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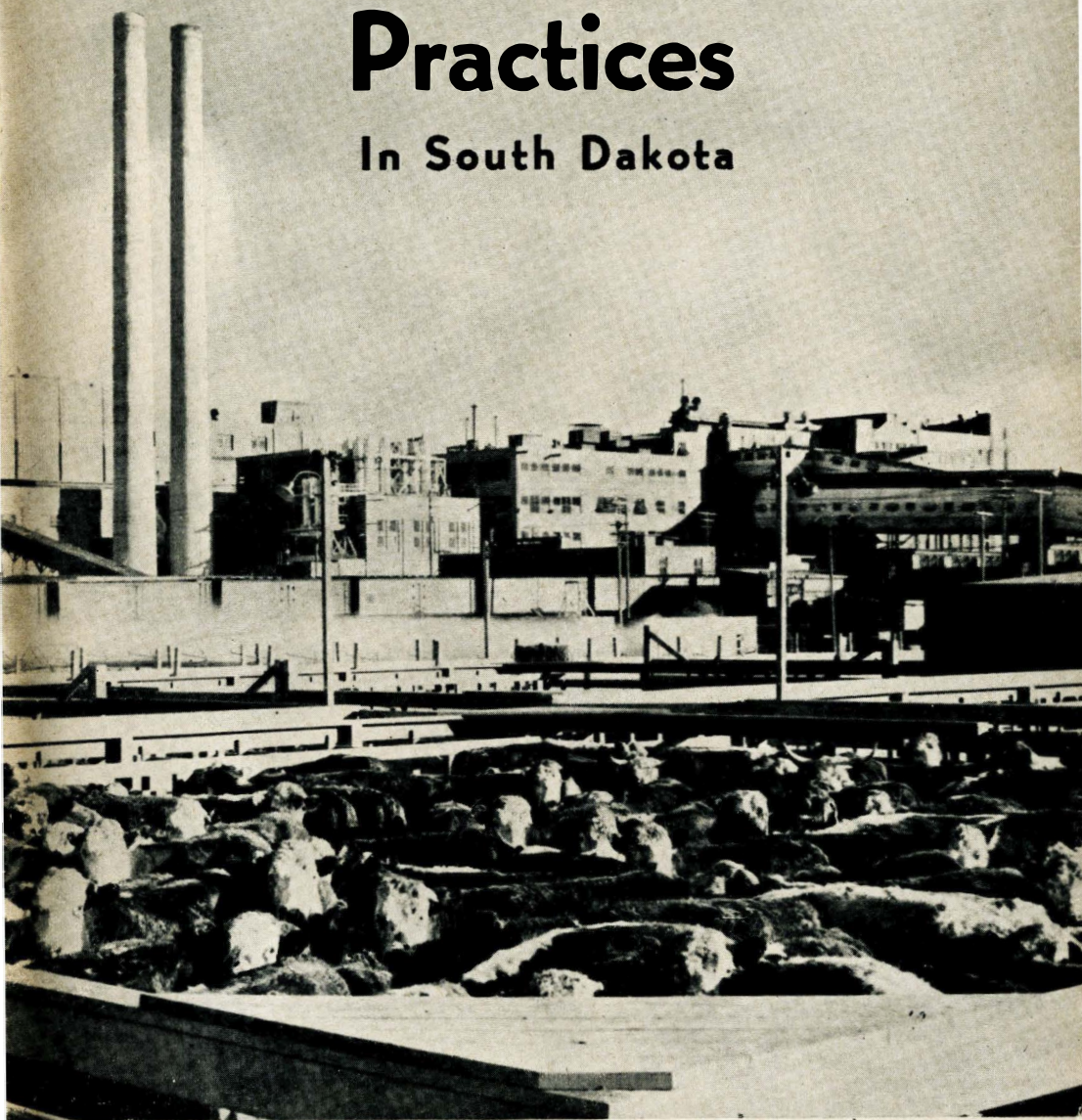
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Livestock Marketing Practices

In South Dakota



Agricultural Economics Department
AGRICULTURAL EXPERIMENT STATION
South Dakota State College
Brookings, S. D.

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Introductory Note

THIS PUBLICATION on livestock marketing represents part of a regional study conducted cooperatively with 13 other state agricultural experiment stations in the Corn Belt Area and the Division of Marketing and Transportation of the Bureau of Agricultural Economics, United States Department of Agriculture.

In the formulation of plans and general guidance of the study much credit is due the Corn Belt Livestock Marketing Research Committee, particularly Chairman I. B. Johnson of the South Dakota Station and members of the technical committee: Chairman T. W. Schultz, Iowa; R. C. Ashby, Illinois; Geo. F. Henning, Ohio; and Knute Bjorka, representative of the Bureau of Agricultural Economics who served as coordinator for the entire regional study.

In connection with the South Dakota study recognition is due Station members I. B. Johnson, director and animal husbandman, and Gabriel Lundy, agricultural economist, for their untiring interest and helpful suggestions in the conduct of the work; David Paterson for securing field questionnaires from livestock producers; the Extension Service for assisting in getting mail schedules out to farmers; the personnel of the Work Projects Administration, Official Project No. 165-1-74-158-W.P. 4327 for assistance in the preparation of charts and tables and the farmers and agencies who cooperated by supplying the basic data.

Livestock Marketing Practices in South Dakota

W. P. COTTON¹

Need for Livestock Marketing Research

Livestock Is a Very Important Source of Income in South Dakota. In cash income derived from the sale of livestock South Dakota ranked 9th in the national picture in hogs; 14th in cattle; and 18th in sheep in 1939.² Within the state itself, for the five year period 1936-40, livestock was responsible for 68 percent of all farm cash income; and if government payments are excluded from the total of all farm cash income, 79 percent of the remainder came from livestock sources. Of every dollar derived from the sale of livestock and livestock products the sales of cattle accounted for 33 percent, hogs 26 percent, and sheep and lambs 6 percent³ (See Figs. 1 and 2).

In addition to its importance as a source of farm income, livestock furnishes the basis for a very large share of the state's industrial income, through employment in various livestock and livestock products processing plants. For instance, meat packing was the number one industry in South Dakota in 1939, with a plant value of meat packing products of over 48 million dollars.

1. W. P. Cotton, Assistant Economist, South Dakota Agricultural Experiment Station.
2. Agricultural Statistics U. S. D. A., 1940.
3. South Dakota Agricultural Statistics—1940 Annual Report of Agricultural Marketing Service.

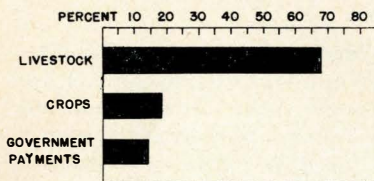
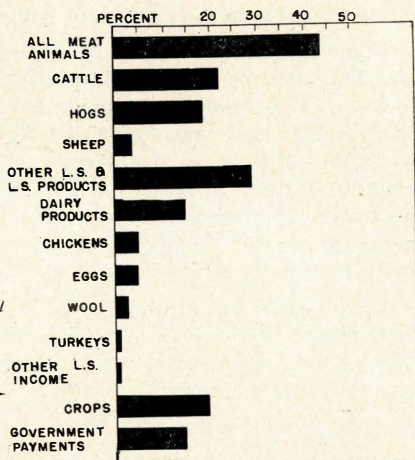


Fig. 1. Sources of Farm Cash Income in South Dakota—1936-1940.

Source: *South Dakota Agricultural Statistics Annual Report—1940* Agricultural Marketing Service.

Fig. 2. Sources of Farm Cash Income in South Dakota—1936-1940. (average percentage from each source).

Source: *South Dakota Agricultural Statistics Annual Report—1940* Agricultural Marketing Service.



Cost of Livestock Marketing and Meat Distribution Very High.⁴ The producer of slaughter meat animals does not get all of the consumer's meat dollar. Livestock marketing services, processing and wholesale and retail distribution costs must first be paid from the consumer's dollar. The producer gets the balance. Neither has the proportion of the meat consumer's dollar that the farmer has received been constant over a period of years. From 1925 through 1937 his share of retail expenditures for beef varied from 50 percent in 1927 to 37 percent in 1933. In pork it varied from 34 percent in 1934 to 67 percent in 1937 and for mutton and lamb the variation was from 39 percent in 1932 to 57 percent in 1926. In 1941 the farm value of pork was 60 percent of the retail price of pork products, and for lamb, 70.6 percent. However, for May, 1942, the farm value of pork had risen to 85 percent of the retail price of pork products, and that of lamb to 80 percent. This tremendous rise in the percentage going to the farmer in May, 1942, is largely due to the rise in live animal prices. The margin of processors and retailers has been relatively fixed. Therefore, when live prices were low the percentage of the consumer's dollar returning to the farmer has been low, and when prices are high the percentage going to the producer is high. (It should be noted that equivalent live weight values are compared to products values, and not the price of 100 pounds of live animal with the price of 100 pounds of products.)

Of the various services required in getting meat to the consumer livestock marketing of slaughter animals alone ordinarily absorbs from 3 to 6 percent of the retail meat price and from 7 to 17 percent of the farm value of the livestock. For animals that are marketed first as feeders and then resold later for slaughter the marketing costs run considerably higher, and consequently take a larger share of the retail meat dollar. Therefore, it is of significance to note that a high percentage of livestock in South Dakota is sold as feeders to be later resold for slaughter.

Many Shifts in Livestock Marketing Methods During Last Two Decades. For a number of decades preceding World War I the majority of livestock was sold through terminal public markets. Since that time numerous developments have taken place that have caused a considerable change in marketing methods. In recent years there has been a growing tendency to establish slaughter plants at interior points. This, together with improvement of motor transportation facilities, has led to a great increase in direct marketing of both slaughter and feeder animals, and a decline in marketing through shipping associations and terminal public markets.

In still more recent times, in many states, there has been a considerable development of livestock auction barns or agencies. These have diverted parts of the volume of livestock, particularly stocker and feeder animals, from longer existing types of markets.

4. *What becomes of the Consumer's Meat Dollar?* Greer and Tobin; *Price Spreads Between the Farmer and the Consumer*, Been and Waugh, Bureau of Agricultural Economics mimeograph, Feb., 1941; *The Marketing and Transportation Situation*, Bureau of Agricultural Economics, U. S. D. A.

All of these changes have created new problems in the marketing of livestock, causing shifts in methods and practices employed.

The Old Problem of Skilled Buyer Competing With Unskilled Seller Remains. The typical livestock producer sells relatively few animals per year, and usually sells these in several small lots. The infrequency with which he sells, and is on the livestock market, raises the question as to how well he is equipped to compete with the buyer who makes many purchases every day. This question is particularly applicable in the case of cattle sales where there is such a wide variation in grades and prices.

Scope and Methods of Present Study

General Objectives Are to Assist Livestock Producer. From the foregoing it is apparent that the South Dakota livestock producer's income and standard of living are materially affected by the size of the producer's share of the consumer's meat dollar, and that it is both to his and the consumer's interest that the producer's share be as high as is consistent with this being brought about through increased efficiency and economies effected in marketing, processing and distributing services. It was to the laying of a foundation for assisting in obtaining this objective that this study was dedicated.

This inquiry was not designed to be an end in itself, but a means to an end. It deals almost entirely with factual and descriptive material relating to the volume of feeder, slaughter, and breeding cattle, hogs and sheep bought and sold by South Dakota farmers and ranchers during 1940; to the use made of various types of marketing agencies in moving animals from the farm to the feed lot and pasture or to the processor; and to the organization, customs and practices of these existing marketing agencies. The present study does not extend into an inquiry of the economics of processing within packing plants, nor of the distribution of meat and meat products. Since it is a necessary preliminary to further investigations in the economics of marketing live animals themselves, it does not attempt to appraise the present marketing system, estimate the benefits of possible desirable reforms, nor set up policies directed toward the encouragement of improvements, either through voluntary action of existing agencies or by other means, rather the study is comparable to a "tooling up" process.

Data Taken from Livestock Producers in All Sections of State. To obtain the information outlined above the following procedure was adopted. Questionnaires were mailed to 10 percent of all the farmers in each county. These were selected by the county agents and county AAA chairmen by taking every tenth name on their mailing lists. Then, 454 additional questionnaires were obtained from farmers by field visits. These farmers were selected as follows: The state was first divided into seven areas selected on a basis of type of farming, together with the distribution of the different species of livestock as shown by the 1940 census. In each of these areas five counties were selected at random; and in each of these counties a township was selected at random. Within these townships an identically numbered section was selec-

ted as a starting point, and every farm was visited as it came, as long as work was done in that particular "spot." In the eastern part of the state, where farms are smaller, a half day constituted the time spent in the original "spot" selected, or "spot 1a." After a morning in "spot 1a" the afternoon's work was shifted to "spot 1b" some 12 to 15 miles toward the next day's "spot," or "spot 2a." Usually about 6 to 8 farms were visited about the "subspot" constituting half a day's work. The questionnaires from the two "subspots" were combined under the heading of the original "spot" selected for purposes of areal study. In the western part, where distance between ranches is much greater, a single "spot" constituted a day's work with every ranch being visited until a minimum of 10 questionnaires had been secured. For each of the original 35 "spots" selected an average of 13 questionnaires was secured. The reports for each "spot" were thrown in with the mail questionnaires returned from that particular county and the percentage of slaughter and feeder animals of each species that were marketed through each type of agency was figured. For those counties that had only mail questionnaires the same procedure was followed. Each county was then mapped on a basis of the percentage of all cattle going through the various types of agencies. This was done in order to make some minor readjustments in the seven areas originally selected. This brought about a shifting of some eight counties and an enlargement of the number of areas to eight in order to set up area 3. From this point all calculations were made on an areal or state basis.

Description of Areas

Marketing Problems Associated with Crop Production. Some indication of the differences in problems encountered in the marketing of livestock in the various areas outlined is given by Figs. 3, 4, and 5 which show the distribution of cattle, hogs and sheep in the state, and the boundaries of the separate areas. These show that hog production is pretty largely concentrated in area 1, while sheep production has a high degree of concentration in area 7. Cattle are distributed much more uniformly over the state with the greatest concentration in areas 1 and 6. These distributions are more understandable

Table 1. Concentration of Grain Production and Animals Sold by Areas in South Dakota

Area	Number bushels of corn and barley ⁵ harvested per section (640 acres)	Number of animal ⁶ units sold per section (640 acres)
1.	4361.0	59.1
2.	1542.0	24.2
3.	1758.7	21.2
4.	162.0	9.0
5.	307.3	11.3
6.	638.2	19.9
7.	18.1	5.6
8.	13.8	5.0
State	827.1	16.5

5. Calculated from 1940 Agricultural Census.

6. Total number of each species and class calculated by weighting sales reported from each area. In figuring animal units the following standards were adapted. One animal unit equals any of designated groups—1 head of slaughter cattle, 2 feeder cattle, 5 slaughter hogs, 10 feeder pigs or 15 lambs.

Fig. 3. Number of Cattle and Calves Over 3 Months Old on Farms in South Dakota, April, 1940.

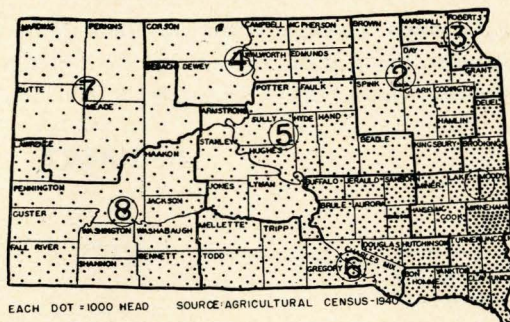


Fig. 4. Number of Hogs and Pigs Over 4 Months Old on Farms in South Dakota, April, 1940.

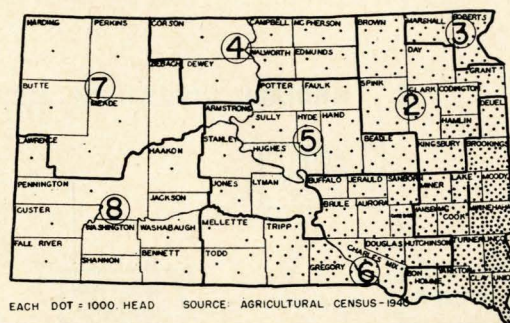
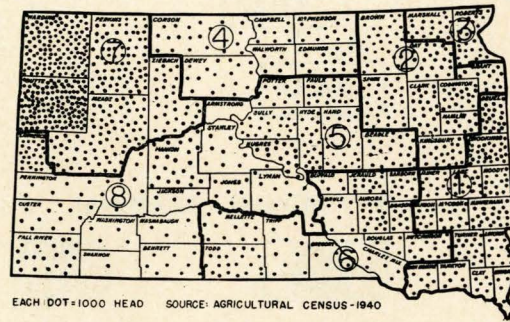


Fig. 5. Number of Sheep and Lambs Over 6 Months Old on Farms in South Dakota, April, 1940.



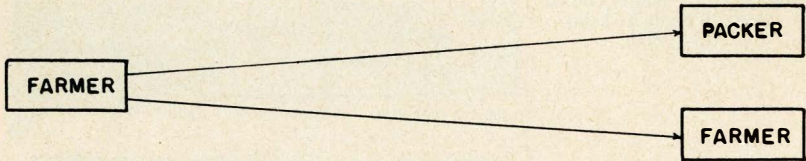
when we look at Table I, which shows the number of bushels of corn and barley harvested and the calculated number of animal units sold per section (640 acres) in each of the areas.

