

AN ANALYSIS OF TRANSPORTATION AND MARKETING COSTS  
OF COUNTY LAMB MARKETING POOLS IN KANSAS

by

FRANK SHERMAN BURSON, JR.

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## INTRODUCTION

One of the main objectives of many ewe flock owners in Kansas has been to produce and market choice milk-fattened lambs. Since the average ewe flock is small\*, a single producer cannot sort out a large number of choice lambs when the earliest lambs are ready for market. This situation has made it impractical for farmers with ewe flocks to individually market their choice lambs when they were ready for market. To provide a practical method of marketing a small lot of choice lambs from a ewe flock, the County Agricultural Agents and other farm leaders have assisted sheep producers in several Kansas counties to organize county lamb marketing pools. The pools afforded a means whereby several sheep producers would provide enough marketable lambs to make a full truck or carload of lambs. This system also enabled the sheep producers to have the services of a competent lamb grader to sort their lambs for them; it enabled them to pool their transportation costs, and provided them an opportunity to sell as one consignment, thereby reducing the selling charges.

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\* An average farm ewe flock in Kansas is about 75 to 150 head of ewes, according to C. G. Elling, Extension Animal Husbandry Specialist, Kansas State College.

One of the benefits that sheep producers of Kansas have been striving for through the county lamb pools is to secure payment to the individual producer in more strict accordance with the quality of his product. This has been accomplished by selling lambs on a graded basis through the lamb pools. Such a benefit is not peculiar to the Kansas pools alone. This is one of the benefits that all cooperative livestock marketing associations have been striving to attain.

This particular study deals with transportation and marketing costs of the pools. In 1939, 1940, and 1941 there were 127,656 lambs shipped from Kansas through county lamb marketing pools. This study is made from the records covering shipments from seven Kansas counties for the years 1939 to 1941. The seven counties shipped 35,983 lambs during those three years.

The purpose of the study was to analyze the transportation, marketing and other charges of the county lamb pools, to determine the savings to members brought about by the pools and to point out the opportunity of additional savings to producers who use the pools.

#### SOURCE OF MATERIAL AND METHOD OF PROCEDURE

Data for the marketing charges of county lamb pools were obtained from the actual records of each lamb shipment. These records were made available through the courtesy of the County Agricultural Agents in Harper, Dickinson, Marion, Gray,

Barber, Kiowa, and Russell Counties.

The data from these counties were used because the counties represent a fair sample of the Kansas counties that usually made some lamb shipments through co-operative pools during the years 1939 to 1941. Dickinson and Harper were two examples of counties which operated large, well-organized pools that did their own home prorating of returns and marketing expenses. Gray and Marion were characteristic of counties that were also well organized and did their own prorating of returns and marketing expenses, but were only medium-sized pools. Barber and Russell were examples of counties that operated a pool entirely on a seasonal basis to enable producers to make up full truck loads or carloads of graded lambs for market. They had no organization and performed only the service of making shipping arrangements for those producers' lambs that had been graded by a representative of some commission firm. Each producer's lambs were handled as a separate consignment at the market. Kiowa county was an example of counties that had only a few ewe flock owners. Such counties had no local organization for marketing lambs, but occasionally the county agent assisted lamb producers in making a pooled shipment of graded lambs.

Transportation charges for L. C. L., single deck, and double deck shipments of lambs from the various shipping points to the public markets were obtained from the livestock agents of the Union Pacific and Santa Fe Railway Companies.

Commission charges for selling sheep and lambs at the public markets were obtained from the secretaries of the livestock exchanges of the Kansas City, St. Joseph, and Wichita livestock markets and yardage charges were obtained from the stockyard companies at these three markets.

The records of marketing charges for the county lamb pools were of two kinds. One was a record of the charges against each entire shipment, which was supported by a sheet showing the proration of expenses to each member shipper as determined by the county agent or a local association committee. The other was a set of records showing each member shipper's sales and charges as a separate consignment. The first type of record was available from counties in which the local association took the responsibility of prorating the charges. The second type of record was available from counties in which the commission firm handling the lambs was instructed to consider each member's lambs as a separate consignment and to prorate the transportation charges.

In analyzing the data, a complete record was made of the number and market weight of lambs sold by each member in each shipment, and the total market charges and home charges assessed against each member. A record was also made of the total charges of each shipment for transportation, commission, yardage, feed, insurance, and other market charges.

After the original data were obtained, each shipment of lambs was considered separately to make an analysis of transportation charges. This analysis was for the purpose of de-

termining the savings in transportation charges as compared to L. C. L. charges for the same weight of lambs and for determining the increase in transportation charges resulting from light-loading.

In cases where trucks were the means of transportation an analysis was made to determine the comparative costs of truck and rail charges and to determine the savings in transportation cost as compared to L. C. L. charges for the same weight of lambs. Each shipment of lambs was also considered separately to determine what the commission charges would have been if each member's lambs had been sold as a separate consignment. This was done by using the schedule of commission charges and determining the commission charges for that number of lambs at the market concerned.

The final analysis consisted of a compilation of the data obtained after the analysis of transportation and marketing charges had been made, for the purpose of determining the combined savings in transportation and marketing costs that were available through county lamb pools. For some shipments the county lamb pools actually had higher transportation and marketing charges than would have been the case if each member had shipped his lambs individually L. C. L. and sold them as a single consignment. The savings for such cases were shown as a minus quantity and average savings per county took these into account.

## REVIEW OF LITERATURE

Only a few studies were found wherein any analysis was made of the transportation and marketing costs of county sheep and lamb pools. The most complete study covered the costs of operating county sheep and lamb pools in West Virginia for the years 1924 to 1929, and covered an analysis of transportation costs for 1927, 1928, and 1929 (Armentrout, 1932).

The West Virginia pools were county cooperative livestock shipping associations that handled all types of livestock, but were set up principally to market sheep and lambs. The aims of the West Virginia Associations were (a) to return to the producer as large a porportion of the terminal market dollar as possible and (b) to improve the quality of the livestock in the state. These pools were attempting to reduce marketing costs to the minimum in keeping with the service offered, and to increase the sales price to the maximum in keeping with the quality of the animals sold. The West Virginia Associations were organized on the County Unit plan. Paid up county Farm Bureau membership constituted membership in the association. Non-Farm Bureau members were charged 10 cents per hundredweight above the regular commission charges.

The average costs per hundredweight for marketing sheep and lambs through the county associations as found in the West Virginia study are shown in Table 1.



Sheep and lambs shipped from counties in West Virginia were marketed at Pittsburgh, Pennsylvania, Jersey City, New Jersey, Baltimore, Maryland, and Lancaster, Pennsylvania. The yardage charges at these markets were as follows: Pittsburgh, seven cents per head, Jersey City, eight cents per head, Baltimore, eight cents per head with a maximum of \$20 per car, and Lancaster, five cents per head. Selling commissions were: 25 cents per head with a maximum of \$15 per single deck and \$25 per double deck at Pittsburgh, 15 cents per head at Jersey City, two percent of the gross sales at Baltimore, and 15 cents per head at Lancaster. The local manager of each of the associations was paid on a commission basis. In Barbour, Harrison, Jackson, Nicholas and Roane counties the managers' commissions were seven cents per head for a car made up of sheep and lambs from a single owner and 14 cents per head if the car was made up of sheep and lambs from more than one owner. In Greenbriar and Wirt counties the managers' commissions were five cents per head on a single owner car of sheep and lambs and 10 cents per head if the car was made up of sheep and lambs from more than one owner. In Braxton and Pocahontas counties, the managers' commissions were eight cents on single owner cars and 15 cents on multiple owner carloads.

While differences in distance to market caused some variation in the transportation charges shown in Table 1, there were three other factors which caused increased trans-

Table 1. Average marketing and transportation costs of county sheep and lamb shipping associations in West Virginia (Armentrout, 1932).

County	:Ydg.:	:Feed:	:Selling: :comm.:	:Total :terminal:	:Mgrs.: :comm.:	:Ins.: :fund:	:Local:	:Total :	:Total :home :& mkt.:	:Trans.:	:Total :trans. :& mkt.*
				:mkt. :chg.			:car :exp.	:home :chg.			:chg.
Barbour	.10	.004	.30	.40	.09	.12	.01	.22	.62	1.02	1.64
Braxton	.12	.03	.27	.42	.14	.06	.12	.22	.64	.56	1.20
Greenbriar	.11	.05	.22	.38	.07	.02	-	.09	.47	.54	1.01
Harrison	.11	.05	.23	.39	.13	.04	.07	.24	.63	.49	1.12
Jackson	.11	.05	.18	.34	.14	.06	.02	.22	.56	.48	1.04
Nicholas	.13	.06	.25	.44	.12	.05	.11	.28	.72	.69	1.41
Pocahontas	.10	.04	.19	.33	.12	.05	.01	.18	.51	.65	1.16
Roane	.11	.06	.17	.34	.11	.08	.03	.22	.56	.46	1.02
Wirt	.10	.04	.22	.36	.10	.08	.05	.23	.59	.52	1.11

\* The above table includes everything except (a) insurance on the terminal market, which is 15 cents per car, (b) shrinkage, and (c) expense of getting animals to the shipping point, which is borne by the owner.

portation costs. These factors were listed as: (a) small volume of business, (b) inability to load up to the minimum weight set by the railroads, and (c) poor management (Armentrout, 1932). The minimum weights set by the railroads were 18,000 pounds for double deck cars and 10,000 pounds for single deck cars. Table 2, which was taken from the study, shows evidence of light-loading.

The minimum freight rates from Barbour County to the markets were 36.5 cents, from Braxton County 45 to 46.3 cents, from Greenbriar County 42.7 to 47.5 cents, from Pocahontas County 47.5 cents, from Roane County 35.0 cents, and from Wirt County 34.5 cents. Minimum freight rates from the other counties were not reported. Evidence of increased transportation costs due to poor management and light loading was shown by the fact that Barbour County paid \$1.02 per hundredweight for truck transportation when minimum rail charges were only 36.5 cents per hundredweight; Wirt County paid transportation costs of 17.5 above the minimum due to light single deck loads while Braxton County paid only 9.7 to 11 cents above the minimum because loads were more nearly filled to the minimum.

