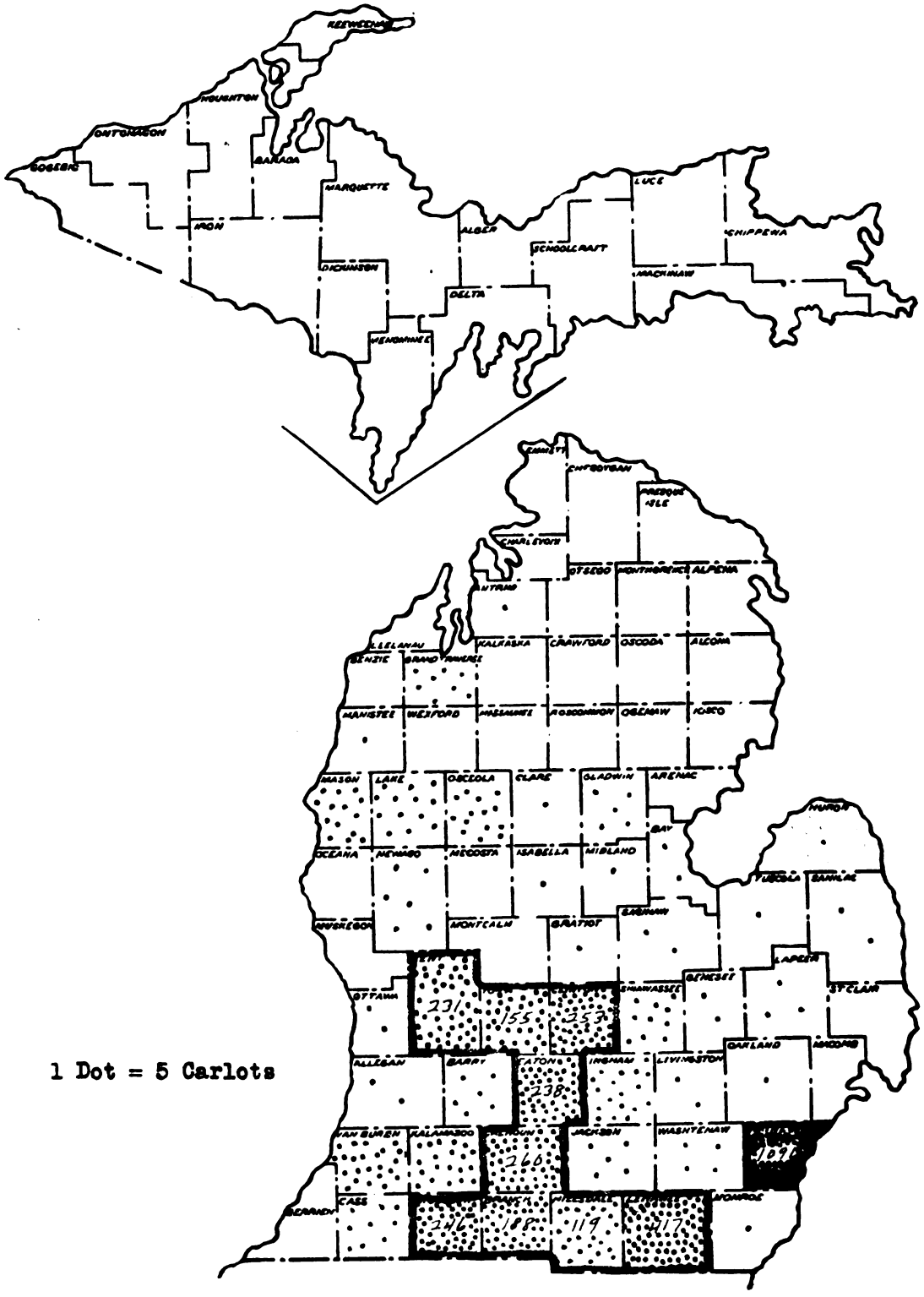
Movements of Michigan Livestock. The discussion of the movement of livestock in and out of Michigan counties will be confined to that carried by the New York Central Lines, Grand Trunk, and Pere Marquette Railroads. Consequently, the analysis will tend to overemphasize the importance of those counties which are served by these lines and will place at a disadvantage those counties in which the producer ships and receives most of his livestock by truck. As shown on the attached railroad map,[1] the counties in the "Thumb" area of the state, as well as most of those north of the Bay City-Muskegon line are at a considerable disadvantage in the matter of rail service, owing to discontinuance of certain branch lines and to necessity of indirect routing in reaching Detroit livestock terminal. This is especially true since many of the railroads in the areas can reach the Detroit livestock market only by way of other terminals.

Shipments from Michigan Counties. There is a considerable variation in the number of carlots which were shipped from any one Michigan county during 1937 (Fig. 11). It may be assumed that, with the exception of Wayne County, most of the shipments are consigned to a terminal market or directly to some packing house in Michigan or farther east. Shipments from Wayne County may be properly divided into those shipments of livestock consigned to an eastern market and shipments of feeder stock which are shipped to Michigan producers for fattening. Of course, the last mentioned group would then reappear at a later date as being shipped from the producer to the terminal.

With the exception of Wayne County, all of the ten counties (Table 6) which led in carloads of livestock shipped during 1937

1. Inside back cover.

Fig. 11. Carlot Shipments of Livestock from Michigan Counties, 1937



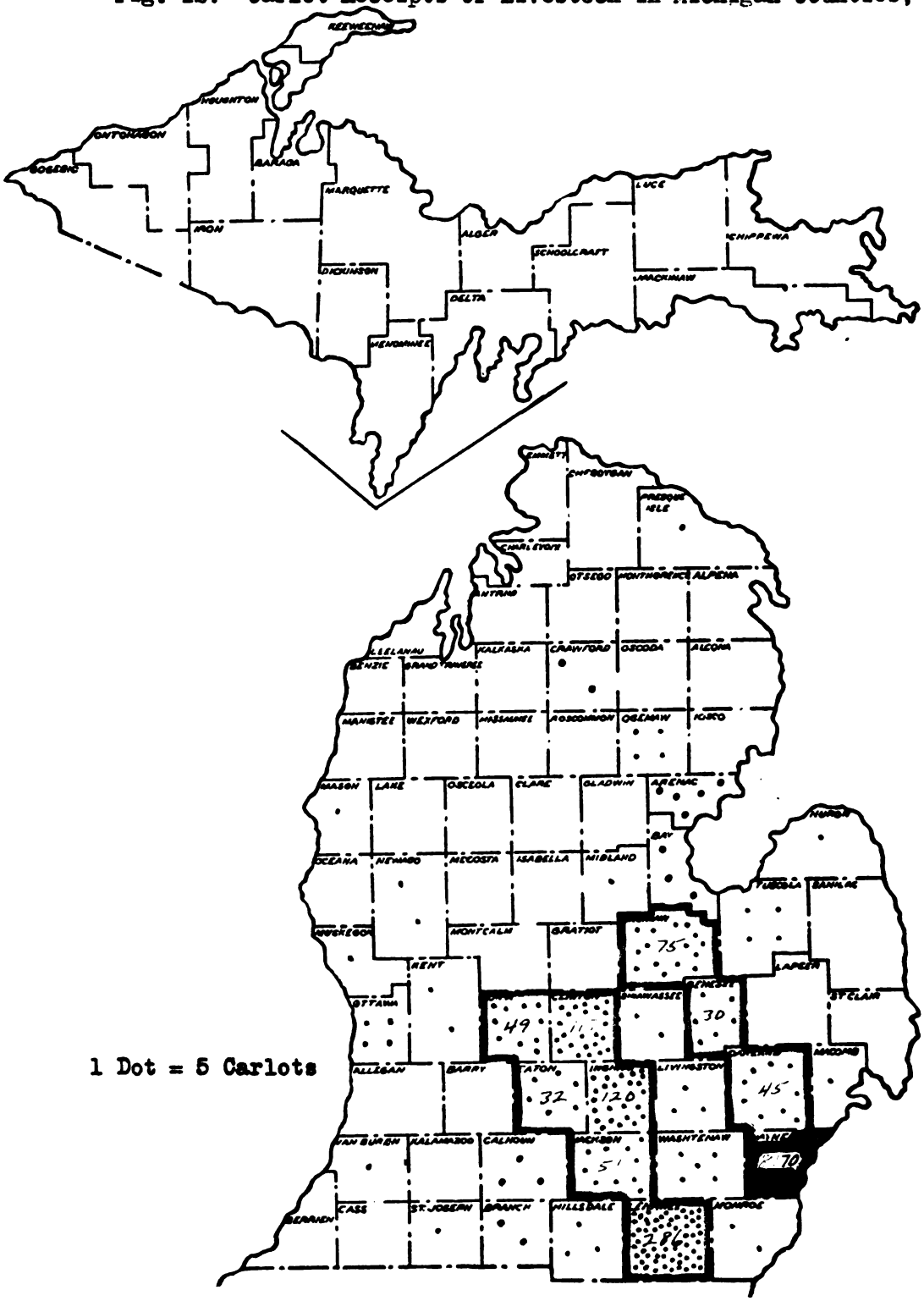
First ten counties in total carlots outlined in red.

are wholly or partially included in the south central livestock area (Fig. 2). Producers in these counties make extensive purchases of good feeder stock (lambs and cattle) from the west. It is known that a large proportion of the fattened animals are shipped directly to the Buffalo market. Small shipments, of course, go to Detroit.

A comparison of Figures 2 and 11 with those showing the distribution of livestock by counties (Fig. 4 - 7) indicates the result of the difficulties encountered by northern Michigan and "Thumb" area producers wishing to consign their livestock by rail. The number of carlots shipped from these areas is much smaller than would normally be expected, since the proportion of producers favoring rail shipments to the terminal market increases with the distance from that market. Substantiation for this statement is found in the answers given by numberous producers when they were questioned as to their preference of rail or truck shipments to the terminal market.

Shipments to Michigan Counties. The distribution of carlot shipments of livestock to Michigan counties (Fig. 12) differs from the distribution of the shipments from Michigan counties in that the ten counties receiving the largest number (Table 6) of shipments are less concentrated in the south-central livestock producing area. These counties may be divided into two groups. Lenawee, Clinton, Jackson and Ingham counties receive shipments of feeder cattle and lambs from the western states. The other six counties (Wayne, Saginaw, Eaton, Ionia, Genesee and Oakland) are important because they have the best facilities in the form of markets and packing houses for the disposition of the livestock.

Fig. 12. Carlot Receipts of Livestock in Michigan Counties, 1937



1 Dot = 5 Carlots

First Ten Counties in Total Carlots Outlined in Red.

Leading Counties in Livestock Movements. The leading counties in the volume of shipments and receipts of livestock are shown in Table 6 which indicates that Clinton, Eaton, Ionia, Lenawee and Wayne counties rank high in the volume of both shipments and receipts.

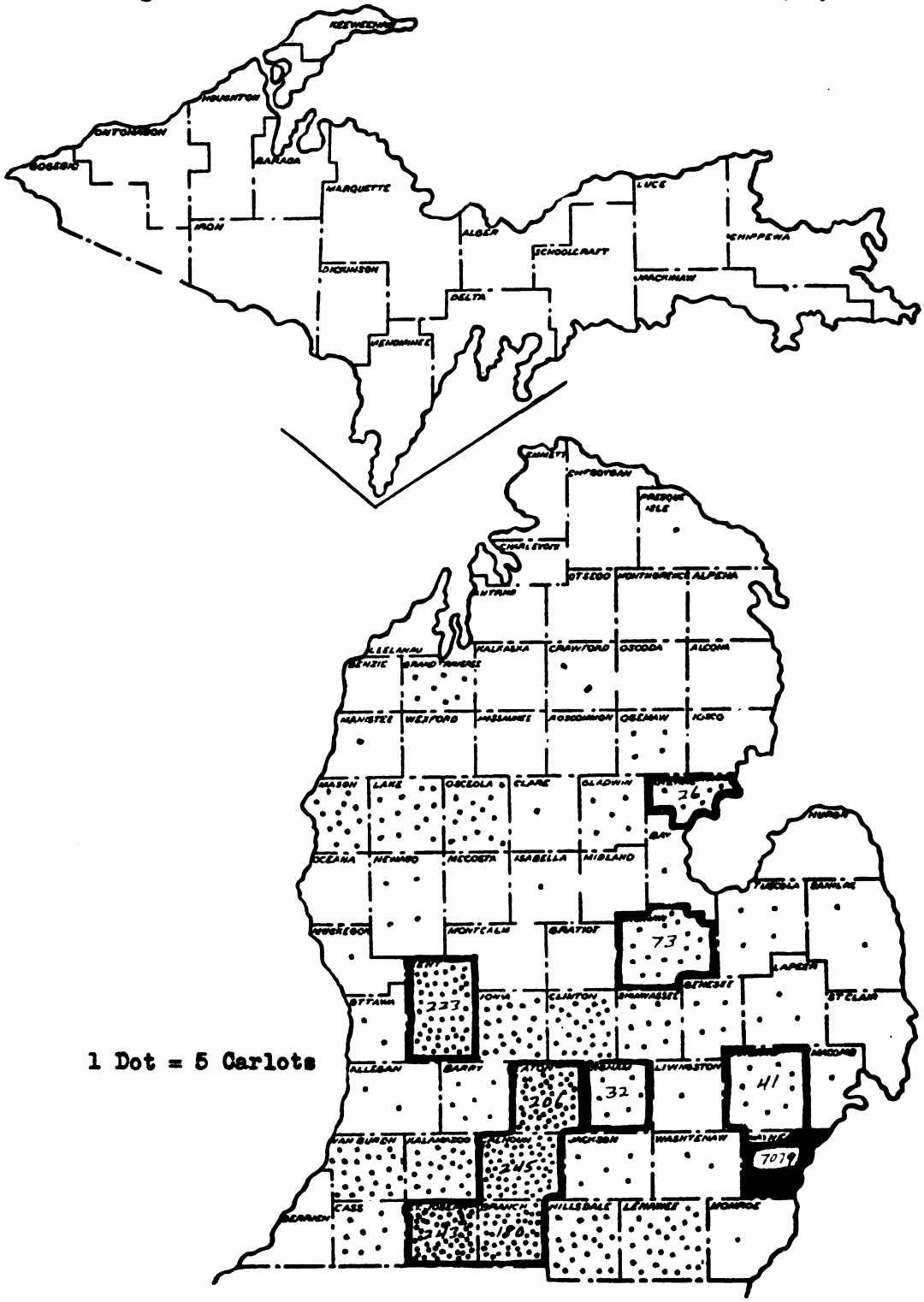
Table 6. Leading Ten Counties[1] in Carlot Shipments and Receipts of Livestock, 1937[2]

County	Carlots Shipped	County	Carlots Received
Wayne	1091	Wayne	8170
Lenawee	417	Lenawee	286
Calhoun	260	Ingham	120
Clinton	253	Clinton	117
St. Joseph	246	Saginaw	75
Eaton	238	Jackson	51
Kent	231	Ionia	49
Branch	188	Oakland	45
Ionia	155	Eaton	32
Hillsdale	119	Genesee	30

1. Counties appearing in both groups are underlined.
2. Comparable figures for other counties are given in Tables 7A and 8A.

Branch, Calhoun, Eaton, Kent and St. Joseph counties had the greatest net surplus of carlots shipped over those received (Fig. 13 and Table 9A). This reflects the presence of the concentration yards at Battle Creek and Marshall in Calhoun county and of active shipping associations in the other counties. The Grand Rapids Packing Company is an additional influence in Kent County as it ships surplus purchases of livestock. It is likely that part of the surplus rail shipments from these counties come in from the surrounding territory by truck. In the case of the deficit counties, shown on the same chart, two explanations may be offered. Wayne, Oakland and Saginaw are no doubt deficit counties because of packing house

Fig. 13. Balance of Carlot Movements of Livestock, by Counties, 1937

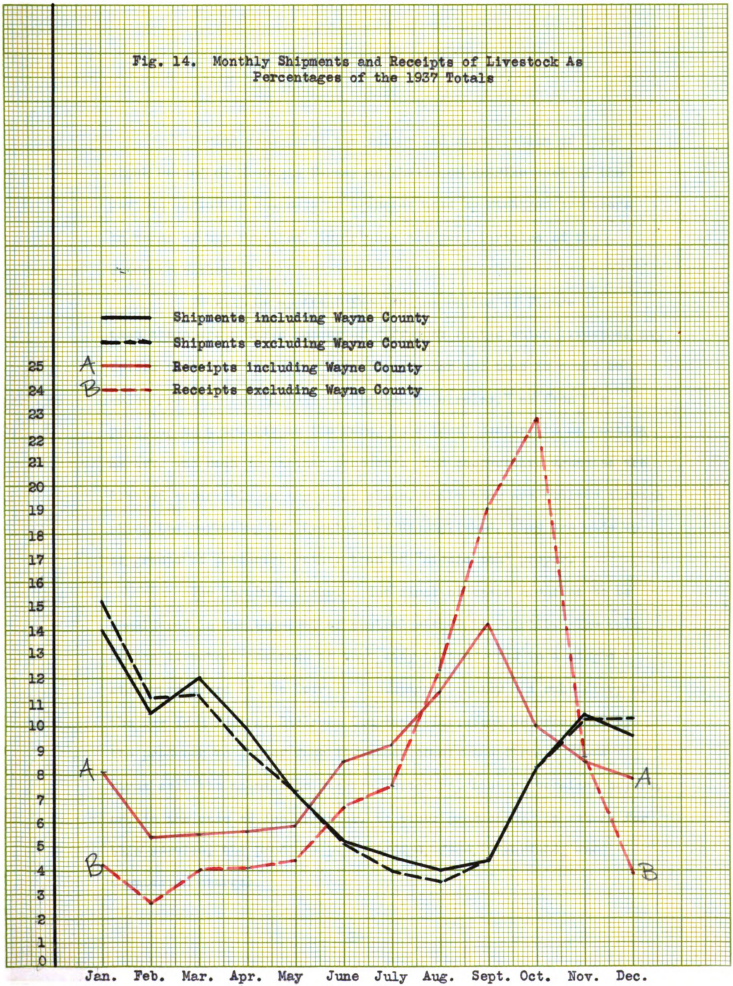


Surplus receipts shown in red and surplus shipments in black.
The five counties with greatest surplus outlined in each case.

operations in their metropolitan centers. This does not apply so well to Arenac and Ingham counties as they do not have major packing plants. However, they are conveniently located to the plants in the other deficit counties and the livestock is no doubt trucked to these centers.

A considerable seasonal variation is present in the livestock movements over the three railroads (Fig. 14). Since the volume (Tables 7A and 8A) of Wayne County shipments and receipts is very much larger than that of any other county, a comparison is made of the seasonal percentages both including and excluding this county. It is interesting to note that an inverse relationship is present between the number of carloads being shipped and those being received by Michigan counties at any one time. For example: The month of August is the low point for shipments from the counties and September is but slightly higher. In spite of this fact, September is the high point for receipts, if Wayne County is included in the analysis. If this county is excluded, the high point in receipts is not reached until October, during which month shipments are substantially higher than in August or September. This phenomenon of high receipts at the time of low shipments indicates the movement of feeder cattle and lambs from out of state sources. By late August or September the farmer can predict his corn crop pretty well and thus can purchase whatever quantity of feeder stock he can handle in any given year. Thus his stock, especially feeder cattle and sheep, comes into the state during September and October and is ready for market about sixty days later - which accounts for the high shipments from Michigan counties during November, December and January.

Fig. 14. Monthly Shipments and Receipts of Livestock As Percentages of the 1937 Totals



SECTION II

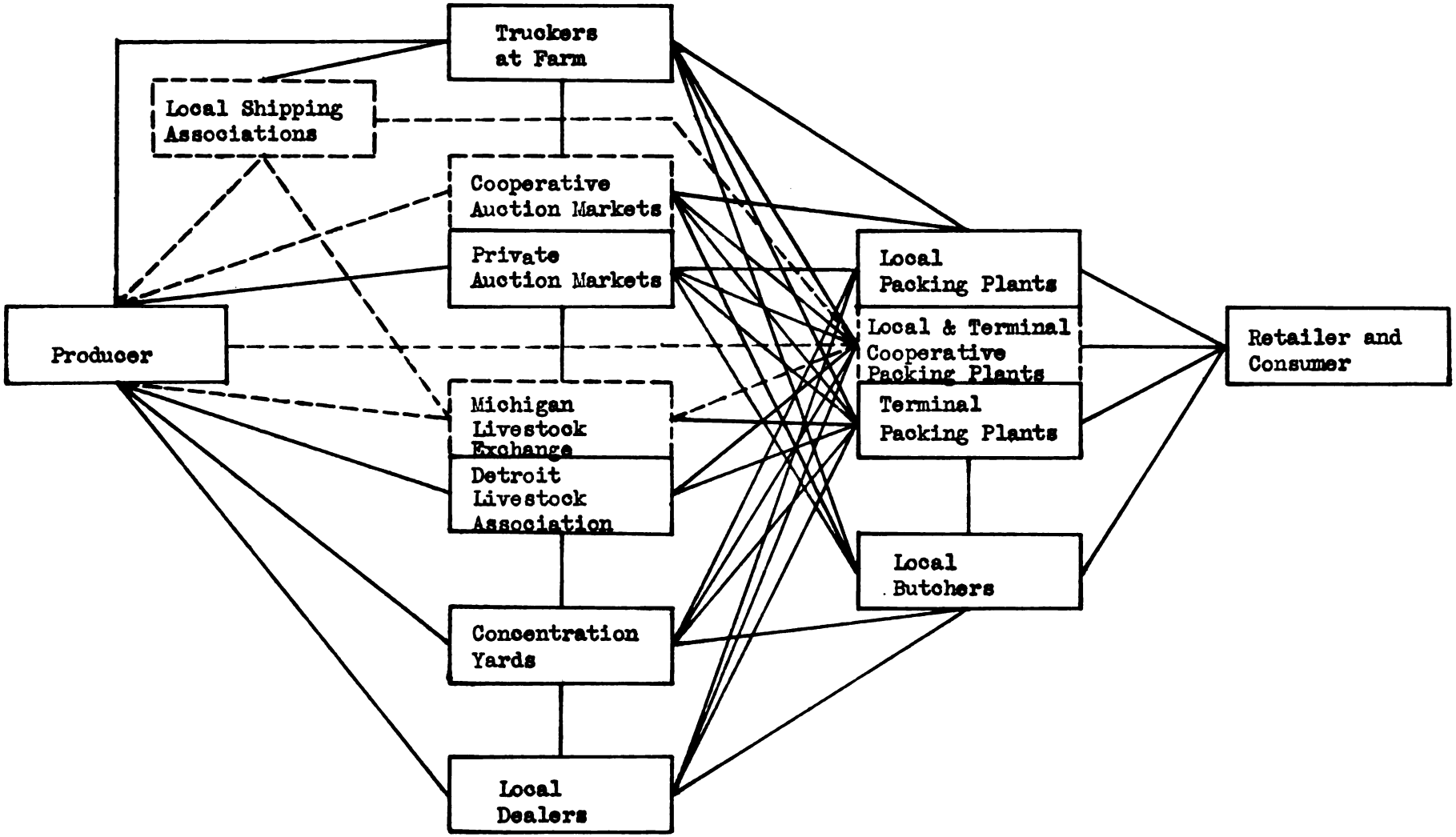
THE TERMINAL MARKET

Having considered the volume and distribution of livestock raised on Michigan farms, we shall now examine each of the various marketing channels or agencies used by Michigan producers in terms of the function, importance and peculiarities of the separate outlets.

It will be apparent from an inspection of Figure 15 that there are a large number of different routes which livestock may follow on its way from producer to consumer and that it would be quite possible for animals to "travel in circles," as from the producer to a trucker at the farm, to a local dealer, to an auction market, and back to another producer. The cooperative agencies are treated separately on the chart since, while they are outlets through which the marketing of livestock is accomplished, they are made up of groups of producers rather than of "middle men" proper.

The Terminal Market. The first of these agencies to be considered is the terminal or central market in Detroit. The bulk of the livestock business in that city is conducted in a single stockyard owned by the Detroit Stockyards Company - a subsidiary of the New York Central Railroad Company. Livestock is consigned by the producer to one of four livestock commission firms. These firms sell the animals to packers, butchers, eastern terminal buyers, or, in the case of feeder stock, to other producers. In return for this service, the producer pays yardage, feed, insurance, and commission charges.

Fig. 15. Agencies and Channels Available for Marketing Michigan Livestock



Selling Costs at the Terminal Market. Yardage and insurance charges are paid, through the commission firm, to the stockyards company (Table 10A). This charge is for the use of the yards and for feed, water and care up to the time of the sale. Commission charges are also paid to the commission firm and are retained by it as compensation for its service in bringing together the producer and the purchaser. It should be emphasized here that these firms ordinarily do not purchase livestock for themselves but act merely as the agent of the producer.