This table indicates the areas of feeder and slaughter livestock production and gives a hint as to the type of market and marketing problems to be expected in each area, particularly in relation to comparative costs of assembling and class of animals sold.

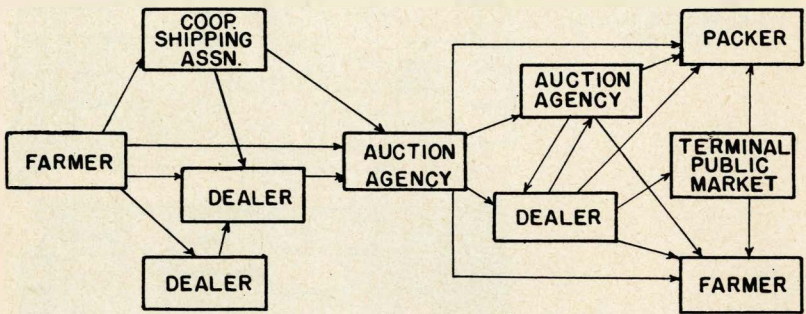
Types, Number, and Location of Markets Studied

Channels Through Which Livestock Move to Market May Be Very Complex. Some of the various channels through which livestock may pass enroute from the farm to the packer, or to the feeder, are indicated by Fig. 6.

I. DIRECT



2. THROUGH LIVESTOCK AUCTION AGENCY



3. THROUGH TERMINAL PUBLIC MARKET

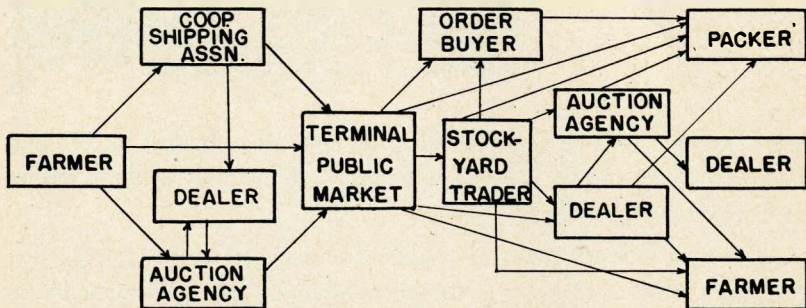


Fig. 6. Channels Through Which Livestock May Move when Marketed.

The marketing agencies considered in the present study include farmers, dealers or local markets, livestock auction agencies, terminal public markets, packing plants, concentration yards, retail meat dealers doing their own slaughtering, and cooperative livestock shipping associations. With the exception of farmers, the number and location of each of these agencies in the state is shown in Figs. 7, 8, and 9. Questionnaires were obtained from 23 of the 50 livestock auction agencies in the state, 70 of the some 900 livestock dealers, truck buyers and custom truckers, all (9) livestock shipping associations, all (9) packing plants, 1 concentration yard and 17 retail meat dealers doing their own slaughtering (See Figs. 7, 8 and 9). The only terminal public market in the state is located at Sioux Falls in area 1. Information was also secured from it.

Fig. 7. Distribution of Dealers and Livestock Truckers Reported by Counties in South Dakota—1941.

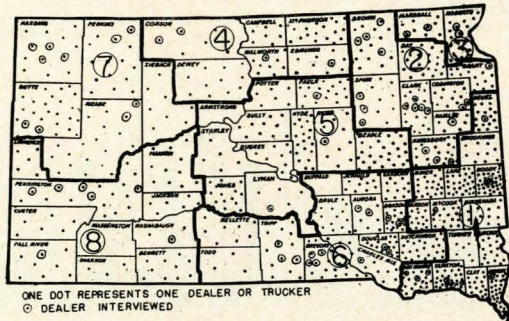


Fig. 8. Location of Terminal Public Market Agencies, Livestock Auction Agencies and Packing Plants in South Dakota—1941.

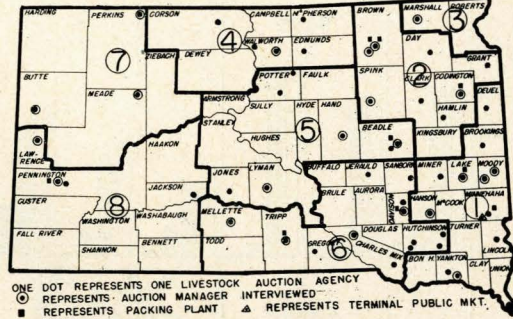
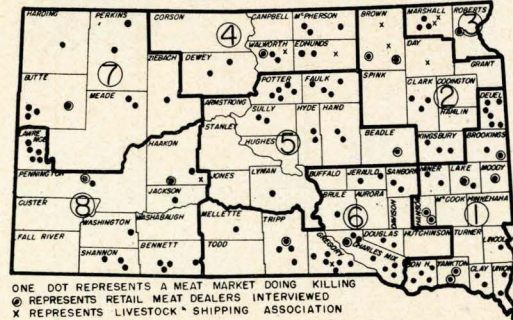


Fig. 9. Number of Retail Meat Dealers Doing Own Slaughtering and Number Livestock Shipping Associations by Counties—1941.



Producers' Practices in Selling Livestock

Cattle Are More Generally Produced for Sale Throughout the State than Either Hogs or Sheep. Eighty-three percent of the farms in the state sold cattle in 1940, while 62 percent sold hogs and only 31 percent sold sheep (See Fig. 10). Furthermore, the range in the percentage of farms by areas which sold cattle is relatively narrower than for either hogs or sheep. For cattle this range was from 95 percent of all farms reporting in the northeast (area 3) to 64 percent in the northwest (area 7). For hogs the range was from 92 percent

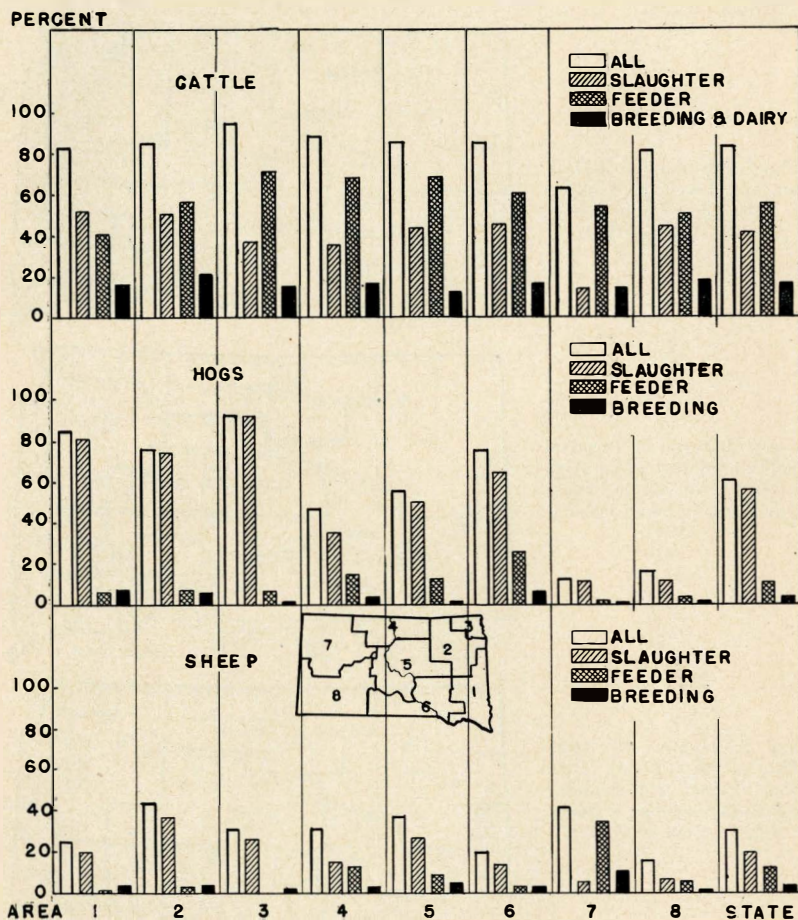


Fig. 10. Percentage of Farms Reporting the Sale of Specified Classes of Livestock by Areas in South Dakota—1940.

in area 3 to 13 percent in area 7; and the percentage of farms selling sheep varied from 45 percent in the northeast (area 2) to 16 percent in the southwest (area 8).

Percentage of Farms Selling Slaughter and Feeder Livestock Is Significant. In the state as a whole 42 percent of the farms reported selling feeder cattle. The contrast between areas is shown by the fact that 53 percent of the farms in the southeast (area 1) reported selling slaughter cattle, while in the northwest (area 7) the percentage was only 15 percent, and for feeder cattle reports of sales came from 71 percent of all farms in the northeast (area 3) while in the southeast (area 1) the percentage was only 41. Only in area 1 did the percentage of farms selling slaughter cattle exceed that selling feeder (See Fig. 10).

Fifty-six percent of the farms reporting in the state gave a record of slaughter hog sales while only 12 percent reported selling feeders. For slaughter hogs these percentages varied from 92 percent in the northeast (area 3) to 12 percent in the northwest (area 7). For feeders the range was from 27 percent in the south central (area 6) to 2 percent in the northwest (area 7).

Twenty percent of the farms contacted reported sales of slaughter sheep and lambs with a range from 37 percent in the northeast (area 2) to 5 percent in the northwest (area 7). For feeder lambs and sheep the state figure was 8 percent with a range from 35 percent in the northwest (area 7) to less than 1 percent in the northeast (area 3). Only area 7 had a larger percentage of farms selling feeder lambs than slaughter.

Relative Importance of Classes of Livestock Sold

In 1940, Areas 1, 2 and 6 Produced Approximately 80 Percent of All the Slaughter Cattle Sold from the State (See Fig. 11). Every area in the state, except 1 and 2, sold considerably more feeder than slaughter cattle. Only in the north central section (area 4) of the state did the numbers of dairy and breeding cattle sold approach the number of slaughter or feeder cattle sold. Here the number of dairy and breeding animals was slightly more than half of the slaughter cattle sold.

Areas 1, 2 and 6 Supply Approximately 83 Percent of All Slaughter Hogs. However, unlike in cattle, every area sells far more hogs for slaughter than for feeder purposes, with only about 12 percent of the hogs in the state being sold as feeders (See Fig. 15).

The Relative Importance of Sheep and Lamb Sales by Slaughter, Feeder and Breeding Classes Varies by Areas. For the state as a whole it is seen in Fig. 19 that the numbers of sheep and lambs sold as feeders by farmers only slightly exceeds that sold for slaughter, each representing close to 45 percent of the total number sold, while those sold for breeding purposes were about 13 percent of all animals sold. When the individual areas are considered the situation shows a tremendous variation from this state average. Considering totals for the eastern part of the state (areas 1, 2, 3, and 6), approximately 90 percent of all sheep and lambs are sold as slaughter animals; 3 percent as feeders and 7 percent for breeding. The totals for the range section (areas 4, 7, and

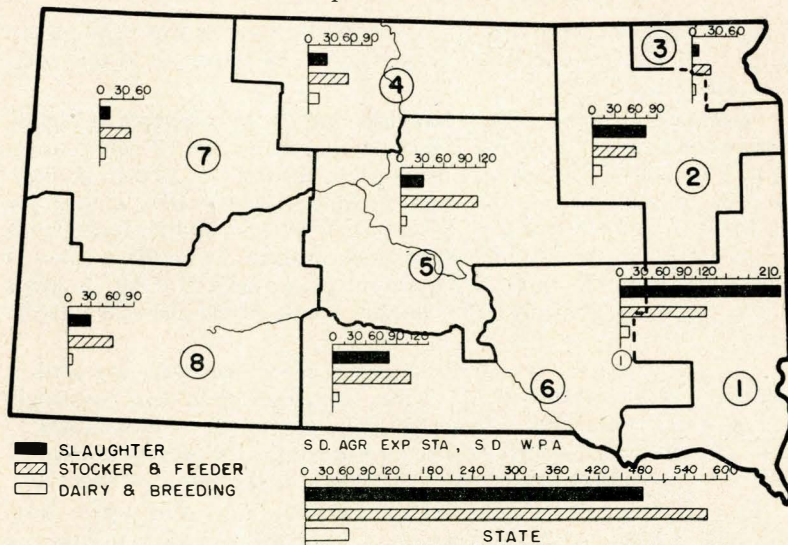


Fig. 11. Classes of All Cattle and Calves Sold by Farmers in South Dakota—1940. (Numbers in thousands by areas in the state.)

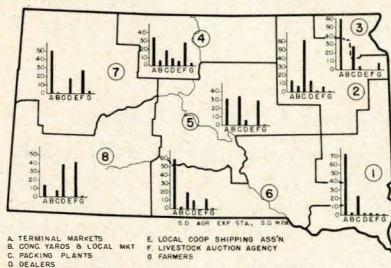


Fig. 12. Percentage of Slaughter Cattle and Calves Sold by Farmers Through Various Agencies by Areas in South Dakota—1940.

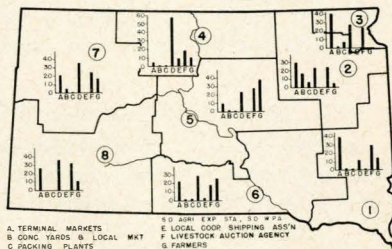
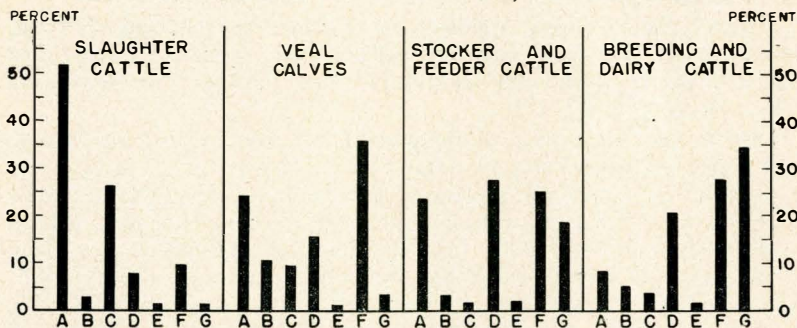


Fig. 13. Percentage of Stocker and Feeder Cattle and Calves Sold by Farmers Through Various Agencies—By Areas in South Dakota—1940.



See legend on above Figs. 12 and 13 for identification of alphabetical symbols.

Fig. 14. Percentage of Cattle and Calves Sold by Farmers Through Various Agencies in South Dakota—1940.

8) show almost the opposite. Here, 77 percent are sold as feeders, 9 percent for slaughter and 14 percent for breeding purposes. Area 5 is a transitional zone between the feeder and slaughter sales areas. Its figures approach the average for the state, for in area 5, 45 percent of the sheep and lambs are sold as slaughter animals, 33 percent as feeders and 22 percent for breeding purposes.

Relative Importance of Market Types in Selling Livestock

Terminal Public Markets and Auction Agencies Principal Cattle Markets; Packing Plants Principal Hog Markets. In 1940 about three times as many cattle in South Dakota were sold through public stockyards as direct to packing plants. On the other hand packing plants received about twice as many hogs direct as were sold by farmers through public stockyards. The two agencies received about equal proportions of sheep and lamb marketings (See Table 2).

Livestock sales during 1940 through auction agencies were: Cattle, 330,638; hogs, 388,657; sheep, 125,574; and horses, 14,812.⁷ This means that almost as many cattle were sold through auctions as to public stockyards and packing plants combined, but auctions were much less of a factor in hog and sheep marketing than either of the other two types of agencies.

Table 2. Livestock Receipts from South Dakota at Packing Plants and Stockyards—1940.⁸

	Packing Plants	Public Stockyards
Cattle	104,021	293,907
Calves	10,955	15,712
Hogs	1,018,372	561,518
Sheep	441,188	376,872

8. Data furnished by South Dakota Agricultural Marketing Service.

Extent of Livestock Cooperative Membership Among Farmers

Of 454 farmers asked if they held memberships in local livestock cooperative marketing associations 12 replied "yes," and 442 "no." When this same group was asked if they held membership in terminal cooperative livestock commission agencies 21 replied "yes" and 431 answered "no." On the other hand, about one-fourth of all livestock sold on the Sioux Falls terminal public market are marketed through cooperative commission firms.

Type of Market Used Varies with Class of Animal and Area. Figs. 12 and 13 show the extent to which farmers used the various types of markets in the separate areas when selling slaughter and feeder cattle. Fig. 12 shows that the extent to which a particular type of market was popular for slaughter cattle depended largely upon the area, or the location of the cattle. In areas 1, 3, 4, 6 and 7 the terminal market was used more extensively than other types. In areas 2, 5, and 8 a considerably higher proportion went direct to the packing plant than to the terminal public market, and in the range and semi-range districts (areas 4, 5, 7 and 8) over 25 percent of the slaughter cattle were sold through livestock auction agencies.