A further analysis of the transportation costs of several of the county associations in West Virginia showed the amount which transportation costs exceeded the minimum transportation rates established by the railroad companies.

Table 2. Average weight (in pounds) of carloads of sheep and lambs shipped  
(Armentrout, 1932).\*

	Braxton	Greenbriar	Harrison	Jackson	Nicholas	Pocahontas	Roane	Wirt
Single deck	9,835	8,470	8,765	8,377	8,940	9,493	9,265	7,946
Double deck	16,000	17,123	14,707	13,262	-	15,430	15,355	-

\* Barbour County sheep and lambs were hauled by truck.

Table 3 shows transportation costs for sheep and lambs marketed, by years, compared with costs if livestock had been transported at minimum freight rates by railroads.

The transportation cost study shown in Table 3 indicated that lack of volume and light-loading increased the transportation costs by a substantial amount. The study further showed that truck transportation involved much greater cost than transportation by rail. From statements explaining expenses omitted in Table 1, it is assumed that the trucks did not pick up lambs at the farms, but at the shipping point in the same manner as rail shipments.

Thompson (1926) found that, of the total marketing and transportation expenses of shipping associations in Iowa, 54.84 percent constituted transportation charges and another 28.42 percent were terminal market charges, while 16.74 percent were home charges. Ashby (1927) found that local associations in Minnesota spent 52.87 percent of the total transportation and marketing charges for freight and another 29.05 percent for terminal market charges, with 18.08 percent for home charges. The principal difference between the figures for the Iowa and Minnesota associations were in charges for a local manager and for a home insurance fund. Less than one-half of the home charges for the Iowa associations were for the local manager's commission and more than one-third of home charges were for an insurance fund to take care of losses in transit (Thompson, 1926). Of the total home

Table 3. Increase in transportation costs of county sheep and lamb shipping associations in West Virginia resulting from light-loading (Armentrout, 1932).

County	Year	No. of animals	Mkt. weight (lbs.)	Total trans. cost (\$)	Trans cost per cwt. (¢)	Min. Frt. per DD car (¢/cwt.)	Total cost at minimum rate (\$)	Inc. trans. cost above min. rate (\$)	Per cwt. (¢)	% Inc.
Braxton	1927	3512	230,190	1266.83	55.0	45.0	1046.53	220.30	9.5	21.0
	1928	3368	210,210	1158.95	55.1	45.8	964.81	194.14	9.3	20.0
	1929	453	28,190	176.31	62.5	46.3	130.78	45.53	16.2	34.8
	Average				55.5	45.7			9.8	21.4
Greenbriar	1927	1249	88,280	446.38	50.6	47.5	419.33	27.05	3.1	6.4
	1928	1463	96,545	531.65	55.0	47.5	458.59	73.06	7.5	15.9
	1929	1025	72,345	309.07	42.7	42.7	309.07	0	0	0
	Average				47.2	44.5			3.6	7.6
Pocahontas	1927	1503	103,490	677.68	65.0	47.5	491.58	186.10	17.5	37.8
	1928	360	22,580	211.86	94.0	47.5	107.25	104.61	46.5	97.5
	1929	2013	129,928	766.05	58.9	47.5	617.16	148.89	11.4	24.1
	Average				64.3	47.5			16.8	35.4
Roane	1927	483	31,600	126.43	40.0	35.0	110.60	15.83	5.0	14.3
	1928	983	58,820	302.25	51.3	35.0	206.16	96.09	16.3	46.6
	1929	1346	80,785	376.80	46.6	35.0	282.74	94.14	11.6	33.0
	Average				46.6	35.0			11.6	33.0
Wirt	1927	1163	73,270	373.97	51.0	34.5	252.78	121.19	16.5	47.9
	1928	1075	64,780	369.76	57.0	34.5	223.49	146.27	22.5	65.0
	1929	1306	83,025	412.37	49.6	34.5	286.44	125.93	15.1	43.9
	Average				51.0	34.5			16.5	47.9
Barbour*	1928	212	14,531	167.57	115.3	36.5	53.03	114.54	78.8	216.0
	1929	618	42,495	414.96	97.6	36.5	156.29	258.67	60.8	165.0
	Average				102.1	36.5			65.6	178.2

\* Shipments made by truck.

charges for the Minnesota associations more than three-fourths were for the local manager (Ashby, 1927).

Since distances from market were not given by either Thompson (1926) or Ashby (1927), the percent of total charges for freight is not particularly significant; however, Thompson found that "in given associations, variations of expense due to underloading not infrequently were 10 to 15 cents per hundredweight, and in extreme cases have reached 30 cents." O'Mealey (1927) reported that 265 Michigan shipping associations took care of light loads by making a flat rate charge for shipping and marketing charges.

The principal terminal charges of cooperative livestock shipping pools were commission charges. Since most commission firms must charge more per head for a small consignment than a large one, this charge can be reduced by making up large cooperative consignments and prorating the expense at home. Thompson (1926) stated that "Costs would be reduced slightly and proceeds more equitably distributed if there were a more general use of home prorating. Commission agencies at Central Markets must charge enough to cover the cost of this practice, which ranges from \$2 to several dollars per car."

Previous studies of transportation and market charges for local livestock shipping associations indicated that volume was an important factor in reducing costs and providing efficient operations. Dvoracek (1931) stated that "most of the internal difficulties of shipping associations may be

traced directly or individually to the small volume of business handled by the average association...Volume is necessary for the efficient operation of shipping associations."

#### DEFINITION OF TERMS

County lamb marketing pool (County Lamb Pool) refers to a voluntary association of sheep producers who ship their lambs to market in the same conveyances.

Consignment refers to a lot of livestock that is sold under a single ownership through a commission firm at a public market.

Rail lambs means lambs arriving at the market via railroad.

Truck-ins refers to lambs arriving at the market via truck.

Transportation cost refers to cost of transporting lambs from a local shipping point to the market. It does not include cost of transporting lambs from farm to the local shipping point.

Light-loading refers to the weight of a load of lambs which is less than the minimum weight charged for by the railroad company.

L. C. L. refers to less than a carload of livestock, billed in accordance with less than carload rates and



privileges.

Commission charges means those charges made by a commission firm at a market for selling livestock.

Marketing costs (Selling costs) refer to all commissions, yardage, feed, insurance and other cost items assessed at the terminal market against the gross sales of lambs, plus any charges made at the local shipping point for marking and loading the lambs.

Prorating refers to the allocation of transportation and marketing charges against gross sales on the basis of the number and weight of lambs consigned by each individual.

Home charges refers to charges made for assistance in marketing and loading the lambs at shipping points.

#### LIMITATIONS OF STUDY

In making this study it would have been desirable to have had a method of determining what all the charges for each item of marketing expense would have been if the individual member's lambs had been sold separately. Unfortunately, there was no accurate method for determining what the charges would have been for feed and yardage if the lambs had been sold separately. There were definite yardage charges for rail lambs and for trunk-ins, but there was no way of knowing how each lot of lambs might have been transported if it had been shipped to market individually. In the case of feed charges,

it was necessary to assume that the lambs would have used the same quantity of feed if they had been sold individually as if they had been in the carload consignment from a county lamb pool. In actual practice, however, shippers who have only a small lot of lambs often do not feed them at the market before selling. In this particular study no analysis of yardage and feed costs was made. However, both items of cost were included in total transportation and marketing costs when considering the saving made by lamb pools.

In considering the transportation costs of cooperative pooled shipments as compared to costs for transporting each individual's lambs, it was not possible to know what the cost might have been if the lambs had been sent to market individually, because the method of transportation that would have been used by an individual was unknown. For purposes of comparing costs, the L. C. L. rail charge was used to figure what transportation costs would have been if each individual's lambs had been sent to market separately. This figure probably would be as low as any trunk figure that might be used.

In analyzing the savings in transportation costs for the shipments by lamb pools it was necessary to use the market weight of the lambs instead of the transportation weight. For rail lambs there was a slight difference between market weight and transportation weight. Some of the records included both weights and an analysis showed that by using market weights the error was generally less than one percent.

Some difficulty was encountered in generalizing in regard to savings in commission charges for pooled shipments. Two significant factors that caused the difficulty can be pointed out. The first factor was that commission charges per head are based on units of 300 head. The commission charge for each additional head tended to decrease as the number of head in the consignment increased up to 300. However, the charge for the second 300 head or any proportion of the second 300 head was no lower than for the first 300 head, or the corresponding proportion of the first 300 head. This also applied to other multiple units of 300 head. Thus, the average commission charges per head were lowest for 300 head or multiple units of 300 head. Also, the average commission charge per head was lower for slightly less than 300 head or multiple units thereof than for slightly more than 300 head or multiple units thereof. If, by pooling, the total consignment were slightly in excess of 300 head or a multiple unit thereof, the saving was smaller than if the pooled consignment resulted in slightly less than 300 head or a multiple unit thereof. In fact, it is possible, but not probable, that a pooled consignment could result in a higher average commission charge for some individuals than if they had not pooled. The second factor causing difficulty was that the saving on commission charges varied not only with the size of the pooled consignment but also with the number of individuals represented in the consignment and the number of

lambs in each individual's consignment. Thus, a greater saving resulted from a given number of lambs in the pooled consignment, if that consignment consisted of several individuals each with a relatively small number of lambs than if it consisted of a few individuals each with a relatively large number of lambs (Table 4 and Table 5).