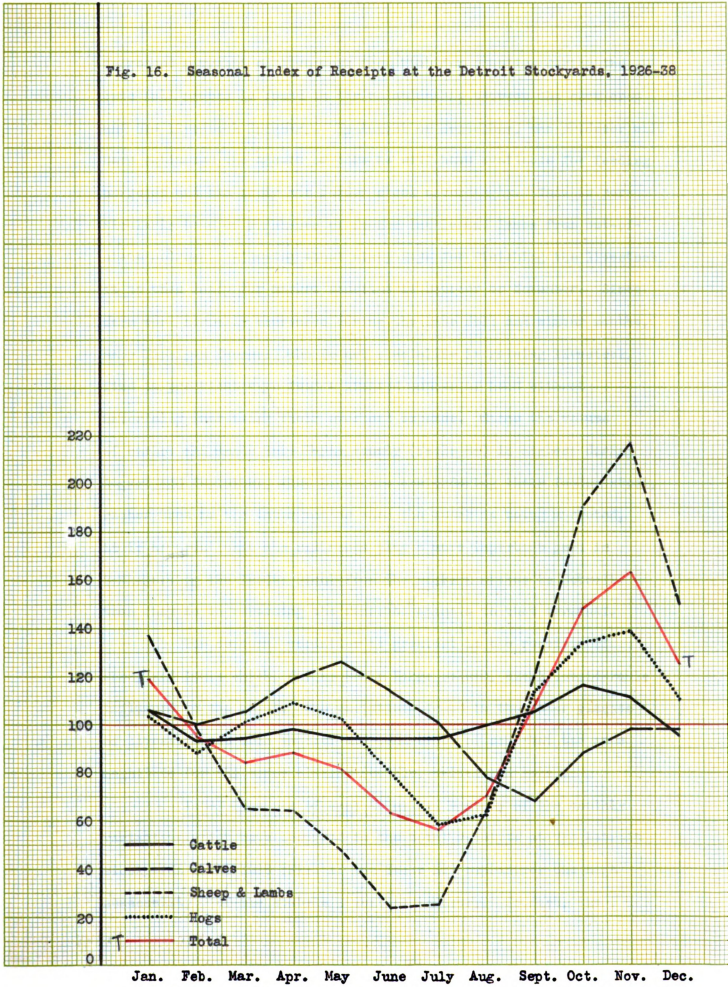
Receipts at the Terminal Market. Since the volume of receipts is an indication of the relative importance of the various marketing agencies, they shall be considered in detail in those cases in which figures showing receipts over a period of time are available. In the case of the terminal market, these receipts are marked by great seasonal fluctuations (Fig. 16 and Table 11). The peak months in total receipts are October and November. As pointed out in Section I, one of the important reasons for the

Table 11. Seasonal Index of Receipts at the Detroit Stockyards, 1926-37[1]

Month	Total Receipts	Cattle	Calves	Sheep	Hogs
January	119.1	106.2	106.0	136.8	103.0
February	94.8	93.1	99.6	98.4	88.2
March	84.0	93.6	105.3	64.6	100.6
April	88.4	97.9	118.6	63.5	109.2
May	80.6	94.3	125.8	47.4	102.4
June	62.9	93.5	113.7	24.2	79.9
July	55.8	93.9	100.8	25.2	58.3
August	70.4	100.1	78.0	64.2	62.0
September	107.9	104.9	67.5	120.2	112.8
October	148.2	116.0	87.8	189.6	133.7
November	163.2	111.0	98.2	216.6	138.8
December	124.5	95.4	98.4	149.8	110.3

1. Based on Monthly Averages

Fig. 16. Seasonal Index of Receipts at the Detroit Stockyards, 1926-38

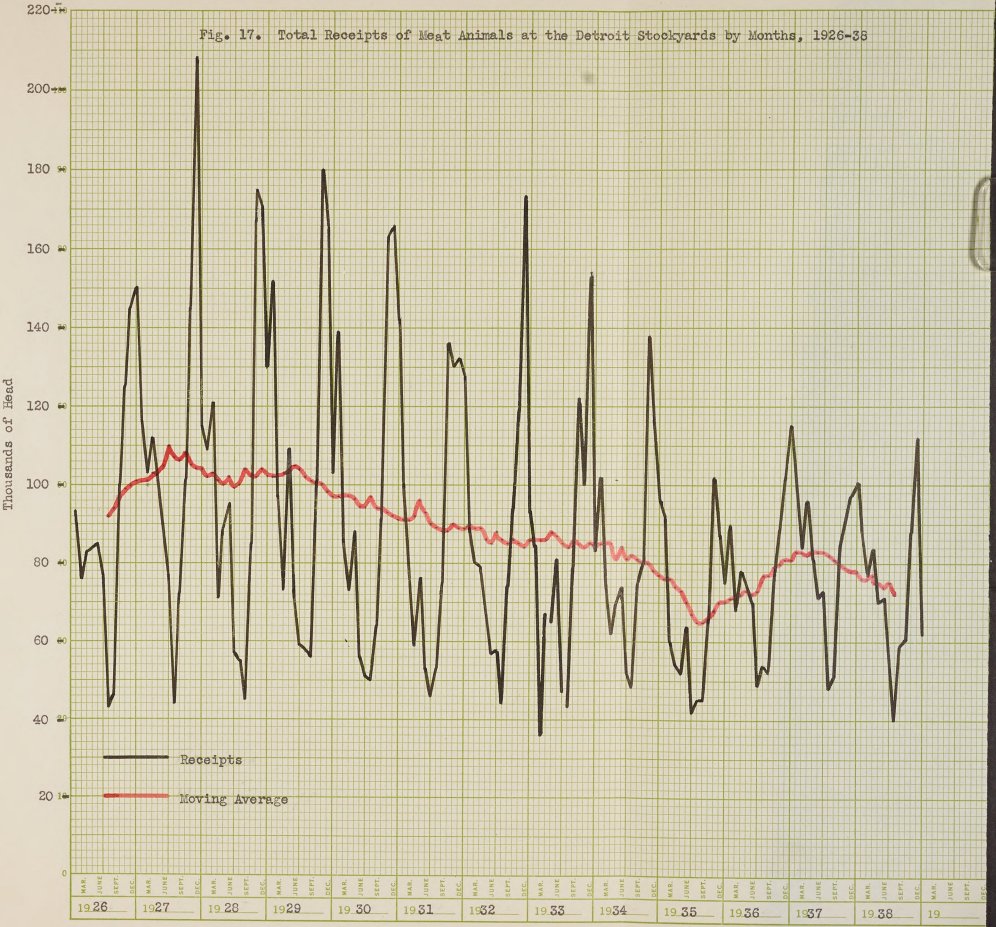


increased movement of livestock from Michigan counties during the late fall months is found in the relationship between the corn crop and the livestock industry. By August or September, the producer will have estimated the amount of corn he will have available for feeding purposes and can order his feeder stock accordingly. This is particularly true of purchases of feeder cattle and lambs from out-of-state cources. Allowing about sixty days for finishing the livestock, it is then ready for market sometime in October or November. Since farm work normally decreases during the late fall and winter months, many Michigan farmers, who do not specialize in raising livestock, find it practicable to feed a limited number of head without materially increasing their overhead expense. Since the volume of carlot shipments into Wayne county (Table 8A) is highest during August and September, when producers are ordering their feeder stock, rather then in the later months when the stock is being marketed, it is apparent that the railroads play a more important part in transporting the feeder stock from the western states to Detroit than they do in returning the finished animals to that terminal.

The seasonal variation is greatest in the receipts of sheep and lambs which, due to their large volume, exert considerable influence on the total. The variations found in the other classes of livestock are much smaller and tend to be of somewhat the same magnitude for the three classes (cattle, calves and hogs).

Total Receipts of Meat Animals. A study of the monthly variations which have occurred in the total receipts at the Detroit stockyards since 1926 (Fig. 17 and Table 12) emphasizes the high seasonality of the state's livestock industry. In fact, the

Fig. 17. Total Receipts of Meat Animals at the Detroit Stockyards by Months, 1926-38



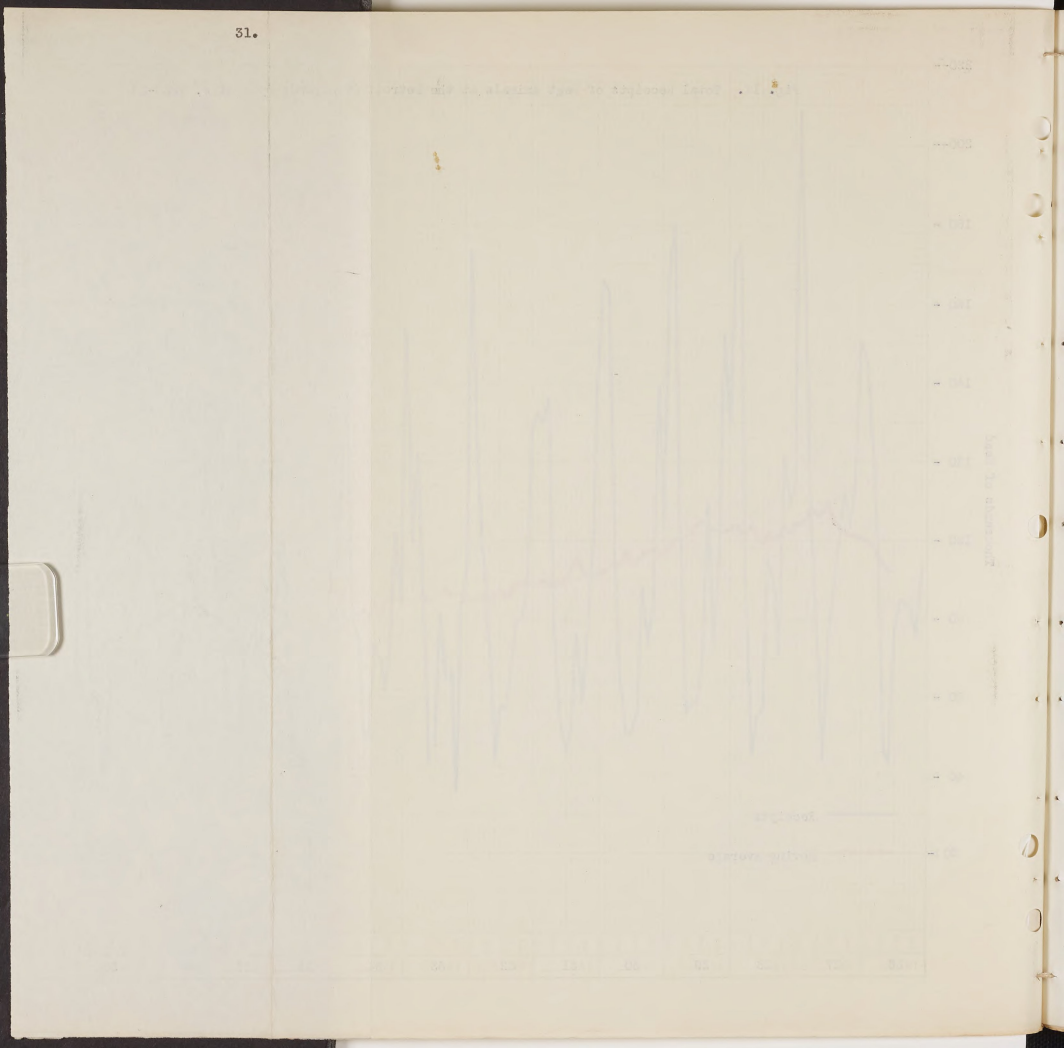


Table 12. Total Receipts of Meat Animals at the Detroit Stock Yards, by Months, 1926-38

Month	1926	1927	1928	1929	1930
January	92747	117363	109348	152341	138878
February	76381	102550	121135	96985	85972
March	82800	111760	71230	73461	72612
April	84015	100925	88597	108542	87648
May	84889	90390	95331	70747	57589
June	77329	77286	57019	59054	51313
July	43443	43665	55360	58235	49916
August	46035	72136	45002	55704	63973
September	100079	100899	85353	101444	90630
October	125164	144857	175319	180228	162906
November	144932	208276	171257	166100	166307
December	150266	115145	129542	103370	142104
Average	92340	107104	100374	102184	97487

Month	1931	1932	1933	1934	1935
January	99723	87741	84013	102276	92145
February	80446	79540	35776	74253	60436
March	58912	79276	66606	61546	53588
April	76365	68069	64717	69927	52427
May	53081	57116	80892	74201	63851
June	45825	57520	46845	52294	41694
July	53429	43742	43248	47570	45280
August	74521	74110	78698	74676	45120
September	136163	94288	122373	80152	66208
October	129804	119232	100419	137997	101648
November	132235	173326	152935	116695	87044
December	127621	93301	82964	95845	75054
Average	89010	85605	79957	82286	65375

Month	1936	1937	1938
January	89533	100342	87901
February	67636	84159	76621
March	77679	96021	83955
April	74254	81474	69551
May	69841	71151	70709
June	49458	72992	56479
July	53680	48152	39524
August	52193	51312	59075
September	78216	84982	60919
October	88894	90715	87935
November	102319	96912	111867
December	114721	100763	61890
Average	76535	81581	72202

fluctuations from month to month in this case are so great that any attempt to analyze the changing importance of the terminal market must be based on some statistical device such as the average receipts for each year or the long term trend line[1] rather than on the monthly data.

A study of this trend line reveals increasing receipts up to July of 1927. A very gradual decrease to July, 1932 may be attributed to two factors: (1) a gradual increase in the number of small marketing agencies being made available to the producer and (2) the slight decrease in the number of livestock on Michigan farms during this period (Table 1). The volume of receipts remained fairly constant from the middle of 1932 through the first quarter of 1934, during which period few new markets were being opened due to the general business depression. The increase since 1935 is due to an increasing production plus a gradual swing back to the terminal market by many producers.

Relative Volume of Four Classes of Livestock. The period since 1920 has been marked by great fluctuations in the volume of each class of livestock received at the Detroit terminal. We shall presently consider the monthly and seasonal fluctuations in these receipts together with their long term moving average or trend, as was done in the preceding paragraph for total receipts of meat animals. The variations which have occurred in the annual receipts of each class are indicative of the relative importance of the four classes in terms of the total number of each marketed in any given year (Fig 18 and Table 13A). These data emphasize the great volume of sheep and lambs marketed as compared with the other classes, together

1. The trend lines in Figures 17 and 19-22 are 12-month moving averages of the data in Tables 12 and 14-17.

Fig. 18. Annual Receipts of Each Class of Livestock at the Detroit Stockyards, 1920-38

with the decrease which has taken place since 1929, in the number of hogs sold annually on the terminal markets. This decrease occurred principally in the period from 1929-32.

Cattle Receipts. The degree of fluctuation found in the monthly receipts of cattle at the Detroit stock yards, (Fig. 19 and Table 14) is much less marked than that found in the tables for all classes (Fig. 17). In fact, as will presently be shown, these receipts fluctuate less than those of any of the other three classes of livestock. It can be seen from a study of the long term trend line that the number of cattle sold at the Detroit stock yards was very nearly constant throughout the four-year period from July 1926 to July 1930, the average monthly volume for these years varying only from 10,496 to 11,075. Receipts then decreased to a lower level (between 8,000 and 9,000 a month) which extended from August 1931 through April of 1933. These years coincide with the low period of the general cattle production cycle for this country as a whole, which in turn was partly caused by the drastic decline in livestock prices and the general economic situation with resultant reduced consumer demand.

Since 1933, the increase has been quite rapid, and since 1935 cattle receipts at Detroit have been larger than at any time in the past. This increase reflects the general upward trend of numbers of cattle on farms (Table 1), improved consumer demand with resultant higher prices, and the A.A.A. programs along with the emergency marketing periods following the drouths of 1934 and again in 1936. The past several years have also been marked by a favorable relationship between the prices of feed crops and meat animals (Fig. 10), which have tended to maintain the volume of livestock production and marketing. It is interesting to note that the range of the monthly fluctuations appear to be increasing with the growing annual volume of receipts.

Fig. 19. Total Receipts of Cattle at the Detroit Stockyards by Months, 1926-38

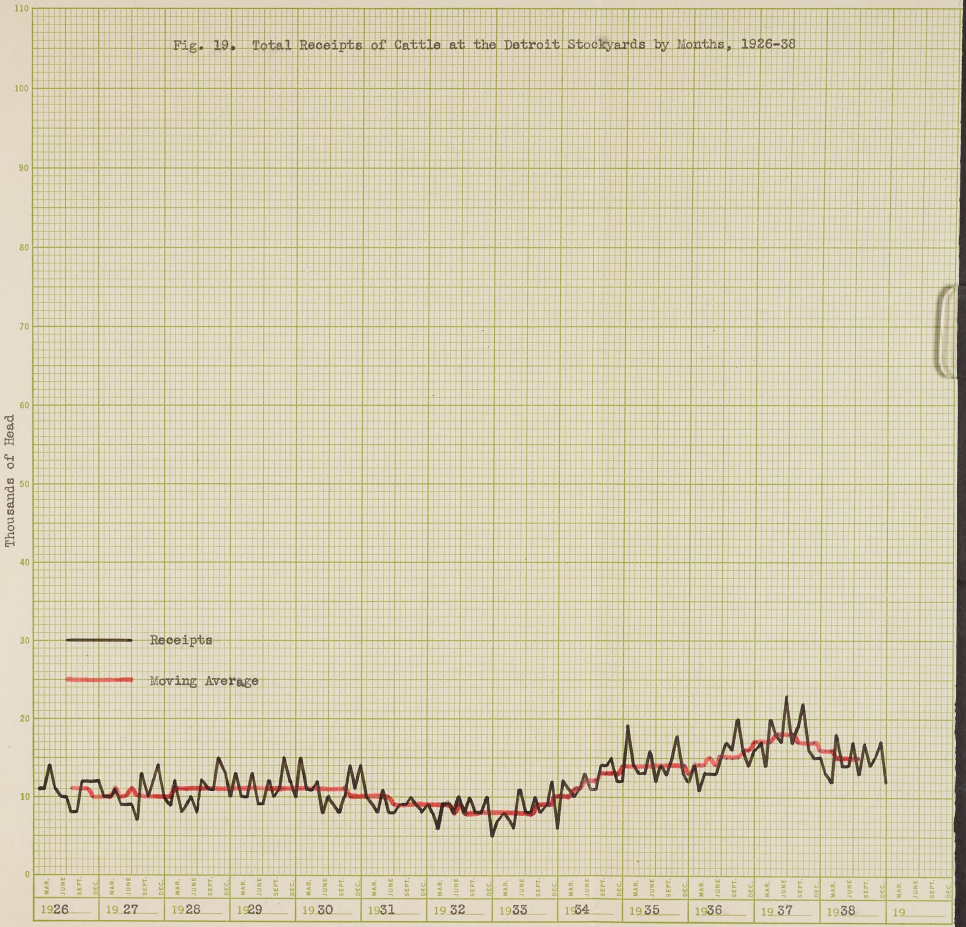


Table 14. Total Receipts of Cattle at the Detroit Stockyards, by Months, 1926-1938

Month	1926	1927	1928	1929	1930
January	11255	10374	8838	13190	14612
February	10862	10254	11661	9641	10992
March	14019	10899	7884	9770	10971
April	10935	9338	9272	13396	12015
May	10176	8948	10434	8663	7947
June	9790	9187	8000	9107	9608
July	8155	6962	12444	11555	8752
August	8376	12500	10521	9649	8106
September	12060	10290	11175	10528	9618
October	11737	12183	14501	15231	14365
November	12059	15502	12782	11958	11405
December	12374	9512	10456	10206	14254
Average	10933	10496	10664	11075	11054

Month	1931	1932	1933	1934	1935
January	10405	7712	6774	11883	19037
February	8827	6457	8074	10710	14261
March	8147	9270	6783	9838	12825
April	10611	8993	6480	10758	12714
May	7538	7580	10518	12547	15579
June	7515	9818	8017	10829	11659
July	9039	8054	7672	11114	13780
August	8614	9098	10429	13983	12710
September	10435	7669	8383	13977	15054
October	9098	7611	8631	15232	18129
November	8374	10039	11915	12356	13265
December	8991	5491	6455	12029	12237
Average	8970	8224	8344	12109	14271

Month	1936	1937	1938
January	14294	16664	12572
February	10892	13940	12287
March	12828	20229	17696
April	12960	17896	14440
May	13314	17040	13794
June	14897	22536	16669
July	16990	16632	12817
August	15981	18883	16879
September	20103	21835	13686
October	15980	16231	15217
November	13872	14800	17261
December	16077	14741	12281
Average	14849	17619	14633

Calf Receipts. Not a great deal need be said in regard to the receipts of calves at the Detroit yards (Fig. 20 and Table 15). The decrease from an average monthly volume of 18,332 in 1931 to 10,381 in 1938 may be attributed largely to the increasing importance of the auction markets and interior packing houses. This decrease would probably have commenced earlier in the decade had not the period from 1931-33 been unfavorable for the marketing of cattle which resulted in them being kept on the farms for breeding. Consequently, the volume of calves marketed during these years was larger than at any other time during the period covered by this study. Since 1933, the producers have been selling a larger proportion of their cattle and the volume of calves marketed has been smaller. The monthly fluctuations in the volume of calf receipts are of greater magnitude and regularity than those present in the case of cattle.

Sheep and Lamb Receipts. The greatest monthly fluctuations found in the receipts of any class of livestock are found in the case of sheep and lambs (Fig. 21 and Table 16). In fact, these variations are so large that it is necessary to use the average monthly receipts together with the trend line as being indicative of the increasing or decreasing importance of the mutton and wool industries in the state. The magnitude of these fluctuations apparently increases during periods when the long term trend is up and decreases when the receipts trend line turns down. The trend is generally upward during the first half (1926-31) of the period covered by this study with the average monthly volume reaching its peak of 48,190 head in 1930. Since that time there has been increasing activity on the part of the various local livestock outlets and the number of sheep and

Fig. 20. Total Receipts of Calves at the Detroit Stockyards by Months, 1926-1938

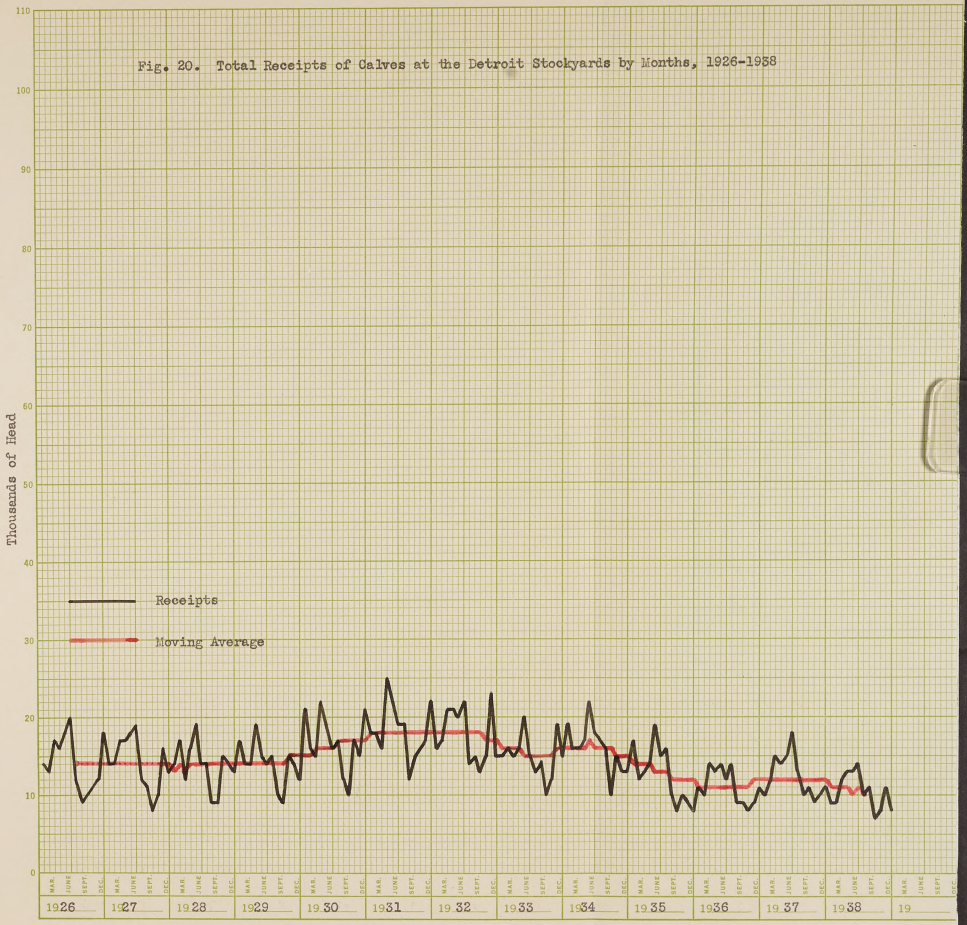


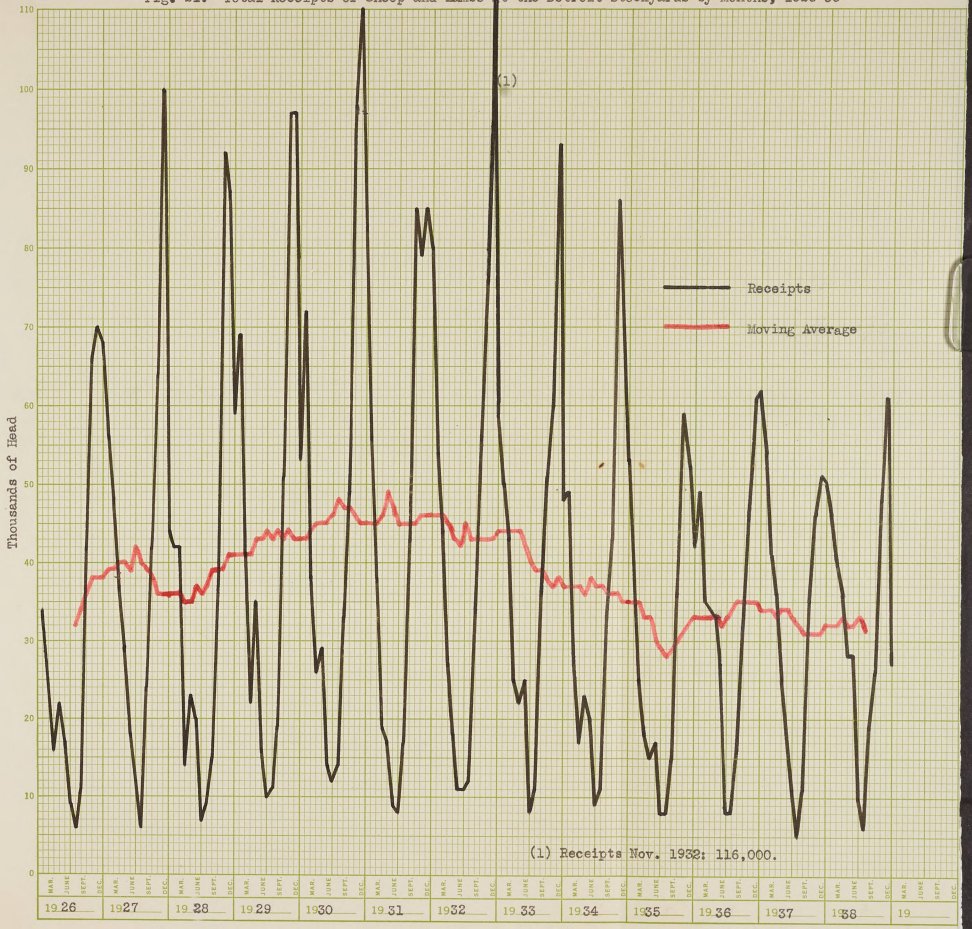
Table 15. Total Receipts of Calves at the Detroit Stockyards, by Months, 1926-1938

Month	1926	1927	1928	1929	1930
January	14260	14115	13558	17143	20872
February	13327	13638	16907	13946	16434
March	17019	17078	12404	13665	15481
April	15914	16665	15661	19028	22201
May	17858	17867	19350	15398	18616
June	20403	18657	14050	14289	15815
July	11874	11541	13904	14530	16761
August	9348	11496	9203	9951	11638
September	9863	7660	8645	8926	10102
October	10637	9909	14573	14877	16608
November	12489	15667	13789	14069	15341
December	17630	12764	13088	11747	21237
Average	14219	13921	13761	13964	16759

Month	1931	1932	1933	1934	1935
January	18282	16386	14574	18850	16973
February	17895	16709	16081	16164	11866
March	16424	21003	14584	15822	13037
April	25475	20820	15637	16998	14169
May	21637	19930	20044	22441	18592
June	19197	22207	14991	18430	14809
July	18742	14273	13288	17195	15864
August	12497	15235	13670	15629	9523
September	15080	12637	10151	9976	8054
October	15945	15314	12278	14722	10352
November	16074	22664	18716	13378	9134
December	21938	15327	15187	13467	8353
Average	18332	17709	14933	16089	12561

Month	1936	1937	1938
January	11075	9970	9088
February	10106	11835	9059
March	14415	15469	12370
April	12667	14168	12765
May	13929	15428	13290
June	12328	18621	13500
July	14408	12776	10119
August	9062	10059	10583
September	9083	11162	6927
October	8280	9223	7751
November	8993	9513	10843
December	11020	10763	8273
Average	10608	12416	10381

Fig. 21. Total Receipts of Sheep and Lambs at the Detroit Stockyards by Months, 1926-38



(1) Receipts Nov. 1932: 116,000.