7. South Dakota Livestock Sanitary Board, 1940.

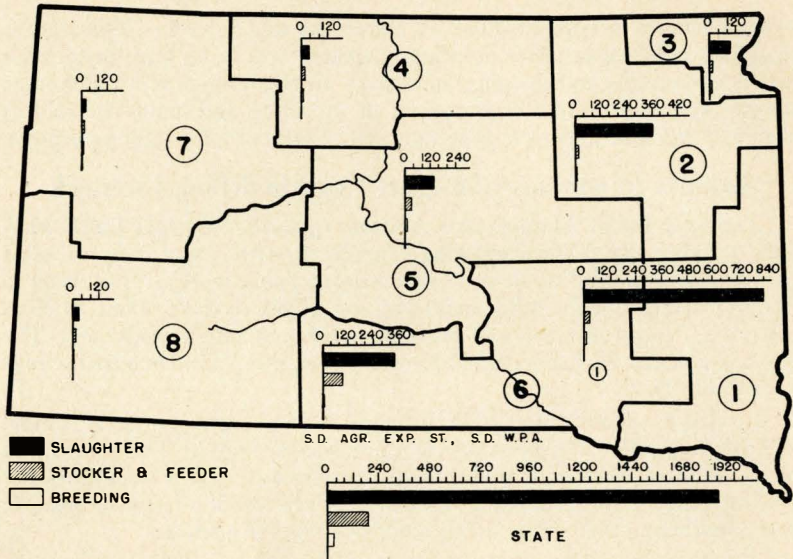


Fig. 15. Classes of all Hogs and Pigs Sold by Farmers in South Dakota—1940. (Numbers in thousands by areas in the state.)

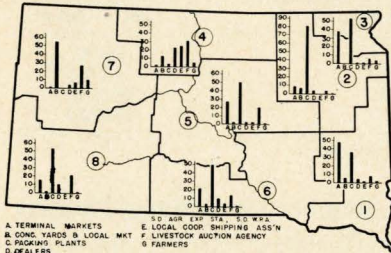


Fig. 16. Percentage of Slaughter Hogs and Pigs Sold by Farmers Through Various Agencies by Areas in South Dakota—1940.

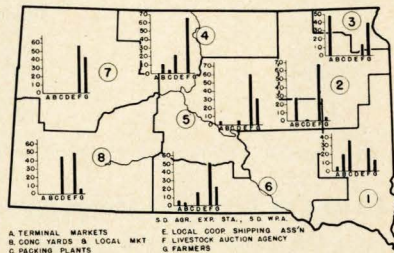


Fig. 17. Percentage of Feeder Hogs and Pigs Sold by Farmers Through Various Agencies by Areas in South Dakota—1940.

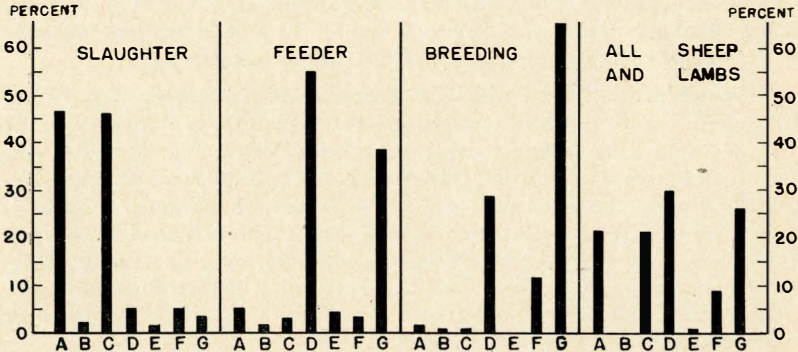


Fig. 18. Percentage of Hogs and Pigs Sold by Farmers Through Various Agencies in South Dakota—1940.

Fig. 13 shows that the terminal market was the most important market for feeder cattle in the three areas on the extreme eastern side of the state, but that in areas 4, 6, 7 and 8 (largely range areas) a higher percentage of feeder cattle was sold by farmers to dealers than to any other type of market. In the north central section (area 4) dealers bought 58 percent of all stocker and feeder cattle sold by farmers. This is probably due to a low volume per square mile and hence high transportation costs to the individual seller. Auction markets also are a very important outlet for feeder cattle sold by farmers, with farmers from no area reporting less than 18.5 percent of their feeder cattle sold through auctions. In area 5 more feeder cattle were sold direct to farmers than by any other method. This area is fairly close to feeding areas in South Dakota, Minnesota, and Iowa.

For the state as a whole, the bulk of slaughter cattle go through terminal markets; with packing plants second. Auctions are used most extensively in selling veal calves, with terminal markets next in importance. Dealers handle more feeder and stocker animals directly from farmers than other agencies, with auctions a close second. Dairy and breeding stock are most commonly sold direct to farmers, with auctions a fairly close second (See Fig. 14 and Appendix Table 1). Thus a different type of market appears to have precedence for each of the four classes of cattle shown. This in part, of course, is due to the particular class of animal sold in an area and the type of market having precedence there. For instance in the eastern sections (areas 1, 2, 3 and 6) the terminal market is the dominant outlet for all cattle. These areas produce about 85 percent of all the slaughter cattle of the state. While in range and semi-range districts (areas 4, 5, 7 and 8) the auction sales barns and dealers are used extensively. Here cattle sales are predominately feeders and stockers, for even the so-called slaughter cattle sold from these areas through auctions and dealers may be resold for further feeding, since they have been largely grass fattened.

As a hog market, packing plants are outstanding in area 2 in that they receive direct 80 percent of all the slaughter hogs reported (See Fig. 16). They are also the most important market in areas 3, 5, 6 and 8 obtaining approximately 50 percent of all slaughter hogs in each of these sections of the state. They also receive a considerable proportion in area 1. The dominant market in the other three areas varies. In the southeast (area 1) it is terminal markets; in the north central (area 4) auctions; and in the northwest (area 7) local markets. Cooperative shipping associations and dealers are relatively important in area 4.

In areas 2 to 8 inclusive, farmers sold from 50 to 68 percent of all feeder hogs through auction sales agencies and in the southeast (area 1) where only 3 percent of all hogs are marketed as feeders, 28 percent of the feeders were reported sold through auctions. Only in the northeast (areas 2 and 3) did terminal markets get an appreciable percentage of feeder hogs sold by farmers. In areas 3, 5, 6 and 7 from 22 to 44 percent of all feeder hogs were sold direct to farmers. In areas 4, 6 and 8 dealers secured a considerable percentage (See Fig. 17).

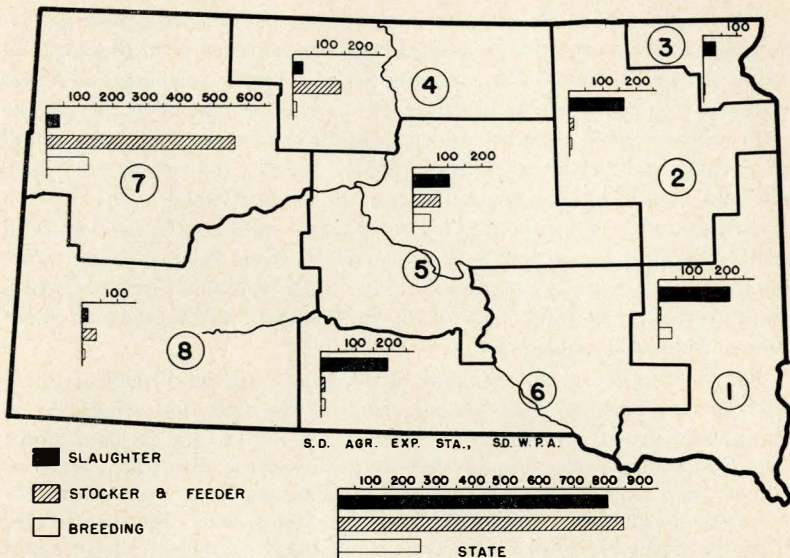


Fig. 19. Classes of All Sheep and Lambs Sold by Farmers in South Dakota—1940 (Numbers in thousands by areas in the state).

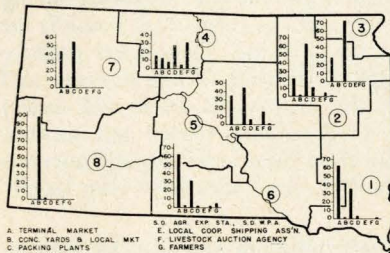


Fig. 20. Percentage of Slaughter Sheep and Lambs Sold by Farmers Through Various Agencies by Areas in South Dakota—1940.

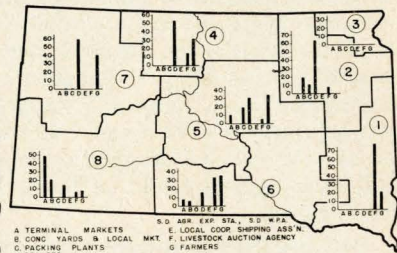
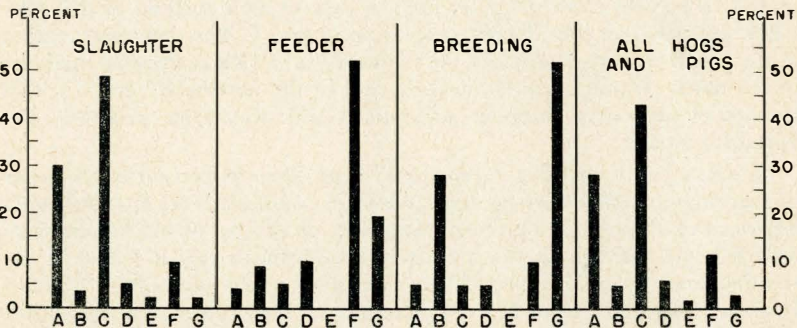


Fig. 21. Percentage of Feeder Sheep and Lambs Sold by Farmers Through Various Agencies by Areas in South Dakota—1940.



See legend on above Figs. 20 and 21 for identification of alphabetical symbols.

Fig. 22. Percentage of Sheep and Lambs Sold by Farmers Through Various Agencies in South Dakota—1940.

For the state as a whole, 48 percent of the slaughter hogs were sold direct to packing plants while 31 percent were sent to terminal markets. Fifty-four percent of the feeder hogs went to auctions, 19 percent direct to farmers (See Fig. 18 and Appendix Table 1). Thus, again it appears that the predominance of a type of market is partially dependent on the class of animal sold.

Slaughter sheep and lambs marketed by farmers in areas 2, 3, 5, 7 and 8 were sold most commonly to packing plants, with 45 to 98 percent of all slaughter animals going to this type of outlet from these areas. In both areas 1 and 6 farmers sold more than 60 percent of this class through terminal markets. In area 4 auctions and dealers ran a close race for precedence with each getting near 30 percent (See Fig. 20).

Feeder lambs and sheep were sold by farmers and ranchers through dealers more than through any other outlet in areas 2, 4 and 7 (See Fig. 21). In area 1 approximately 78 percent were sold through auctions; while in area 8 about one-half went to terminal markets. In area 6 there was small difference between the percentages going to auctions and sold direct to farmers with each outlet getting about 35 percent. In area 5 it was almost a draw between dealers and direct selling to farmers. There each outlet secured about 30 percent of the total number of feeders sold by farmers.

Fig. 22 presents a summary for the state of the types of markets used by farmers in selling the various classes of sheep and lambs (also see Appendix Table 1). Here again in the slaughter class we see that packing plants and terminal markets each secured about 45 percent of the total. Approximately 53 percent of the feeders were sold to dealers and 36 percent direct to farmers. While for the breeding class, 61 percent went direct to farmers. Thus, for each species the influence of the class of animal on the type of market selected is shown.

Size of Lots Per Sale Small. The average size of cattle sales ranged from 5.8 head in the northeast (area 2) to 11.3 head in the southwest (area 8) with a state average of 8 head. For hogs the size of average sales varied from 8.3 head in area 8 to 14.7 head in area 5, with a state average of 13.8 animals. For sheep the average number sold per sale varied much more between areas than for the other two species. The average number per sale in the northeast (area 3) was 13.2 head, while the northwest (area 7) had the high average of 320.4 with the state's average being 60 animals per sale (See Fig. 23).

Some Relation of Number of Slaughter Animals Sold per Farm to Type of Market Selected. In the foregoing discussion it was seen that the class of animal to be sold had a definite influence on the type of market selected. Now the question arises, "Does the number of animals sold per farm also act as an influencing factor?" Figure 24 indicates the answer to that question for slaughter livestock sold in the state as a whole (See also Appendix Table 2).

Larger Lots of Slaughter Cattle and Calves Tend to Go to Terminal Public Markets and Packing Plants. In the case of slaughter cattle and calves as the number sold per farm increased from less than 5 head to over 20 head the percentage going to terminal markets moved from 36 to 51 percent and that

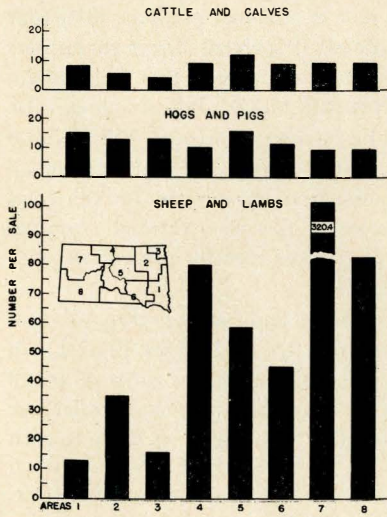


Fig. 23. Average Number of Livestock Per Sale by Areas in South Dakota—1940.

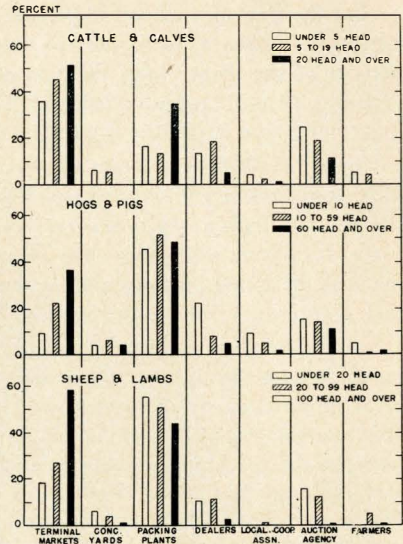


Fig. 24. Relation of Number of Slaughter Livestock Sold Per Farm to Type of Market Selected.

direct to packing plants changed from 16 to 34 percent. These increases were at the expense of business to dealers and auction agencies, for the proportion to dealers dropped from 13 to 4 percent and that to auctions fell from 23 to 10 percent as the number of animals sold per farm increased.

However, a study of relation of market selected to size of sales by areas shows that location and competition of other market types play a definite part in determining what type of market will be affected when the number of animals sold per farm is increased. For instance, the percentage of animals going to terminal markets increased in five areas and decreased in three as the number sold per farm increased. Those areas showing decreases were 2, 5 and 8. The first two of these have access to packing plants within the area. Hence, as size of sales increased the proportion of animals going to this type of market increased from 24 to 87 percent in area 2, and from 14 to 61 percent in area 5. The loss to the terminal market in area 8 was attended by the dealers' share increasing from 21 to 44 percent.

In only one area did packing plants lose patronage as the size of sales increased. This was in the northeast (area 3), where sales to terminal markets increased apparently at the expense of sales to packing plants.

The proportion of sales to dealers decreased with increased size of sales in every area except that mentioned above, and the proportion to auctions showed no increase except in area 7. Here the number of farms reporting selling larger numbers of slaughter cattle was too small to justify a great deal of reliance.

Dealers Receive Smaller Proportion of Slaughter Hogs and Pigs As Size of Lots Increase. Fig. 24 shows about the same trends in the same type of markets for hogs as for cattle, except that terminal markets received a much greater rate of increase in their share of the total hogs sold as size of sales increased than in the case of cattle. This increase was from 9 to 35 percent, and was made largely at the expense of the percentage going to dealers whose share dropped from 22 to 3 percent (See Appendix Table 2).

As the size of sales per farm increased from less than 10 head to over 60 the proportion of hogs going to dealers decreased in each of the eight areas. This loss in dealers' share appeared to be thrown to terminal public markets in areas 3, 5 and 6; to auctions in area 2; and to packing plants and auctions in the western section (areas 7 and 8).

Terminal Public Markets Benefit from Increase in Size of Lots of Slaughter Sheep and Lambs. In the marketing of slaughter sheep and lambs terminal public markets appear to be about the only type of outlet favorably affected as the number of animals sold per farm increases from below 20 to over 100 head. The percentages going to packing plants, dealers and auctions all showed definite decreases as size of sales increased (See Fig. 24 and Appendix Table 2).

The proportion going to terminal public markets increased as the number of animals sold per farm increased in the central and east (Areas 1 to 6 inclusive). These increases were made at the expense of packing plants in areas 1 and 3; packing plants, dealers and auctions in areas 2 and 6; and dealers and auctions in areas 4 and 5. In area 1 the proportion going to terminal markets moved from 37 percent for farms selling less than 20 head to 83 percent for farms selling 100 head or over. At the same time packing plant percentages for these two groups were 59 and 17 percent, respectively. In no area was there a significant increase in the proportion of slaughter sheep and lambs going direct to packing plants as the number sold per farm increased.