One other cost item that could not be analyzed for this study was service costs. Many of the lamb pools had the services of a competent representative of a commission firm to grade the lambs. In most cases there was no charge for this service because the commission firm performing the service received the consignment; however, there were a few cases where a charge of five cents per head was made. In considering this situation, if each member's lambs had been marketed individually it was impossible to know whether this service would have been needed, and if so what charge should have been made for it. This study disregarded the grading service. However, since most of the associations were set up to provide a grading service to the members there is little doubt that it had some value.

While the above factors limited the scope of the study, the records available did provide accurate data on transportation and marketing costs of the lamb pools, and the schedules of commission charges for the markets used made it possible to obtain an accurate determination of commission charges to apply to any specific individual consignment.

Table 4. Theoretical savings in commission charges by selling through a pooled consignment when each member has a relatively large number of lambs.

Member:	Number of lambs :	Commission charge if sold outside of pool :	Commission charge if sold through pool :	Savings in commission charges by selling through pool :
		: Av. per hd. : Total	: Av. per hd. : Total	: Av. per hd. : Total
		: (¢) : (\$)	: (¢) : (\$)	: (¢) : (\$)
A	150	9.06 13.60	5.36 8.05	3.70 5.55
B	150	9.06 13.60	5.36 8.05	3.70 5.55
Total	300	- 27.20	- 16.10	- 11.10

Table 5. Theoretical savings in commission charges by selling through a pooled consignment when each member has a relatively small number of lambs.

Member:	lambs	:Number:	Commission charge	: Commission charge	: Savings in commission		
		: of :	: if sold outside	: if sold through	: charges by		
		: of pool	: pool	: pool	: selling through pool		
		:Av. per hd.:	Total	:Av. per hd.:	Total	: Av. per hd.:	Total
		: (¢)	: (\$)	: (¢)	: (\$)	: (¢)	: (\$)
A	30	18.33	5.50	5.37	1.61	12.96	3.89
B	30	18.33	5.50	5.37	1.61	12.96	3.89
C	30	18.33	5.50	5.37	1.61	12.96	3.89
D	30	18.33	5.50	5.37	1.61	12.96	3.89
E	30	18.33	5.50	5.37	1.61	12.96	3.89
F	30	18.33	5.50	5.37	1.61	12.96	3.89
G	30	18.33	5.50	5.37	1.61	12.96	3.89
H	30	18.33	5.50	5.37	1.61	12.96	3.89
I	30	18.33	5.50	5.37	1.61	12.96	3.89
J	30	18.33	5.50	5.37	1.61	12.96	3.89
Total	300	-	55.00	-	16.10	-	38.90

## ANALYSIS AND INTERPRETATION OF DATA

Savings in Transportation Costs  
by Shipping Through County Lamb Pools

Records of the transportation costs of the seven lamb marketing pools studied showed that five pools used railroads exclusively for transportation and two used trucks exclusively. The Dickinson, Harper, Marion, Gray, and Russell County pools used rail transportation, while Barber and Kiowa pools used truck transportation.

During the years under consideration in this study, less than carload freight rates were available to individuals who had only small lots of livestock to market. As one would expect, these rates were somewhat higher than full carload rates. However, they were not as high as single-deck car rates for sheep and lambs. Since one of the aims of the county lamb pools was to reduce shipping costs to the individual, an analysis was made of the transportation costs actually paid by the pool in comparison to the total transportation costs for each shipment if it had been shipped L. C. L.

Table 6 shows that in most cases there were no net savings in transportation costs through the pools compared to L. C. L. charges on the actual weight of the lambs. In fact,

the table indicates a net loss in transportation charges. However, by referring to Table 7, it is evident that in about one-half of the shipments from Dickinson, Harper, Marion, Gray, and Russell Counties there was a net saving through the pool. Light-loading had increased the freight rates for some of the loads until they were much greater than L. C. L. rates, which caused the county averages to show a net loss. Truck rates were high and Barber and Kiowa showed net losses for all shipments, as indicated in Table 9. Savings in transportation costs will not be an important factor in the lamb pools until such time as they can be managed so as to insure full carloads for all shipments or for a larger proportion of the shipments.

Table 6. Transportation savings effected by county lamb pools, 1939-1941.

County	:Transporta- :tion charges	:L. C. L. trans- :portation chgs. for :same lambs (\$)	:Saving in transpor- :tation chgs. by pool :Total (\$):% saving	
Dickinson	2384.10	2394.21	10.11	0.5
Harper	2343.41	2319.56	- 23.85	- 1.0
Marion	1113.37	1060.63	- 52.74	- 4.8
Gray	925.29	823.63	-101.66	-10.9
Russell	275.51	258.60	- 16.91	- 6.0
Barber	485.00	355.93	-129.07	-26.6
Kiowa	54.22	32.51	- 21.71	-38.7



Table 7. Record of each shipment by county lamb marketing pools, and a record of savings effected in marketing and transportation charges.

County and shipment	: Number : :ship- : :pers :	: Number : :lams :	: Weight : :of lamb : :(lb.) :	Savings effected by county lamb pools						
				: Transpor- : :tation :	: Commis- : :sion : : (\$)	: Other : :chgs. : : (\$)	: Total : :saving : : (\$)	: Saving : :per lamb : :(¢)	: Percent : :saving :	
Dickinson	1	10	91	7,610	0.02	7.75	0	7.77	8.5	13.3
	2	31	254	21,785	4.94	33.42	0	38.36	15.1	26.8
	3	46	397	29,940	6.53	53.65	0	60.17	15.2	28.9
	4	70	611	46,885	0.16	97.90	0	98.06	16.0	28.4
	5	57	505	35,160	- 0.64	81.76	0	81.12	16.0	30.8
	6	61	562	39,510	5.45	90.37	0	95.82	17.0	30.6
	7	54	648	46,975	0.38	83.25	0	83.63	12.9	24.0
	8	44	345	24,375	- 9.59	48.85	0	39.26	11.4	21.4
	9	36	310	26,660	1.73	41.55	0	43.28	14.0	23.4
	10	41	431	33,440	-10.03	57.60	0	47.57	11.0	19.2
	11	56	441	34,885	- 6.34	65.57	0	59.23	13.4	22.9
	12	75	982	74,720	- 0.06	126.50	0	126.44	12.9	24.0
	13	57	670	48,390	4.00	100.70	0	104.70	15.6	27.5
	14	13	105	7,865	0.00	9.05	0	9.05	8.6	14.1
	15	55	657	48,960	6.82	96.70	0	103.52	15.8	28.0
	16	39	493	37,640	0.68	71.62	0	72.30	14.6	28.3
	17	28	215	17,705	- 2.61	31.50	0	28.89	13.4	24.7
	18	12	187	16,730	- 4.99	21.91	0	16.92	9.0	15.1
	19	30	247	21,905	0.00	26.35	0	26.35	10.7	19.9
	20	66	925	71,745	17.95	119.30	0	137.25	14.8	28.9

Table 7 (cont.).

Dickinson	21	20	353	26,970	- 2.98	40.55	0	37.57	10.7	18.5
(cont.)	22	78	848	66,225	1.82	132.34	0	134.16	15.8	30.2
	23	46	460	36,100	- 3.24	66.90	0	63.66	13.9	25.0
	24	53	562	46,295	- 3.85	76.93	0	73.08	13.0	23.8
	25	13	123	11,050	- 0.84	12.29	0	11.45	9.2	16.5
	26	20	221	17,420	- 3.23	32.19	0	28.96	13.1	22.4
	27	21	422	33,360	8.03	41.38	0	49.41	11.7	23.2
Harper	1	30	350	30,720	6.91	42.05	-14.22	34.74	9.9	16.8
	2	56	570	45,300	10.83	84.04	-32.00	62.87	11.0	19.6
	3	34	354	26,665	- 5.42	46.45	-16.51	24.52	7.0	12.6
	4	107	1,083	77,500	18.23	157.15	-35.42	139.96	12.9	23.3
	5	32	348	23,910	-13.82	50.35	-14.56	21.97	6.3	11.6
	6	56	469	32,090	-17.43	75.47	-22.39	35.65	7.6	13.7
	7	25	267	20,890	5.82	34.68	-10.89	29.61	11.1	19.5
	8	32	278	20,875	4.83	43.47	-16.09	32.21	11.6	20.5
	9	64	765	54,085	- 7.99	102.60	-24.03	70.58	9.2	17.0
	10	62	555	39,505	5.19	88.16	-20.00	73.35	13.2	22.9
	11	78	712	53,020	-11.24	110.75	-28.00	71.51	10.0	17.4
	12	37	379	31,665	9.83	52.45	-18.00	44.28	11.7	19.1
	13	41	660	52,890	12.32	76.35	-20.86	67.81	10.3	18.9
	14	18	322	28,535	0.28	20.17	-16.54	3.91	1.2	2.2
	15	38	496	39,200	4.27	60.57	-16.10	48.74	9.8	17.7
	16	55	748	53,090	-11.03	90.94	-19.50	60.41	8.1	15.5
	17	65	682	47,050	- 0.90	100.50	-18.87	80.73	11.8	21.2
	18	71	759	55,065	- 5.00	103.92	-19.59	79.33	10.5	23.4
	19	37	387	28,120	-29.53	46.90	- 8.00	9.37	2.4	4.2

Table 7 (cont.).