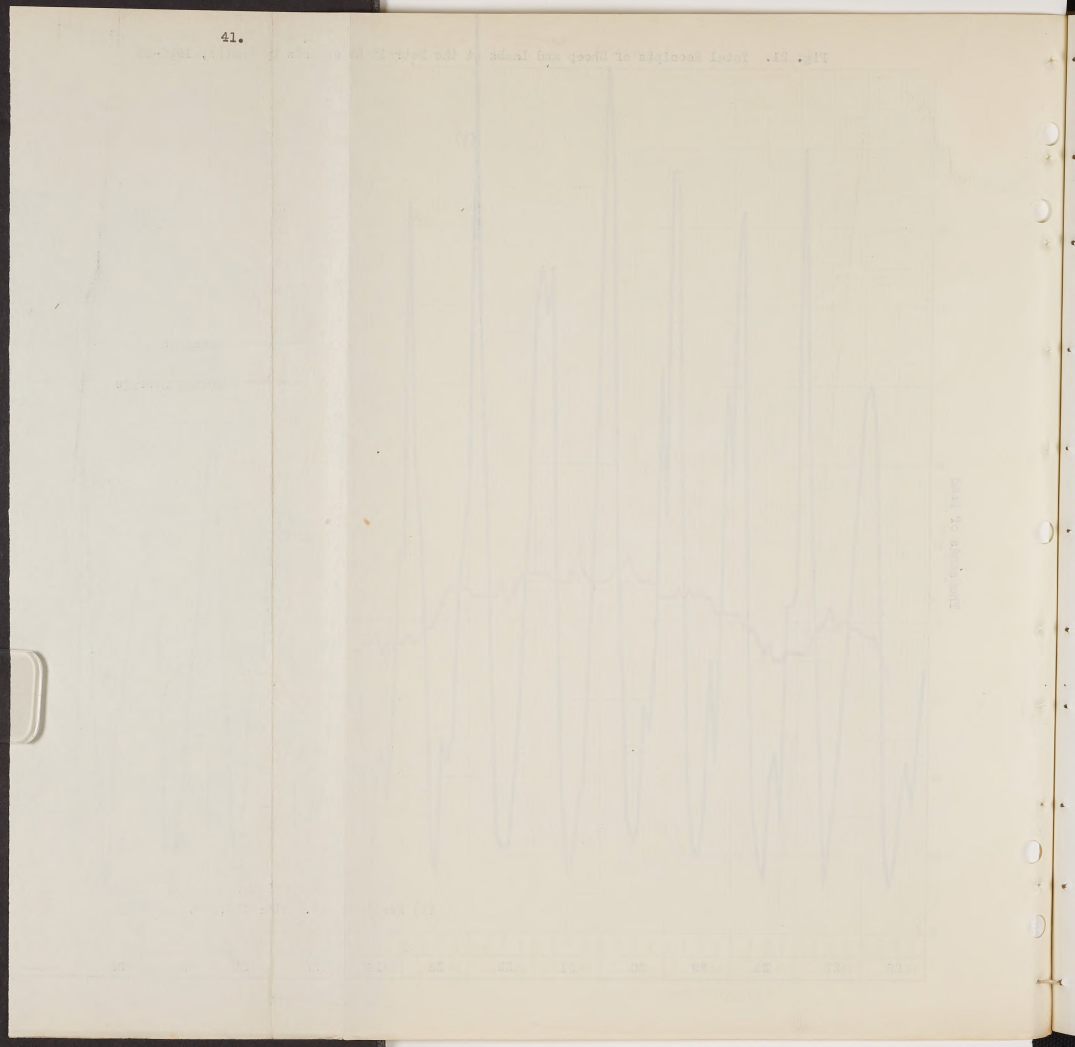


Table 16. Total Receipts of Sheep and Lambs at the Detroit Stockyards, by Months, 1926-1938

Month	1926	1927	1928	1929	1930
January	33504	56170	41501	68972	72232
February	25082	48172	41904	41234	38252
March	16110	36659	14251	21691	26147
April	21770	29095	23101	34515	28963
May	17371	17716	20063	16424	13692
June	9372	12224	7416	9932	11769
July	5684	5810	9194	10930	14316
August	11439	23600	14500	19027	33103
September	41850	41796	36632	50545	48984
October	66341	64480	92142	96995	97952
November	69831	100420	86939	97429	109648
December	67675	43666	58821	53053	83226
Average	32169	39984	37205	43396	46190

Month	1931	1932	1933	1934	1935
January	56219	53911	50186	49354	38941
February	38208	43786	43380	28233	24837
March	18900	27460	24567	17292	17739
April	17249	18388	22191	23440	15241
May	9204	11223	25414	20195	17352
June	8433	10830	7766	8979	7746
July	16973	12443	10659	10752	7657
August	43263	34438	36263	33457	15316
September	84729	56116	50957	42968	35826
October	78597	76036	60014	85984	59342
November	84847	116434	93070	72103	51891
December	79994	59116	47561	53182	42306
Average	44718	43348	39336	37162	27850

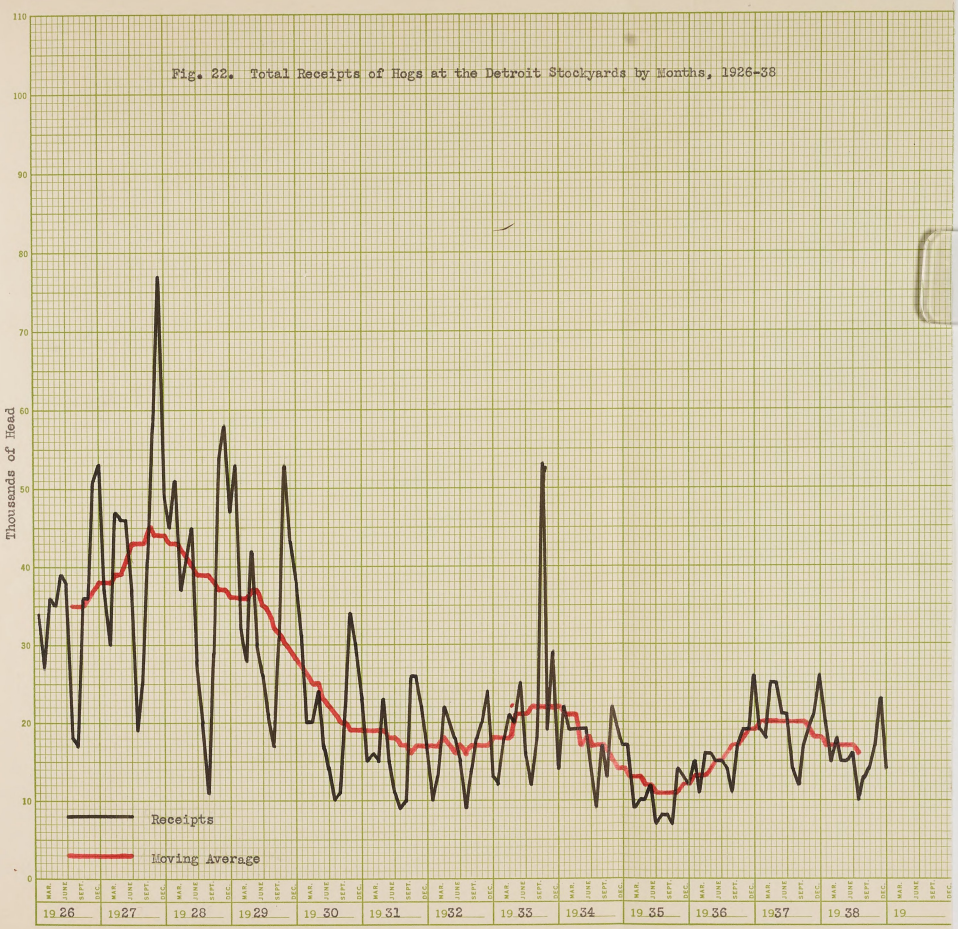
Month	1936	1937	1938
January	48881	54326	45808
February	35290	40578	40370
March	34016	35777	35957
April	32715	24572	27656
May	27100	17777	28488
June	7562	10521	10027
July	8369	4996	6258
August	16084	10820	18849
September	31622	35056	26429
October	46134	46253	48396
November	60543	51389	61249
December	61854	49518	27206
Average	34181	31799	31393

lambs marketed at the terminal has decreased. The monthly average was lowest (27,850) in 1935 and has since varied between 31,393 and 34,181.

Hog Receipts. The trend of hog receipts at the Detroit market has been generally downward for the period of our study (Fig.22 and Table 17). Highest, (42,701) in 1927, the monthly average decreased sharply to 16,324 in 1932, recovered somewhat during 1933 and the first quarter of 1934 and then dropped to its lowest point in 1935 at which time the average monthly receipts were only 10,693. The very marked increase in September, 1933 can mainly be attributed to the AAA purchases of small pigs and brood sows which were slaughtered on government account as an emergency method of reducing the national surplus of this class of livestock. The trend was upward in 1936-37 but the 1938 receipts were smaller than in either of these two years. The monthly variations, though fairly large, are irregular and present no particular pattern with the exception of a high point which is found in the last quarter of most years, and to a lesser degree during the second quarter of many of the years. This long time decrease may be largely attributed to the falling off in the number of hogs on Michigan farms from 1,150,000 in 1923 to 512,000 in 1935 (Table 1). Although this number has been increasing since 1935, it was still only 713,000 in 1939. Other factors affecting terminal receipts have been the growth of direct marketing methods and an increasing number of interior packing houses.

Transportation of Livestock to the Terminal. The period since 1920 will, in the future, be noted as the one in which the motor

Fig. 22. Total Receipts of Hogs at the Detroit Stockyards by Months, 1926-38



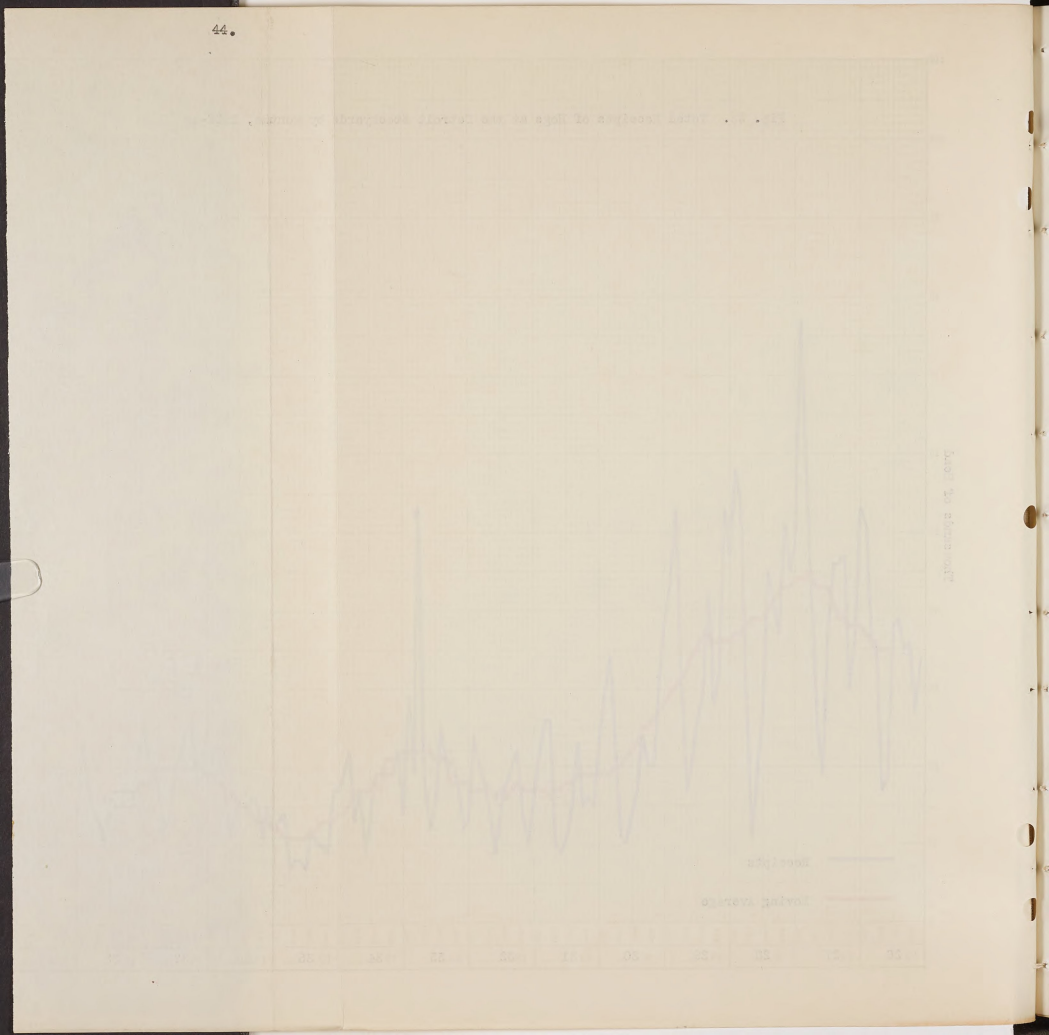


Table 17. Total Receipts of Hogs at the Detroit Stockyards, by Months, 1926-1938

Month	1926	1927	1928	1929	1930
January	33728	36687	45451	53036	31162
February	27110	30486	50663	32164	20294
March	35652	47124	36691	28335	20013
April	35396	45827	40563	41603	24469
May	39484	45859	45484	30262	17332
June	37764	37218	27553	25726	14121
July	17730	19352	19818	21220	10087
August	16872	24540	10778	17077	11126
September	36306	41153	28901	31445	21926
October	36449	58285	54103	53125	33981
November	50553	76681	57747	42648	29913
December	52587	49203	47177	38264	23387
Average	34969	42701	38744	34575	21484

Month	1931	1932	1933	1934	1935
January	14817	9732	12479	22189	17194
February	15516	12588	18241	19146	9472
March	15441	21543	20672	18544	9987
April	23030	19868	20409	18731	10303
May	14702	18383	24916	19018	12328
June	10680	14665	16071	14056	7480
July	8675	8972	11629	8509	7979
August	10147	14439	18336	16607	7571
September	25869	17866	52882	13231	7274
October	26164	20271	19496	22059	13817
November	22140	24189	29234	18858	12758
December	16698	13367	13761	17167	12158
Average	16990	16324	21511	17343	10693

Month	1936	1937	1938
January	15283	19382	20433
February	11348	17806	14905
March	16420	24546	17932
April	15892	24838	14690
May	15498	20906	15137
June	14671	21314	16283
July	13913	13748	10330
August	11066	11550	12744
September	17408	16929	13877
October	18500	19008	16571
November	18911	21210	22514
December	25770	25741	14130
Average	16223	19748	15796

truck largely replaced the railroad as the conveyor of livestock. This trend holds good for all the markets, but only in the case of the terminal yards are reliable figures available which show what has happened in this respect during the past 20 years.

Since 1920, the proportion of total receipts represented by rail shipments has declined from 96.1 per cent to 9.3 per cent, in 1938, while truck receipts increased from 3.9 per cent to 90.7 per cent of the total volume (Fig. 23 and Table 18). The trend from rail to truck was most pronounced in the years between 1924 and 1933. This period probably also marks the era of most rapid improvement in the trucks themselves as well as in the highways upon which they operate. There was a very slight swing back to the railroad in 1934, but after that year the trend reversed itself again and the truckers have since been transporting an increasing percentage of each year's marketings. Of course, the annual increase in the proportion trucked has been much smaller than was the case during the late twenties and it is highly improbable, if not impossible, that the railroads will ever lose all of this business. On the other hand, present conditions give no indication that they will ever regain a larger proportion of the livestock transportation business than they now have.

The 1920-38 decline in the percentage of each of the four classes of livestock carried by the railroads has been about the same (Fig. 24 and Table 18). The percentage of cattle shipped by rail increased over 12 per cent between 1933 and 1936 before resuming its decline. This may be attributed to the fact that during that period, a larger proportion of the cattle was coming from

Fig. 23. Percentages of the Annual Livestock Receipts by Truck and Rail at the Detroit Stockyards, by Classes, 1920-38

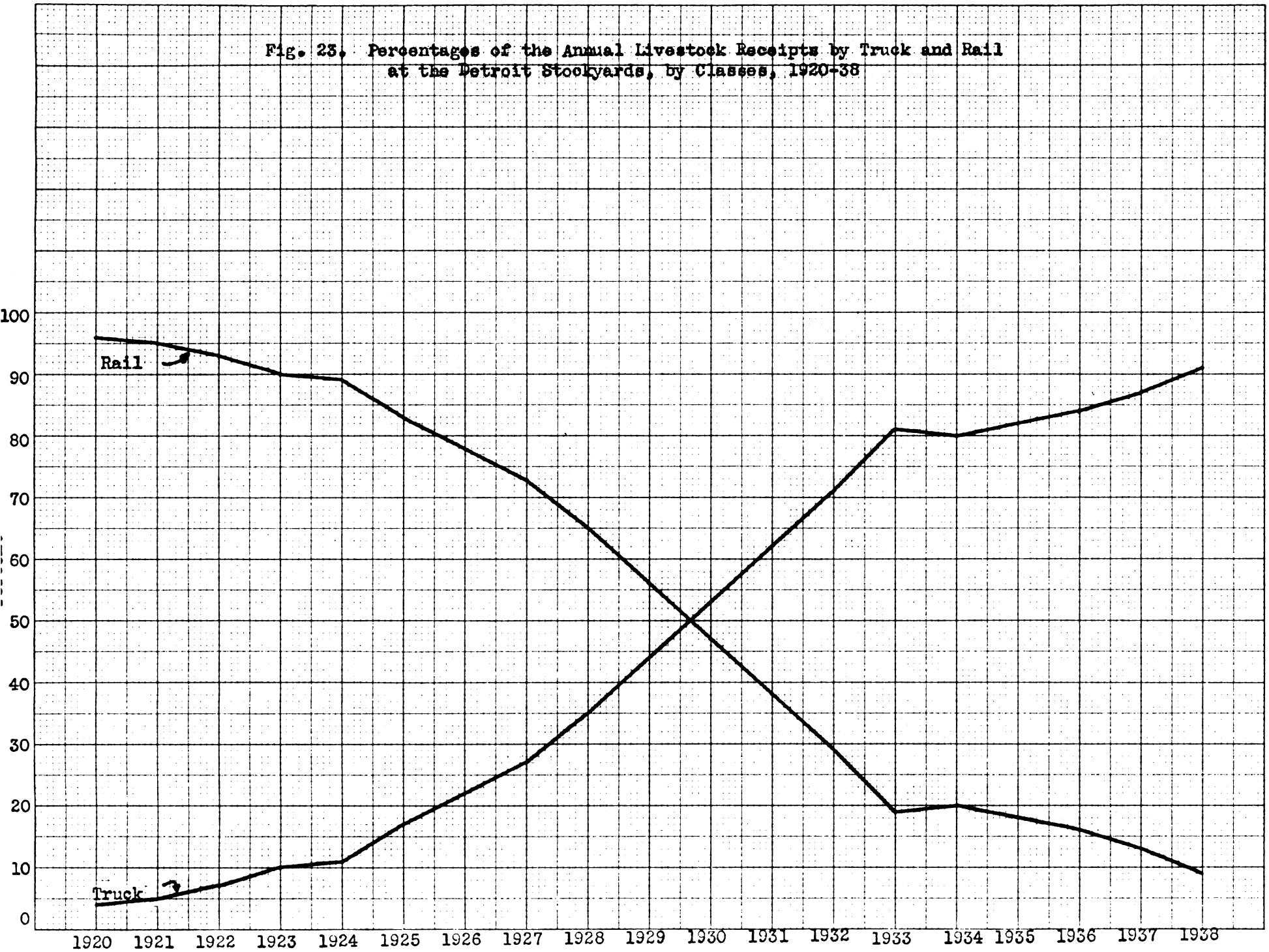
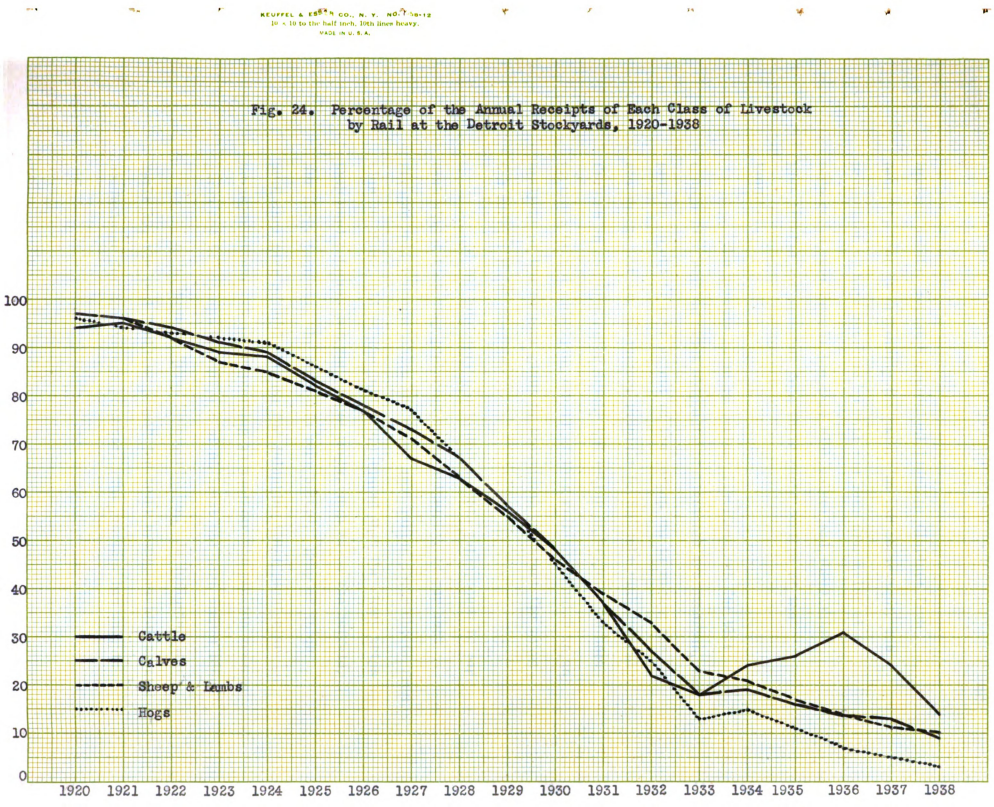


Table 18. Percentages of Annual Livestock Receipts by Rail and Truck at the Detroit Stockyards, by Classes, 1920-38[1]

Year	Per Cent by Rail					Per Cent by Truck				
	Cattle	Calves	Sheep and Lambs	Hogs	Total	Cattle	Calves	Sheep and Lambs	Hogs	Total
1920	93.6%	97.0%	96.8%	96.2%	96.1%	6.4%	3.0%	3.2%	3.8%	3.9%
1921	94.6	95.5	95.7	94.3	95.0	5.4	4.5	4.3	5.7	5.0
1922	92.4	94.4	92.4	93.4	93.0	7.6	5.6	7.6	6.6	7.0
1923	89.4	91.3	86.6	92.0	90.2	10.6	8.7	13.4	8.0	9.8
1924	88.2	89.2	85.3	90.6	88.5	11.8	10.8	14.7	9.4	11.5
1925	81.6	82.8	80.8	86.3	83.4	18.4	17.2	19.2	13.7	16.6
1926	77.1	77.5	76.8	80.7	78.4	22.9	22.5	23.2	19.3	21.6
1927	67.4	72.9	70.9	76.5	73.1	32.6	27.1	29.1	23.5	26.9
1928	63.2	66.5	63.3	66.6	65.0	36.8	33.5	36.7	33.4	35.0
1929	56.1	56.5	55.0	57.1	56.0	43.9	43.5	45.0	42.9	44.0
1930	47.5	48.1	46.3	45.0	46.5	52.5	51.9	53.7	55.0	53.5
1931	37.2	37.2	39.3	33.4	37.5	62.8	62.8	60.7	66.6	62.5
1932	22.0	27.3	32.9	25.4	29.2	78.0	62.7	67.1	74.6	70.8
1933	18.4	18.1	23.3	13.3	19.4	81.6	81.6	76.7	86.7	80.6
1934	24.0	19.0	20.9	14.7	19.7	76.0	81.0	79.1	85.3	80.3
1935	25.6	15.7	17.0	10.5	17.5	74.4	84.3	83.0	89.5	82.5
1936	30.7	14.0	14.1	6.9	15.8	69.3	86.0	85.9	93.1	84.2
1937	23.5	12.5	11.2	5.3	12.6	76.5	87.5	88.8	94.7	87.4
1938	13.8	9.2	10.3	3.1	9.3	86.2	90.8	89.7	96.9	90.7

1. These percentages were computed from the data given in Table 13A.

Fig. 24. Percentage of the Annual Receipts of Each Class of Livestock by Rail at the Detroit Stockyards, 1920-1938



western points, beyond a convenient trucking distance from Detroit, than is ordinarily the case. On the other hand, the proportion of hogs received by rail has been decreasing at a more rapid rate than is the case with calves and sheep which have leveled out somewhat from their rapid decline of the twenties.