Some Relation of Number of Feeder Livestock Sold per Farm to Type of Market Selected. Reports of 532 farmers selling feeder cattle and calves were grouped according to the number of feeder animals sold per farm. These groups were for those selling: (1) under 5 head; (2) 5 head to 19 head; and (3) 20 head and over. For each of these groupings the percentage of animals sold to each type of market was calculated in an effort to see if there was a relation between volume of feeder animals sold per farm and the type of market selected (See Fig. 25 and Appendix Table 3). It appears that as the number sold per farm increased the percentages going to auctions and packing plants decreased while the proportions going to farmers and local cooperative associations increased. A more detailed examination of the data on an areal basis indicates that no area showed a trend opposite to the state average for the above mentioned markets, and that as the volume per farm increased the proportion of feeder cattle sold to auctions and packing plants decreased in 6 and 4 areas, respectively. Five areas showed increased proportions being sold directly to farmers as size of sales increased while no area showed decreases. The increased proportion going to local cooperative associations came largely in area 4 where cooperatives are relatively important.

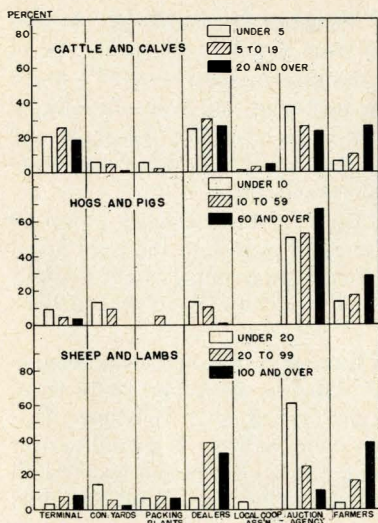


Fig. 25. Feeder Livestock Sold Through Each Type of Outlet in South Dakota—By Areas, Classified by Number Sold Per Farm for Each Species, 1940.

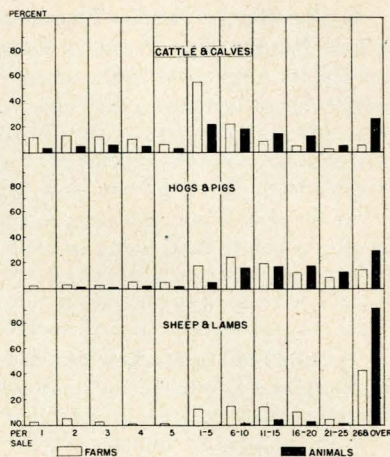


Fig. 26. Percentage of Farms Selling and Percentage of Livestock Sold by Number of Animals Per Sale in South Dakota—1940.

Larger Proportions of Feeder Hogs and Pigs Sold Through Auctions and Direct to Farmers as Size of Sales Increases. One hundred and two farms reporting selling feeder hogs were divided into groups similar to the above described for cattle, except that for hogs the size of the groups were (1) under 10 head; (2) 10 to 59 head; and (3) 60 head and over. Figure 25 shows these results also. Here direct marketing to farmers again increased with size of marketings, but in this case the increase came largely from areas 4 and 5. With feeder hogs, in contrast to cattle, the reports showed auctions benefitting from increased size of sales. This was true for the state, as well as for areas 2, 4, 6 and 8, while only area 1 indicated that it might have a reversed situation.

The agencies suffering from the effects of increased size of sales per farm appeared to be terminal markets and dealers, with the south-central section (area 6) being chiefly responsible in the case of terminal markets, and the central and south central sections (areas 5 and 6) in the case of dealers.

Larger Proportions of Feeder Sheep and Lambs Sold Direct to Farmers and Through Dealers as Size of Lots Increase. The number of farms reporting selling feeder sheep and lambs was small. In an effort to get a comparison of type of market selected with size of sales these were divided into the following groups: (1) Less than 20 head; (2) 20 to 99 head; and (3) 100 head and over, and fell into lots of 16, 18, and 14 farms respectively (See Fig. 25). Local markets and auctions appeared to suffer most as number sold per farm increased, while direct sales to farmers and sales through dealers seemed to gain the proportion lost by the other two agencies.

From the Foregoing it May be Concluded that as the Number of Feeder Animals Sold Per Farm Increases:

1. The proportion of all species sold direct to farmers increases.
2. The proportion of cattle and sheep sold through auctions decreases, while that of hogs increases.
3. The proportion of feeder cattle sold to packing plants decreases.

How Prevalent is Large Scale Selling? It has been shown that the choice of markets is affected by the number of animals to be sold. The question may be asked, "What percentage of farms have sales within specified size groups, and what percentage of animals are sold within these size of sale groups?"

Only Nine Percent of the Farms Market More Than 20 Cattle Per Sale. But these sales constitute approximately one-third of all cattle sold (See Table 3). This means, of course, that 91 percent of the farms in the state are limited in their ability to take advantage of large scale selling. However, in the west (areas 7 and 8) this factor is not as important as in the balance of the state. In area 7, 18 percent of the farms sell and 52 percent of the cattle are sold in lots of more than 20 head per sale, and in area 8 the respective percentages are 18 and 43. In contrast, in the northeast (area 2) only 2 percent of the farms sold and only 19 percent of the cattle were marketed in lots of more than 20 head per sale (See Fig. 26 for summary).

Table 3. Comparison of Percentage of Farms Selling and Percentage of Cattle Sold. Classified by Number of Animals per Sale.

No. Head per Sale per Farm	No. Farms Reporting	Percent of Farms	Percent of Cattle
5 head or less	439	55.5	22.1
6 to 20 head	284	36.0	46.1
Over 20 head	67	8.5	31.8
Total	790	100.0	100.0

Lot Sales of Hogs and Pigs Per Farm Are Usually Small. Nearly one-half the farms sell and almost one-fourth of all hogs are sold in lots of 10 head or less per sale, while only 15 percent of the farms sell and 29 percent of the hogs are sold in lots of more than 25 head per sale. This again indicates that relatively few farms are prepared to take advantage of large scale selling (See Fig. 26 and Table 4), although small sales may be partially due to selling animals as they are finished.

Table 4. Comparison of Percentage of Farms Selling and Percentage of Hogs Sold. Classified by Number of Animals per Sale.

No. Head per Sale per Farm	No. Farms Reporting	Percent of Farms	Percent of Hogs
10 head and under	256	43.8	22.4
11 to 25 head	243	41.6	48.9
26 head and over	85	14.6	28.7
Total	584	100.0	100.0

Size of Lots of Sheep and Lambs Sold Per Farm Are Larger than for Other Species. About 43 percent of the farms selling market, and 91 percent

of the sheep sold in the state are marketed in lots of over 25 head per sale (See Fig. 26). In fact, as shown previously, the state average per sale is 60 head. In large measure this seems to account for the fact that 87 percent of the slaughter sheep are sold direct by the farmer to either packing plants or terminal markets, and that 37 percent of the feeder sheep and lambs and 62 percent of the breeding stock is sold direct to farmers.

Weights by Species at Which Livestock Are Sold

Considerable Variation in Average Weights in Different Areas. Table 5 shows the average weight at which various species and classes of livestock were sold by farmers in South Dakota, the range of average weight by areas and the weight range for approximately 50 percent of each class sold. One of the most interesting features of this phase of the study is the variation in average weights between areas. In fed cattle the areas of the eastern part of the state appear to sell at weights averaging around 900 pounds, while areas 6, 7

Table 5. Approximate Average Weight and Ranges in Weights of Livestock Sold by Farmers in South Dakota by Species and Classes in 1940.

Species and Class	Farms Reporting	Approximate State Av. in Lbs.	Range of Average Weights among Areas	Weight Range for Approximately 50 Percent of Volume
Fed Cattle	118	944	882-1108	900-1100
Stocker and Feeder Cattle	308	544	529- 682	500- 650
Butcher Hogs	251	227	204- 276	200- 250
Slaughter Lambs	98	88	81- 95	80- 90
Feeder Lambs	52	69	60- 74	60- 70

and 8 in the south central and western sections tend to carry their fat cattle to weights averaging between 1,000 and 1,100 pounds. In the case of feeder cattle sales, almost the reverse appears to be true, that is areas 6, 7 and 8 sell at average weights of approximately 550 pounds, while feeder cattle sold in areas 1, 2 and 3 have a reported average of about 675 pounds. The heaviest butcher hogs appear to be sold in areas 5 and 8 with the approximate average weight being about 270 pounds, while in area 6 and the more eastern sections the average was around 227 pounds.

Feeder lambs appear to be sold at heavier weights in the western areas than in the eastern, with the average being around 70 pounds for 10,504 lambs reported from areas 7 and 8 and 60 pounds for 1,426 lambs reported from area 2.

The Bulk of All Slaughter Livestock Except Veal Calves Sold by Weight.

In selling various classes of livestock, farmers have the choice usually of selling at so much a pound or "lumping" the individual animals at so much per head. Without discussing the relative merits of these alternatives the evidence is that practically all slaughter hogs are sold by weight, but that about 10 percent of the slaughter cattle, veal calves and 1 percent of the slaughter lambs in the state are sold by the head (See Appendix Table 4). Fig. 27 presents this comparison by areas. Sales by the head apparently are still more general

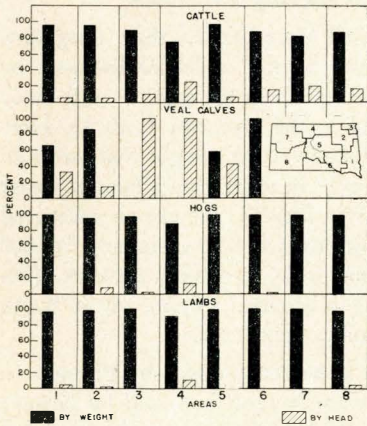


Fig. 27 Percentage of Slaughter Livestock Sold by Farmers, by Weight and by Head, by Areas in South Dakota—1940

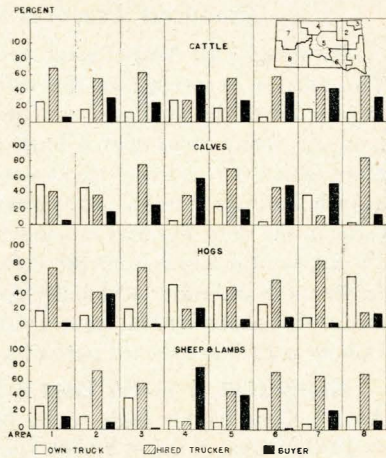


Fig. 28. Means by Which Livestock Sold by Farmers in South Dakota were Moved from Farms by Areas—1940 (Percentages of species by each method).

for all species in area 4 than in other sections. From this area 25 percent of the slaughter cattle, 100 percent of the veal calves, 13 percent of the slaughter hogs and 10 percent of the slaughter lambs were sold by the head. Cattle sales by the head seem to be least common in the east (areas 1 and 2). In these two areas practically all slaughter livestock are sold by weight, except veal calves.

Means of Transportation of Livestock from Farms

The Most Common Means by Which Livestock of all Species Are Moved to Market from Farms in South Dakota Is by Hired Truckers. The second most usual means is by the buyer, while one-fifth of the cattle and calves, one-seventh of the sheep and lambs and one-fourth of the hogs are hauled in the farmers own trucks (See Appendix Table 5). Buyers have precedence in moving livestock from farms in only the north central (area 4). Here they transport 78 percent of the sheep and lambs, 58 percent of the calves, 46 percent of the cattle and 25 percent of the hogs. In contrast in the southeast (area 1) only about 6 percent of the hogs, cattle and calves and 16 percent of the sheep and lambs are moved by buyers (See Fig. 28). In every area, except 4, hired truckers dominate the transportation field, moving over 50 percent of the cattle in six areas, over 50 percent of the calves in three areas, over 50 percent of the hogs in five, and over 50 percent of the sheep in seven.

Trucks owned by farmers themselves are used most extensively in the southeast (area 1) for transporting farmers own livestock to market. Here they move about one-fourth of the cattle, one-half of the calves, one-fifth of the hogs, and one-third of the sheep and lambs in their own trucks.

A very small percentage of livestock moves directly from the farm to market by railroad except for shipments of cattle and sheep to packing plants from distances usually over 200 miles.

Producers' Practices When Buying Livestock

Farmers in All Areas Except Area 1 Sell More Feeders than They Buy.

The relative importance of the selling and buying of feeder livestock by farmers in the different areas is shown in Fig. 29. In the case of cattle every area sells many more than it buys, except in the southeast (area 1). Here more than twice as many feeder cattle and calves are bought than are sold as such. Farmers in this area buy about 65 percent of all farmer bought feeder cattle in the state. Farmers in another eastern area (2) bought an additional 10 percent. Estimates from the data gathered show approximately 592,000 feeder cattle and calves sold and 456,000 bought by farmers in the state. This means that about 136,000 feeders were left to be either shipped out of South Dakota in 1940 or to be fed out by buyers other than farmers.

Nearly Half of Feeder Hogs Sold in State Are Bought by Farmers in Area 1. Considerably more feeder hogs were bought than sold by farmers in 1940 in areas 1, 2 and 8 (See Fig. 29). In the other areas, sales exceeded purchases. Area 1 alone accounted for approximately 41 percent of all farmer purchases in the state, while adjacent areas 2 and 6 purchased 18 and 23 percent of the total, respectively. Thus, these three eastern areas bought 82 percent of the state total. Estimates from the data gathered indicate that farmers bought about 10,000 more feeder pigs than were sold in the state, selling 192,000 and buying 202,000. This would indicate that in-shipments of feeder hogs exceeded out-shipments for 1940.

Two-Thirds of Feeder Sheep Bought in State by Farmers Are Bought in Areas 1, 2 and 6. In the case of feeder sheep and lambs, areas 1, 2 and 6 are again the sections in which farmer purchases exceeded farmer sales. These areas accounted for 34, 17 and 19 percent respectively, of the state's total farmer purchases. Area 7 in the northwest although the heaviest seller of feeder lambs of all areas, also accounted for 23 percent of the state's farmer purchases (See Fig. 29). It is in this area that the "Belle Fourche" lamb feeding operations take place.

Auction Agencies Most Important Source of Cattle Purchased by Farmers. For the state as a whole farmers bought about 50 percent of their feeder cattle and calves through auctions in 1940. Twenty-eight percent came direct from farmers and 15 percent from terminal markets (See Fig. 30 and Appendix Table 6). About 56 percent of the dairy and breeding animals came direct from farmers, with 33 percent from auctions and 9 percent from dealers.

The auction market was the most important source of stockers and feeders in each of the eight areas, and in the central and northwest sections (areas 4, 5 and 7) farmers reported buying over 75 percent of their feeder cattle from auctions. In the east (areas 1, 2 and 3) and the southwest (area 8) over 25 percent of feeder purchases came direct from farmers, while only in area 1 were terminal markets an important source of supply. Here this type of market supplied 27 percent of farmer purchases. Only in areas 3, 6 and 8 did dealers supply as much as 10 percent, with a high of 23 percent in area 8.

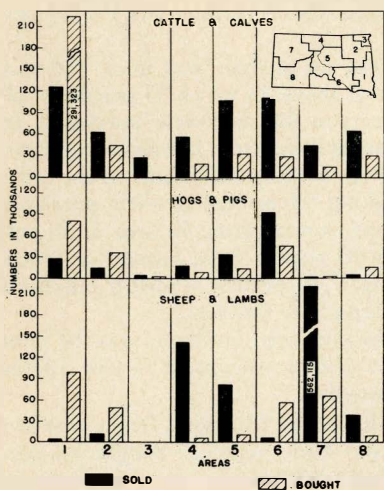


Fig. 29. Comparison of Numbers of Feeder Livestock Bought and Sold by Farmers in Different Areas of South Dakota—1940 (Numbers in thousands).

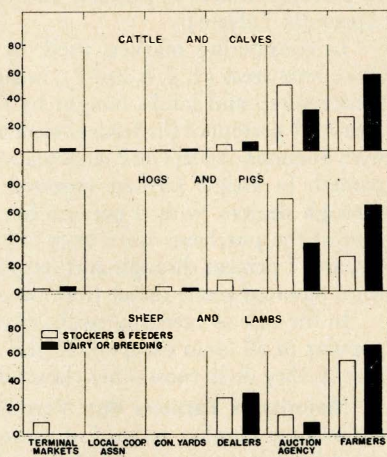


Fig. 30. Sources from Which Farmers Bought Livestock in South Dakota—1940 (Percentage of different classes bought at each source).

In every area except 5 and 8 the greater proportion of dairy and breeding animals came from farmers. In these two areas auctions were the more important source of supply.

Hog Purchases by Farmers Largely from Auctions and Other Farmers. Farmers bought 68 percent of the feeder hogs and 32 percent of breeding hogs they purchased through auctions in 1940, while 64 percent of the breeding stock and 25 percent of feeders bought were from farmers direct (See Fig. 30 and Appendix Table 6).

Turning to an areal basis and remembering that areas 1, 2 and 6 bought 82 percent of all feeder hogs purchased by farmers, it is seen that the purchases through auctions were 90 percent in area 1, 37 percent in area 2, and 70 percent in area 6. Direct purchases from farmers represented 45 percent of the total in area 2, 26 percent in area 6, and 2 percent in area 1. Most of the other feeder purchases in these three areas were through dealers and ranged from 5 percent in area 1 to 7 percent in area 2.

In all areas, except 5, where auctions were slightly dominant, the majority of breeding stock was bought from farmers direct.

Sheep and Lambs Bought by Farmers Largely from Other Farmers and Dealers. Farmers purchase a larger proportion of both feeder and breeding animals from other farmers than from other sources. In 1940 feeder sheep and lambs bought by farmers were secured in the following proportions: from farmers, 54 percent; dealers, 26 percent; auctions, 13 percent; and from terminal markets 7 percent. Sources of breeding stock were: from farmers

63 percent; dealers 30 percent; and from auctions 7 percent (See Fig. 30 and Appendix Table 6).