Marion	1	19	173	13,700	-11.10	21.34	- 5.19	5.04	2.9	5.6
	2	48	602	42,340	16.33	93.60	-18.06	91.87	15.2	31.2
	3	42	390	27,610	- 3.04	56.90	-11.70	42.16	10.8	21.4
	4	39	382	26,625	-19.84	55.60	-11.46	24.30	6.4	12.7
	5	22	192	14,355	0.02	30.46	- 5.76	24.72	12.9	24.3
	6	21	235	18,070	- 0.65	35.15	- 7.05	27.45	11.7	22.5
	7	42	525	37,305	1.50	80.35	-15.75	66.10	12.4	25.2
	8	34	326	23,400	-10.76	55.70	- 9.78	35.16	10.8	20.4
	9	35	305	23,025	-11.35	54.40	- 9.15	33.90	11.1	21.2
	10	26	220	15,770	- 6.30	33.70	- 6.60	20.80	9.5	18.2
	11	27	230	16,755	- 4.29	36.80	- 6.90	25.61	11.1	21.4
	12	17	220	18,670	0.75	29.50	- 6.60	23.65	10.7	20.2
	13	35	522	38,850	1.84	57.45	-15.66	43.63	8.3	16.8
	14	61	829	63,165	6.27	143.27	-24.87	124.67	15.0	28.2
	15	25	244	18,175	- 0.80	40.42	- 7.32	32.30	13.2	24.8
	16	44	413	30,525	0.78	55.41	-12.39	43.80	10.6	20.5
	17	20	189	13,580	-12.10	28.47	- 5.67	10.70	5.7	10.8
Gray	1	17	244	18,300	- 6.34	26.65	0	20.31	8.3	15.4
	2	11	137	9,910	-24.00	14.31	0	- 9.69	- 7.0	-11.1
	3	17	171	13,150	-23.60	23.03	0	- 0.57	- 0.4	- 0.5
	4	26	327	23,250	0.00	45.00	0	45.00	13.7	30.6
	5	14*	171	11,070	0.00	0.00	0	0.00	0.0	0.0
	6	25	301	26,910	-11.60	42.65	0	31.05	10.3	15.7
	7	22	377	31,190	1.29	45.65	0	46.94	12.5	19.1
	8	24	409	31,150	1.28	52.70	0	53.98	13.2	22.9
	9	13	236	16,990	-10.73	28.08	0	17.35	7.3	12.0
	10	13	231	16,805	-11.35	29.98	0	18.63	8.0	14.0

\* Each individual's lambs considered as separate consignments.

Table 7 (concl.).

Gray (cont.)	11	30	412	29,350	-17.79	53.10	0	35.31	8.6	16.1
	12	90	243	21,600	1.08	31.76	0	32.84	13.5	22.3
Russell	1	20	183	15,400	- 8.99	0.00	0	8.99	- 4.9	- 6.7
	2	14	251	20,030	4.44	0.00	0	4.44	1.8	3.0
	3	17	211	18,930	0.72	0.00	0	0.72	0.3	0.6
	4	49	372	33,020	-13.08	0.00	0	-13.08	- 3.5	- 5.5
Barber	1	13	153	12,050	- 1.92	1.05	0	- 0.87	- 0.5	- 1.6
	2	19	361	27,095	-14.36	8.60	0	- 9.23	- 2.6	- 7.4
	3	14	407	28,750	-16.87	10.50	0	- 6.37	- 1.5	- 4.6
	4	5	150	11,710	- 2.43	0.00	0	- 2.43	- 1.6	- 4.8
	5	14	193	13,091	- 7.86	3.30	0	- 4.56	- 2.4	- 6.7
	6	9	96	6,480	-10.28	0.00	0	-10.28	-10.7	-30.2
	7	18	396	28,760	-14.36	7.95	0	- 6.41	- 1.6	- 4.5
	8	20	427	30,410	-14.36	13.00	0	- 1.36	- 0.3	- 0.9
	9	12	155	12,625	- 1.06	0.00	0	- 1.06	- 0.9	- 2.4
	10	12	169	13,280	- 5.08	0.15	-4.89	- 9.82	- 5.8	-15.7
	11	21	519	36,340	-25.49	20.80	-10.38	-15.07	- 2.9	- 7.3
	12	7	225	16,665	-15.00	8.55	0	- 6.45	- 2.4	- 7.3
Kiowa	1	16	310	21,675	-21.71	0.00	0	-21.71	- 7.0	-16.5

Many of the railroad cars were loaded lighter than the minimum weight requirements of the railroads, which resulted in actual transportation costs substantially above the minimum rail rates. Table 8 shows the extra transportation costs due to light loading for the county pools using rail transport.

Table 8. Increase in transportation costs of county lamb pools due to light-loading.

County	:Actual trans- :portation :charges (\$)	:Charges for: :weight not :in loads : (\$)	:Percent increase in :cost due to light- : loading	
			: Range	: Average
Dickinson	2384.10	150.90	0 to 31.3	6.7
Harper	2343.41	163.70	0 to 40.5	7.5
Gray	925.29	68.71	0 to 50.2	8.0
Marion	1113.37	81.10	0 to 46.2	7.8
Russell	275.51	33.70	0 to 28.7	13.8

One of the advantages claimed by the county lamb pools is the saving in transportation costs, but if that be true the associations analyzed can effect savings only by loading cars to more nearly the minimum weight requirements.

To obtain full carloads for each shipment it is essential to have an adequate volume of sheep and lambs. While enough lambs for one and one-fourth carloads causes transportation cost per hundredweight to be greater than if there were only enough lambs for three-fourths of a car, in general, a large volume of lambs for each shipment seems to leave a

smaller percent of empty car space and to reduce extra transportation cost, due to light loading, more than 14 percent. For shipments of less than 35,000 pounds, 21 shipments or 32 percent, had an increase of 14 percent or more in cost due to light loading. Evidence of the effect of volume on extra cost due to light loading is shown in Fig. 1.

It is interesting to note that the percent increase in transportation costs due to light-loading was not nearly as great for the lamb marketing pools considered in this study as for other pools reviewed in the literature. Armentrout (1932) found the percent increase in transportation costs resulting from light-loading to be from 7.6 percent to 178.2 percent. Thompson (1926) reported that variations in expense of Iowa shipping associations due to under-loading not infrequently were 10 to 15 cents per hundred-weight, and in extreme cases reached 30 cents.

The county pools using trucks may have overcome the problem of light-loading, particularly on small shipments, but the truck charges were such that, compared to freight rates for the same loads, they were not only in excess of minimum freight rates but also in excess of what the rail charges would have been for the same shipments. Table 9 shows the extra transportation costs due to use of truck rather than rail transport.

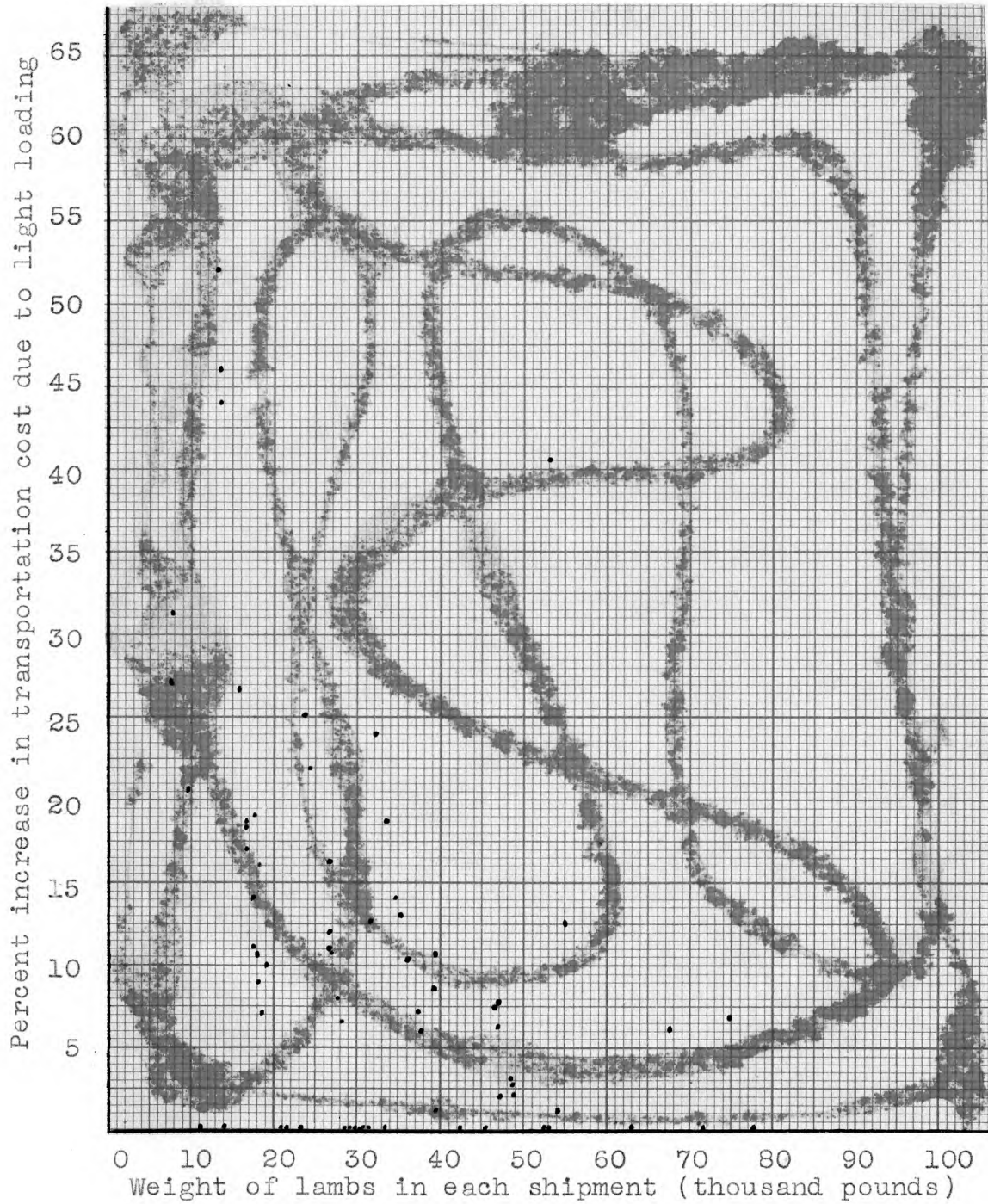


Fig. 1. Effect of weight of lambs in each shipment on increase in transportation costs due to light loading.