The reasons given by various livestock men for this change from rail to truck shipments of livestock are numerous, and seem to depend to some extent on the person who is making the statement. It is, of course, possible to indicate such general factors as improved motor trucks and better highways. The best approach to the underlying causes of this rail-truck shift is an analysis of the reasons given by individual producers for using the service which they do.

Of 202 producers questioned on this point, over 76 per cent stated that they preferred truck shipments, 17 per cent favored rail transportation and 6 per cent varied their choice from time to time. All of the last group stated that for short trips they used a truck, but for longer hauls, such as to the Buffalo, New York, terminal, the railroads were better. Many of these producers gave several reasons for selecting their particular transportation. It is interesting to consider the various reasons given and to attempt an analysis of at least the more common ones.

Advantages of Truck Transportation. As indicated in Table 19, the best "selling point" for truck transportation is its convenience for the average producer. The producer has only to

Table 19. Advantages of Livestock Trucking as Indicated by 219 Michigan Producers

Factor	Producers Reporting	Percent
Convenience	97	44.3%
Faster, more direct delivery	56	25.6
Less shrinkage	28	12.8
Lower cost	19	8.7
Has own truck	8	3.6
Stock arrives in better condition	7	3.2
Can watch market more closely	4	1.8
Totals	219	100.0%

contact his favorite trucker who comes to the farm, usually loads the livestock himself, and takes it to market. In most cases of shipment by rail the stock must be loaded into trucks by the producer and taken to the railroad loading yards, where it must be reloaded into a railroad car. On hauls of any distance, the producer must often accompany the load to take care of it enroute. Another factor to be considered under the heading of "convenience" is the fact that the average producer can usually fill a truck when he is ready to make a shipment. Thus, he finds it easy and profitable to market his livestock immediately upon its reaching its best weight. In contrast, many producers do not have a sufficient volume ready for market at any one time to fill a railroad car. Because of higher rates on less than carlots, they are forced to wait until a neighbor has enough stock ready for market to complete the shipment. This means carrying livestock on the farm after it has reached its best weight, with a resultant increase in production costs. Of course, membership in a cooperative livestock shipping association takes care

of this problem for many Michigan producers.

Another important factor in the convenience of truck shipments for the producer is the average number of trips made to the terminal market each week by the truckers (Table 20). The average for the 93 truckers in this study

Table 20. Frequency of Trips to the Terminal Market by 93 Michigan Truckers

Number of Trips	Number	Percent
5 trips per week	2	2.1%
4 " " "	7	7.5
3 " " "	17	18.3
2 " " "	28	30.2
1 " " "	26	28.0
2 " " month	3	3.2
1 " " "	3	3.2
Less than 1 trip per month	7	7.5
Totals	93	100.0%

is 1.87 trips per week. Many of them stated, however, that in the peak months they make as many as 10 or 12 trips per week, as time permits. "Apparently, truck service is more valuable in reducing the average interval between irregular shipments than in permitting shipments with regular frequency."[1] Instead of being restricted to the train schedule in planning his shipments, the producer is free to start a load to market at almost any hour of the day or night. This permits him to take advantage of the cool nights and also to time the arrival of the livestock at Detroit so as to sell it the same day it arrives, thus effecting considerable savings in yard charges.

Second only to convenience is the item of fast and

1. Motts, G. N., Motor Truck Marketing of Michigan Livestock. Ag. Expt. Station, Michigan State College, Special Bulletin No. 235, May, 1933, p. 15.

direct delivery to Detroit (Table 19). Many producers stated that, given the same starting time, it would often require several times as long for livestock to reach the market by train as it does by truck. Since most livestock men agree that time enroute should be kept at a minimum, this item is understandably significant to the producers. This, of course, involves the third most common reason for preferring truck shipment--that of "less shrinkage."

Another stated advantage of truck shipments, that of "lower cost", appears to be very questionable since this reason is the most common one given by producers favoring rail shipments for preferring that form of transportation (Table 23). A comparison of the relative costs to the producer for truck and rail shipments of livestock is given in Table 21. The rate per hundred weight for rail shipments is consistently less than that quoted by the truckers contacted in this study for trips of 30 to 140 miles. It appears from this that, when the producer is able to take advantage of carlot rates, the trucking charge is less than the comparable cost of rail shipment only in exceptional cases. Since most calves are trucked for a charge of $0.75 or $1.00 per head rather than by weight, this class of livestock is omitted from the tabulation. Although the average charge for trucking the various classes of livestock to the terminal market increases with the distance to that market, this increase is far from regular and there is often considerable variation in these rates within a small area. For example, the average charges per hundred-weight for transporting

Table 21. Charges for Transportation of Livestock by Truck and Rail, by Classes

Mileage	Average Truck Charge per Cwt.			Rail Charge per Cwt.[1]		
	Cattle	Sheep and Lambs	Hogs	Cattle	Sheep and Lambs	Hogs
31-40	.25	.25	.25	.14	.17	.16
41-50	.31	.33	.31	.15	.18	.17
51-60	.28	.29	.28	.16	.20	.18
61-70	.31	.31	.31	.17	.21	.19
71-80	.33	.34	.34	.18	.22	.20
81-90	.34	.35	.32	.19	.23	.21
91-100	.35	.35	.35	.20	.25	.23
101-120	.38	.43	.38	.21	.26	.24
121-140	.40	.52	.50	.22	.27	.25

1. These rates, which were furnished by the New York Central Railroad System, are for single deck carlots; the rate for double deck sheep and hogs is the same as the rate given above for cattle.

cattle, sheep and lambs, and hogs from the 40-49 mile zone to the terminal market are higher than those asked by truckers operating in the 50-59 mile zone.

In explanation of the wide and erratic variations in livestock trucking rates, reference may appropriately be made at this point to the following observations from a study of "Motor Truck Marketing of Livestock in Michigan", made by G. N. Motts in 1932.[1]

> "One of the most important reasons for the wide variation in livestock trucking rates in Michigan and for the severity of competition among the truckers is the fact that many truckers do not estimate their costs accurately. Although the expenses often referred to as "cash outlay" or "cash costs" are quite well know, there are the fixed costs which must also be paid if the trucker is to continue to operate. The cash costs include gasoline, oil, tire and truck repairs, and wages. The latter in most cases is not charged as part of the expenses but is considered to be whatever is left after all the cash costs of a trip have been met. Such accounting neglects the fixed expenses of vehicle taxes, insurance, depreciation, and interest on the investment.
>
> "The total operating cost per mile varies with the size of truck, the loads carried, the character of the roads traveled, the condition in which the truck is maintained whether the truck is used for hire or not, the number of years it is driven, its cost, and the number of miles driven per year. For these reasons, an exact figure cannot be given here for the total costs per mile, but according to about 10 per cent of the truckers, their total costs per mile range from 15 to 20 cents per truck mile. The truckers who base their rates upon their cash costs, may appear to be breaking even or making a small profit; but over a period of time their full costs must be met if they are to continue to operate. Wages at 30 cents per hour are included in these estimates. A recent study by the transportation division of the United States Department of Commerce indicates that operating costs of 1.5 ton trucks were at least as large as 20 cents per truck mile in 1931."

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[1] Michigan Agricultural Experiment Station, Special Bulletin No. p. 12.

The last three advantages of truck transportation listed in Table 19 - - "own truck", "stock arrives in better condition", and "permits closer watch of the market" - - obviously vary with the individual producer. Since they were listed in a very few cases, it is believed that they are not sufficiently important for detailed discussion at this point.

The advantages of motor truck shipment as noted by producers in this survey, may be compared with those discussed in Dr. Motts' bulletin under the following captions: (1) less time in transit, (2) more frequent shipments, (3) livestock picked up at farms, (4) condition on arrival, (5) lower costs in some cases.[1]

Result of Increased Volume of Truck Shipments. In connection with this analysis of the increase in the trucking of Michigan livestock, the resultant changes in the number and kinds of stock raised, as reported by the producers, are given in Table 22.

It is apparent that, although a few producers have sought to improve their economic position by making changes in their production schedule, the coming of truck marketing of livestock has not produced, as yet, any great changes in the production of livestock. Whether or not the few changes reported

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[1] Ibid., pp. 14-15.

are really attributable to the increasing prevalence of trucking or are merely coincidental with it is probably debatable.

Table 22. Effects of Increased Motor Truck Marketing on Michigan Livestock Production

Effect	Producers Reporting	Percent
No change	169	93.7%
Increased amount of livestock	3	1.7
Change from dairy to beef cattle	2	1.1
Better selection of feeder stock is possible	2	1.1
Decreased amount of livestock	1	.6
Production of cheaper grade of livestock	1	.6
Produce heavier hogs	1	.6
Decreased marketing of calves	1	.6
Totals	180	100.0

Advantages of Rail Transportation. Since the proportion by rail of livestock marketed is much smaller than that which is transported by truck (Table 18), it is natural that even the advantages most commonly claimed for this type of transportation should appear less frequently than the reasons given for favoring truck shipments (Table 19). It should also be remembered that many of the producers who favor rail shipments state that most of their sales are made at the eastern terminals such as Buffalo or Newark. Many of the advantages listed (Table 23) are colored by this fact.

The most common reason given for favoring rail shipments is "lower cost." This is to be expected since it has been previously indicated that in all but a few exceptional cases the cost to the producer for a given shipment is less by rail than by truck. The second most common reason for preferring rail shipments is "better condition on arrival." In the case of long hauls, the convenient water and feed stops, together with somewhat less "bouncing around"

of the livestock tends to produce this result. The third reason, that of a "definite arrival time," is also to be expected since, over a long distance and under varying weather conditions, it is easier for a railroad to operate on a definite schedule than it would be for a trucker.

Table 23. Advantages of Rail Transportation as Indicated by 43 Michigan Producers

Factor	Producers Reporting	Percent
Lower cost	17	39.5%
Stock arrives in better condition	9	20.9
Definite arrival time	4	9.3
Terminal used is too far for truck	3	7.0
Make shipments too large for truck	3	7.0
No reason	3	7.0
Feed in transit privileges	2	4.7
Less shrinkage	1	2.3
Convenience	1	2.3
Totals	43	100.0%

It will be recalled that one of the commonly mentioned advantages of truck transportation is the convenience of the truck for small shipments over a short distance. Reasons 4 and 5 in Table 23 present the reverse side of the picture, indicating that some trips are too long, or shipments too large, to be handled with a truck or semi-trailer.

As with the producers favoring the truck, several reasons for favoring rail shipments were mentioned which do not appear often enough to be of significance in this analysis. They are included in the tabulation in order that it might be as complete as possible, but need not be considered individually.

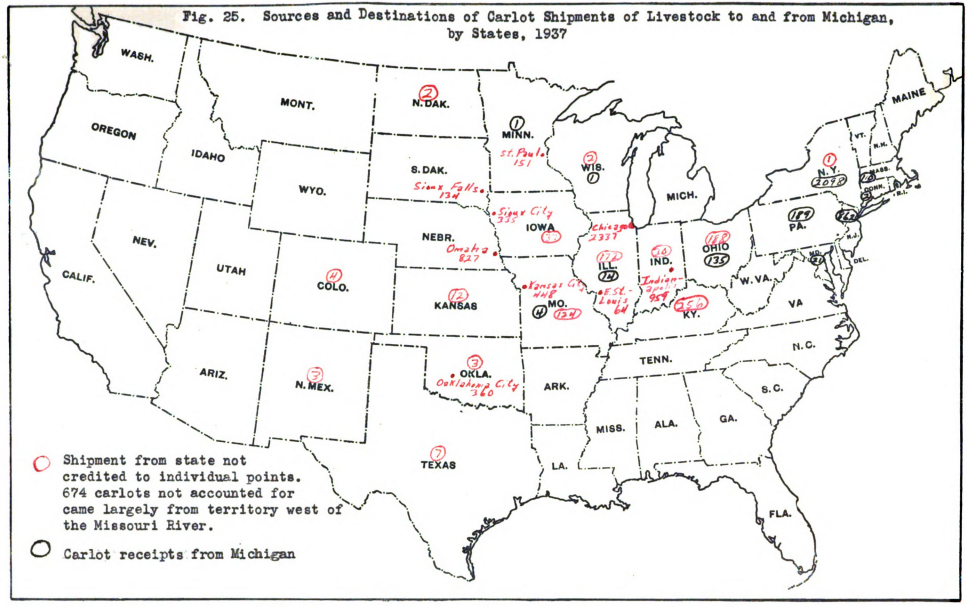
Out-of-State Terminal Markets. Attention has been given thus far only to the Detroit stockyards. To round out the picture, note should be taken of certain relationships of the Michigan livestock industry to various eastern and western terminal markets in the states to which Michigan livestock moves and from which the out of state receipts arrive.

In 1937, there were 3,534 carloads of livestock shipped from Michigan points to other states over the New York Central, Grand Trunk, and Pere Marquette Railroads. An examination of Figure 25 and Table 24A reveals that over half (59.4%) of these shipments were to the state of New York. New Jersey (24.4%), Pennsylvania (5.3%), Ohio (3.8%), and Massachusetts (3.1%) followed as the chief purchasers of Michigan livestock. The balance of 4.0 per cent was divided among some six other states in varying quantities. For the same year these three railways reported arrivals in Michigan of 7130 carlot shipments of livestock from western states (Fig. 25 and Table 25A). This represents a surplus of receipts over shipments of 3596 carloads. This livestock came from seventeen states, with nearly 70% coming from a group of five cities. These shipping points were Chicago (32.8%), Indianapolis (13.5%), Omaha (11.6%), Kansas City (6.3%), and Oklahoma City (5.0%).

Advantages and Disadvantages of Terminal Marketing. Among the advantages of marketing through the Detroit terminal listed by Michigan livestock producers and truckers may be included:

1) More active buyer competition. Of course the producer

Fig. 25. Sources and Destinations of Carlot Shipments of Livestock to and from Michigan, by States, 1937



is competing with more sellers of his commodity, but the producers of good or average grades of livestock will probably get a better price at the terminal market than at one of the smaller markets in the state. The large scale operations of the terminals tend to result in all producers receiving the true market value for all grades of livestock.

2) All commission firms are bonded to assure producer of payment for stock and otherwise protect the interests of producers.

3) Ease of transportation to and from the market since most railroads converge in Detroit and the city may be reached by direct highways from nearly all sections of the lower peninsula.

4) More adequate facilities for the care of the livestock prior to selling.

5) The presence of a cooperative commission firm for the use of its members and other cooperative-minded producers. Such an agency tends to improve handling and selling practices and otherwise protect the farmer's interest. This is, of course, not inherent in terminal marketing as such, but comes rather from the presence of a cooperative agency in the terminal under consideration here.

6) The location of the yards in the state's largest business and industrial center (which provides a broad outlet for meat products) is an advantage for those producers and truckers who wish to transact other business on their marketing trips. (For example, many truckers haul various commodities purchased in Detroit back to their home localities on the return trip.)

7) For those producers interested in feeder stock, the livestock arriving at the terminal from the west offers a better

selection and more uniform grades than can ordinarily be secured elsewhere.

There are also certain disadvantages to trading at the terminal market which were mentioned by the producers and truckers. These include:

1) A longer haul is usually necessary than if the producer patronized a home market.

2) In the case of railroad shipments, especially where switching between lines is required, quite a long time often elapses after the livestock reaches Detroit before the car is "spotted" at the yards.

3) Close grading of livestock may react to the disadvantage of the seller of poor grades of livestock.

4) Somewhat higher selling costs exist here than are charged at other markets.

5) Once a consignment is on the terminal market, the producer or trucker is inclined to sell regardless of the condition of the market. This is because transportation and yardage charges will be collected whether a sale is made or not. In addition, once hogs have been unloaded at the yards, state regulation forbids their removal from the yards without vaccination.

SECTION III

COOPERATIVE MARKETING AGENCIES

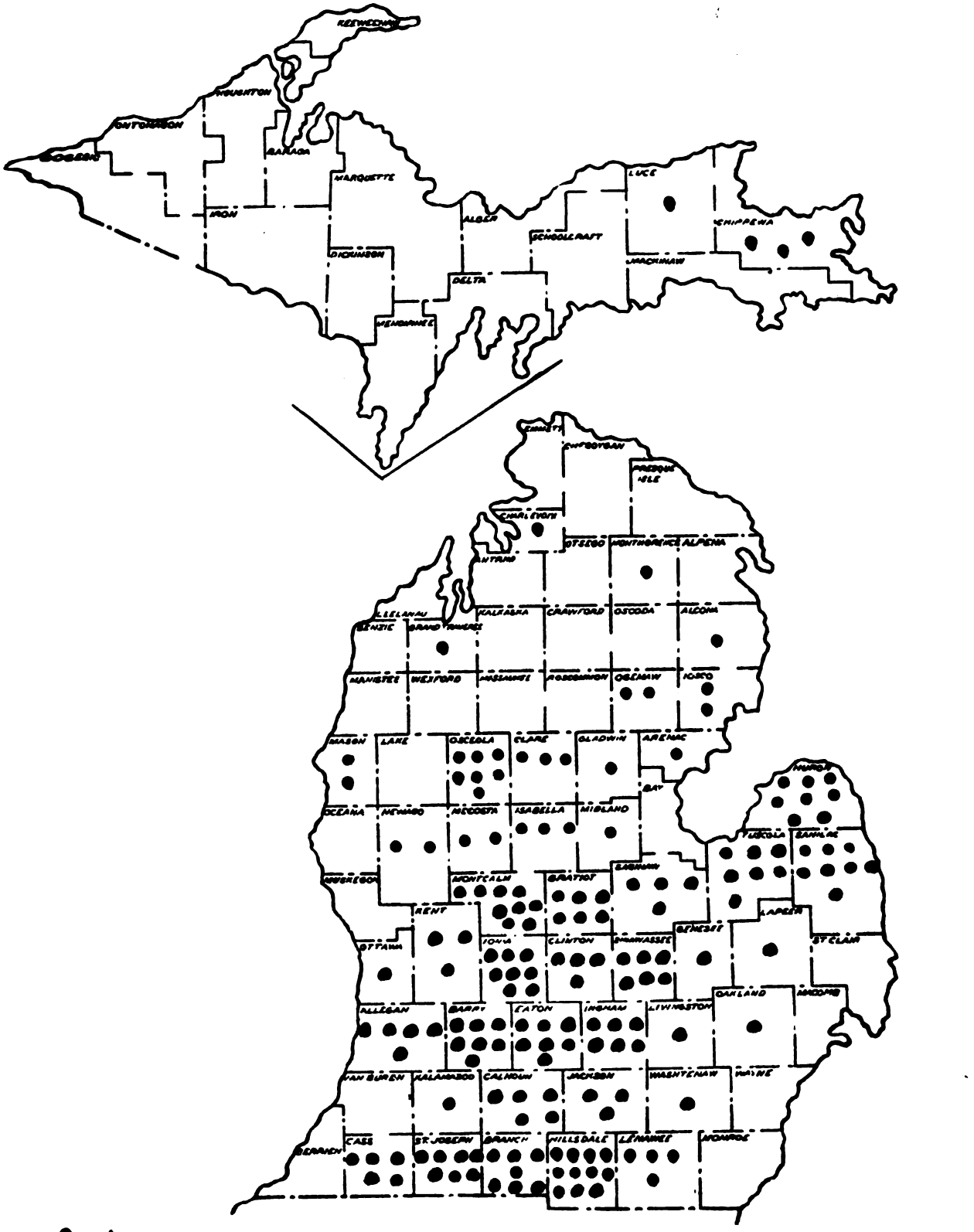
A considerable proportion of the livestock sold by Michigan farmers is marketed through cooperative agencies. As indicated in the preceding section, these outlets are slightly different than the others considered in this study since they exist on a cooperative basis rather than for private profit. The relationship of these cooperative outlets to the other agencies is indicated in Figure 15.

Livestock Shipping Associations. The first of these agencies to be considered are the livestock shipping associations. These are organizations of the producers in a given area which are designed to furnish a way of transporting the members' livestock to a convenient market--usually to one where it may be sold through another cooperative agency. The number of these associations in Michigan, as well as in the surrounding states, is known to have been declining for a number of years. Indeed, the number of active associations in Michigan declined from 143 in 1930 to 27 in 1939 (Fig. 26 and Table 26A). Some of the reasons for the rise and fall in the number of these associations are indicated in the following excerpt from a recent publication of the University of Minnesota Agricultural Experiment Station:[1]

"Before the shipping association movement began, farmers with less than carload lots commonly sold their livestock to the local dealer, who assembled full carloads for consignment to a

1. Dowell, A.A. and Warrington, S.T., Livestock Shipping Associations. Agricultural Experiment Station, University of Minnesota, Bulletin No. 339, November, 1938, P. 24.

Fig. 26. Location of Livestock Shipping Associations, by Counties, 1930 and 1939



● Associations active in 1930

● Associations active in 1939

convenient public market. Under these conditions many farmers believed that the dealers were exacting undue margins for their services. The local cooperative livestock shipping association enabled the individual farmer to ship his livestock, regardless of number, at full carload rates to the public market where they could be sold separately. This arrangement appealed to producers generally as indicated by the large proportion of Minnesota farmers using the shipping associations when this movement reached its peak. Viewed in retrospect, it appears that the local associations performed much-needed services for producers during this period.

"Shortly after the World War, a number of new developments began to affect the activities of the local associations. The mileage of hard-surfaced roads and the number and efficiency of motor trucks for the transportation of livestock increased greatly. In many cases, producers were able to ship their small lots of livestock to market by truck, and hence did not need to rely on the local shipping association to supply transportation facilities. Grade standards were improved and market news was made available through the medium of the telephone, the radio, and the press. These developments not only brought the individual farmer in closer touch with his former market, but in many cases made available additional outlets. As a result, large numbers of producers dropped out of the local associations and marketed their own livestock through other channels."

In the face of this wide-spread decline in the number and activity of local shipping associations, it is not surprising

to find that, of 211 Michigan producers contacted in this study, only 7 per cent marketed all of their livestock sold in 1937 through such an association (Table 27). Conversely, 84 per cent of these producers made no sales through this agency. As shown in the table, most producers sell either

Table 27. Sales of 211 Michigan Producers, Classified by Proportion of Livestock Marketed through Shipping Associations, 1937.