In considering markets used, by areas, an analysis was made for only those four areas (1, 2, 6 and 7), mentioned above, in which 93 percent of all feeder sheep and lambs bought by farmers in the state were purchased. In area 1, 69 percent of the feeders were obtained direct from farmers or ranchers, with auctions, dealers and terminal markets dividing the balance in the order named. In area 2 farmers reported making 93 percent of their purchases through dealers, with 6 percent from terminal markets. In area 6, 56 percent of the purchases were from dealers, 35 percent from farmers or ranchers, and 7 percent through auctions. In area 7, 91 percent of farmer purchases were reported made direct from other farmers or ranchers.

In the case of breeding stock, direct buying from producers was the most popular in all areas except 4. In this area dealers also appear to play a large part, as they do in most other classes of livestock.

Majority of Farmers Buy Very Small Lots of Livestock. Table 6 shows the average number of head of stocker and feeder livestock bought per purchase by farmers in South Dakota. It is probably even more significant to know the percentage of farms buying and the percentage of animals bought within different sizes of purchases. Table 7 shows this for cattle and calves, hogs, and sheep. From this it is seen that about 19 percent of the farms buying purchase approximately 75 percent of the cattle bought by farmers and ranchers; that about 11 percent of the farmers buying secure 65 percent of all hogs bought by farmers; and that approximately 2 percent of the farmers buying purchase 41 percent of all sheep and lambs bought by farmers or ranchers (See footnote to Table 7). This shows that the majority of farmers buy feeder livestock in small numbers and hence may be expected to cater to types of markets accordingly.

Table 6. Average Number of Head of Stocker and Feeder Livestock Bought by Farmers in South Dakota, Classified by Species, 1940.

Species	Farms Reporting	Head Bought	Times Bought	Average Per Purchase
	Number	Number	Number	Number
Cattle and Calves	132	4209	470	9
Hogs	55	1661	135	12.3
Sheep	22	6459	52	124.2

Table 7. Comparison of Percentage of Farms buying and Percentage of Livestock Bought: Classified by Species and Size of Purchase.

	Number head per purchase per farm	No. Farms Reporting	Percent of Farms	Percent of Livestock
Cattle and Calves:	5 and less	140	48.4	5.0
	6 to 25	95	32.9	20.3
	26 and over	54	18.7	74.7
Hogs and Pigs:	10 and less	145	71.9	14.2
	11 to 25	34	17.0	21.2
	26 and over	22	10.9	64.6
Sheep and Lambs:	25 and less	74	54.1	2.5
	26 to 999	60	43.7	55.5
	1000 and over ¹	3	2.2	41.4

1. Data for this group quite limited.

Cattle and Calves Purchases from Auctions Increase with Size of Lots Purchased. As the number of feeder cattle per purchase increases from less than 5 head to more than 20 head there appears to be a tendency to patronize auctions more and farmers less (See Fig. 31 and Appendix Table 7). Of 37 farms reporting buying less than 5 head per farm, 43 percent of the cattle were bought from auctions and 34 percent from farmers; while of 56 farms reporting buying over 20 head per farm, 49 percent were bought through auctions and 28 percent from farmers. Furthermore, the increased use of auctions and decreased purchases from farmers seemed to hold true in areas 1, 4, 6 and 8 as number of animals purchased per sale increased. In six areas (1, 2, 4, 6, 7 and 8) the proportion bought from auctions increased as the size of purchase increased. Similar increases were observed in no areas for terminal markets, in areas 5 and 8 for dealers, and in areas 2 and 5 for purchases from farmers. The increases in area 5 for purchases from dealers and farmers were at the expense of auctions, and in area 8 the increase for dealers was at the expense of direct purchases from farmers. Increased purchases from farmers in area 2 were at the expense of dealer accounts.

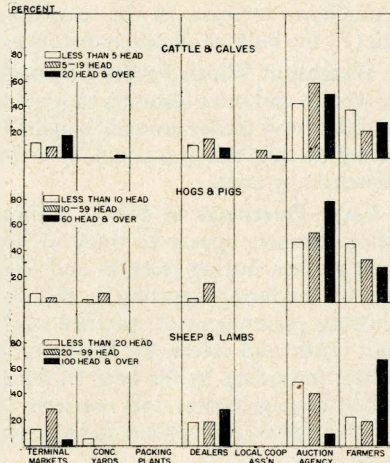


Fig. 31. Effect of Size of Purchase on Type of Market Selected. (Percentage of various sized purchases from different types of markets).

Hog and Pig Purchases from Auctions Increase with Size of Lots Bought. Comparisons were made of the extent to which different type markets were used by farmers when grouped according to the number of hogs bought. All farms buying hogs were grouped as follows: (1) Those buying less than 10 head; (2) those buying 20-59 head; and (3) those buying 60 head or over. Fig. 31 shows that as these three groups were compared the percentages bought through auctions increased definitely (as the size of purchases increased) while the proportions bought directly from farmers declined almost as much. This same situation held true in all three areas (1, 2 and 6) in which hog purchases in considerable amounts took place.

Sheep and Lamb Purchases from Farmers and Dealers Increase With Size of Lots. A similar comparison as the above was made for sheep and lamb purchases. Here the farm groups were those buying, (1) less than 20 head, (2) 20 to 99 head, and (3) 100 head and over. Fig. 31 shows, that for the lower group, auctions were the principal source of supply. When the second group is considered auctions sacrificed some of their precedence to

terminal markets. But when purchases of over 100 head were made farmers stepped up their direct purchases from farmers or ranchers to 62 percent from 21 percent when less than 20 head were bought. Dealers also gained farmer business on the larger purchases, while terminal markets and auctions suffered heavily. Area 1 seems to follow, and indeed set, the pattern of the state. But areas 2 and 6 appear to give the majority of business to dealers as the size of purchases increase. In the remaining important feeder sheep purchasing area (7) the bulk of all purchases appear to be direct from the rancher.

Weights at Which Feeder Livestock Is Bought. Table 8 shows the average weight and most common ranges in weights of various species and classes of stocker and feeder animals bought by farmers. The number of farms reporting on this item was small. Therefore, no attempt was made to calculate differences by areas.

Large Percentage of Feeder Animals Are Bought by the Head. South Dakota farmers appear to trade in livestock by the head much more frequently when buying stockers and feeders than when selling slaughter animals. Of the farms reporting on this point the state summary shows that the following percentages of specified stockers and feeders were bought by the head: Cattle and calves, 45; hogs and pigs, 41; and sheep and lambs, 24. In contrast to trading by the head in selling slaughter livestock, trading by the head in buying feeders does not seem to be any more applicable to one area than to another, but appears to be general over the entire state.

Table 8. Approximate average weight, and most common ranges in weights, which comprised 50 percent and 75 percent of stocker and feeder livestock bought by farmers in South Dakota, classified by species and class, 1940.

Species and Class	Farms Reporting	Approximate Average	Weight Range for Approximately 50% of Volume	Weight Range for Approximately 75% of Volume
	Number	Pounds	Pounds	Pounds
Steers	26	589	650 - 750	400 - 700
Heifers	3	537	500 - 600	450 - 600
Calves	24	296	300 - 400	200 - 400
Hogs and Pigs	22	73	40 - 70	40 - 100
Lambs	6	64	50 - 65	50 - 65

Market Information and Farmers' Reasons for Selecting Particular Types of Markets

Twenty-five Percent of Farmers Reported Use of Outlook Information. Of 443 farmers asked if they were making use of market outlook information, 119 replied, "yes," and 324, "no." Of the 119 replying affirmatively, the following sources of information were given: Farm paper, 81; government publications, 30; radio, 16; and commission firm letters, 11.

Farmers' reports indicate that the radio is the principal means by which they obtain market news, with the frequency of the use of this source exceeding that of newspapers by about 40 percent for prices on cattle, calves, hogs, and sheep. A small percentage of farmers reported getting market prices through news letters from commission firms.

In response to the question, "Is enough market information obtained by radio to permit farmers to sell each class and grade of livestock for largest net returns?" 454 farmers gave the following percentage of affirmative replies for different species: for cattle, 45 percent; for calves, 56 percent; for hogs and sheep, 77 percent. This indicates that radio news does not adapt itself to the wide variation in classes and grades of cattle as well as to hogs and sheep, which are usually much more uniform in grade. Even for hogs and sheep the adequacy of radio news appears to be questionable.

Why do Farmers Select Particular Types of Markets When Selling? Appendix Table 8 presents a summary of the reasons farmers gave for selecting particular types of marketing agencies when selling livestock. The following seem to be highlights and distinguishing characteristics as selected from the reasons given for using each type of market: (1) Terminal public markets afford the greatest amount of competition; (2) packing plants, closest and avoid middlemen; (3) livestock auction agencies, best market for small number, good market for feeder animals, convenient, and afford most competition; (4) livestock dealers and truck buyers, afford an opportunity for a farm agreed price, most convenient and least expense; (5) direct selling to farmers, least expense and most money; (6) concentration yards or local markets, least expense and least shrinkage.

How do Farmers Select Markets When Buying? An outstanding reason why terminal public markets are employed is because they afford a supply of the kind of animals wanted. Auctions are used for similar reasons, for sake of convenience, because a farmer can bid his own price, and because in many instances they are the only available source of supply. Dealers are employed because of convenience, availability, and price. Reasons given for buying direct from farmers were most numerous and most uniform for all species. The outstanding reason given here was that a farmer has the opportunity of knowing just what he is getting when he buys from another producer (See Appendix Table 9).

Sioux City and Sioux Falls are the leading markets on which the majority of South Dakota farmers depend for price information. However, Watertown, St. Paul, Huron, Chicago, Omaha, Fargo, Mitchell, Aberdeen and others are all very important in certain localities. The sphere of influence of each is determined by locality, transportation facilities, and class and grade of animals to be marketed (See Appendix Table 10).

Are Farmers Qualified as Salesmen to Deal with Skilled Buyers? A summary of farmers' replies to the question, "Do you consider yourself qualified to act as your own salesman of the different species of livestock?" shows that the following percentages thought they are not qualified to do their own selling of different species: cattle, 30 percent; calves, 19 percent; hogs, 17 percent; sheep, 16 percent. As was indicated above the complexity of cattle grades is again recognized by farmers here, and raises the question, "How may this difference in bargaining power be equalized?"

Characteristics and Practices of Livestock Marketing Agencies Livestock Auction or Sales Barn

Six Auction Firms Handled Almost One-Half of all Livestock Sold Through 49 Auction Agencies. Among the 49 auctions in operation in South Dakota during 1940 the range in volume of the different species sold was quite wide (See Table 9).

Table 9. Frequency Distribution of Number of Livestock Sold by 49 South Dakota Auctions in 1940—by species—and Percentage of Total Sold by Six Largest Sellers of Each Species.

Size of Sales for Year Numbers	Number of Auctions Selling		
	Cattle	Hogs	Sheep
Under 5,000	28	22	42
5,000 to 9,999	15	13	6
10,000 to 19,999	3	13	1
20,000 to 29,999	1	0	0
30,000 to 39,999	1	0	0
Over 40,000	1	1	0
	Percent	Percent	Percent
Percent of total sold by 6 largest sellers of each species	45	36	45

The fact that the six (12 percent of the total) largest sellers of each species handled almost one-half of the cattle and sheep and over one-third of the hogs sold through auctions is of considerable interest. The seven largest auctions are rather well distributed over the state, with two being in the southeast (area 1), 3 in the northeast (area 2), 1 in the central (area 5), and 1 in the southwest (area 8).

Annual Value of Business of Some Auctions More than One Million Dollars. From a standpoint of value of business transacted, 18 auctions reported selling \$11,926,523.80 worth of livestock and other material during 1940. Of this amount 97.7 percent was represented by sales of livestock other than horses and poultry. Most of the balance was from horse sales, with a very small part from other sales, as harness, machinery, etc.

One auction's sales amounted to \$2,547,109.59, and another to \$1,500,000, with the smallest reported amounting to only \$50,000 for the year, 1940.

Wide Range in Maximum Sales Per Day. The usual practice in South Dakota is for auction agencies to have sales once a week the year round. However, the largest auction in the state has two sales a week, while a few hold sales only bi-weekly, and some of these are suspended during the winter months.

In regard to the maximum number of animals reported by 19 auctions as being sold on a single day the following summary is given: Less than 200 head per day; cattle, 6 auctions; hogs, 3 auctions; sheep and lambs, 10 auctions; more than 1,000 on a given day, cattle, 4 auctions; hogs, 6 auctions; and sheep and lambs, 4 auctions.

Average Attendance Good. Table 10 shows the average attendance per sale as reported by 21 livestock auctions. In connection with this, the average number of buyers and sellers participating at each sale as reported by 15 auctions is given in Table 11. This, of course, tells nothing about the size of pur-

chases or consignments by individual buyers or consignors. However, these figures as reported indicate a basis for fairly competitive conditions for most auction agencies.

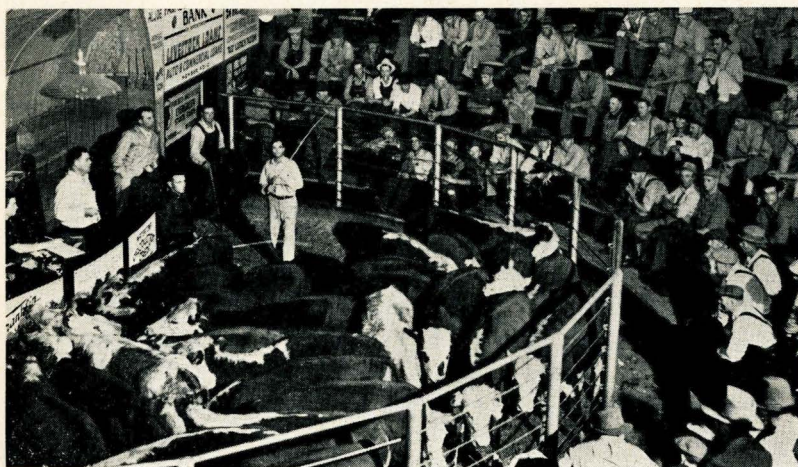
Table 10. Average attendance per sale at 21 livestock auctions in South Dakota, 1940.

Average Attendance	Number of Auctions
Below 100	0
100 to 199	3
200 to 299	4
300 to 399	2
400 to 499	8
500 to 599	1
600 to 699	2
700 and over	1
Total	21

Larger Proportion of Names of Buyers than Consignors Made Known.

Of 21 auctions reporting, 14 said they did not announce name of consignor at time of sale, and 13 said the name of consignor was posted on the pen containing his livestock. Twenty of the 21 reported that they announced the names of all buyers at the time of sale.

No Uniform Practice Regarding Sales at Private Treaty and Bidding at Auction Agencies. One-third of the auctions reporting stated that they required all animals delivered to be offered at auction. For those auctions where all livestock was not put through the ring, six reported that no charges were made while the balance made charges ranging from feed and care to full commission.



Auction agencies are important cattle markets in South Dakota.

Table 11. Number of Buyers and Consignors Reported from 15 Livestock Auctions in South Dakota, 1940.

No. Consignors	No. Auctions Reporting	No. Buyers	No. Auctions Reporting
Under 25	-	Under 10	-
25 to 49	4	10 to 24	5
50 to 99	5	25 to 49	8
100 to 200	5	50 to 100	2
Over 200	1	Over 100	-
Total	15		15

	Average and Range		
	Average	Extreme Low	Extreme High
Buyers	35	15	100
Consignors	105	35	400

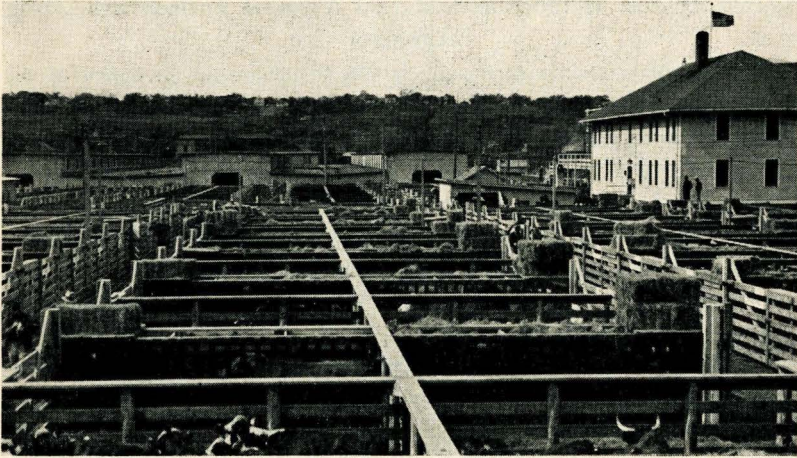
Sixteen of 21 auctions stated that bids were usually opened by either ringmen or the auctioneer, while five stated that the opening bid came from some one in the audience. Sixteen of the 21 auctions reported that consignors could protect themselves against low bids by crying "no sale;" at four, the seller was allowed to bid; and at one, a reserve price was allowed.

At eight of the auctions no charge was made if the consignor bid in his own animals, while at six, one-half commission was charged.