Table 9. Extra transportation costs due to use of truck rather than rail transport.

County	:Actual :transporta- :tion chgs. : (\$)	:Charges for :truck over RR: :chgs. for :same loads : (\$)	:Percent increase in :cost by use of trucks : Range	:Average
Barber	485.00	79.39	0 to 34.9	19.5
Kiowa	54.22	9.22	only 1 shipment	20.5

From the standpoint of actual transportation charges Table 9 shows that rail transportation would have figured 19.5 percent and 20.5 percent less than truck transportation in the two counties using trucks. However, differences in shrinkage for the two methods of transport were not taken into account and since the Barber and Kiowa County associations used the Wichita market, which is only 80 to 110 miles distant, truck transportation probably would have shown less shrinkage.

#### Savings in Commission Charges by Marketing Through County Lamb Pools

The responsibility of a commission firm at a public market in handling livestock requires that separate pens, separate weighing, separate selling, and separate accounting be provided for each consignment. A certain amount of work



is involved in selling any consignment of lambs, regardless of the number of head in the consignment. Because of this situation a consignment with a few head requires much more work per head than a consignment with a carload or more of lambs. In an attempt to get remuneration for the service rendered, it is necessary for the commission firm to charge commissions at a higher rate per head if the consignment of stock is small than if the consignment is large. The three public markets at which lambs were marketed from the lamb pools under consideration in this study - Kansas City, South St. Joseph, and Wichita - each have a schedule of commission charges for selling sheep and lambs that are adhered to by all commission firms at those markets. The charges at Kansas City are 35 cents for only one head; if more than one head, the charges are 25 cents for each head up to 10 head, then 15 cents for each additional head up to a total of 60 head, then five cents for each additional head up to 120 head, then two cents for each additional head up to 250 head and then one cent for each additional head up to 300 head, making a total charge of \$16.10 for 300 head. After reaching 300 head, the charges start over again at 25 cents per head for the next 10 head, with a maximum charge of \$16.10 for the next 300 head. The scale of charges at the St. Joseph and Wichita markets are not identical with charges at Kansas City, but the same general principle applies and the actual charges are nearly the same.

Such a practice puts very definite limitations upon the amount of commission saving that can be made through large consignments. Rates per head can be decreased as the number of lambs in a single consignment increase until the consignment reaches 300 head. Increases in numbers of lambs above 300 head do not bring about the same relative decrease in commission charges per head.

Shipments from the Dickinson, Harper, Marion and Gray County pools were sent to market as one consignment and the proration of sales and market expenses were made by the county agent or some other representative of the county lamb marketing pool. The actual dollars of commission charges saved for the members by doing their own prorating increased progressively with the number of lambs in each shipment as indicated by Fig. 2.

Shipments from Barber County were sent to market as one consignment, but the commission firm that handled the lambs prorated the sales and marketing expense and then mailed the sales accounts and checks to the county agent. The agent in turn sent a copy of the accounts, together with the checks to each member who had lambs in the shipment. In handling such shipments the commission firm made certain deductions in commission charges provided there were more than 150 head of lambs in a shipment. The saving for Barber County members is shown in Fig. 3.

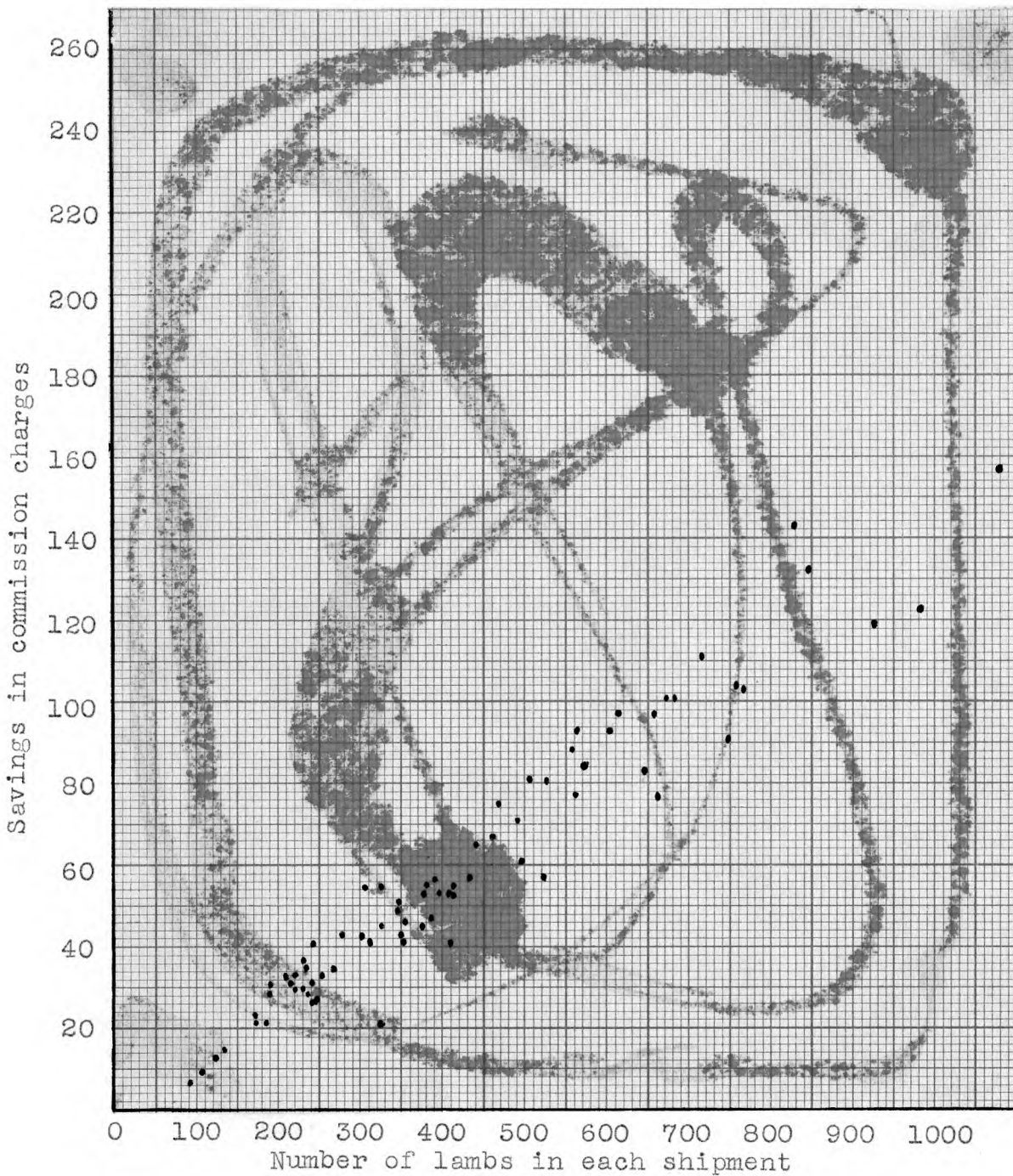


Fig. 2. Effect of number of lambs in each shipment on savings in commission charges in pools that did their own prorating.

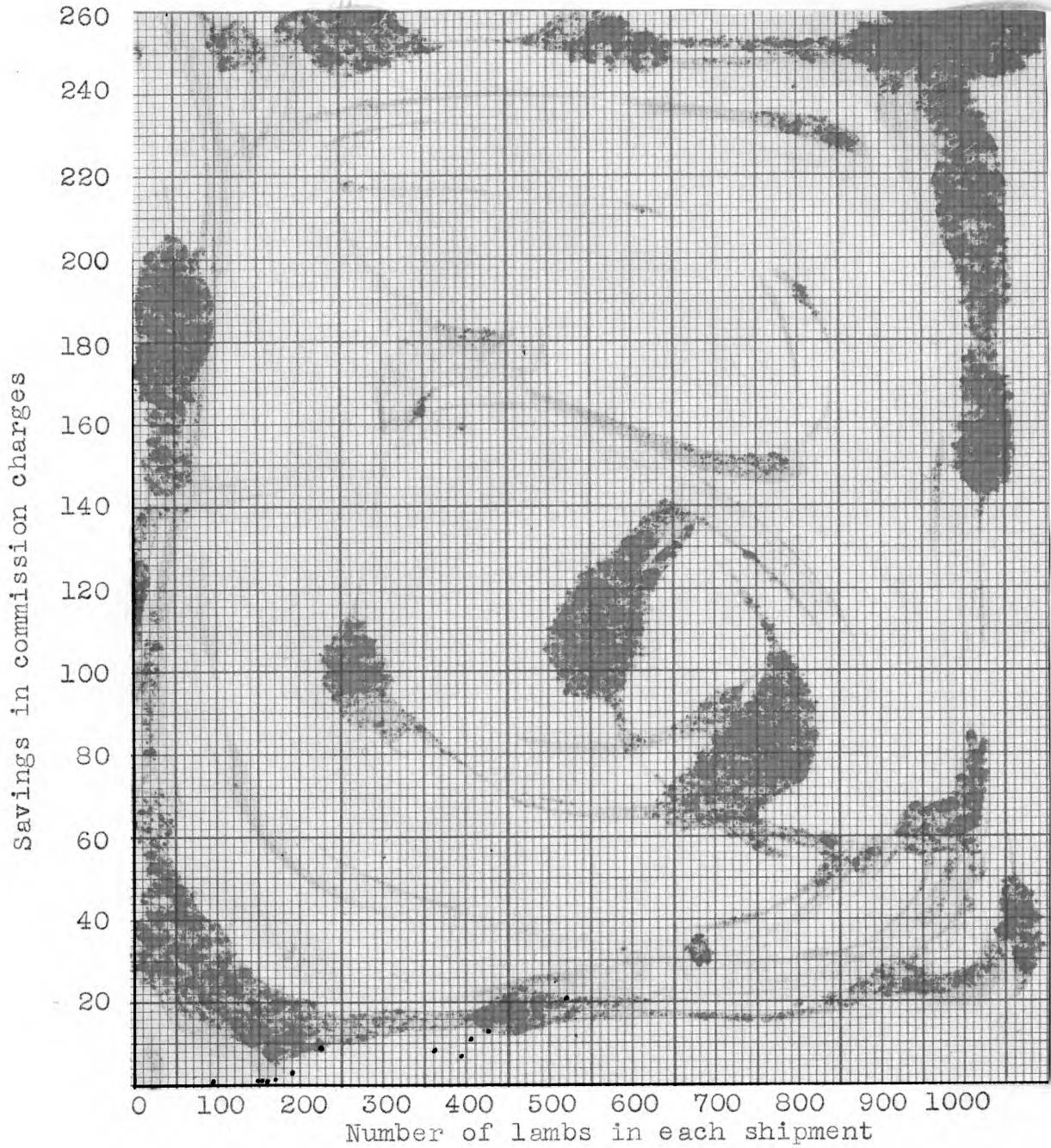


Fig. 3. Effect of number of lambs in each shipment on savings in commission charges in a pool that did not do its own prorating (Barber County).