Percentage of Individual Producer's Livestock Sold Through Local Cooperative Shipping Associations.	Number of Producers in Each Class	Frequency Expressed as a Percentage
100%	15	7.1%
90-99	4	1.9
80-89	1	0.5
70-79	3	1.4
60-69	0	0
50-59	3	1.4
40-49	0	0
30-39	1	0.5
20-29	3	1.4
10-19	2	0.9
1- 9	2	0.9
0	177	84.0
Totals	211	100.0

all or none of their livestock through an association, since only 19 out of the 211 producers indicated that they sold a fractional part of their livestock by this method.

The principal advantages claimed for this method of marketing are (1) decreased marketing costs and (2) use of large scale rail shipments to distant terminals by farmers who raise only small quantities of livestock.

One of the disadvantages of this form of marketing

is the necessity of the producer timing his shipments of livestock to correspond with the marketing schedule of the shipping association. Of course, in the case of the larger associations which ship several times a week, this disadvantage is not of great consequence. Probably more important to the producer is the fact that in order to market through the facilities of the association, it is usually necessary for him to transport his livestock to the shipping point.

Cooperative Commission Agencies. As brought out in the above paragraphs, numerous Michigan producers who formerly marketed their livestock through cooperative shipping associations are now transporting it to market in other ways. However, many of these producers, together with other farmers who market their livestock in Detroit, continue to make final disposition of their stock through a cooperative agency. The Michigan Livestock Exchange and the Detroit Packing Company are the two cooperative agencies which are available to these producers.

The Michigan Livestock Exchange was first organized in 1918 as a State organization to assist the local shipping associations in the solution of their legislative and transportation problems. It was not until 1922 that the Exchange established a sales agency on the Detroit Livestock Market. Its original operating capital was furnished by the member shipping associations and the Board of Directors.

In the period extending from 1926 through 1938, the Exchange handled a total of 5,146,913 head of stock (an average of slightly less than 400,000 head per year) valued at about $74,329,000.

The Michigan producers contacted in this study tend to use this outlet for either all or none of the livestock which they sell at the Detroit stockyards (Table 28). Forty per cent of the producers contacted in this study sold all of their

Table 28. Sales of 199 Michigan Producers, Classified by Proportion of Livestock Marketed Through Cooperative Commission Firms, 1937.

Per cent of Livestock Sold at Terminal which is Sold through Michigan Livestock Exchange	Number of Producers in Each Class	Frequency Expressed as a Percentage
100%	80	40.2%
90-99	1	0.5
80-89	0	--
70-79	0	--
60-69	2	1.0
50-59	9	4.5
40-49	1	0.5
30-39	1	0.5
20-29	4	2.0
10-19	5	2.5
1- 9	4	2.0
0	92	46.3
Totals	199	100.0%

terminal-marketed livestock through this firm, while forty-six per cent did not patronize it to any extent whatever. It may be seen from a comparison of Tables 27 and 28 that at present there is very little relationship between the proportion of livestock sold through the local shipping associations and that marketed through the cooperative commission firm at the terminal. From the same group of producers, only 7 per cent sold all of their livestock through the local association, while 40 per cent disposed of all of their terminal marketed stock through the cooperative commission firm. This may be due to the fact that members of disbanded

shipping associations have retained the "cooperative idea" and are, consequently, operating through the producer owned commission agency on the terminal market.

The Producers Cooperative Commission Association is an organization similar to the Michigan Livestock Exchange. Located on the East Buffalo, New York terminal, it serves as an outlet for the livestock of producers residing in that portion of southern Michigan which is served by the New York Central System. Many of the local shipping associations in that part of the state are members of this Commission Association. Approximately 20 per cent of the deckload receipts of this firm between 1930 and 1938 originated in Michigan.

The advantages and disadvantages of terminal marketing as given in Section II will, in general, apply to these commission agencies. Association members will, of course, benefit from whatever patronage dividends are distributed by these firms. The Michigan Livestock Exchange refunded $140,000 in this manner between 1922 and 1935, but has made no refunds in the last five years.

The Detroit Packing Company. This organization is a farmer owned and controlled corporation which acquired the assets of the old Detroit Packing Company in 1933. This was made possible through a loan from the Central Bank for Cooperatives at Washington, D. C.

While figures indicating the volume of its receipts were not obtained for this study, it is known that this institution is handling a substantial volume of livestock. It is located near

the Detroit stockyards which is a convenience for those truckers who sell part of their load at the parking company and dispose of the balance at the terminal market. Several truckers were observed to be consistently engaging in this practice.

The principal advantage of disposing of livestock at this agency is the reduced marketing cost. Since the animals are slaughtered very shortly after being unloaded, the charges for yardage and feed which are made at the terminal market are not collected at this outlet. In place of the usual selling charges, the packing company retains a certain amount per head which is credited to the producer's account. At the end of each year, certificates of interest are issued to each producer. These represent the accumulated savings in marketing charges. The only disadvantage observed in connection with this institution was that during the rush hours of a morning, it is occasionally necessary for truckers to wait somewhat longer in the line to the truck dock than is the case at the stockyards.

SECTION IV

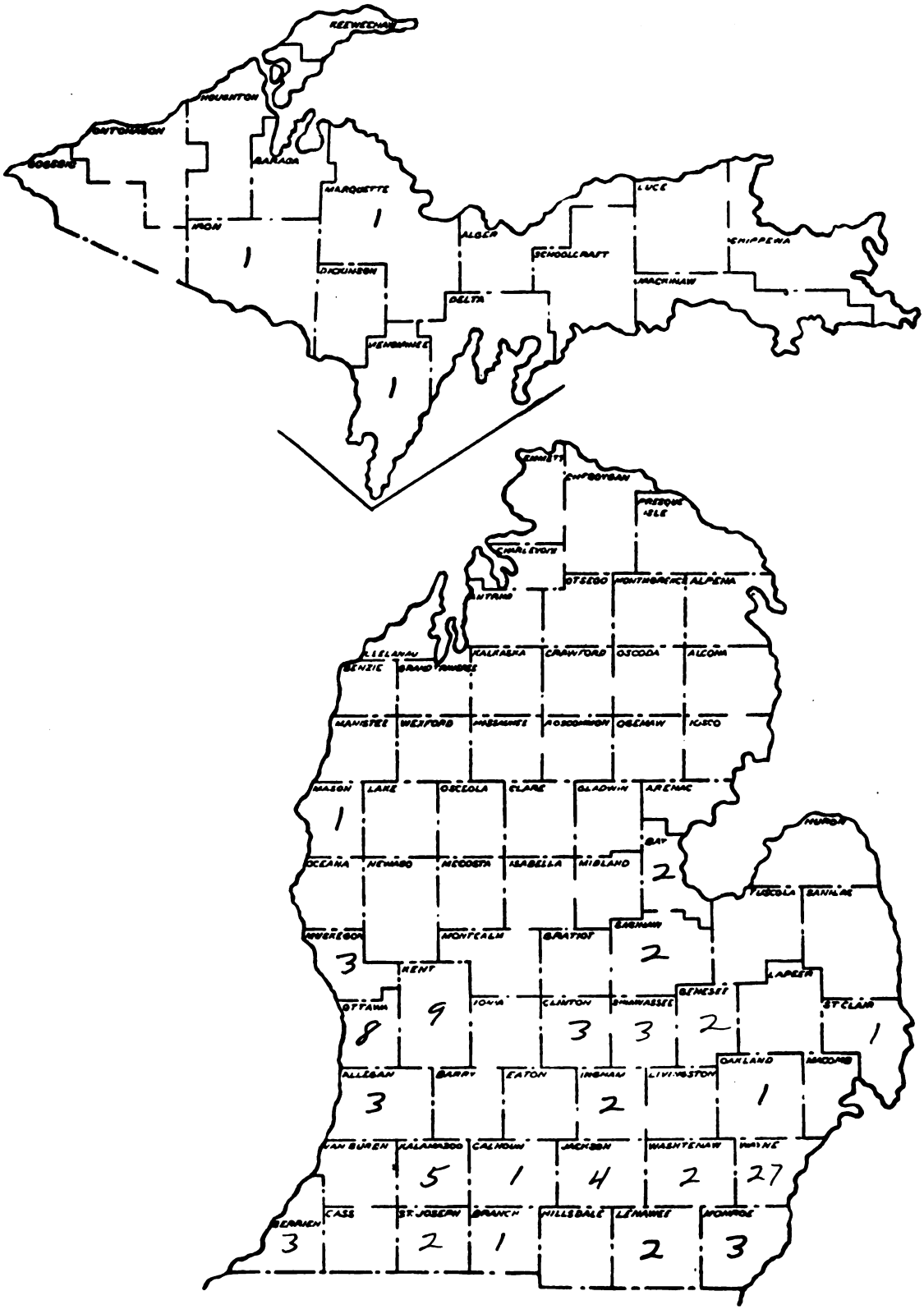
OTHER MARKETING AGENCIES

Attention will now be given to the various marketing agencies other than the terminal yards. Some of these, such as the packing houses in the larger cities, have many of the same characteristics observed in the case of the Detroit markets. Others, such as the community auction markets, concentration yards, local dealers, and butchers are distinctly local and vary greatly in their characteristics. The first of these agencies to be considered are the packing houses which are to be found in various cities of Michigan.

The Packing House. A packing house may be classed as a local or terminal establishment depending upon its location. "Terminal" packing houses are those located in the large livestock receiving centers such as Detroit or Grand Rapids. Smaller establishments serving a limited area may properly be classed as "local" packing houses. With the return to direct marketing, which has occurred in recent years over a wide area in the livestock producing regions of the country, the number of both classes of packing houses has increased somewhat. Livestock sold to these agencies is slaughtered and the meat products sold to wholesalers and retailers, both for the Michigan and eastern markets. These agencies may be distinguished from the local or string butchers, discussed later, chiefly on the basis of the extent to which they engage in wholesale operations.

There were 103 of these agencies in Michigan in 1939, (Fig. 27 and Table 29A). They are so located that one or more may be conveniently reached by a majority of the livestock producers of

Fig. 27. Location of Michigan Packing Houses, by Counties, 1939



the state. Many of these institutions maintain buyers at the terminal and other important markets who purchase a large portion of the receipts of their company at these markets. In addition, traveling representatives of these packing houses are present at all important community and private auctions bidding in such grades and quantities of livestock as they may desire.

With the exception of packing houses located in the larger cities, the bulk of the receipts of these agencies are transported by truck, due to the fact that as the size of a city decreases, the advantages of truck services tends to increase in comparison with rail service. In the case of the numerous packing plants located in small cities and towns off the main railroad lines, it is apparent that a satisfactory method of transporting livestock to them depends upon the use of the motor truck. When one considers that the terminal packing plants are not likely to receive a larger percentage of their livestock by rail than does the terminal stockyards (Fig. 23), the statement that these agencies receive most of their livestock by truck is given additional substantiation. Another factor influencing the transportation of livestock to these agencies is that many of the smaller ones often can not conveniently use livestock in carload lots and so prefer to purchase the smaller truck loads.

Advantages which may be gained by selling livestock directly to packing houses include:

1) Lower transportation costs, since most livestock producing areas have one or more conveniently located institutions of this type.

2) The usually shorter haul results in less loss to the producer from shrinkage.

3) Lower selling costs due to the absence of feed and yardage costs. Livestock purchased by these agencies is slaughtered almost immediately and consequently requires little care after arriving at the packing plant.

Disadvantages encountered in selling to these agencies include:

1) The absence of buyer competition, such as is found at the terminal yards, generally makes for slightly lower prices than can be obtained at the terminal. Many producers and truckers state, however, that this difference just about equals the increase in transportation and selling costs which a sale through the terminal usually necessitates.

2) Some of the smaller plants maintain rather inadequate truck docks making it necessary for the truckers to wait in line during the rush seasons of marketing. Not only is this a source of inconvenience to the trucker, but it occasionally results in the loss of livestock, especially hogs, from over-heating. Some of these plants fail to grade animals properly and this sometimes results in a financial advantage for the producer of the poorer grades of livestock. Conversely, the producer of top grade animals may occasionally receive a lower price for his livestock than if they were sold at another market.

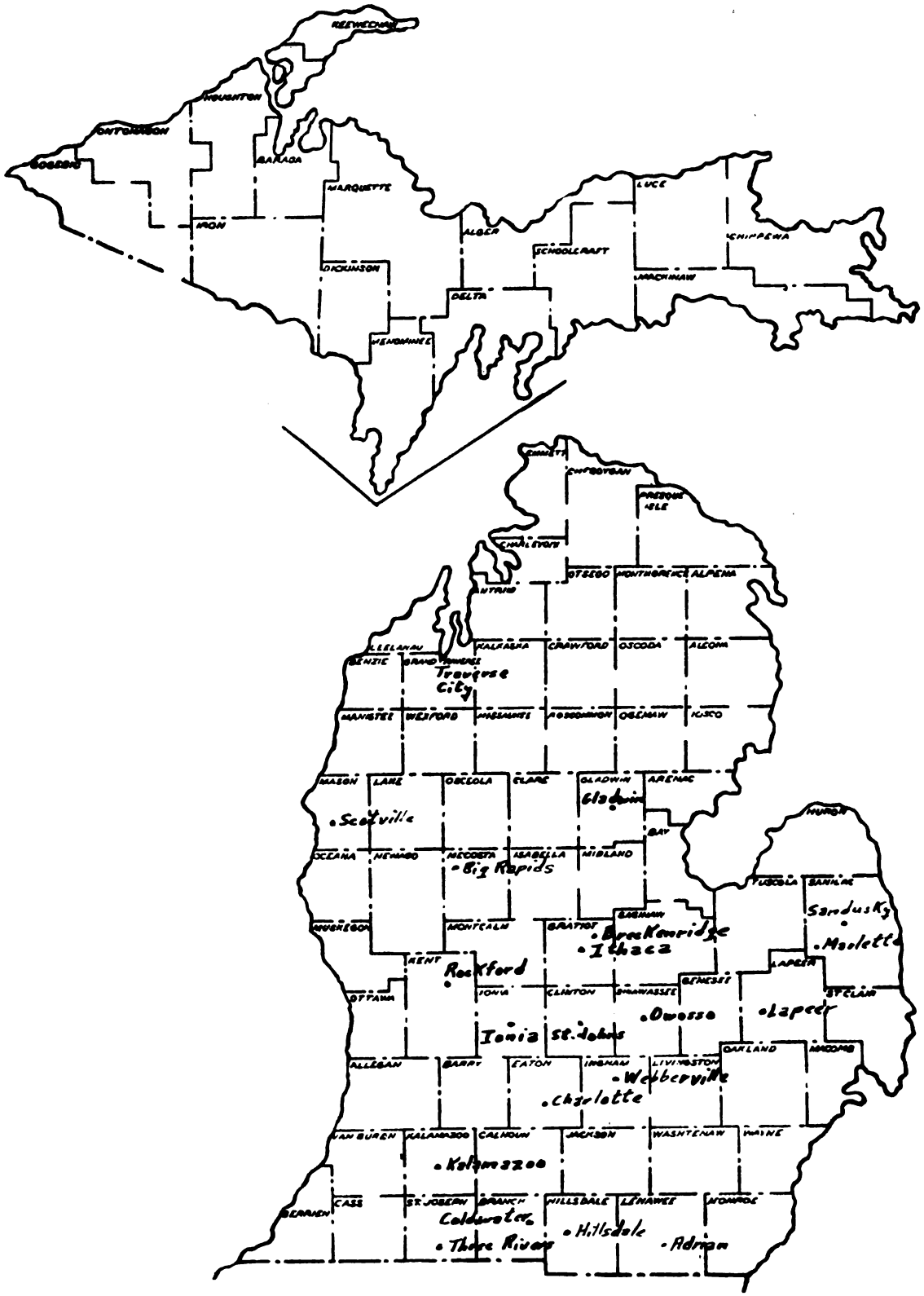
Livestock Auction Markets. During recent years a new type of local marketing agency has been developing in Michigan. These are the local, or "community," livestock auction markets which have been

operating in certain states, such as Iowa and Nebraska, for quite a number of years. These agencies provide a local outlet for the producer wishing to sell a few head of livestock as well as a local source of supply for butchers, packers, and producers who wish to purchase stock. They are usually operated as private enterprises with the management receiving either a fixed fee or percentage commission for the sale of each animal (Table 30A). Sales are handled by an independent auctioneer with the livestock being sold to the highest bidder. Sales may be either by the head or by the hundred weight. The livestock is generally trucked to the auction by the producer or his agent and from the market by the purchaser or his agent.

The twenty auction markets operating in 1939 were located chiefly in the lower half of the southern peninsula (Fig. 28) since this is the area within which the major portion of the state's livestock is produced. Some of the markets are quite close together (Gratiot and Sanilac Counties each have two of these agencies), thus competing for the same livestock. It will usually be found, however, that the various markets in a given competitive area operate on different days of the week. Since most auctions hold sales only once a week, it is possible for producers, auctioneers, and buyers to be present at a number of sales each week.

These agencies are particularly important as a market for calves. This is reasonable since many calves are purchased by farmers, who keep them for fattening, as well as by local packers. Another factor is the relatively high cost of trucking a calf from some

Fig. 28. Location of Michigan Livestock Auction Markets, 1939



sections of the state to the terminal market.

The advantages claimed for the auction markets include:

1) A shorter, easier haul resulting in less expense and less shrinkage. It may be pointed out that the transportation of livestock to these markets is accomplished almost entirely by motor truck or trailer. This is due to a combination of factors including the ordinarily short distance, the odd-lot consignments, and the frequent lack of rail facilities at the markets themselves.

2) The absence of feed and yardage charges (Table 30A).

3) The presence in some cases of representatives of eastern markets. This makes for a degree of competition not found at some of the other local marketing agencies.

4) Auction sale to the highest bidder, with the seller being allowed one bid for the protection of his interests.

5) Immediate payment on the day of sale.

An additional factor which has assisted in the development of these institutions is the fact that, aided by the ever present cafe or hot-dog stand, they have come to be a sort of social meeting place for the farmers and, occasionally, their wives. It is not uncommon for farmers to attend these sales on days when they have no intention of either selling or purchasing livestock.

The chief disadvantages found in patronizing these markets are:

1) The spreading of such diseases as sheep scab from one farm to another through contacts made at the auction market. Some attempts are being made at regulation by the state, but as yet most of the effective precautions must be initiated by the auction managers

themselves. Many of them are working diligently to prevent the spread of disease, but the few that have been negligent at one time or another have brought discredit upon auction markets in general in the opinion of quite a large proportion of the producers and truckers contacted. Coincident with this problem is the one of regulating livestock truckers who engage in trucking betwen neighboring states (such as Ohio where sheep scab is quite prevalent) and Michigan.

2) The failure of some auctions to have uniform selling charges for all patrons alike.

3) Some auctions do not carry ample bonds for the protection of their consignors.

4) Regularly tested scales and impartial, bonded weighmasters are not always found at these markets.

5) The failure of some auctions to provide capable and honest auctioneers who have no financial interest in the stock sold or bought or in the auction company itself.

6) Some auctions do not require buyers to post bond, consequently payment for livestock purchased is not always assured.

7) The practice of some auctions in using other than actual sales and weights in published reports of their sales.

An additional disadvantage mentioned by some producers was that of "low selling price." Of course, their opinion may well have been based on one or two unsatisfactory sales. In any event, it is doubtful whether or not the higher terminal prices would have any more than covered the increased marketing costs encountered when selling through that agency. A comparison of the marketing

charges at the Detroit stockyards and six auction markets (Tables 10A and 30A) reveals that it is noticeably less costly to sell small consignments of stock through the auction market than through the terminal market.

The auction markets handle all grades of livestock but probably receive a greater proportion of the less desirable grades due to the lack of the type of grading which is found at the terminal markets. This condition reacts in favor of the producer of the poorer grades of livestock and against the producers of the top grades. It is possible that auction markets may eventually specialize in serving the producers of the less desirable livestock.

The Concentration Yard. Another local marketing agency is the concentration yard which is found in a few cities, such as Battle Creek, Marshall, and St. Johns. They may be defined as central points, outside of the terminal cities, at which small quantities of livestock from numerous sources are purchased for carlot shipments to the packers.

Advantages gained by the producer in selling to concentration yards include:

1) The convenience of a shorter haul than would necessarily be made if the livestock were sold at the terminal market. Due to the short haul, most of the livestock is delivered to these points by truck.

2) Lower marketing costs.

3) Less shrinkage.

The disadvantages of selling through these agencies are not particularly numerous. They include:

1) A slightly lower price. Since the concentration

yard manager will often hold livestock for a day or two, while accumulating enough to warrant a large scale shipment, he must protect himself against declines in terminal market prices between the time he purchases and sells the livestock. In addition, he bears the expense of such items as yardage and feed while the animals are in his yards. Consequently, the price received by the producer from these outlets tends to be somewhat lower than the terminal price. As noted above, part (often nearly all) of this difference is lower selling costs and the resultant loss is not as great as would be indicated by the differential in market prices alone.

2) The lack of grading found at these markets. These agencies purchase all grades of livestock since the most of their shipments are direct to the packers.

Sales to Truckers. A small portion of the livestock sold by the producers included in this study was sold directly to truckers. The purchasers in this case are usually speculative dealers or traveling representatives of packing houses or butchers who ordinarily purchase and load small quantities of livestock at the farm.

This method of marketing is advantageous to the producer in that:

1) It eliminates much of the expense of the usual marketing operations.

2) It represents the ultimate in "convenient marketing".

There are, however, several important disadvantages connected with this type of marketing which have served to keep most producers from making more than occasional use of it. These

include:

1) This service is not always readily available when wanted.

2) The selling price is largely the result of bargaining carried on between the producer and the dealer, rather than being determined by the supply and demand of many producers and buyers as is the case at the terminal market. In this contest of wits, the man who raises and sells a few head of livestock each year very often finds himself no match for the dealer who devotes his entire time to the livestock marketing business. Consequently, the sale price is often considerably less than the terminal price would warrant, transportation and other costs considered. This is especially true when sales are made "by the head".

3) The highly transient character of many of these dealers and the occasional bad check losses suffered by the producers.

Local Livestock Dealers. Another market outlet for Michigan livestock is that furnished by the local or community livestock dealer. This method of marketing was formerly used to a considerable extent but its popularity has been declining in recent years.

These dealers make speculative purchases of livestock from producers who usually have only a limited number of animals ready for market at any given time. Through a canvass of the surrounding territory such a dealer makes up carlot or truckload shipments of such grades and classes as his consignees wish to purchase and ships them to one of the larger markets.

The advantages to the producer in this case depend largely upon whether or not the dealer picks up the livestock at the farm. If he does, the producer gains in convenience and decreased marketing costs. However, if the producer must truck the stock to the dealers location, he loses much of his advantage. In any case, the first haul in this marketing process will almost certainly be made by truck, while for larger shipments to the central markets, the dealer may elect to use rail transportation.

The principal disadvantage of this type of marketing is that at which the producer usually places himself when attempting to determine the selling price by bargaining with the more experienced dealer. A number of producers commented that they had used this outlet for their livestock for a time but had decided that, on the average and all costs considered, they could do better at the terminal yards or some other large market.

Local or "String" Butchers. Local or "string" butchers purchase enough livestock for the needs of one or two local meat shops. They ordinarily do not engage in wholesaling operations.

The advantages and disadvantages of using this outlet for livestock are about the same as in the case of the local dealer except that the producer probably does not find himself at such a great disadvantage when bargaining to determine the selling price of the stock.

SECTION V

UTILIZATION OF MARKETING AGENCIES BY MICHIGAN LIVESTOCK PRODUCERS

Having considered the seven agencies which are available for the marketing of Michigan livestock, attention will now be given to the proportion of livestock sales which is made through each of these outlets. This analysis is based on the 1937 sales of 244 Michigan producers.

Sales at Individual Outlets. The common belief that the terminal market serves as the hub of the livestock marketing system in Michigan is substantiated by the fact that a representative group of producers marketed over 70 per cent of their livestock through this agency in 1937 (Table 31). In this total were 56 per cent of the cattle, 39 per cent of the calves, 73 per cent of the sheep and lambs, and 56 per cent of the hogs sold by this group of producers.

The percentages of each class which are sold at the Detroit yards serve as an inverse indication of the proportion of each class which is handled by the smaller markets over the state. For example, the high percentage of sheep and lambs sold at the terminal indicates that only a relatively small volume of this class of livestock is sold through the other outlets. On the other hand, a large proportion of the calves are marketed through the local outlets and a smaller proportion of the total are taken directly to the terminal.

Next to the terminal market, the most popular outlet in 1937 was the community auction market. These institutions handled

Table 31. Percentage Distribution of the 1937 Sales of 244 Michigan Livestock Producers, by Marketing Agencies Patronized

Class of Livestock	Terminal Market	Packing Houses	Auction Markets	Concentration Yards	Truckers at Farm	Local Dealers	Local Butchers	Totals
Cattle	56.4%	14.2%	7.7%	1.2%	5.8%	8.9%	5.8%	100.0%
Calves	38.9	4.2	30.9	6.2	5.9	9.7	4.2	100.0
Sheep and Lambs	78.3	2.6	4.8	6.4	.4	7.2	.3	100.0
Hogs	55.7	15.9	11.8	3.2	2.8	6.2	4.4	100.0
Totals	70.8	6.1	7.3	5.4	1.5	7.2	1.7	100.0

7.3 per cent of the animals sold by this group of producers, including 8 per cent of the cattle, 31 per cent of the calves, 5 per cent of the sheep and lambs, and 12 per cent of the hogs. It is interesting to note that this outlet handled nearly as large a proportion of the calves as did the terminal market, there being a differential of only 8 per cent.

The local dealers, with 7.2 per cent of the total sales, ranked just below the auction markets in popularity. They handled 9 per cent of the cattle, 10 per cent of the calves, 7 per cent of the sheep and lambs, and 6 per cent of the hogs.