Buying by Auction Operators and Auctioneers Rather Prevalent. Only four of the 21 auction operators reporting stated that they never bought livestock in the country for resale at the auction, nor bought at the auction. The other 17 stated that they both bought in the country for resale at the auction and bought at the auction either regularly or infrequently. Some of the smaller auctions reported buying in the country up to 25 percent of the animals sold in the sales ring.

Nine of the 21 auctions reported that the auctioneer had a financial interest in the business. Of these nine auctioneers with a financial interest, and of the 12 without financial interest, only two in each group stated that they never bought at the auction. The balance in both groups either bought regularly or infrequently.

Lack of Uniformity in Charges Made by Auction Agencies. Commission, yardage, feed, insurance and brand and veterinary inspection charges for the various auctions are shown in Appendix Table 11. There was considerable variation in the method of charging and amounts of charges made by the several auctions. Of 21 auctions reporting, four charged commissions on the basis of percentage of gross sales on cattle, calves and horses, while three used a similar basis for hogs and sheep. These rates were either flat or graduated on a value basis. The remaining auctions made their commission charges by the head, with the majority graduating their charges either on a basis of value, numbers, size of animal, or some combination of these factors.



Terminal public markets received direct 34.6 percent of all cattle, 28.4 percent of all hogs, 20.7 percent of all sheep sold by farmers in South Dakota in 1940.

Terminal Public Market or Stockyards

A terminal public market is a stockyards owned, maintained and operated by a stockyards company at some central point. Here livestock is delivered to be sold and bought on a market that is open to the public. Livestock is unloaded at the chutes, received, counted and delivered by the stockyards company to a commission firm operating on the market.

The commission firm waters, feeds, sorts, grades and sells the livestock on bids to packers, order buyers, feeder buyers, or yard dealers operating on the market. After the producer's assignment is sold it is taken to the scale by the commission firm and weighed on scales that are inspected and tested regularly every 90 days by the scale company under the supervision of the Packer and Stockyards Administration, United States Department of Agriculture. The Packer and Stockyard Administration also supervises the market practices of each agency and checks their financial standing. In addition, each agency is bonded according to the Packer and Stockyard Administration regulations for the protection of the market patrons. The Bureau of Animal Industry is represented on the market by veterinary service that inspects all animals upon arrival and before leaving the yards.

On December 31, 1940, the following number of agencies were operating on the Sioux Falls market: Commission firms, 9; packer buyers, 5; order buyers, 3; and yard traders, 4. The packer buyers are representatives of packing companies and buy livestock for slaughter for them. The commission firms sell livestock that has been consigned to them and also may buy livestock on order. The order buyers buy on orders for (usually) non-resident packers, feeder buyers or dealers. The yard dealers buy livestock for resale. They buy when and what they think they can dispose of at a profit.

Transportation Methods and Market Areas of Various Marketing Agencies

One of the objectives of this study was to determine the extent of the market area in which the various types of marketing agencies normally operate. This affords evidence of the marketing facilities available, and to some extent, the degree of competition in different sectors. The size of market area varies, of course, from agency to agency within a given type and is related to transportation methods. Figures 32 through 38 show the approximate percentage of each species of animals, handled by all agencies of a given type, according to the radius from which they were obtained, and, in most cases, according to method of transportation.

Dealers' Transportation Methods Differ for Cattle and Hogs. The majority of cattle and calves were picked up on farms by trucks owned or hired by dealers, while an equally high percentage of hogs, sheep and lambs were delivered to dealers' yards by farmers or custom truckers (See Appendix Table 12).

Of livestock assembled at 43 dealers' yards, approximately one-third of the cattle and calves; one-fourth of the hogs; and three-fourths of the sheep and lambs were shipped out by rail, while the balance was transported by truck.

Dealers Secure a Considerable Part of Cattle and Sheep Handled Outside of a Radius of 100 Miles. The trade area for dealers was calculated in two ways. First, the percentages of animals of each species picked up on farms by dealers' trucks within specified distances were figured for 49 dealers reporting. Second, the percentages of animals of various species not picked up by the truck of the dealer, but handled through dealers were figured for specified distances for 36 dealers reporting. Some of the animals in the latter group may have been bought through other marketing agencies and transported by a variety of means to the dealers' own yards or shipped from point of purchase to point of selling by the dealers without ever passing through his yards.

Dealers' trucks find a fairly uniform volume of business in cattle for all zones listed (See Fig. 32) with only a slight drop for the zone extending beyond 100 miles. With calves picked up by truck the picture differs from that of cattle in that about twice as high a percentage are picked up in the 25-50 mile zone as in any of the other four zones. Hogs are bought closer to home, with the percentage decreasing steadily from the very first 10 mile area. The situation as to sheep picked up at farms by dealers is very similar to that of calves, with approximately 53 percent coming from the 25-50 mile zone.

Many dealers buy livestock delivered at their yards or from sources other than directly from farms. A comparison of the procurement areas involved

for these types of purchases as compared to animals picked up on farms is shown in Table 12. This indicates that livestock picked up on farms by dealers comes from a much smaller radius than their other purchases. Part of this is due to making purchases at a point and shipping the animals from there by rail to destination other than the dealers' yards.

Table 12. Percentage of Animals Picked Up On Farms and Not Picked Up on Farms But Bought By Dealers That Came From Over 50 Miles By Species, 1940

	Picked up on Farms	Handled by, but not Picked Up on Farms
	Percent from Over 50 Miles	Percent from Over 50 Miles
Cattle	36.7	53.3
Calves	29.4	42.5
Hogs	7.2	25.4
Sheep and Lambs	24.4	38.1

More than One-fourth of Livestock Handled by 21 Auctions Came from Radius Outside of 50 Miles. Of all the livestock received at reporting auctions in 1940 the following percentages were received by truck: Cattle, 83 percent; calves, 86 percent; hogs, 96 percent; and sheep, 80 percent. Practically all the balance came by rail. Of the animals coming by rail about 90 percent of the cattle and calves, and practically all of the hogs and sheep came from over 100 miles.

South Dakota livestock auction agencies draw on fairly large marketing areas, with the following percentages of animals delivered by truck coming from over 50 miles; cattle, 47 percent; calves, 39 percent; hogs, 29 percent; and sheep and lambs, 43 percent (See Fig. 33). These percentages correspond closely to the ones on the livestock not picked up on farms but handled by dealers, and may give some indication as to the consignors of livestock coming over 50 miles, as well as to the source from which these consignors obtained their animals.

Concentration Yard Contacted Transported High Percentage of Livestock in its Own or Hired Trucks. This agency reported that 40 percent of the cattle, 100 percent of the sheep and 5 percent of the hogs bought were picked up on farms by trucks owned or hired by the yards. The balance of the cattle and hogs was delivered to the yards by farmers or custom truckers. In transporting the animals from the yards 100 percent of the cattle and sheep and 90 percent of the hogs were moved by truck. The other 10 percent of the hogs was shipped by rail. The area from which this agency drew its cattle and hogs was largely under 50 miles, with 40 percent of the cattle and 50 percent of the hogs reported coming from the 25-50 mile zone.

Bulk of Livestock Is Delivered to Local Cooperative Marketing Associations and Retail Meat Dealers Doing Slaughtering. Reports show that practically 90 percent of the hogs, half the cattle and sheep and one-third of the calves are delivered to shipping associations' yards by farmers or custom truckers, and that two-thirds of the calves, half the sheep and lambs, 42 percent of the cattle and 8 percent of the hogs are moved directly from the farms to buyers by association trucks.

Of the livestock concentrated at the yards operated by the associations approximately one-half of the cattle and sheep, one-third of the calves, and one-fifth of the hogs were shipped by rail. The balance was moved from the yards by trucks.

Fig. 32. Livestock Picked up at Farms by Trucks Operated by Dealers in South Dakota from Various Distances, Classified by Species, 1940.

Fig. 33. Trade Area of South Dakota Livestock Auctions in 1940. (Percentage of various classes of livestock received by truck that came from specified distances.)

Fig. 34. Livestock Received at Yards of Local Cooperative Marketing Associations in South Dakota from Various Distances, Classified by Species, 1940.

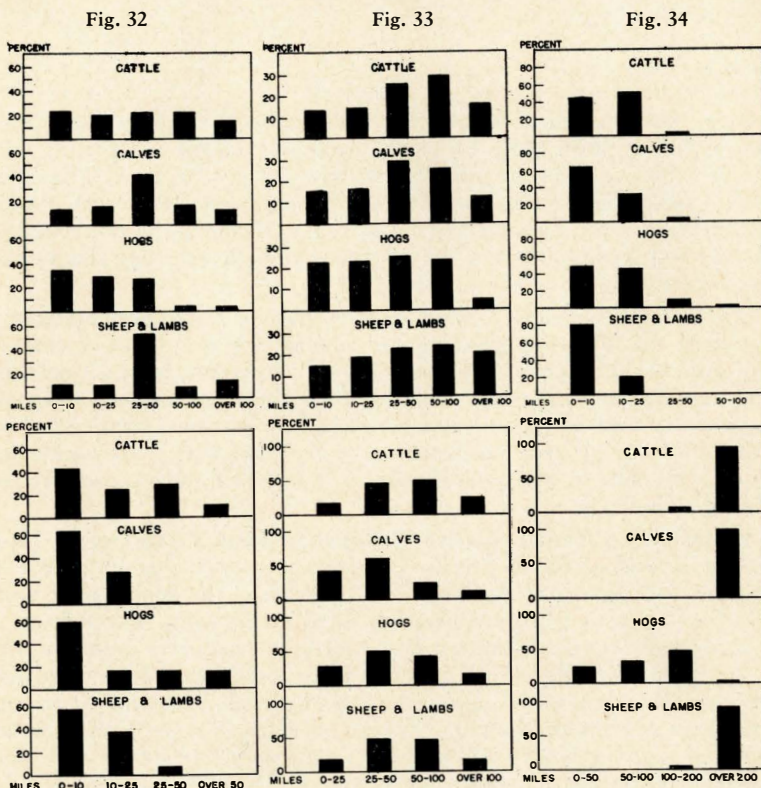


Fig. 32

Fig. 33

Fig. 34

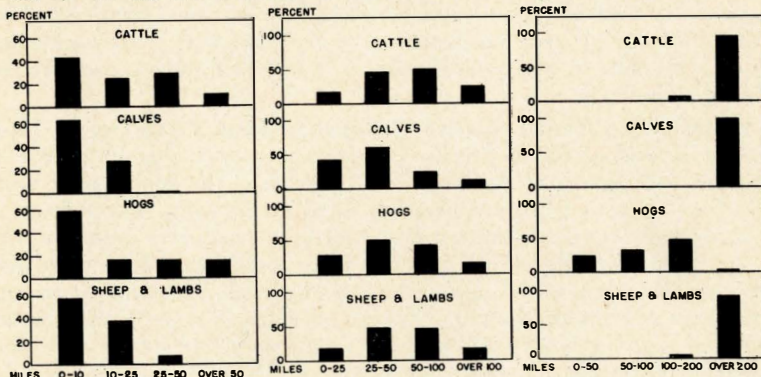


Fig. 35

Fig. 36

Fig. 37

Fig. 35. Livestock Received by Retail Meat Dealers who Slaughter in South Dakota, From Various Distances, Classified by Species, 1940.

Fig. 36. Livestock Procurement Area of 9 Packing Plants in South Dakota—1940 (Percentage of various classes of livestock received by truck that came from specified distances).

Fig. 37. Livestock Procurement Area of 6 Packing Plants in South Dakota—1940 (Percentage of various classes of livestock received by rail from specified distances).

Fig. 34 shows the extent of the areas from which local shipping associations drew their supplies of livestock. From this it is seen that the name local is well used, for practically none of any species is secured outside a 25 mile radius, and the major portion is obtained within a 10 mile limit.

Records from 13 retail meat dealers doing slaughtering indicate that three-fourths of the hogs, about one-third of the cattle and calves and one-fourth of the sheep and lambs handled were delivered by farmers or custom truckers, and that three-fourths of the sheep and lambs, one-third of the cattle and one-fifth of the calves and hogs were picked up on farms by trucks owned or hired by the meat dealers. The balance of all species was delivered by livestock dealers.

Figure 35 presents the areas from which this type of marketing agency draws its supply of animals. These, too, are local in character, largely, but not as much so as the local cooperative shipping associations.

Packing Plants Secure Livestock From Rather Wide Areas. Approximately 91 percent of all the hogs and two-thirds of the cattle, calves, sheep and lambs received at packing plants were brought in by trucks. The balance arrived largely by rail.

Fig. 36 shows the distances from which truck transported livestock comes. This indicates that approximately half of the cattle and sheep and about 60 percent of the hogs come from within a radius of 50 miles, while about one-fifth of the cattle and sheep and one-eighth of the hogs come from outside a radius of 100 miles.

Fig. 37 presents the market area from which rail transported livestock comes to packing plants. From this it appears that 5 percent of the hogs, and about 95 percent of the cattle, calves, and sheep brought in by rail came from over 200 miles.

Of the packing plants submitting data, 9 stated that they received livestock from more than 100 miles by truck, and 4 stated that they received livestock from more than 700 miles by rail.⁹ One plant received slaughter lambs from California.

Truck Deliveries to Sioux Falls Public Market Largely Concentrated Within a 50 Mile Radius. The Sioux Falls public market received the following percentages of the different species of livestock by truck: Cattle, 96.6; hogs, 99.9; and sheep and lambs, 88.1. The balance was received by rail. Fig. 38 shows the percentage of different species received by truck that came from within specified distances. This shows that 82.8 percent of the hogs, 79.1 percent of the sheep, and 67.2 percent of the cattle received by truck came from within 50 miles of Sioux Falls.

Of the livestock received by rail the following percentages came from points within the state: Cattle, 51.3; hogs, 100.0, and sheep and lambs, 29.3.

Large Number of Local Livestock Dealers and Truckers in State. A survey through county agents, auction sales managers and dealers indicate that there are some 900 local livestock dealers, truck buyers, and livestock cus-

9. Figures for nine South Dakota and three North Dakota packing plants were combined for all data relating to packing plants except those shown in Figs. 36 and 37, which are for South Dakota plants only.

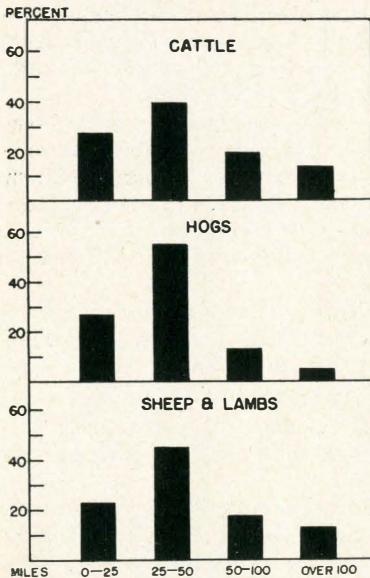


Fig. 38. Livestock Procurement Area of Sioux Falls Terminal Public Market—1940.

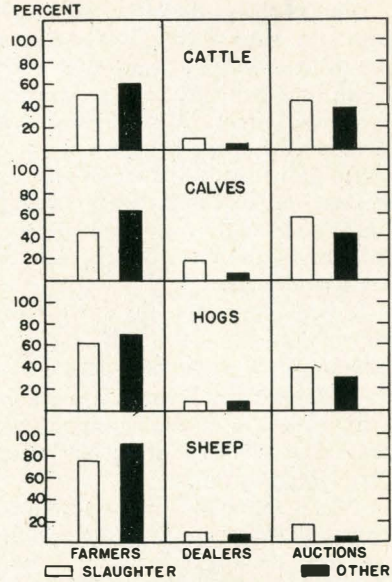


Fig. 39. Sources From Which 68 Livestock Dealers Bought Livestock in South Dakota—1940. (Percentage bought from each type of source by classes).

tom truckers in South Dakota. In questionnaires secured from 69 livestock dealers in the state, (See Fig. 7) in addition to securing information on dealers' sources and disposition of livestock, an attempt was made to learn the relative importance of custom trucking by dealers as compared, (1) to livestock bought by all dealers, and (2) to livestock bought by dealers doing custom trucking. Of the 69 dealers surveyed—31 did not operate trucks, 38 operated trucks, and 24 did custom trucking as well as buying (See Table 13).

Table 13. Custom Trucking by the Livestock Dealers Operating Trucks in South Dakota; Classified by species, 1940.

Importance of Custom Trucking	Cattle	Calves	Hogs	Sheep & Lambs
Custom trucked livestock as percentage of livestock bought by all dealers	16.3	17.6	52.0	7.7
Custom trucked livestock as percentage of livestock bought by dealers doing custom trucking	70.8	47.7	138.8	128.2

The significance of this comparison, of course, is to see to what extent dealers are dependent for income on transportation charges as compared to speculative trading. Indications are that speculative buying of hogs and sheep is considerably less than the volume custom hauled by dealers, but that speculative trading is relatively more extensive in cattle and calves.

Farmers Were the Principal Source of All Classes of Livestock Purchased by Dealers Except for Slaughter Calves. Farmers were drawn on for a higher proportion of feeding and breeding stock in each species than for slaughter. On the other hand, a higher percentage of slaughter animals than of "other" were bought from auctions. These two sources constituted the bulk of supply, with other dealers being a source of a limited percentage. The majority of animals obtained from other dealers were in the slaughter class (See Fig. 39). Terminal public markets furnished dealers with less than 1 percent of each species bought.