The county pools that did their own prorating made substantial savings in commission charges over what they would have been if each individual's lambs had been handled as a single consignment.

The actual saving per lamb varied for each individual having lambs in a shipment, because those individuals having a large number of lambs through individual consignment would have had lower commission charges per head of lambs than those individuals having a smaller number of lambs.

As indicated in the discussion of the limitations of this study, no entirely satisfactory statistical method was found for showing this variation for all the shipments. However, an analysis of some of the shipments as shown in Table 9 reveals why there were variations in the commission saving for shipments with practically the same number of lambs. The composition of the loads for three shipments containing from 322 to 327 head of lambs, three shipments containing from 348 to 354 head of lambs, and three shipments containing from 505 to 525 head of lambs were analyzed to determine the effect of the number of lambs owned by each consignor upon the commission saving per lamb in each shipment. Table 10 shows that the commission saving per lamb for shipments which included practically the same number of lambs was greatly affected by the number of lambs owned by each individual consignor.

From Table 10 it can be seen that the commission saving

Table 10. Effect of composition of consignment upon average commission saving per lamb by shipping through a county lamb pool.

County	Shipment number*	Number of lambs	Composition of shipment			Av. commission saving per lamb by shipping through county lamb pool
			Percent of lambs owned by shippers with 1 to 10 hd. of lambs in shipment (%)	Percent of lambs owned by shippers with 1 to 25 hd. of lambs in shipment (%)	Percent of lambs owned by shippers with over 25 hd. of lambs in shipment (%)	
Marion	8	326	48.2	51.8	0.0	17.1
Gray	4	327	33.9	37.6	28.5	13.8
Harper	14	322	18.0	10.0	72.0	6.2
Harper	5	348	38.2	45.7	16.1	14.5
Harper	3	354	27.1	50.9	22.0	13.1
Dickinson	21	353	21.8	20.9	57.3	11.5
Dickinson	5	505	40.0	45.7	14.3	16.2
Marion	7	525	28.0	41.7	30.3	15.3
Marion	13	522	17.4	31.0	51.6	11.0

\* Shipment number refers to order of shipments from each county as shown in Table 9.

by pooling a shipment of lambs was greatest when a large percentage of the shipment was made up of a small number of lambs from each owner. It is significant to note that the greatest commission saving was in shipment number 8 from Marion County in which nearly one-half the lambs were consigned by owners, each of whom had 10 head or fewer lambs in the shipment, and where no owner had more than 25 head of lambs in the shipment. The least saving in commission was in shipment number 14 from Harper County in which nearly three-fourths of the lambs were consigned by owners, each of whom had more than 25 lambs in the shipment.

While the money saved in commission charges by the lamb marketing pool is not great for each individual, it is significant to point to the percent saving in commission charges compared with what charges would have been if each individual's lambs had been handled as single consignments.

Table 11 shows the percent saving in commission charges for the four county pools that did their own prorating and for the Barber County pool in which the shipments were handled as single consignments but the prorating was done by the commission firm.

In the pools doing their own prorating, the saving in commission charges was more than 50 percent for practically all shipments of one carload or more. The percent saving in commission charges was not the same for each shipment from a county.

Table 11. Savings in commission charges for county lamb pools.

County	Commission charges (\$)	What commission chgs. would have been if each individual's lambs had been sold as a separate consignment (\$)	Saving in commission chgs. through county lamb pool	Total saving (\$)	Percent saving
Dickinson	931.67	2589.55	1657.88	64.0	
Harper	768.35	2155.32	1386.97	64.3	
Marion	400.98	1309.50	908.52	69.4	
Gray	232.04	624.95	392.90	62.9	
Barber	395.05	468.95	73.90	15.8	

Factors affecting the percent saving were: (a) Number of lambs in the shipment; (b) the variation in number of lambs owned by individual members in each shipment; and (c) the market used. The relationship of the percent saving in commission for each shipment to the number of lambs in such shipment is shown in Figs. 4 and 5. The percent saving for each shipment tended to increase with an increase in the number of lambs. However, the increase in savings was not consistent with an increase in the number of lambs because the commission charges for any consignment are figured separately for each 300 head of lambs at Kansas City, for each 250 head at St. Joseph, and for each carload at Wichita. The variation in number of lambs owned by individual members in each shipment was also a factor in the amount of commission saved but it



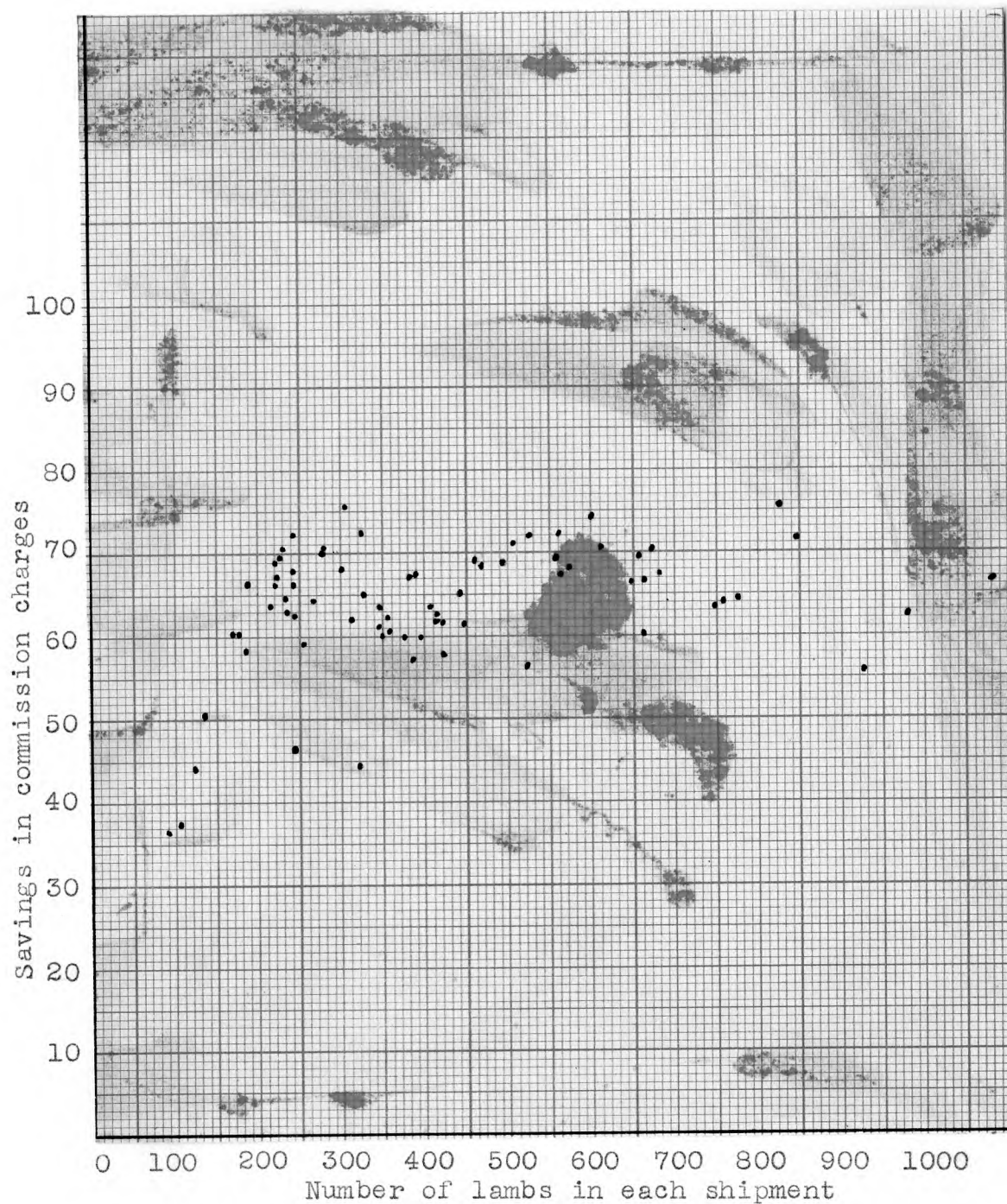


Fig. 4. Effect of number of lambs in each shipment on percent saving in commission charges for pools doing their own prorating.