Next in line were the packing houses and concentration yards with 6 per cent and 5 per cent, respectively, of the total sales. The packing houses, of course, did the largest part of their business in cattle and hogs, while the concentration yards received a larger proportion of calves and sheep and lambs than of the other two classes of meat animals.

Least popular outlets were the local butchers and the truckers at the farm. The producers contacted in this study sold between 1 and 2 per cent of their livestock through each of these agencies.

Factors in the Selection of a Market. What factors determine which of these numerous agencies a given producer will use? A tabulation of 222 replies received from Michigan farmers in answer to such a question reveals that price considerations are of paramount importance (Table 32). This is to be expected since it is natural that the producer of any commodity will attempt to dispose of it in that market which gives him the greatest return. However,

Table 32. Factors in the Selection of Livestock Marketing Outlets by Michigan Producers

Factor	Number	Percent
Price Considerations	81	36.5
Convenience	62	27.9
"Best Market"[1]	65	29.3
Selling for Breeding Purposes	2	0.9
Habit	1	0.5
No Particular Reason	11	4.9
Totals	222	100.0

1. See text for explanation.

only 36.5 per cent of the answers indicated that the price factor served as the sole guide in the matter of market selection. The other two most often mentioned reasons were convenience and, for lack of a better term, "the best market." This factor is probably a composite of"convenience" and "best price" supplemented by what may be termed the "producer's best interest." The term was used by those producers who, while desiring a top price from a convenient market, selected those agencies which, in their opinion, would best serve them over a period of time and consequently were deserving of patronage even though the use of a different outlet might be indicated by the factors of price or convenience alone.

Since such a large percentage of the producers reported "price" as a prime consideration in selecting a market, Table 33 showing the sources of price information utilized by Michigan farmers may be noted at this point before considering the other factors listed in Table 32. As it would be natural for the producers to use the price information service provided by their favorite agency, it would seem that this breakdown might serve as somewhat of an indication of

Table 33. Sources of Price Information Used by Michigan Farmers

Source	Number	Percent
Central Market Prices	175	54.2
Local Packer Prices	17	5.3
Concentration Point Prices	40	12.4
Local Auction Prices	42	13.0
Local Trade Offers	26	8.0
Estimates of Hired Truckers	21	6.5
None	2	0.6
Totals	323	100.0

the long term preference of Michigan producers for certain markets. Of course, the lack of published statements of local prices in newspapers or elsewhere will tend to cause producers who sell through the local markets to follow the published terminal prices as an indication of what they might expect from the smaller local outlets. This accounts for part of the preponderance of the farmers who obtain their price information from terminal reports.

With the exception of price considerations, the most common reasons (Table 32) given by a producer for using a given market were "convenience" and "best market" (which in some cases involved "convenience"). "Convenience" should not be interpreted as "shortest distance" for there is little relationship between the distance which various producers live from the terminal market (Detroit) and the percentage of their livestock which is sold at that market (Table 34). This may be attributed to the fact that those producers living at a distance from the terminal are, in many cases, also at a considerable distance from other markets and it is often easier to get good train or truck connections to Detroit than to other points in the state. One must conclude from this that, whatever other influences may be present, distance is not of prime

Table 34. Effect of Distance upon the Use of the Terminal Market by Michigan Producers

Round Trip Mileage	Percentage of Livestock Marketed through Terminal Market										
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	Totals
0- 24	4				1	1	1		1	3	11
25- 49	11	1			1		4		1	12	30
50- 74	8	5	1	2		1	3	2	4	21	47
75- 99	17	2	2	1	1	1				18	42
100-124	21	1	4	2		3	5	2	2	9	49
125-149	5		2				2			1	10
150-174	7				2			1		5	15
175-199	1			1	2					1	5
200-224	5					1				2	8
225-249	1									1	2
250-274	5					1					6
275-299										1	1
300-324	2								1	1	4
325-349	1										1
350-374						1				1	2
Totals	88	9	9	6	7	9	15	5	9	76	233

consideration in determining the proportion of livestock sold at the terminal market. However, it is probable that the distance factor is of considerable importance in influencing consignments to the various smaller markets in the state. For example, while 150 miles is no great distance when shipping in fair sized lots to Detroit, it would be a considerable item in selling only a few head through the medium of an auction market, local butcher, or small packing house.

The personal opinion of the trucker is another important factor in determining the agency to which livestock is consigned. In analyzing this factor, it is possible to divide livestock consignments into those shipments trucked by the producers, those trucked by a hired trucker, and those sent by rail (Table 35). It

Table 35. Proportion of Marketed Livestock Trucked by the Producer, by a Hired Trucker, and Shipped by Rail[1] (Based on the 1937 Sales of 231 Michigan Producers)

Percentage of Individual Producer's Stock	Trucked by the Producer		Trucked by a Hired Trucker		Shipped by Rail	
	Number	Percent	Number	Percent	Number	Percent
100 (all)	47	20.3%	89	38.6%	10	4.3%
90-99	9	3.9	4	1.7	3	1.3
80-89	2	0.9	1	0.4	1	0.4
70-79	7	3.0	4	1.7	3	1.3
60-69	5	2.2	4	1.7	1	0.4
50-59	8	3.5	12	5.2	4	1.7
40-49	2	0.9	3	1.3	1	0.4
30-39	2	0.9	4	1.7	0	0.0
20-29	5	2.2	10	4.3	4	1.7
10-19	3	1.3	10	4.3	2	0.9
1- 9	1	0.4	5	2.2	0	0.0
0 (none)	140	60.5	85	36.9	202	87.6
Totals	231	100.0%	231	100.0%	231	100.0%

1. Exclusive of livestock sold to truckers or dealers at the farm.

is significant that 39 per cent of the producers marketed all of their livestock through hired truckers and that an additional 20 per cent trucked all of their livestock themselves, while only 4 per cent of the group reported that all of their livestock was shipped by rail. Conversely, 60 per cent of the producers reported that they personally trucked in none of their stock, 37 per cent stated that they shipped none with hired truckers, and 83 per cent stated that they shipped none by rail.

It may be seen from these figures that a very large part of Michigan livestock is being marketed by means of the motor truck. While it is true that in many cases the trucking is done by the producer himself, it is likewise a fact that enough of the total livestock marketed is handled by hired truckers to permit attaching considerable importance to their personal preference for one marketing outlet over the others. This may be emphasized by noting that the 93 truckers questioned reported that (on the average) they did 69 per cent of their trucking directly for the producer, 29 per cent for a dealer (who was usually the trucker himself) and about 2 per cent for cooperative shipping associations. Of the livestock which these truckers owned, 38 per cent was raised on their own farms. To this extent they were performing the same function as the producer (who did not otherwise engage in trucking) does when transporting his livestock to market. In addition, 59 per cent of the trucker-owned stock was purchased directly from some producer on his farm, while about 2.0 per cent was purchased at a livestock auction market and a like amount from the various other local shipping points.

In the light of the above facts, it may be seen that another factor in the selection of a market is the extent to which producers instruct the hired truckers as to the outlet to be used. Slightly less than 70 per cent of the Michigan producers contacted indicated that they designate the market to be used (Table 36). It

Table 36. Proportion of Producers Who Instruct Hired Truckers Regarding the Market to be Patronized

Producers	Number	Percent
Instructing truckers	111	69.4%
Not instructing truckers	29	18.1
Giving truckers some degree of choice	13	8.1
Varying their practice	7	4.4
Totals	160	100.0%

is significant that in 18 per cent of the cases, the truckers have complete freedom in deciding to which agency a given livestock shipment will be taken, and that in an additional 8 to 12 per cent of the cases, they have at least some influence in the choice.

When a number of livestock truckers were interviewed on this problem, they indicated that about 40 per cent of the producers gave definite instructions regarding the disposition of livestock. The truckers also stated that an additional 15 per cent of the producers knew where their livestock would be taken, in the absence of other instructions, and approved the practice. This leaves a balance of approximately 45 per cent of the producers who, according to the truckers, give no directions either explicit or "by consent" as to the agency they wished to patronize. The discrepancy between the replies made by the producers and those of the truckers may possibly be attributed to the fact that most producers do not like to

admit giving no instructions to the hired truckers, plus a desire on the part of some truckers to place extra importance on their own opinions.

Consideration has been given to the various marketing agencies available for use by Michigan livestock producers, the degree to which the producers avail themselves of these facilities, and the factors considered by individual producers in selecting a market. It may be of value at this point to indicate some changes which various livestock producers and truckers recommended as being beneficial to the industry. These will be considered from the viewpoint of improving truck transportation, rail transportation, and the marketing system in general.

Suggested Changes Relating to Truck Shipments. The most frequently made suggestions concern changes of one type or another in the Michigan Public Service Regulation (Table 37). This law, which licenses individuals to perform trucking services for hire, has numerous provisions. It protects both the trucker and the consignor against loss from accidents by making it mandatory for the trucker to carry cargo insurance as well as normal insurance covering the vehicle. The law contains additional provisions against such evils as overloading. Under another provisions, the trucker may be made to use certain highways in making his normal run.

As indicated in the table, the truckers are divided in their opinion of this regulation. The thing to which the greatest number are opposed, however, is not the law itself but the "red tape"- filling out of application forms, periodical reports, trips to the commission offices, loss of time in "check ups" on the highway -- all

of which compliance with the law now necessitates.

Table 37. Suggested Changes in Truck Transportation

Change	Times Suggested By Producers	Times Suggested By Truckers
1. In Michigan Public Service Regulation:		
(a) Less "red tape"		15
(b) Enforce or abolish the regulation		11
(c) Enforce the regulation		10
(d) Abolish the regulation on light farm trucks	2	9
(e) Eliminate the "40 mile exemption"		2
(f) Eliminate the license for cooperative trucks	1	
(g) Lower "cargo insurance" rates	1	4
(h) Less regulation		1
2. In Charges in trucking rates:		
(a) Standardization	2	17
(b) Decrease	7	
3. In Method of loading stock at farm		3
4. Better identification marks	3	
5. Centralized loading points for truckers		1
6. Advance notification of trucker by producer		1
7. More truck shipments through local cooperatives	1	
8. Better racks and covers for protection of livestock	2	
9. Bond truckers against loss from bad checks	1	
10. Trucker to select market in all cases	1	
11. Eliminate undesirable truckers	1	

There are two distinct groups of truckers as regards their stand on the law itself. One group believes the regulation desirable and wishes to see it strictly enforced. The other group concedes that the regulation "may be all right if it can be enforced," but insists that it should be abolished if the enforcement is not completely inclusive. The other changes suggested in regard to this regulation are largely the result of personal inequities suffered by truckers under the law and will not be discussed in detail.

The second group of changes concerns trucking charges. The producers, of course, would like to see the rates lowered as much as possible, while the truckers wish to see a standardized set of charges, probably on a ton-mile basis at or above their present level.

Suggested Changes Relating to Rail Shipments. Some of the producers also made suggestions in respect to the problem of improved rail shipments (Table 38). These suggestions are about what might be expected since they reflect the general desire for better conditions for farmers. They will not be discussed in detail except for the third item in the table. The matter of the "spotting" of cars at the Detroit stock yards is especially important to those producers who ship over lines other than the New York Central, because there is a definite period of each day set aside by the various railroads entering Detroit for the switching of cars from one

Table 38. Suggested Changes in Rail Transportation

Change	Times Suggested
1. Lower rates	6
2. Lower minimum weights	5
3. Faster "spotting"of cars at yards	3
4. Faster service en route	3
5. Better facilities for small lots	1
6. More frequent service	1
7. More cooperative shipments	1
8. Permit to drive stock down railroad right of way	1
9. Better loading	1

line to another. Livestock reaching Detroit before this period is quite promptly switched over to the New York Central tracks and then to the stockyards, but should livestock reach the city at a time just following this period of the day, it is possible for the

livestock to remain on a siding for quite a long time before reaching the market.

Suggested Changes Relating to the Livestock Marketing System. Finally, it is interesting to notice the suggestions of Michigan producers regarding desirable changes in the marketing

Table 39. Suggested Changes in Marketing Michigan Livestock

Change	Times Suggested
1. Regarding the terminal market:	
(a) More general use of this market	17
(b) Lower rates and handling charges	17
(c) More cooperative activity	13
(d) More accurate grading of livestock	3
(e) All feeders to be purchased at the terminal	1
2. Regarding the packing houses:	
(a) Less direct buying	6
(b) All packers should pay Detroit prices	2
(c) More opportunity to sell direct to packers	2
3. Regarding auction markets:	
(a) More auction markets desirable	10
(b) Fewer auction markets desirable	6
(c) More supervision of auctions	4
(d) Higher average prices at auctions	2
(e) More accurate grading of livestock	2
4. Regarding prices and price information:	
(a) Less seasonal price variation	7
(b) More and better information regarding changes in the demand for the various classes and grades of livestock	4
(c) Less spread between retail and farm prices	2
(d) Establish market prices on the basis of a larger portion of the total production	1
(e) Unionize producers so that price determination will pass from purchaser to producer	1
(f) Less publicity given to probable annual production	1
5. Miscellaneous Recommendations:	
(a) All shipments by rail	1
(b) Bring truck and rail charges closer together	1
(c) Prevent middle men from buying poor cattle and reselling as prime beef	1

system as a whole (Table 39). Many of these recommendations do not warrant detailed discussion as they largely parallel the previous discussion of the individual outlets. However, from the group of most frequently made suggestions, it is apparent that the"average" producer contacted in this study favors a return to the terminal market with increased cooperative activity and decreased selling charges at that agency. To a lesser extent, more community auction markets are believed desirable. In addition, less seasonal variation in livestock prices and more information regarding changes in the demand for various classes and grades of livestock would be valuable to the producer of livestock in Michigan.

SECTION VI

SUMMARY AND CONCLUSIONS

Classification and Localization of Michigan Livestock. The greatest concentration of livestock in Michigan is found in the southern part of the lower peninsula, centering in Lenawee, Saginaw, and Washtenaw counties. The number of cattle in the state has increased slightly during the past twenty years. The same is true of sheep and lambs but the number of hogs on Michigan farms has decreased nearly fifty per cent during this period.

Although the portion of the farm income in Michigan which may be attributed to the sale of meat animals is much smaller than that derived from cash crops, it still accounts for 15 per cent to 20 per cent of the gross farm income. When all livestock and livestock products are considered, the picture is quite different as this income has constituted from 55 per cent to 65 per cent of the gross farm income for each year since 1924. Since farm prices of meat animals fluctuate less widely than those of the cash crops, it would seem that the farmer may anticipate a somewhat more stable return from livestock and its products than from the other commodities.

In addition to livestock bred in Michigan, there is a considerable volume of animals shipped into the state by rail. Various Michigan counties also serve as the source of considerable livestock shipped to out of state points. Clinton, Eaton, Ionia, Lenawee and Wayne counties rank high in the volume of both shipments

and receipts.

The Terminal Market. The principal terminal market in Michigan is the Detroit Stockyards Company. Livestock sold at this market is consigned to one of four commission firms. These firms sell the animals to packers, buyers, or representatives of other markets, for which service the producer pays yardage, feed, commission, and insurance charges.

Receipts at this outlet are marked by wide seasonal fluctuations with the largest volume in October and November. This variation is much larger in the case of sheep and lambs than for the other classes of livestock. Although the volume of hog receipts has declined considerably in recent years, the total number of animals received at the stockyards has been increasing slowly. During the past twenty years, the proportion of the total receipts at the Detroit market represented by truck shipments has increased from less than 5 per cent to more than 90 per cent. This change may be most logically attributed to improved trucks and highways and the added convenience and speed which this form of transportation offers the producer of livestock.

On the other hand, the advantages of rail transportation, with the exception of lower shipping costs, appear to be limited to those arising from long distance shipments of livestock. Most of the producers contacted in this study indicated that rail transportation was desirable for trips in excess of 200 miles. It may, of course, be argued that, during periods of reduced farm income, the lower cost of this form of transportation is of great enough importance to make rail shipments fully as valuable to the producer

as the more convenient truck shipments.

Among the out-of-state terminals to which rail shipments of Michigan livestock are consigned, those in New York and New Jersey are the most important. Over 75 per cent of the 1937 shipments over the New York Central, Grand Trunk and Per Marquette Railroads were consigned to markets in these states. The most important sources of livestock shipments to Michigan are Chicago, Indianapolis, and Omaha.

The principal advantage of selling livestock at a large terminal market comes from the increased buyer competition for properly graded animals. As a result of these factors, the producer usually receives the true market value of his livestock. Of course, the fact that these outlets are operated with bonded commission firms and adequate facilities for the care of the livestock provide them with additional "selling points".

The greatest disadvantage of this form of marketing is the increased selling costs arising from the longer haul and the yardage, commission, and other costs which must be met after the livestock is actually at the terminal.

Cooperative Marketing Agencies. The principal cooperative outlets available to Michigan livestock producers are the various shipping associations, the cooperative commission firms, and the Detroit Packing Company. The two commission firms (The Michigan Livestock Exchange in Detroit and the Producer's Commission Company in Buffalo) are probably the most important from the standpoint of the number of animals handled. Forty per cent of the producers contacted in this study stated that they sold all of their terminal marketed stock through an agency of this type.

Although the number of shipping associations in Michigan has been decreasing in recent years, these associations are still quite active in certain sections of the state. However, less than ten per cent of the producers indicated that they made extensive use of such agencies in disposing of their livestock.

The producer-owned Detroit Packing Company offers an outlet for producers who wish to sell their livestock directly to a packing house, thus avoiding some of the selling costs associated with other forms of marketing. While figures showing the extent of its activities were not secured for this study, it is known to be handling a substantial volume of livestock.

The principal advantage of marketing through a cooperative packing company is a reduced selling cost, as indicated above. Shipping associations permit the producer to take advantage of carlot rates for smaller quantities of livestock, while the commission firms, operating on a cooperative basis, can refund to the producer-members the profits made on this marketing service.

Other Marketing Agencies. In addition to the terminal market and the various cooperative agencies, there are a number of other outlets available for the use of Michigan livestock producers. These include the packing houses, auction markets, concentration yards, and the local dealers and butchers.

With the return to direct marketing by many producers, the importance of both terminal and local packing plants has been increasing. One of more of these outlets may conveniently be utilized by most Michigan producers, especially when shipping the stock

by truck. The principal advantage of this type of marketing is the lower selling cost which may be attributed to a shorter haul and the absence of feed and yardage costs. The producer usually receives a somewhat lower price than that being paid at the Detroit stockyards but, considering the lower selling costs mentioned above, this differential is probably not significant.

The recently developed livestock auction markets are also of increasing importance in some sections of the state, especially as an outlet for calves. The twenty markets operating in 1939 were organized both as cooperative and private enterprises and, ordinarily, held sales once each week. The principal advantage of selling livestock through an auction market is the same as was given above for the packing house--decreased selling costs. The principal disadvantage arises from the lack, in some cases, of proper precaution against the spread of such livestock diseases as sheep scab. In addition, questionable practices on the part of some operators has hindered the more rapid development of this type of marketing.

The principal advantages of disposing of livestock through such local outlets as the concentration yards, other local dealers or truckers, or butchers are the convenience and low cost of such operations. However, the price received for the livestock is usually the result of bargaining carried on between the producer and the dealer. As the producer is often unable to match wits with a dealer who devotes most of his time to livestock marketing, the price is occasionally somewhat less than the terminal price would warrant.

Utilization of Marketing Agencies by Michigan Livestock Producers. In 1937, a representative group of Michigan producers

marketed over 70 per cent of their livestock through the terminal market in Detroit. It is apparent from this that that institution serves as the hub of the state's marketing system. Ranking below the terminal market in the proportion of stock handled were the auction markets (7 per cent), the local dealers (7 per cent), the packing house (6 per cent), and the concentration yards (5 per cent). Least popular were the local butchers and truckers at the farm; the producers contacted in this study selling only from 1 to 2 per cent of their livestock through each of these agencies.

The principal factors considered by Michigan livestock producers in the selection of a marketing agency are price considerations, convenience, and "best market"--a composite of best price, convenience, and the farmer's best interest. Convenience, as such, should not be interpreted as "shortest distance" in the case of the Detroit terminal, although it is probable that the distance factor is an important influence upon consignments to the smaller markets in the state. Another important factor in the selection of a market is the preference of the livestock truckers for a particular market over the others.

In regard to possible changes in the Michigan livestock marketing system, the livestock truckers are most concerned about the Michigan Public Service Regulation. The truckers are almost unanimously of the opinion that, if such regulation is to exist, is should be uniformly enforced and the necessary amount of "red tape" should be reduced to a minimum.

The producers are, of course, interested in anything that will enable them to market the livestock more easily and at lower cost. Many of them would like to see a standard scale of charges for truck

shipments. In this desire, they are joined by a large proportion of the livestock truckers. The two groups, however, do not fully agree as to what would constitute a fair level for such charges.

In regard to rail shipments of livestock, the principal suggestions made by Michigan producers were lower rates, lower minimum weights, faster and more frequent service, and better facilities for the transportation of small lots of livestock.

The "average" Michigan livestock producer also favors a return to the terminal market with increased cooperative activity and decreased selling costs at that agency. To a somewhat lesser extent, more community auction markets are believed to be desirable. In addition, Michigan farmers would like to receive more information regarding changes in the demand for the various classes and grades of livestock.

APPENDIX A

Table 2A. Distribution of Livestock in Michigan Counties, 1935

County	Cattle	Calves under 1 yr.	Sheep and Lambs	Hogs
Alcona	6,822	2,436	9,574	1,047
Alger	3,649	1,243	360	364
Allegan	33,636	6,965	7,769	10,941
Alpena	9,785	3,204	6,685	1,999
Antrim	9,087	2,512	1,145	1,937
Arenac	10,236	1,946	4,068	2,184
Baraga	4,670	1,050	349	295
Barry	17,837	3,938	31,641	9,223
Bay	19,112	3,398	2,694	8,449
Benzie	3,808	1,169	432	948
Berrien	18,542	3,166	3,970	10,599
Branch	21,025	4,239	44,806	15,800
Calhoun	24,853	5,558	39,793	15,397
Cass	15,358	3,840	14,961	16,722
Charlevoix	8,539	2,940	2,607	2,106
Cheboygan	7,558	2,438	2,050	1,687
Chippewa	11,675	2,990	4,189	1,531
Clare	7,536	2,020	15,723	1,689
Clinton	21,976	3,823	46,021	13,692
Crawford	917	274	662	123
Delta	10,268	2,207	1,035	1,307
Dickinson	3,797	829	321	355
Eaton	24,412	5,651	41,655	10,313
Emmet	7,751	2,275	1,606	1,636
Genesee	23,547	5,007	24,869	11,281
Gladwin	11,404	2,479	13,686	2,095
Gogebic	3,517	1,135	322	161
Gd. Traverse	9,560	2,571	1,174	2,667
Gratiot	24,077	4,981	29,018	13,776
Hillsdale	25,471	4,977	48,117	18,238
Houghton	10,398	2,257	841	756
Huron	40,030	10,673	8,156	12,388
Ingham	21,752	4,524	59,492	10,565
Ionia	24,050	5,576	34,530	12,826
Iosco	6,157	1,740	10,346	1,287

Table 2A (Continued).

County	Cattle	Calves under 1 yr.	Sheep and Lambs	Hogs
Iron	5,189	1,408	1,117	445
Isabella	20,903	4,798	14,470	6,328
Jackson	23,648	5,550	45,724	10,202
Kalamazoo	16,616	4,312	20,342	9,688
Kalkaska	3,991	1,111	256	876
Kent	31,481	6,778	11,483	8,349
Keweenaw	430	73	64	9
Lake	4,187	1,142	1,664	873
Lapeer	29,020	6,693	26,758	7,959
Leelanau	7,334	2,055	694	2,520
Lenawee	31,852	5,062	76,279	33,106
Livingston	17,779	3,702	46,434	5,183
Luce	1,534	467	129	463
Mackinac	3,835	1,040	558	652
Macomb	21,493	3,120	5,621	7,201
Manistee	8,833	2,406	725	2,182
Marquette	5,485	1,301	263	594
Mason	12,043	2,466	1,448	3,011
Mecosta	15,032	3,739	5,071	2,910
Menominee	17,976	2,833	1,547	2,893
Midland	13,919	2,891	9,867	3,689
Missaukee	9,160	2,395	7,915	1,935
Monroe	21,237	2,691	13,924	24,279
Montcalm	22,780	5,499	8,628	5,447
Montmorency	3,331	989	3,194	695
Muskegon	10,672	2,456	1,125	1,731
Newaygo	17,129	4,371	2,443	5,946
Oakland	21,576	4,211	20,519	6,120
Oceana	12,878	3,936	2,509	3,470
Ogemaw	8,956	2,139	11,915	1,320
Ontonagon	7,222	1,899	867	586
Osceola	14,347	3,043	11,015	2,298
Oscoda	1,899	501	6,684	285
Otsego	3,621	1,219	271	940
Ottawa	27,850	5,126	3,142	7,397

Table 2A (Continued).

County	Cattle	Calves under 1 yr.	Sheep and Lambs	Hogs
Presque Isle	8,854	2,326	6,748	2,754
Roscommon	940	246	833	88
Saginaw	33,570	5,664	12,439	16,337
St. Clair	31,177	6,421	10,133	7,333
St. Joseph	14,870	3,429	25,883	15,374
Sanilac	50,502	14,164	16,970	8,619
Schoolcraft	2,704	570	198	525
Shiawassee	21,002	3,895	37,355	7,424
Tuscola	32,959	7,127	11,917	11,046
Van Buren	19,795	4,223	7,479	8,175
Washtenaw	29,176	4,949	88,005	16,520
Wayne	9,321	1,288	1,174	5,145
Wexford	8,409	2,555	1,752	1,660
Totals	1,241,329	276,308	1,100,218	488,966

Table 4A. Annual Gross Income of Michigan Farmers, 1924-1938, With Principal Sources[1].