It appears that dealers get more than 60 percent of their cattle and calves from farmers in all sections except the east and southeast (areas 1, 2 and 6). In these areas only about 40 percent of the total number handled by local dealers comes direct from farmers.

Dealers apparently got 60 percent or more of all the hogs they bought directly from farmers in all areas of the state, with the highest percentages coming from the northern and central areas. The proportion from farmers in each of these areas was above 90 percent.

Evidence indicates that practically all sheep and lambs (over 97 percent) bought by dealers in the west (areas 7 and 8) are bought directly from ranchers, while considerably smaller proportions (75 percent of the slaughter and 34 percent of the feeder in area 2) are bought directly from farmers in eastern areas of the state.

Wide Variation in Dealer Purchases from Auctions by Areas. Dealers obtain a higher proportion of their slaughter and feeder cattle through auctions in areas 1, 2 and 6 (over 50 percent) than in the other sections of the state, where the percentage appears to run under 30.

From 30 to 50 percent of the hogs reported bought by dealers in the east and southeast (areas 1, 2 and 6) came from auctions, while it appears that less than 10 percent of the hogs bought came from auctions in the other areas of the state.

Only in the east (areas 1 and 2) do auctions seem to supply an important part of the sheep and lambs bought by dealers and these are a source of only about 25 to 30 percent of the slaughter and 15 percent of the "other" bought by dealers.

Dealers' Purchases from Dealers Small. The percentage of slaughter cattle and calves that dealers buy from other dealers appears to be less than 8 percent in every area except 2 and 5. In those areas the percentage runs up to about 13 and 19 percent, respectively. The percentage of feeders and breeders bought from dealers appears to be under 5 percent in all areas.

The proportion of hogs and pigs secured from other dealers appears to be negligible in all areas except in 1 and 2 where it appears to run around only 5 percent.

Only in the eastern section of the state (areas 1 and 2) do dealers appear to secure an appreciable percentage of sheep and lambs from other dealers. In area 1 three dealers reported getting 5.6 percent of their feeder and breeding animals from other dealers, and in area 2, 12 dealers reported obtaining 49.5 percent of their feeders and breeders from other dealers.

Dealers' Disposition of Livestock Varies by Class of Animal and Area.

Sixty-four dealers reporting sold 45 percent of their slaughter cattle, 47 percent of their slaughter calves, and 94 percent of their slaughter hogs, sheep and lambs direct to packing plants. The balance of the slaughter animals were fairly evenly disposed of through auctions and terminal markets (See Fig. 40).

The picture is different for feeding and breeding animals. Of these, dealers sold 52 percent of the cattle, 76 percent of the calves and 57 percent of the hogs through auctions, while 83 percent of the sheep and lambs were sold direct to farmers (See Fig. 40).

The principal agencies through which slaughter cattle and calves were sold by dealers by areas were as follows: for areas 1, 2, 5 and 7, direct to packing plants; for areas 3, 4 and 6, terminal markets; and area 8, auction agencies. For other cattle the principal outlets were: for areas 1, 4 and 7, farmers; and for areas 2, 3, 5, 6 and 8, auctions. For other calves the principal places of sale were: For areas 1, 2, 3, 5, 6 and 7, auctions; and for area 4, farmers.

Over 90 percent of all slaughter hogs reported marketed by dealers were sold by them direct to packing plants in every area except 4. Here dealers sold the bulk of their slaughter hogs through auctions. Auctions were the principal outlet for feeder hogs sold by dealers in every area of the state.

Terminal markets received the majority of dealers' slaughter sheep and lambs from area 1, while packing plants were the primary outlet in areas 2, 3, 6 and 7. Most of the "other" sheep in the eastern and western areas (1, 2, 6, 7 and 8) went directly from dealers to farmers, while in the central and north central (areas 4 and 5) auctions claimed the largest share.

Development of Livestock Auctions Has Been Very Rapid in State. On July 1, 1941, there were 50 livestock auction agencies in South Dakota. Fig. 8 shows their location and distribution, as well as the location of the 23 auctions from which questionnaires were secured for this study.

The development of this type of livestock marketing agency has taken place largely in the last 10 years. The dates of establishment of the 23 auctions contacted in this study are shown in Table 14. In spite of their recent development the growth in the number and percentages of feeder livestock marketed through them has been quite rapid (See Fig. 41). Ownership of 11 of 22 of these auctions was found to be by private individuals, 8 by partnerships and 3 by corporations.

High Proportion of Livestock Handled by Auction Agencies Are Stockers and Feeders. Managers and clerks at 23 auctions contacted reported that 22 percent of the cattle, 8 percent of the calves, 40 percent of the hogs and 20 percent of the sheep and lambs sold through their sales rings were slaughter animals. The balance were stockers, feeders and breeding animals, with the latter being in the minority. However, there was a wide range in the percentages that slaughter animals consigned were of the total in the auction barns of the different areas. For example, auctions contacted in the south-east (area 1) reported only 6 percent of the consigned cattle as being slaugh-

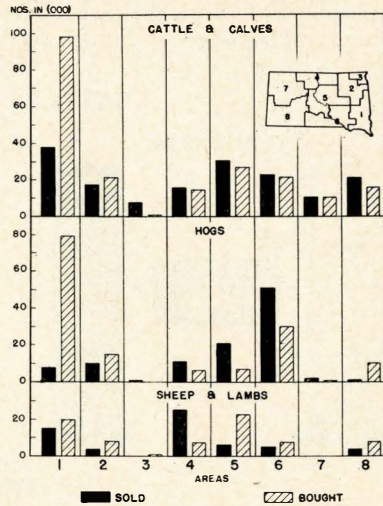
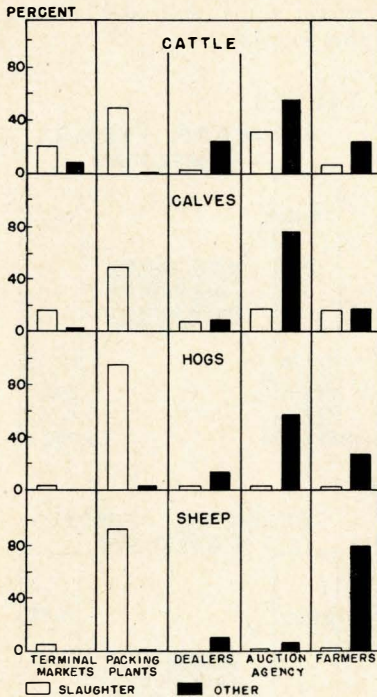


Fig. 41. Numbers of Feeder and Breeding Livestock Sold and Bought by Farmers Through Auctions by Areas in South Dakota—1940. (Numbers in thousands.)

Fig. 40. Types of Markets Used by 64 Dealers in Selling Livestock in South Dakota—1940. (Percentage Sold at each type by classes).

ter animals, while in the northwest (area 7) 32 percent of the consigned animals were reported as being slaughter stock.

In the southeast (area 1) only 36 percent of the consigned hogs were reported as sold for slaughter, while in the north central and northwest (areas 4 and 7) the percentages were 75 and 77, respectively.

Auctions Report Bulk of Livestock as Consigned by Farmers. Relative to sellers of slaughter animals, auction managers reported about 73 percent of the cattle, 69 percent of the calves, 85 percent of the hogs and 80 percent of the sheep and lambs as consigned by farmers, with the balance being consigned by dealers. The reported consignments of feeder and breeding animals had about the same distribution, with the exception of sheep and lambs. In this species dealers were reported consigning only 20 percent of the slaugh-

Table 14. Year of Establishment of the 23 Livestock Auctions from Which Data Were Obtained—South Dakota, 1940.

Year Established	Number of Auctions	Year Established	Number of Auctions	Year Established	Number of Auctions
1931	2	1935	3	1939	3
1932	2	1936	2	1940	1
1933	2	1937	3	No date listed	2
1934	1	1938	2	Total	23

ter animals, whereas they sold about 31 percent of the feeder and breeding sheep and lambs going through auctions (See Fig. 42).

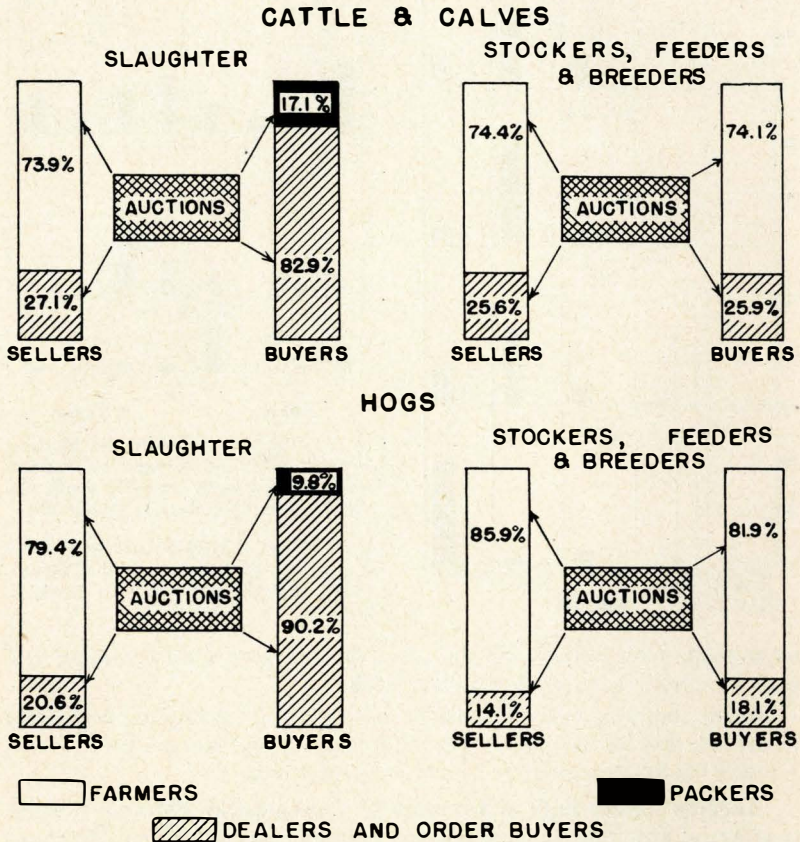


Fig. 42 Buyers and Sellers of Livestock at auctions in South Dakota, 1940. (Percentage bought and sold by each type of agency, as reported by auction agencies.)

Auctions Report Bulk of Slaughter Animals Bought by Dealers and Stockers and Feeders by Farmers. With respect to the buying of slaughter animals auction managers' reports show that about 85 percent of the cattle, 73 percent of the calves, 90 percent of the hogs, and 98 percent of the sheep and lambs were bought by dealers or order buyers, with the balance being bought directly by packers. In the case of stockers, feeders and breeding animals the reports indicate that about 75 percent of the cattle, 73 percent of the calves, 82 percent of the hogs and 74 percent of the sheep were bought by farmers, with the balance going to dealers.

The foregoing figures are estimates on the part of auction sales managers and are not actual detailed records. Therefore, it is of interest to take the actual sales and purchases through auctions as reported by farmers and from these estimate the total number of feeder and breeding animals of each species bought and sold through auctions for the state and the several areas within the state. Estimates for the state are shown in Table 15.

Table 15. Stocker, Feeder, and Breeding Animals Bought and Sold Through Auctions by Farmers in South Dakota—1940.

Species	Total Handled Through All Auctions in State*	Calculated No. Sold by Farmers	Calculated No. Bought by Farmers
Cattle and Calves	330,638	165,777	248,920
Hogs and Pigs	388,657	105,576	149,502
Sheep and Lambs	125,574	59,931	73,185

* Livestock Sanitary Board, Annual Report, 1940.

These figures seem to indicate that farmers purchase a considerably larger proportion of all feeder and breeding animals sold through auctions than they consign. This is particularly true of cattle, but to less extent of hogs and sheep. However, the situation varies considerably from area to area. In area 1 farmers bought about three times as many feeder and breeding cattle, about 11 times as many feeder and breeding hogs, and about one-third more feeder and breeding sheep than they sold through auctions. In area 2 farmer purchases also exceeded farmer sales. But in the rest of the state, with few exceptions, farmers sold a larger proportion of the total auction consignments than they bought (See Fig. 42). This would indicate from a standpoint of number of buyers that there would be a greater amount of competitive bidding in the eastern areas than in other sections of the state. However, this is not proof that auctions in other sections do not afford a competitive market for the feeder and breeding stock. The dealers who buy and move livestock eastward for resale do so because of more attractive prices, and hence have a strong incentive to bid competitively. Then, too, farmers in feeding areas may go to auctions in other areas to buy their feeders and breeding stock. However, the indications are that livestock originating in one area and moving through auctions to farmers in another area are handled in between times very frequently, if not usually, by dealers.

Livestock Handled by Local Cooperative Marketing Associations Primarily Slaughter Animals. Records of the volume of livestock handled in 1940 by all (9) of the known remaining livestock shipping associations in South Dakota were obtained. These records show that the following number of animals by species, were handled: cattle, 1,889; calves, 450; hogs, 17,281; sheep and lambs, 2,485. Slightly less than half of the cattle, about 98 percent of the hogs, and two-thirds of the sheep and lambs were slaughter animals. Approximately 95 percent of the cattle and sheep and 65 percent of the hogs were furnished by members, and the balance by non-members.

Shipping Associations Sell Cattle Largely Through Terminal Public Market and Hogs Directly to Packing Plants. Approximately 98 percent of all the cattle, 100 percent of all the calves and sheep, and 12 percent of the hogs were sold through terminal public markets. About 4 percent of the slaughter cattle and 72 percent of all the hogs were sold direct to packing plants, while approximately 16 percent of the hogs were sold through dealers, order buyers, and auctions.

Table 16. Receipts and Disposition of Livestock at Sioux Falls Stockyard, 1940.

Species	Total No. Received	Percent of Total Sold as Slaughter	Percent of Total Sold as Slaughter Within State	Percent Total Sold as Slaughter Out of State	Percent of Total Sold as Feeders	Percent of Total Sold as Feeders Within State	Percent of Total Sold as Feeders Out of State
Cattle	188,728	69.4	41.1	28.3	30.6	13.9	16.7
Calves	14,313	32.1	9.8	22.3	67.9	67.2	.7
Hogs	487,301	99.9	49.8	50.1	.1	.1	.02
Sheep & Lambs	225,451	88.6	22.4	66.2	11.4	8.6	2.8

Sioux Falls Only Terminal Public Market in South Dakota. Table 16 shows the receipts and disposition of livestock at this market during 1940. This table shows that 99.9 percent of the hogs, about 89 percent of the sheep and lambs, about 70 percent of the cattle and about one-third of the calves received were disposed of as slaughter animals and the balance as feeders. Of the total receipts 50 percent of the hogs, 45 percent of the cattle, 69 percent of the sheep and lambs, and 23 percent of the calves were reshipped to packers, markets or feeder buyers outside of the state, with the remainder slaughtered in Sioux Falls or resold as feeders within South Dakota.

Retail Meat Dealers Doing Slaughtering Buy Largely from Auctions and Farmers. Questionnaires were secured from 15 retail meat dealers doing slaughtering to determine the volume and source of livestock handled by this type of agency. The sources from which animals bought were obtained is represented on a percentage basis by Table 17. This table shows that auc-

Table 17. Livestock Bought by 15 Retail Meat Dealers Who Slaughter. South Dakota—1940 (Total Number and Percentage of Each Class Obtained from Various Types of Markets).

Species	Total Number Bought	Percent obtained from each Type of Agency			
		Terminal Market	Dealers	Auctions	Farmers
Cattle:					
Slaughter	2,468	1.5	10.0	52.0	36.5
Veal Calves	619		24.2	30.1	45.7
Other Calves	13		7.7	92.3	
Hogs	4,441		3.1	43.0	53.9
Sheep and Lambs	67			44.8	55.2

tions and farmers have almost an equal volume of sales to retail meat dealers, with farmers holding the edge in hogs, sheep and lambs, while the auctions get first call for supplies of slaughter cattle.

Retail meat dealers reported reselling very little livestock, with cattle constituting the bulk of resales. Terminal public markets and farmers each bought about the same proportion of the cattle resold.

Concentration Yard Bought from Farmers and Sold to Packers and Auction Agencies. There are a few dealers or local markets in South Dakota that might be classified as concentration yards or assembly points in a rather broad sense. However, since these are not operated by individual packing plants we have elected to class them as dealer markets. Therefore, we obtained only one questionnaire from a concentration yard as such. Information from all other similar markets was classed with local dealers.

This concentration yard from which a questionnaire was secured is located in the south central section (area 6) west of the Missouri River. During 1940 it handled 125 feeder cattle, 12,000 slaughter and 2,000 feeder hogs, and 30 slaughter sheep and lambs. All of these were bought directly from farmers.

The livestock bought was disposed of as follows: feeder cattle, 35 percent to terminal public markets, and 65 percent through auction agencies; slaughter hogs, 100 percent to packing plants; feeder hogs and slaughter sheep and lambs, 100 percent through auction barns.