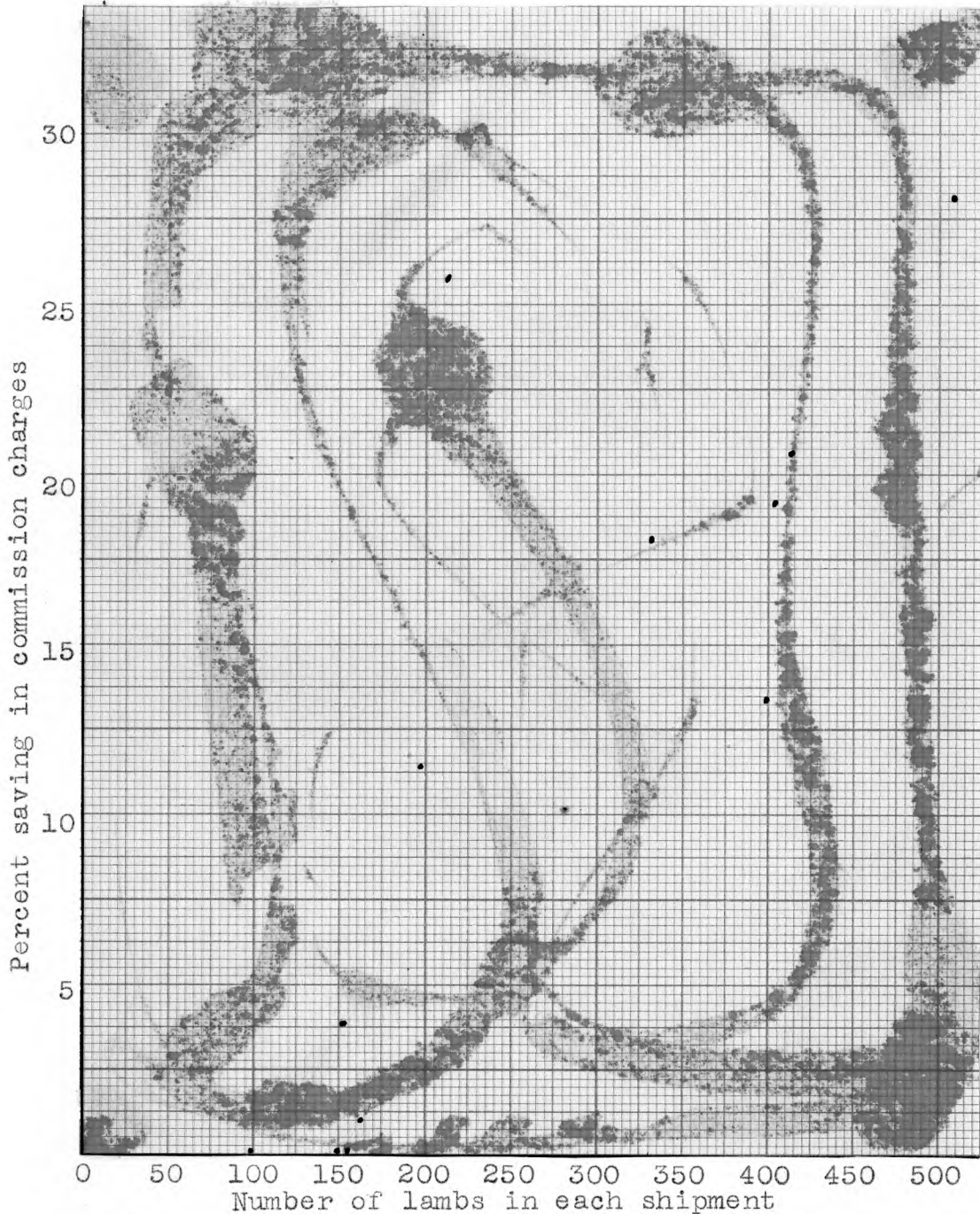


Fig. 5. Effect of number of lambs in each shipment on percent saving in commission charges for pools not doing their own prorating (Barber County).

bore no necessary relationship to the number of lambs in the consignment. A carload of lambs which was made up of lambs from only a few individuals could effect little saving over individual consignments, while a carload made up of lambs from several individuals would effect substantial savings. This can be more readily understood by referring to Tables 4 and 5, which illustrate the savings in commission due to variation in the number of lambs owned by each individual. The market used is a factor in commission savings because of the differences in the schedule of commission charges. The schedule of commission charges at the St. Joseph and Wichita markets are such that the charges for the first 10 head of lambs in a consignment are lower than at Kansas City, but the rate per head is reduced more at Kansas City as the numbers of lambs increase in any one consignment. The schedules of commission charges at the three markets are shown in Table 12.



Table 12. Schedule of commission charges for sheep and lambs at Kansas City, St. Joseph, and Wichita livestock markets.

Kansas City	:	St. Joseph	:	Wichita
Single head .35 each		Single head .30. On		.15 per head. Not to
1 to 10 head .25 each		250 head or fraction		exceed \$12 for the sheep
Next 50 head .15 each		thereof .20 per head		in a single deck or \$17
Next 60 head .05 each		with a maximum of \$13		for the sheep in a
Next 130 head .02 each		up to and including		double deck car. Where
Next 50 head .01 each		125 head. .15 per		prorating is necessary
		additional head above		there shall be made an
		125 with charge of		additional charge of
Total 300 hd. \$16.10		\$18 for 250 head		.30 for each proration

### Other Costs in Marketing Through County Lamb Pools

In addition to freight and commission charges, the other marketing charges included yardage, feed, insurance, grading, and home expense for marking and loading the lambs. All three public markets considered in this study make a nine cents per head yardage charge for rail lambs and a 12 cents yardage charge for truck-ins. While this charge is not large, the associations using railroads as a means of transportation did save three cents per head yardage charge, which is a 25 percent saving. As stated previously, the Dickinson, Harper, Marion, Gray, and Russell County lamb pools used rail transportation exclusively. The Barber and Kiowa County pools used trucks.

Feed and insurance charges for the lambs from county pools probably were no different than if the same lambs had been sold by each individual member.

County lamb pools often obtain the assistance of a commission man to grade the spring lambs for the first one or two shipments each season. In a few cases the commission firm representative has made a charge of five cents per lamb for this service, but generally no charge is made because the commission firm providing the service receives the consignment at the market.

Home charges for the county pools were generally

negligible. In two pools, local help was employed to assist in marking and loading and home charges were assessed. In the other pools considered in this study there were no home charges. The county agent notified the members of the shipping date, ordered the cars, and pro-rated the receipts and expenses. Those who shipped lambs assisted with marking and loading the lambs. No payment was made to the county agent as he considered it as part of his work. However, in Dickinson and Gray Counties each participant was required to be a member of the County Farm Bureau or he was charged a fee of 10 cents per head until his Farm Bureau membership was fully paid. It is interesting to note that Armentrout (1932) reported the same practice for the West Virginia lamb marketing pools.

Total Savings in Marketing and Transportation Charges  
for Selling Lambs Through the County Lamb Pools  
as Compared to Shipping L. C. L. and Selling  
as Individual Consignments

The combined savings in marketing charges for lambs marketed through the pools as compared to what marketing charges would have been if each producer's lambs had been shipped L. C. L. and sold as an individual consignment are shown in Table 13.

The net loss in "other" charges of the county lamb pools results from charges made by the pools for assistance

Table 13. Savings in transportation and marketing costs by county lamb pools.

County	:Commission: : (\$)	:Transportation: : (\$)	:Other: : (\$)	:Total: : (\$)	:Av. per: :lamb : (¢)	Percent saving	
						Range	:Average
Dickinson	1667.88	10.11	70.00	1677.99	13.8	9.2 -30.8	25.4
Harper	1386.98	- 23.85	-371.37	991.75	9.7	2.2 -23.4	17.5
Marion	908.52	- 52.74	-179.81	675.97	11.7	5.6 -31.2	22.5
Gray	392.91	-101.66	0.00	291.25	9.0	-11.1 -22.9	15.1
Russell	0.00	- 16.91	0.00	- 16.91	- 1.6	- 6.7 - -3.0	- 2.7
Barber	73.90	-129.07	0.00	- 70.44	- 2.2	-42.1 - .9	- 5.8
Kiowa	0.00	- 21.71	0.00	- 21.71	- 7.0	-16.5	-16.5

in loading and marketing the lambs. While transportation, commission, and home charges of the pools were the only items of marketing cost which were analyzed in relation to apparent costs for individual producers marketing their lambs separately, these items alone show that some of the county pools were able to reduce total marketing costs by a substantial amount.

The percent saving for individual shipments varied considerably for each county pool. The number of lambs in each shipment was an important factor in determining the saving of the pools that did their own prorating (Dickinson, Harper, Marion, and Gray), as indicated by Fig. 6. Where the prorating of expense was not done at home the number of lambs in a shipment was not so important, as indicated by Fig. 7.

For any given shipment, the transportation and marketing charges decreased as the volume of lambs marketed increased, provided the charges were prorated by the pool. Exceptions were found when the number of lambs available for shipment did not make up full carloads, because the increased transportation costs more than offset savings in commission charges.