Year	Cattle and Calves	Sheep and Lambs	Hogs	Total Meat Animals	Livestock & Livestock Products	Cash Crops	Grand Total	Percent of Grand Total Represented By: Meat Animals	Percent of Grand Total Represented By: Livestock & Livestock Products
	Thousands of Dollars							Percent	
1924	$18,381	$4,764	$25,098	$48,243	$162,170	$131,032	$293,202	16.5%	55.3%
1925	22,156	5,385	28,949	56,490	173,222	136,128	309,350	18.3	56.0
1926	22,220	4,434	31,163	57,817	183,032	121,087	304,119	19.0	60.2
1927	22,453	6,667	28,888	58,008	182,997	114,239	297,236	19.5	61.6
1928	25,331	6,326	23,170	54,827	188,843	113,988	302,831	18.1	62.4
1929	24,051	6,914	22,581	53,546	199,571	119,859	319,430	16.8	62.5
1930	21,871	5,006	18,962	45,839	163,957	90,483	254,440	18.0	64.4
1931	14,107	3,194	12,157	29,458	116,096	62,674	178,770	16.5	64.9
1932	10,218	2,869	8,259	21,346	88,479	54,272	142,751	15.0	62.0
1933	11,293	3,144	9,721	24,158	88,689	71,192	159,881	15.1	55.5
1934	12,570	3,809	12,739	29,118	110,501	75,221	185,722	15.7	59.5
1935	19,473	4,227	16,213	39,913	136,709	83,731	220,440	18.1	62.0
1936	19,915	5,460	21,443	46,818	150,981	102,129	253,110	18.5	59.7
1937	25,666	6,183	24,329	56,178	177,352	103,801	281,153	20.0	58.7
1938	24,059	4,842	19,255	48,156	154,549	87,361	241,910	19.9	63.9

1. 1934-38 figures include government benefit payments.

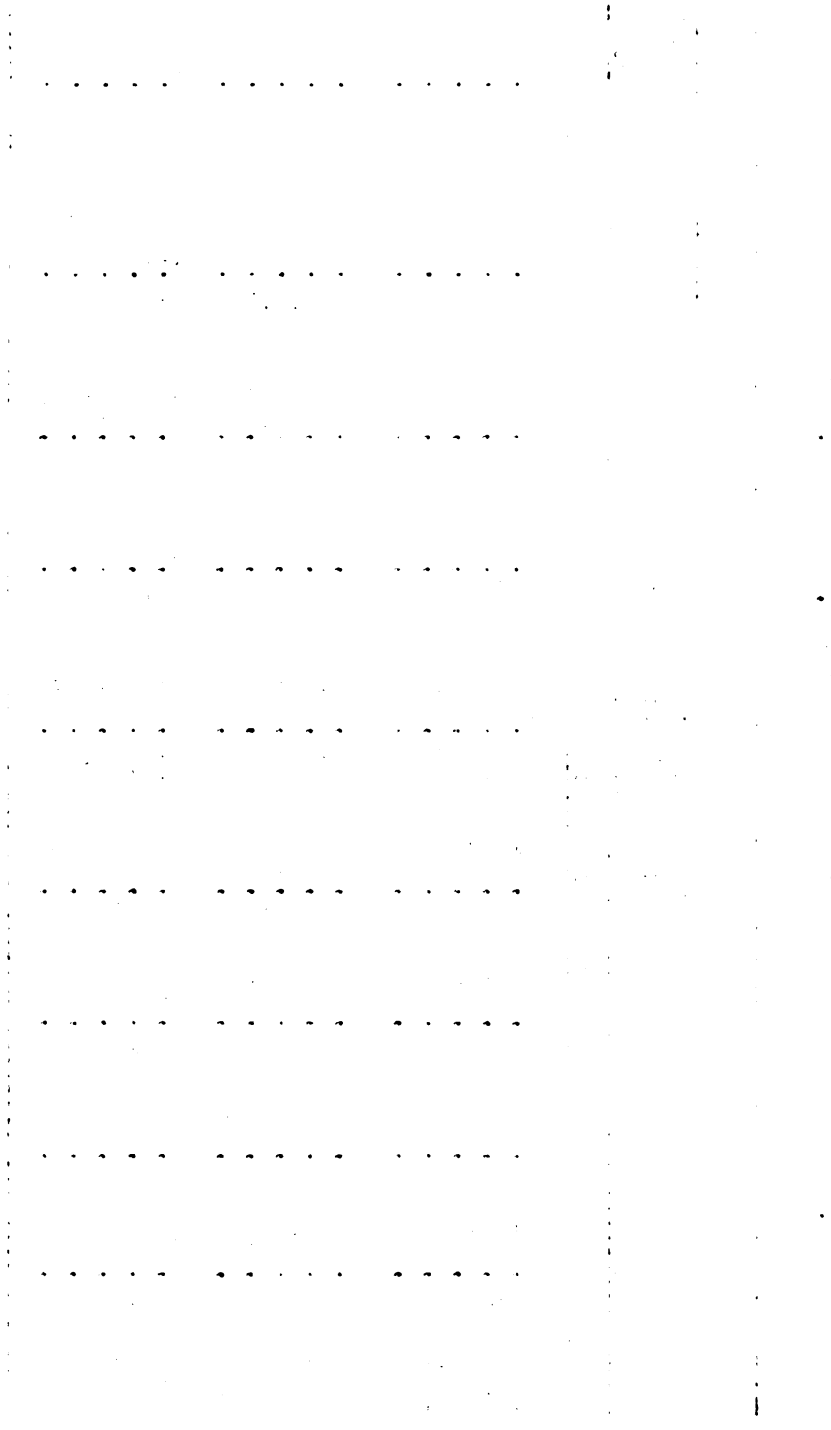


Table 7A. Carlot Shipments of Livestock from Michigan Counties, 1937

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Alcona													
Alger	2							1	3	2	3	1	12
Allegan													
Alpena	3										1		4
Antrim													
Arenac													
Baraga													
Barry	8	2	4	3	2		1	1	1	4	1	2	29
Bay	1	1			1				1	1	2	2	9
Benzie													
Berrien					1								1
Branch	34	21	21	16	14	9	3	3	11	17	19	20	188
Calhoun	41	28	39	24	19	8	15	4	6	17	31	28	260
Cass	6	4	3	4	3	2	3		2	5	6	5	43
Charlevoix													
Cheboygan											1		1
Chippewa													
Clare	2			1							1		4
Clinton	32	23	26	16	19	15	14	9	14	29	25	31	253
Crawford													

Table 7A (Continued)

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Delta													
Dickinson													
Eaton	36	19	18	13	8	12	8	9	14	30	34	37	233
Emmet													
Genesee		3		1		2	2						8
Gladwin				1				1	4	6	10	2	24
Gogebic													
Gd. Traverse	8			9	2	3	2	3	3	3	4	1	38
Gratiot	2											1	3
Hillsdale	15	20	24	17	6	2	2	4	2	8	11	8	119
Houghton													
Huron			1		1	1					1	1	5
Ingham	11	30	3	8	3	4		1	1	10	7	10	88
Ionia	18	8	16	14	10	8	6	7	13	18	18	19	155
Iosco													
Iron													
Isabella						4	2					1	7
Jackson	5	4	3	2	8		1					3	26
Kalamazoo	26	15	16	10	3	3	5			2	9	12	101
Kalkaska													
Kent	33	22	24	23	19	16	11	9	13	18	27	16	231
Keweenaw													
Lake	4	1	2	4	4	1	5	6	8	10	12	9	66
Lapeer	4	2	2	1	2	1	1		1	1		1	16
Leelanau													

Table 7A (Continued)

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Lenawee	84	75	70	36	42	26	9	7	11	7	21	29	417
Livingston	1				2		2	5	1				11
Luce													
Mackinac									1				1
Macomb													
Manistee	1			4									5
Marquette													
Mason	14	5	11	8	8	9	8	2	1	1		3	70
Mecosta													
Menominee													
Midland						1						2	3
Missaukee													
Monroe	1								2				3
Montcalm													
Montmorency													
Muskegon													
Newaygo	2		4	2	3	3	1	2		3	6	5	31
Oakland					1			1				2	4
Oceana													
Ogemaw										1			1
Ontonagon									1				1
Osceola	4	1	8	8	6	5	4	5	8	6	7	7	69
Oscoda													
Otsego													
Ottawa			4	2	4	1		1					12

Table 7A (Continued)

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Presque Isle													
Roscommon													
Saginaw							2						2
St. Clair													
St. Joseph	28	31	26	23	14	11	7	10	13	46	30	27	246
Sanilac		1					1			5	5		12
Schoolcraft													
Shiawassee	9	7	3	5	5	3	1	4	2	3	3	4	49
Tuscola				3									3
Van Buren	12	10	12	13	8	3	5	7	1	12	13	17	113
Washtenaw	8	3	1					3		1		2	18
Wayne	120	93	151*	134	77	59*	64*	59*	42*	86*	120*	86	1091
Wexford						1				1			2
Totals	575	429	492	405	295	212	185	165	178	335	428	394	4093
Percent by Months	14.0	10.5	12.0	9.9	7.2	5.2	4.5	4.0	4.4	8.2	10.5	9.6	100.0
Total Less Wayne Co.	455	336	341	271	218	153	121	106	136	249	308	308	3002
Percent by Months	15.2	11.2	11.3	9.0	7.3	5.1	4.0	3.5	4.5	8.3	10.3	10.3	100.0

*For these months, carload shipments from Detroit Stockyards were reported as being greater than the Wayne County total. In order to minimize error and include all movements of livestock the figures of the Stockyards Company were used in these cases.

Table 8A. Carlot Receipts of Livestock in Michigan Counties, 1937

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Alcona													
Alger													
Allegan									1				1
Alpena													
Antrim			1							1			2
Arenac		1	4	3	1	2	5	4	5	1			26
Baraga													
Barry												1	1
Bay		1		1		3	3	3	2	1	1	1	16
Benzie													
Berrien		1											1
Branch								5	1	2			8
Calhoun		1			4		1	2	5	1	1		15
Cass										1	1		2
Charlevoix													
Cheboygan													
Chippewa													
Clare								1					1
Clinton	6	2	1	1	3	10	22	25	17	21	6	3	117
Crawford						9							9

Table 8A (Continued)

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Delta													
Dickinson													
Eaton			1	2	1	3		2	1	17	3	2	32
Emmet													
Genesee		2	3	4	4	5	3	4	3		2		30
Gladwin								1					1
Gogebic													
Gd. Traverse								1					1
Gratiot			1			1							2
Hillsdale						1			3	2	8	1	15
Houghton													
Huron						1	1		1				3
Ingham	5	4	1	18	2	7	3	6	19	49	2	4	120
Ionia	4	2		3	7	6	8	13	4	1	1		49
Iosco									1	1			2
Iron													
Isabella													
Jackson	4	1	1	3	3	4	4	8	5	8	9	1	51
Kalamazoo													
Kalkaska													
Kent		1	1	1					2	2		1	8
Keweenaw													
Lake													
Lapeer									2				2
Leelanau													

Table 8A (Continued)

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Lenawee	16	4	11		2	2	2	18	87	98	32	14	286
Livingston	2	1	2		3	2	1	2	1	1			15
Luce													
Mackinac													
Macomb					1	1	1						3
Manistee											1		1
Marquette													
Mason		1	1					2					4
Mecosta						2							2
Menominee													
Midland			1				2		1				4
Missaukee									1				1
Monroe									3	4	2		9
Montcalm													
Montmorency													
Muskegon									1	1		5	7
Newaygo					2		4	4					10
Oakland			7	1	3		4	5	9	6	9	1	45
Oceana						2							2
Ogemaw				1	4	6		1	2	4	3		21
Ontongaon													
Osceola													
Oscoda													
Otsego													
Ottawa	1						1	1	4	6	3	4	20

Table 8A (Continued)

County	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Presque Isle	1		1							2	1		5
Roscommon													
Saginaw	3	1	3	5	5	3	13	19	13	3	5	2	75
St. Clair			1										1
St. Joseph					1	1						1	3
Sanilac								2					2
Schoolcraft													
Shiawassee							2	1		3	2		8
Tuscola	2	3	2	1	1	1	2	1	4	2		2	21
Van Buren				1	1				1				3
Washtenaw	2	2	1					3	7	9	3		27
Wayne	705	476	462	476	490	720	772	915	1102	678	694	680	8170
Wexford													
Totals	751	504	506	521	538	792	854	1049	1308	925	789	723	9260
Percent by Months	8.1	5.4	5.5	5.6	5.8	8.5	9.2	11.4	14.2	10.0	8.5	7.8	100.0
Total Less Wayne Co.	46	28	44	45	48	72	82	134	206	247	95	43	1090
Percent by Months	4.2	2.6	4.0	4.1	4.4	6.6	7.5	12.3	19.0	22.7	8.7	3.9	100.0

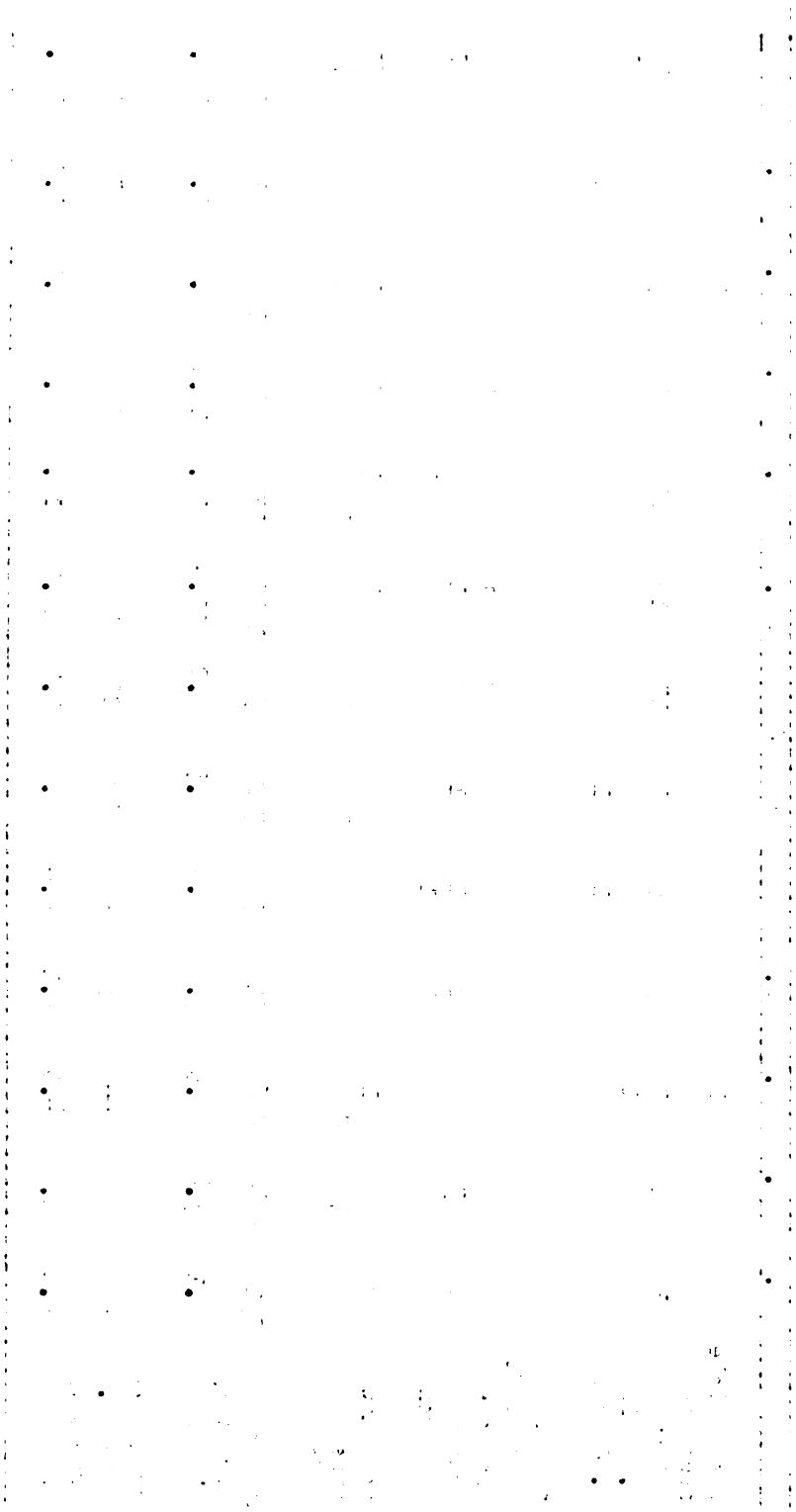


Table 9A. Balance of Carlot Shipments of Livestock, by Counties, 1937

County	Surplus Receipts	Surplus Shipments	County	Surplus Receipts	Surplus Shipments
Alcona			Iron		
Alger			Isabella		7
Allegan		11	Jackson	25	
Alpena			Kalamazoo		101
Antrim		2	Kalkaska		
Arenac	26		Kent		223
Baraga			Keeweenaw		
Barry		28	Lake		66
Bay	7		Lapeer		14
Benzie			Leelanau		
Berrien			Lenawee		131
Branch		180	Livingston	4	
Calhoun		245	Luce		
Cass		41	Mackinac		1
Charlevoix			Macomb	3	
Cheboygan		1	Manistee		4
Chippewa			Marquette		
Clare		3	Mason		66
Clinton		136	Mecosta	2	
Crawford		9	Menominee		
Delta			Midland	1	
Dickinson			Missaukee	1	
Eaton		206	Monroe	6	
Emmet			Montcalm		
Genessee	22		Montmorency		
Gladwin		23	Muskegon	7	
Gogebic			Newaygo		21
Gd. Traverse		37	Oakland	41	
Gratiot		1	Oceana	2	
Hillsdale		104	Ogemaw	20	
Houghton			Ontonagon		1
Huron		2	Osceola		69
Ingham	32		Oscoda		
Ionia		106	Otsego		
Iosco	2		Ottawa	8	

Table 9A. (Continued)

County	Surplus Receipts	Surplus Shipments	County	Surplus Receipts	Surplus Shipments
P. Isle	5		Shiawassee		41
Roscommon			Tuscola	18	
Saginaw	73		Van Burren		110
St. Clair	1		Washtenaw	9	
St. Joseph		243	Wayne	7079	
Sanilac		10	Wexford		2
Schoolcraft					
			Totals	5167	

Table 10A. Marketing Charges at the Detroit Stockyards

YARD CHARGES ON RAIL STOCK ARE AS FOLLOWS:-

Yardage on Cattle	30¢ per head
Yardage on Calves	25¢ per head
Yardage on Hogs	12¢ per head
Yardage on Sheep or Lambs	8¢ per head

YARD CHARGES ON STOCK DRIVEN OR HAULED IN, SAME AS ABOVE RAIL YARDAGE, WITH FOLLOWING EXCEPTIONS:-

One Cattle	50¢ per head
Less than Four Calves	35¢ per head
Less than Three Hogs	22¢ per head
Less than Six Sheep	14¢ per head

COMMISSION CHARGES ARE AS FOLLOWS:-

Carloads	Single Deck	Double Deck
Cattle (30 head or less)	$20.00	
(Over 30 head, 50¢ per head additional; maximum $24.00 per car.)		
Hogs	14.00	$20.00
Sheep, Lambs, Goats or Kids	14.00	20.00
Calves (300 pounds or less. Stock Yards Classification to Govern)		
	14.00	20.00
Mixed Small Stock	14.00	20.00

On mixed cars of livestock containing cattle, the commission charge shall be the trucked-in charge for cattle and small stock, provided the maximum charge on each kind shall not exceed the minimum carload charge for each with a maximum charge of $24.00 for the car.

Two single-deck carloads billed as a double-deck car, the commission charge shall be for a double-deck car. Railroad billing to govern in all cases.

Any carloads containing 12,000 pounds or less, to be considered less than carload lots; over 12,000 pounds, carload rates to govern.

Trucked-in -- Driven-in -- or Less than Carloads, Commission:

Cattle - $1.00 per head for the first 20 head and 8¢ per head for the balance of the consignment.
Hogs - $ .20 per head.
Sheep, Lambs, Goats or Kids - 20¢ per head for first 50 head; 15¢ per head for next 50 head, and 10¢ per head for balance of consignment.
Calves - 35¢ per head for the first 20 head and 25¢ per head for balance of consignment. (300 lbs. or less, Stock Yards Classification to Govern.)
Commission Charges on Speculators and Yard Traders Stock:
The commission charge for handling stock, viz.: Collecting Accounts or Selling for Speculators or Hard Traders, shall be:

	Per head
Cattle	50 cents
Calves	17½ cents
Sheep, Lambs, Goats or Kids	10 cents
Hogs	10 cents

No transaction shall be made where commission charge is under 50 cents. Truck shipments arriving in time for any one day's market to be considered one consignment.

Table 13A. Annual Livestock Receipts by Truck and Rail at the Detroit Stockyards, by Classes, 1920-1938

	- By Rail -				- By Truck -				- Total Receipts -				Total by	Total by	Grand
	Cattle	Calves	Sheep	Hogs	Cattle	Calves	Sheep	Hogs	Cattle	Calves	Sheep	Hogs	Rail	Truck	Total
1920	111103	96063	286772	414443	7652	3006	9429	16420	118755	99069	296201	430863	908381	36507	944888
1921	100018	87240	323858	333307	5748	4079	14435	20060	105766	91319	338293	353367	844423	44322	888745
1922	116027	116662	316685	399653	9535	7000	26121	28377	125562	123662	342806	428030	949027	71033	1020060
1923	113237	122970	249335	486657	13364	11671	38539	42359	126601	134641	287874	529016	972199	105933	1078132
1924	113282	136742	323761	497257	15103	16558	56015	51463	128385	153300	379776	548720	1071042	139139	1210181
1925	110353	136872	293940	372495	24883	28448	69620	59010	135236	165320	363560	431505	913660	181961	1095621
1926	102235	132250	296998	340323	30293	38372	89685	81437	132528	170622	386683	421760	871806	239787	1111593
1927	84978	121760	339935	392088	41055	45322	139185	120243	126033	167082	479120	512331	938761	345805	1284566
1928	81611	110672	284481	311763	47537	55817	165264	156030	129148	166489	449745	467793	788527	424648	1213175
1929	75118	95964	291218	233030	58867	73848	238411	174807	133985	169812	529629	407837	695330	545933	1241263
1930	62157	94779	262074	113368	68574	102370	304332	138397	130731	197149	566406	251765	532378	613673	1146051
1931	40092	82084	211090	68115	67658	138318	326089	136005	107750	220402	537179	204120	401381	668070	1069451
1932	21756	57872	170658	49612	76936	154669	349523	146271	98692	212541	520181	195883	299898	727399	1027297
1933	18440	32519	110156	34428	81793	146682	361872	223576	100233	179201	472028	258004	195543	813923	1009466
1934	35692	36938	94025	30032	112778	157713	355132	174530	148470	194651	449157	204562	196687	800153	996840
1935	43991	23619	57298	13559	128028	126863	280593	115036	172019	150482	337891	128595	138467	650520	788987
1936	54002	18770	56762	13313	122059	114966	346397	179662	176061	133736	403159	192975	142847	763084	905931
1937	49736	18662	42653	12538	161663	130325	338689	224440	211399	148987	381342	236978	123589	855117	978706
1938	24209	11513	38845	5790	151369	113055	337868	183946	175578	124568	376713	189736	80357	786238	866595

Table 24A. Destinations of Carlot Shipments of Livestock from Michigan, by States, 1937

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals	Percent
Connecticut								2					2	0.1
Illinois	5		4			1	1	1			2		14	0.4
Maryland	4	1	5	2	5	1						3	21	0.6
Massachusetts	34	9	20	9	6		2	2	1	5	13	9	110	3.1
Minnesota					1								1	*
Missouri		2					2						4	0.1
New Jersey	131	87	113	88	82	37	29	31	33	51	79	101	862	24.4
New York	283	248	251	230	159	101	76	62	77	173	228	210	2098	59.4
Ohio	12	20	14	7	11	8	19	7	11	14	5	7	135	3.8
Pennsylvania	18	17	29	23	15	6	6	10	14	17	18	16	189	5.3
Wisconsin								1					1	*
Others(1)	14	2	16	11	13	7	7	7	1	4	6	9	97	2.7
Totals	201	386	452	370	292	161	142	123	137	264	351	355	3534	100.0

*Less than 0.05%

(1)May include states listed above in cases where final destination of shipment was unknown.