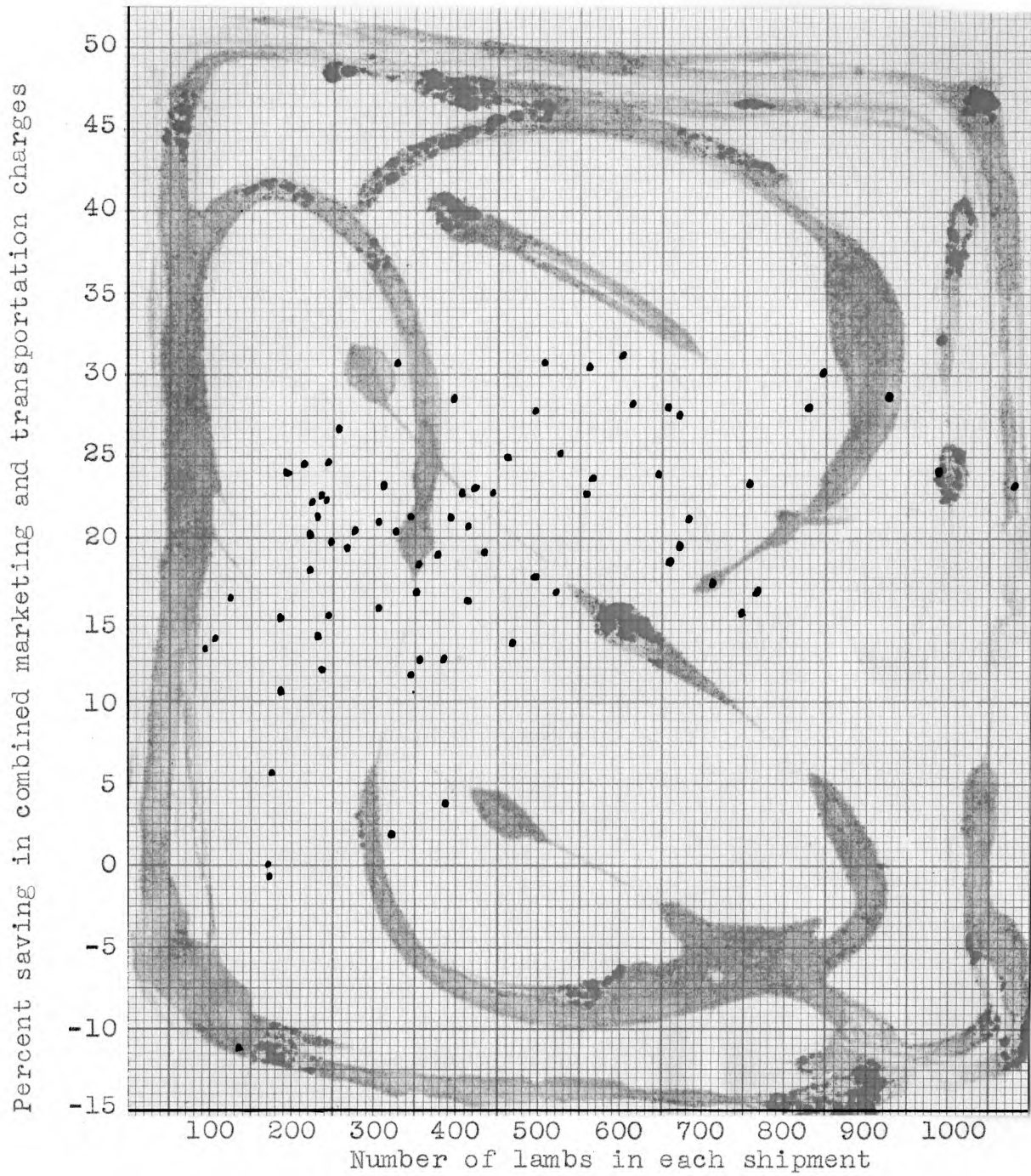


Fig. 6. Effect of the number of lambs in each shipment on percent saving in combined marketing and transportation charges for pools doing their own prorating.

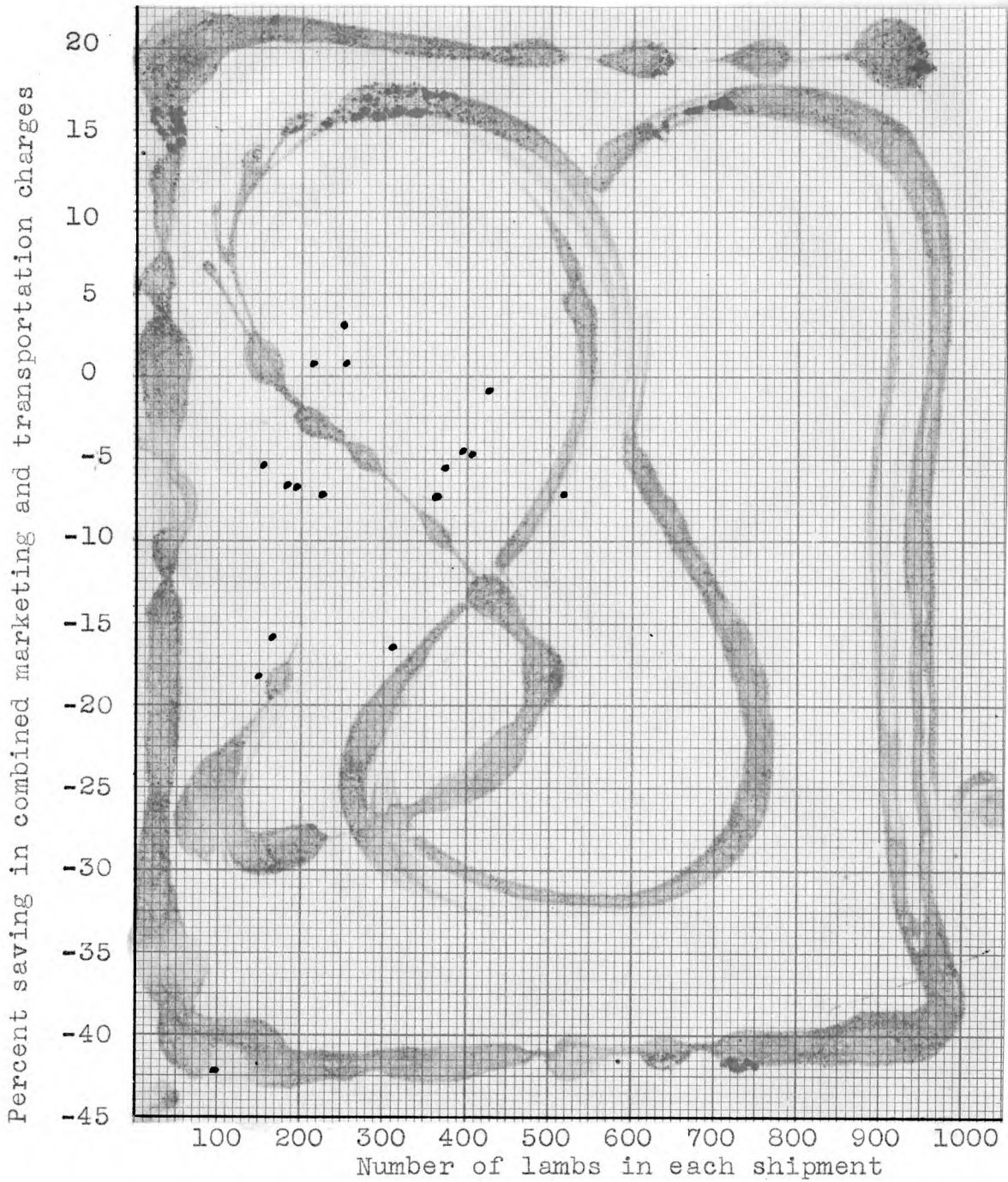


Fig. 7. Effect of the number of lambs in each shipment on percent saving in combined marketing and transportation charges for pools not doing their own prorating.

## SUMMARY

1. The county lamb pools that used railroads for transportation had average transportation costs of 6.7 percent to 13.8 percent above the minimum rail rates for full carload shipments. The county pools using trucks had average transportation costs of 19.5 percent and 20.5 percent above what railroad charges would have been for the same shipments.

2. The average of all shipments for each county pool showed that there was no saving in transportation costs by pooled lamb shipments over what charges would have been if the lambs were shipped individually under L. C. L. charges. The counties using rail transportation showed an average net loss over L. C. L. charges for individual shipments of one percent to 10.9 percent, except for Dickinson County which showed a net saving of .5 of one percent; however, in about one-half of the shipments there was a net saving through the pool. The counties using trucks showed average net losses over L. C. L. charges of 26.6 percent and 38.7 percent, and also showed net losses for every shipment.

3. Substantial savings were made in commission charges by the pools that handled each shipment as a single consignment and did their own prorating of sales and expenses. The four counties that performed their own prorating service made average savings in commission charges of 62.9 percent

to 69.4 percent, and made a saving of more than 50 percent for all shipments of one full carload or more.

4. There was no accurate method of determining what yardage, feed, and insurance charges would have been if the lambs had been sold individually. Consequently, it was assumed that the lamb pools effected no saving in these charges.

5. The average saving in total transportation and marketing charges for the county pools that performed their own prorating service ranged from 15.1 percent to 25.4 percent as compared to what charges would have been if each shipper's lambs had been shipped L. C. L. and sold as one consignment. The saving per shipment for these pools ranged from -11.1 percent to 31.2 percent; however, in only two shipments of the 75 did the pools that performed their own prorating service show total charges in excess of what charges would have been if each shipper's lambs had been shipped L. C. L. and sold as one consignment. The county pools that did not perform their own prorating service showed transportation and marketing charges of 2.7 percent to 16.5 percent above what charges would have been if each shipper's lambs had been shipped L. C. L. and sold as a single consignment.

6. While there was no method of determining the value of the lamb grading service available by county lamb pools, the fact that sheep producers use the lamb pools principally for the purpose of selling their lambs on a graded basis is

evidence that the grading service is of substantial value.

7. The county lamb pools studied have not yet been sufficiently developed to make the greatest possible savings in transportation and marketing charges. Some of the pools have made savings to members in transportation costs, and in commission charges. Yardage costs are also reduced if lambs are transported by rail. However, when local help was employed to assist in marking and loading the lambs there were additional charges to the pools.

8. The greatest saving made by the county lamb pools studied was in commission charges. However, only four of the seven pools were making a substantial saving in this item. The other three pools were not doing their own prorating and consequently did not save on this item of marketing charges. Some of the county lamb pools considered in this study made savings in transportation for their membership by providing individual lamb producers an opportunity to transport their lambs to market at full carload rates. However, none of the county lamb pools had their organization well enough perfected and managed to be assured of full carloads for each shipment. Such a situation made it necessary to pay additional freight for many cars that were light-loaded.

9. The data analyzed in this study indicate that the most important factors contributing to a reduction in marketing and transportation costs of county lamb pools were:

(1) A large volume of lambs, (2) home prorating of sales and marketing expenses, and (3) management of pools to insure full carloads or full truck loads for each shipment.

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