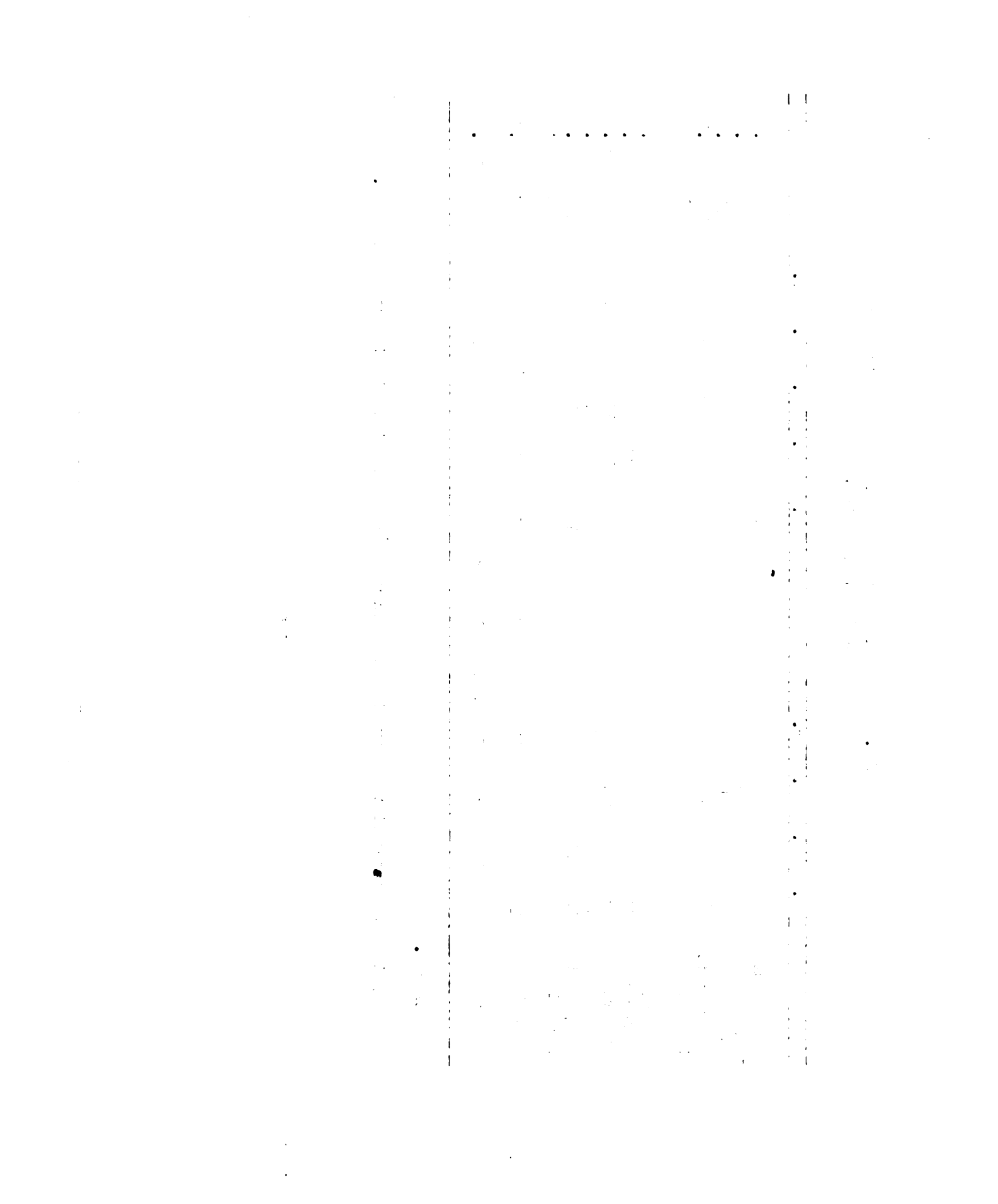


Table 25A. Sources of Carlot Receipts of Livestock in Michigan, 1937

Shipping Point	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals	Percent
Colorado													4	0.1
All Points								2	2					
Illinois														
Chicago	289	202	163	189	162	142	181	139	214	176	193	287	2337	32.8
E. St. Louis	11				2	32		1		16			64	0.9
Other Points	18	17	18	12	6	6	5	8	10	35	20	17	172	2.4
Indiana														
Indianapolis	70	51	73	91	78	106	72	97	139	54	86	42	959	13.5
Other Points		2	3	2	1	1	1	1	4	3	9	3	30	0.4
Iowa														
Sioux City	32	5	33	13	6	3	12	20	66	48	72	25	335	4.7
Other Points	2	3	1		3	1			10	12		5	37	0.5
Kansas														
All Points								2	6	4			12	0.1
Kentucky														
All Points	12	8	1		4	48	59	73	40	7	3	1	256	3.6
Minnesota														
St. Paul	12	4	7	9	5	10	15	25	25	21	18		151	2.1
Missouri														
Kansas City	3	14	4		7	26	16	103	63	66	39	107	448	6.3
Other Points	2		1	1	4	2	14	18	28	23	19	12	124	1.7
Nebraska														
Omaha	35	32	13	16	18	55	99	88	241	124	75	31	827	11.6
New Mexico														
All Points										3			3	*
New York														
All Points			1										1	*
North Dakota														
All Points								2					2	*
Ohio														
All Points	48	23	28	13	2	11	9	5	25	9	12	3	188	2.6
Oklahoma														
Oklahoma City	1		2	5	9	56	66	79	60	38	24	20	360	5.0
Other Points								2	1				3	*
South Dakota														
Sioux Falls	6	3	6	3	4	2	6	12	33	23	11	25	134	1.9
Texas														
All Points		1				1		5					7	0.1
Wisconsin														
All Points			2										2	*
All Other Points[1]	20	17	20	39	55	59	50	85	116	122			674	9.5
Totals	561	382	375	394	368	561	605	767	1083	784			7130	100.0

*Less than 0.05%.

1. May include additional shipments from points listed above in cases where it is impossible to trace loading points. Greatest percentage of these shipments are from west of Missouri River.

Table 28A. Bureau of Child Welfare in Michigan, 1929.

Districts	Total Population	Percent
Total		
Calhoun Co.		
Ann Arbor		
Battle Creek		
Benton Harbor		
Coldwater		
Dowagiac		
Hillsdale		
Jackson		
Kalamazoo		
Lansing		
Marshall		
Monroe		
Niles		
Paw Paw		
Pontiac		
Port Huron		
Romeo		
St. Clair Co.		
St. Joseph Co.		
Three Rivers		
Wayne Co.		
Detroit		
Ecorse		
Grosse Pointe		
Hamtramck		
Highland Park		
Inkster		
River Rouge		
Wyandotte		
Washtenaw Co.		
Ypsilanti		
Ypsilanti Twp.		
Ann Arbor		
Ann Arbor Twp.		
Saginaw Co.		
Saginaw		
Saginaw Twp.		
Bay City		
Bay City Twp.		
Essexville		
Kent Co.		
Grand Rapids		
Grand Rapids Twp.		
Kentwood		
Wyoming		
Wyoming Twp.		
Muskegon Co.		
Muskegon		
Muskegon Heights		
Muskegon Twp.		
Norton Shores		
Roosevelt Park		
Ottawa Co.		
Holland		
Zeeland		
Allegan Co.		
Allegan		
Otsego		
Plainwell		
Van Buren Co.		
Bangor		
Berrien Co.		
Benton Harbor		
Benton Harbor Twp.		
Bridgman		
Buchanan		
Eau Claire		
Galien		
Niles		
Niles Twp.		
Royalton		
St. Joseph		
St. Joseph Twp.		
Stevensville		
Three Oaks		
Watervliet		
Watervliet Twp.		
Cass Co.		
Dowagiac		
Dowagiac Twp.		
Edwardsburg		
Cassopolis		
Vandalia		
Jackson Co.		
Jackson		
Jackson Twp.		
Blackman Twp.		
Grass Lake		
Grass Lake Twp.		
Michigan Center		
Parma		
Spring Arbor		
Spring Arbor Twp.		
Concord		
Lenawee Co.		
Adrian		
Adrian Twp.		
Blissfield		
Blissfield Twp.		
Clinton		
Deerfield		
Hudson		
Hudson Twp.		
Morenci		
Morenci Twp.		
Tecumseh		
Tecumseh Twp.		
Monroe Co.		
Monroe		
Monroe Twp.		
Dundee		
Dundee Twp.		
Ida		
Ida Twp.		
Petersburg		
Raisinville Twp.		
Milan		
Milan Twp.		
Oakland Co.		
Pontiac		
Pontiac Twp.		
Auburn Heights		
Birmingham		
Bloomfield Twp.		
Clarkston		
Farmington		
Farmington Twp.		
Ferndale		
Hazel Park		
Huntington Woods		
Keego Harbor		
Lake Orion		
Lake Orion Twp.		
Madison Heights		
Northville		
Northville Twp.		
Novi		
Novi Twp.		
Oak Park		
Orchard Lake		
Orchard Lake Twp.		
Oxford		
Oxford Twp.		
Rochester		
Rochester Twp.		
Royal Oak		
Royal Oak Twp.		
Southfield		
Southfield Twp.		
Troy		
Troy Twp.		
Waterford		
Waterford Twp.		
West Bloomfield		
West Bloomfield Twp.		
Wixom		
Wixom Twp.		
Ottawa Co.		
Holland		
Holland Twp.		
Zeeland		
Zeeland Twp.		
Allegan Co.		
Allegan		
Allegan Twp.		
Otsego		
Otsego Twp.		
Plainwell		
Plainwell Twp.		
Van Buren Co.		
Bangor		
Bangor Twp.		
Berrien Co.		
Benton Harbor		
Benton Harbor Twp.		
Bridgman		
Buchanan		
Buchanan Twp.		
Eau Claire		
Eau Claire Twp.		
Galien		
Galien Twp.		
Niles		
Niles Twp.		
Royalton		
Royalton Twp.		
St. Joseph		
St. Joseph Twp.		
Stevensville		
Stevensville Twp.		
Three Oaks		
Three Oaks Twp.		
Watervliet		
Watervliet Twp.		
Cass Co.		
Dowagiac		
Dowagiac Twp.		
Edwardsburg		
Edwardsburg Twp.		
Cassopolis		
Cassopolis Twp.		
Vandalia		
Vandalia Twp.		
Jackson Co.		
Jackson		
Jackson Twp.		
Blackman Twp.		
Grass Lake		
Grass Lake Twp.		
Michigan Center		
Michigan Center Twp.		
Parma		
Parma Twp.		
Spring Arbor		
Spring Arbor Twp.		
Concord		
Concord Twp.		
Lenawee Co.		
Adrian		
Adrian Twp.		
Blissfield		
Blissfield Twp.		
Clinton		
Clinton Twp.		
Deerfield		
Deerfield Twp.		
Hudson		
Hudson Twp.		
Morenci		
Morenci Twp.		
Tecumseh		
Tecumseh Twp.		
Monroe Co.		
Monroe		
Monroe Twp.		
Dundee		
Dundee Twp.		
Ida		
Ida Twp.		
Petersburg		
Petersburg Twp.		
Raisinville Twp.		
Milan		
Milan Twp.		

Table 26A. Location of Livestock Shipping Associations by Counties, 1930 and 1939

County	Town	County	Town
Alcona:	Mikado	Eaton:	Bellevere
			Charlotte
Allegan:	Hamilton*		Eaton Rapids
	Hopkins		Grand Ledge
	Martin		Mulliken
	Plainswell		Sunfield
Arenac:	Sterling	Genesee:	Flushing
Barry:	Delton	Gladwin:	Gladwin
	Doster		
	Freyport	Gd. Traverse:	Traverse City
	Hastings		
	Middleville	Gratiot:	Ashley
	Nashville*		Breckenridge
			Forest Hill
Branch:	Batavia*		Ithaca
	Bronson*		Middleton
	Coldwater		St. Louis
	Quincy*		
		Hillsdale:	Allen*
Calhoun:	Albian		Hillsdale
	Battle Creek		Litchfield
	Homer		Montgomery
	Marshall		North Adams*
	Tekansha		Pittsford
			Prattville
Cass:	Cassopolis		Reading
	Dawagiac*		Waldson
	Jones		
	Marcellus	Huron:	Bad Axe
			Caseville
Charlevoix:	Charlevoix		Kinde
			Owendale*
Chippewa:	Rudyard		Pigeon*
	Sault St. Marie		Ruth
Clare:	Clare	Ingham:	Haslett
	Farewell		Holt
	Harrison		Mason
			Webberville
Clinton:	Elsie		Williamston*
	Fowler		
	Riley**		
	St. Johns		

Table 26A (Continued).

County	Town	County	Town
Ionia:	Belding	Montmorency:	Lewiston
	Clarkesville		
	Ionia	Newaygo:	Fremont
	Lake Odessa*		White Cloud
	Pewamo		
	Portland	Oakland:	Ortinville
	Saranac		
		Ogemaw:	Prescott
Iosco:	Whittemore		West Branch*
	Beal City**		
		Osceola:	Evart*
Isabella:	Mount Pleasant		Hersey
	Shepherd		Leroy
	Weidman		Marion*
			Reed City**
Jackson:	Concord*		
	Parma	Ottawa:	Holland
Kalamazoo:	Schoolcraft	Saginaw:	Chesaning
			Hemlock*
Kent:	Lowell		Merrill
	Sparta*		
		St. Joseph:	Burr Oak*
Lapeer:	Metamora		Centerville
			Constantine
Lenawee:	Blissfield		Sturgis
	Deerfield		Three Rivers
	Hudson		White Pigeon
	Onsted		
		Samilac:	Croswell
Livingston:	Fowlerville		Decker
			Deckerville
Luce:	McMillan		Marlette
			Minden*
Mason:	Scottsville		Snover
			Watertown
Mecosta:	Remus		
	Stanwood	Shiawassee:	Laingsburg
			Lennon
Midland:	Coleman		Morrice*
			Owasso
Montcalm:	Amble		Perry
	Butternut		
	Carson City	Tuscola:	Akron*
	Greenville		Caro*
	Lakeview		Cass City
	Stanton		Colling
	Trufant		Unionville
	Vickeryville	Washtenaw:	Manchester
	Wyman		

*Associations existing in both 1930 and 1939.
**Associations existing in 1939 but not in 1930.

Table 29A. Location of 103 Packing Houses, by Counties, 1939*

County	Town	County	Town
Allegan:	Hopkins	Lenawee:	Blissfield
	Plainwell		Hudson
	Wayland		
		Marquette:	Marquette
Bay:	Bay City - 2		
		Mason:	Ludington
Berrien:	Benton Harbor		
	Buchanan	Menominee:	Menominee
	Niles		
		Monroe:	Milan - 2
Branch:	Coldwater		Monroe
Calhoun:	Battle Creek	Muskegon:	Muskegon - 3
Clinton:	Bath	Oakland:	Pontiac
	Maple Rapids		
	Ovid	Ottawa:	Grand Haven - 2
			Holland - 2
Genesee:	Fenton		Zeeland - 4
	Flint		
		Saginaw:	Chesaning
Ingham:	Holt		Saginaw
	Leslie		
		St. Clair:	Smiths Creek
Iron:	Iron River		
		St. Joseph:	Sturgis
Jackson:	Hanover		Three Rivers
	Jackson - 3		
		Shiawassee:	Owosso - 2
Kalamazoo:	Climax		Perry
	Kalamazoo - 3		
	Vicksburg	Washtenaw:	Ann Arbor - 2
Kent:	Cedar Springs	Wayne:	Detroit - 27
	Grand Rapids - 8		

* Data from Bureau of Animal Industry, Michigan Department of Agriculture.

Table 30A. Marketing Charges at Michigan Auction Markets

Item	Auction A	Auction B	Auction C	Auction D	Auction E	Auction F	Concensus
Hogs, Per Head	.25	.25	.25	.25	.25	.25 (Under $5)	.25 .15
Shoats & Feeder Pigs Under 60#		.15	.15	.15		.15 (Over $5)	
Shoats & Feeder Pigs Over 60#						.20 (Over $50 at 2%)	
Sow & Pigs		1.00	1.00	1.00	1.00	1.00	1.00
Boars, Bred Sows		.50	.50	.50	.50	.50	.50
Roughs & Stags Over 350#	.50	.50	.50	.50	.50	(Over 300#) .50	.50
Roughs & Stags Under 350#		.25	.25	.25	.25	(Under 300#) .25	.25
Cattle, Sold Singly	1.00	1.00	1.00	1.00	1.00	(Over $20) 1.00	1.00
Cattle, Sold 3 or more		.75	.75	.75		.75	.75
Cattle, Feeder, Under $15						.50	
Cattle, Feeder, $15 - $20						.75	
Cow and Calf		1.50	1.50	1.25	1.50	Minimum-4%, Basic 1.75	1.50
Veal Calf	.50	.50	.50	.50	.50	.50 (Under $5)	.50
Deacon Calf		.25	.25	.25	.25	.25 (Over $5)	.25
Deacon Calf						.50	
Dairy Cows	1.50					Minimum-4%, Basic 1.25 2% when over $50	
Bulls		1.00	1.00	1.00	1.00		1.00
Sheep and Lambs, per Head	.25	.25	.25	.25	.25	.25	.25
Horses, Up to $100		5%	5%	5%	5%	5%	5%
Horses, $100 or Over	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Single Deck Carload - Hogs		12.50	12.50	12.50		12.50	12.50
Double Deck Carload - Hogs		20.00	20.00	20.00		20.00	20.00
Single Deck Carload - Lambs		12.50	12.50	12.50		12.50	12.50
Double Deck Carload - Lambs		20.00	20.00	20.00		20.00	20.00
Car Cattle		18.00	18.00	18.00		18.00	18.00
Miscellaneous Items*		3-10%	3-10%	3-10%	3-10%	3-10%	3-10%
Insurance of Stock & Guaranteed Payment		1/2%	1/2%	1/2%	1/2%	1/2%	1/2%

*Varies with time necessary to sell.

APPENDIX B

EXHIBIT I.

Truckers

No.___Name_____P.O. Address_____County_____

1. No. trucks___. 2. Men per truck____. 3. Producer___dealer-trucker____.

for hire trucker_____. Volume of each if 2 or more_____

4. Tone rating_____value_____. 5. Years engaged in trucking livestock__

Months of operation during year_____

6. Method of obtaining business_____ 7. Other work - % of income from

trucking_____

8. No. of trips per week to each of following markets and best days at each:

From_____to terminal_____

From_____to auction_____

From_____to concentration yards_____

From_____to Detroit packers_____

From_____to Interior packers_____

From_____to others(name)_____

9. "Pick up" area_____

_____

10. If trucking for self:

	Cattle	Calves	Sheep	Hogs
% bought at farm				
% bought at local shipping points				
% bought at other places where_____				

11. If trucking for hire:

	Cattle	Calves	Sheep	Hogs
Rate Basis				
Charge to markets reached as: Detroit				
St. Johns				
Others (name)				

EXHIBIT I (Continued)

12. Average miles per round trip_____% of mileage empty_____

What commodities are hauled on return trips?_____

13. Kinds of stock handled and estimated volume of each per year:

Cattle_____Calves_____Sheep_____Hogs_____

14. % of hauling done for each of the following:

	Cattle	Calves	Sheep	Hogs
Producers				
Dealers				
Co-operatives				
Others (name)				

15. % sold or delivered to each of the following:

	Cattle	Calves	Sheep	Hogs
Local Dealers				
Co-operatives				
Interior packers (wholesalers)				
Terminal packers Detroit, Chicago, Toledo				
Terminal Cooperative Commission Firms				
Terminal Independent Commission Firms				
Auctions				
Concentration yards				
String Butchers				
Others (name)				

16. Why do you use the outlets indicated above?_____

% of farmers which instruct you through whom to sell_____

17. Losses in transit (% of value or amount per year)_____

18. Causes of loss in transit (death and cripples)_____

19. Are stock fed before loading____how long before loading_____

EXHIBIT I (Continued)

20. Chief difficulties in trucking each kind of stock: Calves_____

Cattle_____Sheep_____

Hogs_____Others_____

21. Suggestions for improving the facilities for truck delivery at various markets_____

22. What other changes in livestock trucking or trucking in general would benefit you?_____

23. Additional comments_____

_____

_____

EXHIBIT II

Producer Questionnaire

No. ____Name_____Address_____County_____

Size of farm you operate____acres. No. of acres in hay and pasture____.

1.

	Cattle	Calves	Sheep	Hogs
No. of head sold past year				
% sold thru Terminal market				
% sold thru Auction market				
% sold to concentration yards				
% sold to local dealers				
% sold to truckers at farm				
% sold to packers direct				
% sold to local butchers				

2. Why do you use the outlets shown above:_____

_____

3. Number of miles from farm to terminal market____:Auction market____:

Concentration Yards___:local dealer____:packing house___local Butcher__.

4. What % of livestock do you ship through local Cooperative Shipping Association_____.

5. What percentage of the livestock you sell at the terminal market (Detroit) is sold through the Cooperative Commission Firm? (Michigan Livestock Exchange)_____.

6. Percentage of livestock trucked to market by yourself___: Percentage hired trucked to market___: Percentage shipped by rail_____.

7. Do you direct hired truckers as to which market and commission firm to use for your livestock?_____. If not, do you allow them complete freedom to take the livestock where they wish?_____.

8. On what price information do you determine the probable sales value of your livestock? (Check one or more of the following: Central market prices__; local packer prices__; Concentration point prices__; Local Auction prices__; Local trader offers__; estimates of hired truckers__; None__.

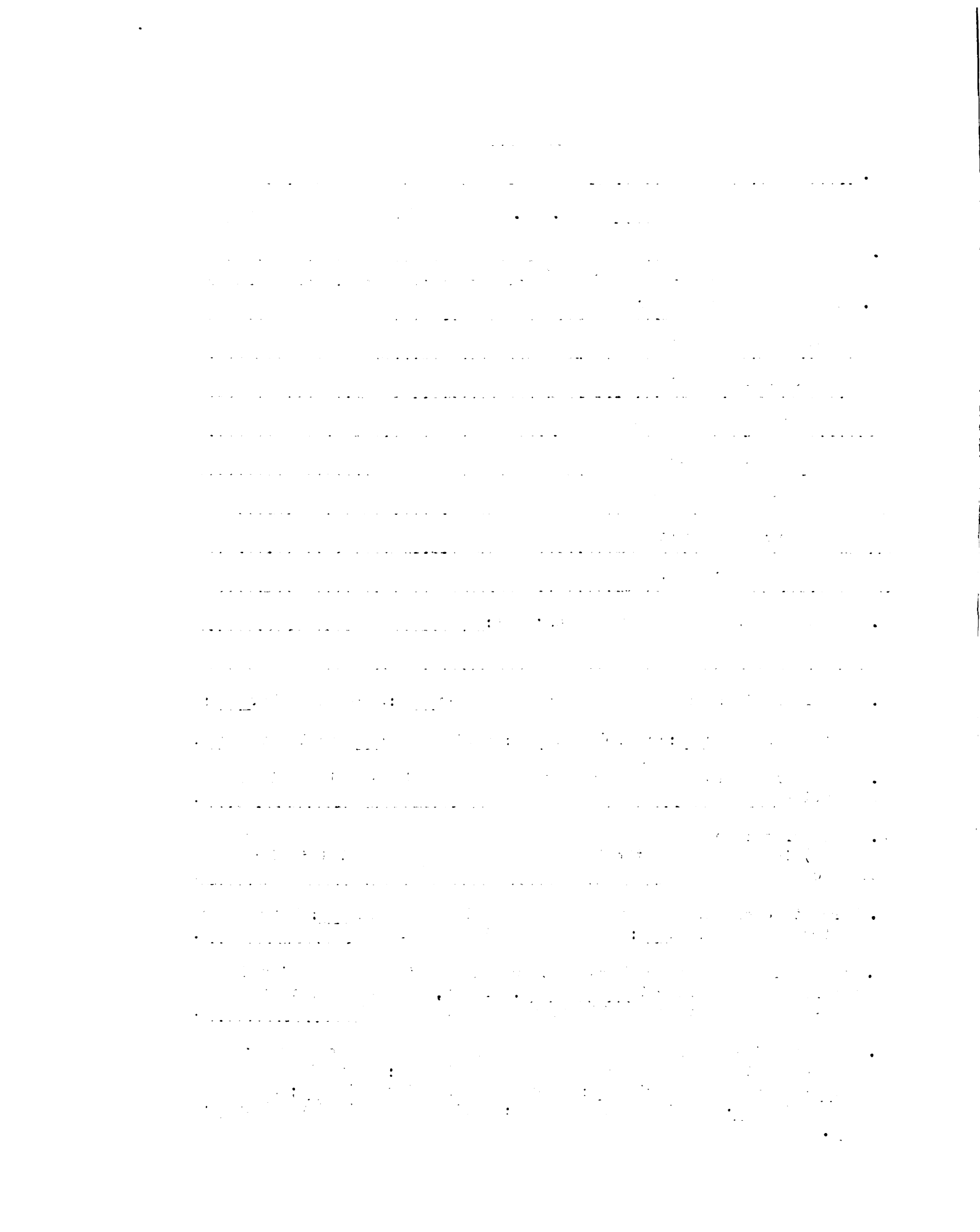


EXHIBIT II (Continued)

9. Do trucker buyers buy your best, medium, or poor grades of livestock ____, or all grades_____.

10. How does price by truck buyer compare with Detroit [redacted] other terminal) price?_____.
If comparison is made with terminal other than Detroit, specify which: Toledo, Chicago, Buffalo, (Other)_____.

11. Indicate below the number of head of breading or feeder stock you you usually purchase per year and the agencies from which you buy it:

_____Cattle_____

_____Sheep_____

_____Hogs_____

12. Do you prefer truck or rail shipment_____. Why_____

_____

13. What changes in truck or rail shipment would be valuable to you____

_____

14. Has livestock trucking changed the number or kinds of stock you produce_____. If so, what changes_____

15. Can you suggest any changes in the marketing system which would be of benefit to you._____

_____

16. Additional comments_____

_____

_____

[redacted]

'53