Packing Plants Obtain Higher Percentage of Livestock from Farmers than from Any Other Source. Twelve packing plants in South and North Dakota reported obtaining over two-thirds of the hogs and sheep and about 45 percent of their cattle and calves direct from farmers and packer buyers in the country. Terminal public markets and dealers were the next two most important sources of supply, each contributing about equally (See Table 18).

Of all livestock bought the following percentages were purchased at the plants: cattle, 67.7; sheep and lambs, 79.6; calves, 82.4; and hogs, 83.1 percent. However, three of eight plants reported buying less than 50 percent of their cattle and calves at their plants.

Table 18. Livestock bought at 12 Packing Plants in South Dakota and North Dakota, 1940. Percentage obtained from each type of Individual or Market.

Species	Public stock-yards	Concn. Yards		Dealers or Truck Buyers	Local Cooperative Assn.	Sale Barns (Auctions)	Farmers and Others*	Total
	Percent	Own	Other					
Cattle	26.9	1.8	1.8	15.7	7.0	0.7	46.1	100
Calves	12.8	3.8	0.1	24.6	15.4	0.4	42.9	100
Hogs	11.7	0.4	4.3	12.0	3.2	0.3	68.1	100
Sheep	5.3		10.4	6.7	8.0		69.6	100

* Packer buyers in country.

Packing plants resold a relatively small volume of any species. Of these sold, the majority went to other plants in the case of calves, hogs, and sheep, and to feeders in the case of cattle.

Local Livestock Dealers Buy Large Proportion of Feeder Cattle by the Head. Returns from 66 dealers indicate that about 95 percent of the hogs and 70 percent of the sheep and lambs bought by them were paid for on a basis of weight, while approximately 58 percent of the cattle and calves were bought for "so much per head" (See Appendix Tables 13 and 14). These reports indicate that the classes usually bought by the head were feeder cows,

steers, and heifers, milk cows and calves, feeder hogs and lambs, and breeding ewes. Slaughter stock was much more commonly bought by weight.

Livestock Auctions Frequently Sell Feeder Animals by the Head. A summary of reports from 21 livestock auctions indicates a great deal of variation in the practices of selling different livestock classes by weight or by the head (See Appendix Table 15). Eighteen auctions reported selling slaughter cattle entirely, or mostly, by weight, while three reported selling entirely by the head. Eleven auctions said they sold feeder cattle entirely or largely by weight, while 10 sold feeder cattle mostly by the head. The frequency of the method of selling slaughter calves corresponded very closely to that for slaughter cattle, while 12 auctions sold feeder calves by the head more commonly than by weight.

Only two auctions reported selling slaughter hogs by the head to an appreciable extent, while 13 reported head sales of feeder pigs as most or very common. The method of sale of slaughter sheep and lambs very closely paralleled that of slaughter hogs, while the number of auctions reporting selling feeder sheep and lambs by the head was about as great as the number selling largely by weight.

Only one auction stated that it sold milk cows largely by weight. At all the others head sales were equally or most prevalent. Brood sows appeared to be sold about as frequently one way as the other. Breeding ewes were sold almost entirely by the head, with no auction reporting selling as many by weight as by the head.

Several auction agencies in the north central and northwest (areas 4 and 7) are outstanding for the prevalence of sales by the head for practically all classes of livestock. This is in distinct contrast to some of the larger auctions in the east (areas 1 and 2) where the majority of all classes are sold entirely, or largely, by weight. Of two of the larger auctions in these eastern areas, or in the state, one reports only milk cows and breeding ewes as being sold largely by the head, and the other reports only feeder calves, milk cows and breeding ewes as being usually sold by the head.

Packing Plants Buy Practically All Livestock by Weight. A summary of reports from 12 packing plants in North and South Dakota showed that 100 percent of all hogs and lambs and 99.9 percent of all cattle and calves were bought by weight. Only 3 plants reported any purchases by the head. These consisted of an occasional cow, or cattle sold at the option of a seller who preferred to "lump."

Purchases by Retail Dealers Who Slaughter Show Some Trading by the Head for Slaughter Animals. Reports from 15 retail meat dealers who slaughter indicate that they bought and priced 80 percent of their cattle, 87 percent of their calves, and 96 percent of their hogs and lambs on the basis of weight. The relatively high percentage (20) of slaughter cattle still bought by this group by the head is significant.

The "concentration yard" on which we have a report bought 100 percent of its hogs by weight and 100 percent of its cattle, sheep and lambs by the head.

Few Dealers Use Their Own Scales. Of 38 dealers reporting on the place of weighing livestock bought by weight, 24 reported the place of weighing as the yards where delivery was made, and 28 reported the place of weighing as farms where livestock was picked up by the dealer. Of the 24 reporting on weighing where stock was delivered at their yards, only 7 used their own scales. The balance used scales at auction sales agencies, railroad yards, or other private or commercial scales.

Of the 28 reporting place of weighing as where livestock were picked up at farms, only 4 reported using their own scales. The rest used those scales that were most convenient.

A Few Auction Agencies Do Not Have Scales. Two of the 21 auctions questioned on the subject did not have scales in their barns. These were in the north central and north western parts of the state. The balance weighed livestock sold by weight immediately after the sale of the individual lots of animals.

Few Retail Dealers Doing Slaughtering, or Shipping Associations Have Their Own Scales. Only three of the 14 retail dealers questioned, who do slaughtering, reported using their own scales in weighing livestock bought. Two of these used the dressed weights at their shops, the other used yard scales. The other 11 used lumber yards, sales barn, elevator, city, or other scales, depending on convenience.

Of the 9 shipping associations interviewed the following reports on place of weighing livestock were given: own scales, 1; railroad scales, 2; terminal market scales, 3; and others, 3.

Packing Plants Do Most of Weighing at the Plant. It is presumed that all livestock bought from farmers by packing plants is weighed at the plant. For livestock bought from local dealers and cooperatives 11 plants reported that 100 percent of the calves, 96 percent of the cattle, 86 percent of the hogs, and 80 percent of the sheep and lambs were paid for on the basis of weights at the plant. The balance was bought on weights at country stations.

For slaughter animals, weighing usually is considered a truer measure of value than per head sales. But because of price differentials the accurate determination of values of livestock is in part reflected by the degree to which animals are bought and sold by specific grade and weight classifications. Existing practices employed in this regard by marketing agencies in South Dakota are briefly described.

Wide Variation in Dealers' Practices in Grading. Of 38 dealers asked the question, "What proportion of the livestock bought in 1940 was in mixed lots (grade and weight)?" 6 reported that 10 to 50 percent, and 8 that over 50 percent of the veal calves was bought in mixed lots and ungraded; and 4 reported from 10 to 50 percent, and 10 that over 50 percent of the lambs was bought in mixed lots.

Of all the livestock bought by these 38 dealers a summary of replies shows that the percentages of different classes that were sorted into lots of uniform grade and weight and priced on that basis were: hogs, 96 percent; veal calves, 76 percent; lambs, 3 dealers reported sorting and grading from 10 to 50 per-

Table 19. Schedules of classes and grades of livestock used by four dealers in South Dakota.

Schedule used	No. Dealers	Schedule used	No. Dealers
Cattle and Calves	1	Hogs	3
Good cows		Good to choice	
Cutters		Medium	
Canners		Cull	
Heavy bulls		Sheep and Lambs	1
Good veal		Choice lambs	
Medium veal		Good lambs	
Weaner calves		Medium lambs	
Heavy fed steers		Yearlings	
Fed heifers		Ewes	
Stock cattle			

cent, 5 reported sorting and grading from 55 to 90 percent, and 7 reported grading 100 percent. The balance of each class that was purchased by weight was bought ungraded and paid for at a flat price per pound for the lot.

Of 38 dealers questioned on the subject only 3 used a definite schedule of classes and grades of hogs and only one for cattle, and one for sheep and lambs. The classes and grades used by these are shown in Table 19.

Auction Agencies Do a Reasonable Amount of Grading on a Broad Basis.

While no auction visited had a definite schedule of weights and grades into which animals were sorted, there are two rules that auctions seem to follow generally in South Dakota relative to the grading of livestock. First, livestock belonging to individuals is sold separately. It is not ordinarily mixed nor mingled with livestock owned by others. Second, the auction operator sorts and subdivides the individual animals either according to the instruction of the consignor or according to his own best judgment. This sorting is usually done just before the animals pass into the sales ring. Ordinarily, there are no specific weight or grade groups into which the animals are divided. Rather, an attempt is made to secure broadly uniform lots as to age, size, weight, finish, breed, color, and sex in many cases. As a result a great many lots contain very few animals. At some auctions one is impressed by the prevalence of sales of single animals. While at others, carloads of cattle or sheep may be sold at a single fall of the auctioneer's hammer. In general, grading appears to be done with care, particularly at the more successful barns. However, even here, an occasional stag or piggy sow may be run in with a group of top butcher hogs, or similar strays may be found in other classes and species.

It is very difficult for livestock men to rid themselves of some of the natural instincts of the trader, particularly that of, "Let the buyer beware." Notwithstanding, many auction agencies apparently have found it profitable to create confidence on the part of the buyer as well as the seller. Hence, they are careful about their grading practices and representations of animals sold.

Considerable Proportion of Lambs and Hogs Bought by Packing Plants in Unsorted Lots. Nine packing plants that reported on the proportion of animals they bought in unsorted lots stated that they bought ungraded and paid for at a flat price per pound 27.5 percent of the lambs, 14.1 percent of

Table 20. Classes, weights and qualities of livestock that packers in South and North Dakota preferred to buy, 1940.

Plant	Cattle	Calves	Hogs	Sheep
1	Good long fed yearlings Fairly finished cows Some bulls	Some for boning and some for fresh meat	200-225 Some for boning and fresh meat	
2	Medium fed heifers live weight 650-750 lbs.	Dress 200 lb.	200-240	80-85 lb. lambs
3	Not too well finished to mostly good cow market 8.5 cents top limit on present market 5/23/41	As they come	200-270	Few
4			Depends on pork market—varies with season	
5			Market demand in general	
6	700-900 lb. fed cattle	Top veals	190-225 lb.	
7	Buy all grades	Buy all grades	Buy all grades	Buy all grades
8	Medium to top good grades 600-1350 lb.		Depends on mar- ket conditions	Medium to choice lambs 70-90 lb.
9	All classes, weights and qualities	All classes, weights and qualities	All classes, weights and qualities	All classes, weights and qualities
10	Varies with season. May to Oct. greatest need for canners, cutters and bulls for sausage. 50% butcher cows and cutters. 50% steers and heifers	Good veal	Good medium weight butchers	Lambs

Table 21. Schedules of classes and grades of livestock used at five packing plants in South Dakota.

Plant No.	Cattle		Plant No.	Hogs		Plant No.	Lambs
	Classes	Cows		Classes	Sows		Classes
	Steers and Heifers			Butchers	Sows		Lambs Grades
	Grades or Weights			Grade or Weights			
7	Choice to prime. Medium to good. Fair Medium Grass Common grass	Choice to prime. Medium to good. Fair to medium. Cutters Canners Bulls	4, 7 and 8	140-170 170-180 180-190 190-200 200-230 230-250 250-270 270-280 280-300 300-330 330-360 360-370 370-400	270 with gradations to 500	7	Spring lambs: Choice to Premium Good to choice Medium Cull Common
			9	Good to choice. Medium Cull			

the hogs, and 40 percent of the veal calves handled. The balance was sorted into uniform lots by grade and weight and priced on that basis.

Table 20 shows the classes, weights and qualities of livestock that individual packers stated that they preferred to buy. It is interesting to note that 5 out of 9 plants listed distinct grade preferences.

Table 21 shows the grades used in pricing by 5 packing plants.

Local Cooperative Marketing Associations Grading Practices Show Considerable Variation. Two of the 9 local cooperative marketing associations interviewed stated that they had definite schedules of classes and grades of hogs that they used in grading hogs upon delivery to their yards. One of these used interior packer grades and the other used a schedule with slight variations from the interior packer.

Of the livestock handled by local cooperative marketing associations 12.5 percent of the hogs and all the cattle, calves, sheep and lambs were reported as marked and shipped as a lot to be re-sorted at destination. This left 87.5 percent of the hogs to be graded and mingled with similar animals consigned by others.

Concentration Yard Reports Strict Grading. The single agency of this class interviewed reported that from 20 to 30 percent of the hogs it bought was in mixed lots, and it sorted 100 percent into lots of uniform grade and weight and priced them on that basis, and that it bought all hogs offered, irrespective of quality.

The Amount of Fill Which the Animal Carries Strongly Influences Value. Therefore, an effort was made to determine the extent to which feeding and filling were employed by various agencies before selling.

In answer to the question, "What proportion of the livestock assembled at your yards in 1940 was given no feed and water before weighing?" the nine shipping associations and concentration yard all said 100 percent. In contrast the terminal public market reported 100 percent of all livestock, and 18 auctions stated that 100 percent of the cattle and calves, 98.6 percent of the sheep and lambs and 74 percent of the hogs handled had both feed and water before weighing.

The extent to which livestock was given feed and water before weighing by six packing plants is shown in Table 22. The percentage of cattle, calves, sheep, and lambs getting both feed and water before weighing is surprising. There is considerable reason for normal feeding and watering at certain

Table 22. Extent to which feed and water were given livestock before weighing at 6 packing plants in South Dakota, 1940.

Feeding and Watering Practices	Cattle	Calves	Hogs	Sheep and Lambs
	Percent	Percent	Percent	Percent
No feed and water before weighing	70.9	51.0	87.1	77.7
Water only before weighing	0.3		4.9	
Feed and water before weighing	28.8	49.0	8.0	22.3
Total	100	100	100	100

markets, but the value of "filling" as a general practice is certainly open to question, particularly if the animals are to be slaughtered in a short time.

Dealers and Packing Plants Buy Considerable Quantities of Hogs by Description but not Cattle and Sheep. The prevalence of methods or place of pricing for various species of livestock bought by 58 dealers is shown in Appendix Table 16. From this it is seen that over 90 percent of all cattle, calves, sheep and lambs had the price agreed on after examination, while approximately 50 percent of the hogs were priced upon delivery, and 21 percent was bought by telephone description. This contrast between hogs and other species is important in that it emphasizes the degree to which buyers and sellers have a common understanding of grades and grade values of the several species. The contrast in these figures indicates the greater complexity in arriving at prices for cattle as compared to hogs and sheep. There is so much variation in grades of cattle that most dealers would not think of bidding on them until they had been seen and examined, while on hogs and lambs this is not the case. These latter species lend themselves much more readily to pricing by description.

With respect to pricing when dealers sell to packers, reports from 24 dealers show that 99 percent of the cattle, 95 percent of the calves, 72 percent of the sheep and lambs, and 36 percent of the hogs were bought by the dealers on their own account and delivered to packers without knowing in advance what price they would receive. This left a negligible percentage of cattle and calves, 28 percent of the sheep and lambs and 64 percent of the hogs on which bids from packers were obtained before the livestock was bought. Thus, again, the confidence with which animals can be bought by description is emphasized. The knowledge of value of hogs by grades is fairly general, but sheep to a less extent, and cattle and calves still much less.

Ten packers stated that the following percentages of animals were priced upon delivery to the plant: calves, 99.7 percent; hogs, 99.1 percent; sheep, 73.8 percent; and cattle, 69.5 percent. The balance was inspected and had the price agreed on before movement to the plant. This again emphasizes the difficulty of a meeting of minds on grades and prices of cattle and sheep without inspection by both buyer and seller.

Time Granted in Making Deliveries on Bids Usually Limited. In the cases of dealers and concentration yards obtaining bids from packers before buying, the following reports were made relative to time allowed in making delivery: 24 to 36 hours, 5 buyers; same day that packers representative comes to weigh and purchase, 2 buyers; until notified to stop, 1 buyer. Of 3 packing plants reporting on the time they allowed farmers to make delivery on livestock contracted for by telephone the following number of days was reported: one reported, 1 day; another stated, 3 days; and the third, 7 days.

Supply, Condition of Dressed Market, Quality and Fill Are Four of Most Important Factors Considered in Pricing. The factors most frequently mentioned by dealers, packing plants, and buyers at the terminal market in stating what determined their price in a given locality were: supply and demand, quality, fill, condition of dressed market, weight, market value, condition, dressing percentage and competition, in order named. In some cases volume

was taken into account with larger deliveries securing slightly higher prices.

Methods of Announcing Prices and Price Adjustments Vary. Very few dealers contacted announce a definite schedule of prices. Of four who reported preparing a definite price schedule, 2 posted them at their place of business, one announced them in local daily papers, and the other did not make his schedule public (See Table 19). For all of these classes and grades, price ranges, rather than single prices were quoted by all dealers.

Packing plants announced their prices by radio and daily papers, and to some extent by telephone and telegraph. They made adjustments in quoted prices for: time in transit, fill, type of transportation, competitive conditions, and bruising or crippling or disease. The amount and prevalence of dockage practices among 12 packers in North and South Dakota are shown in Table 23. This shows there is still considerable dockage for buck lambs, stags, and in particular seasons, piggy sows.

Table 23. Number of packers applying dockage of various amounts when buying certain kinds of livestock, classified by kind of livestock, 1940.

Amount of Dockage applied	Piggy Sows	Stags	Lumpy Jaw Cattle	Buck Lambs
10 to 40 pounds	5			
\$1 cwt.				4
60 to 70 pounds		4		
No dockage	3	4		1
\$1 per head (subject)			1	
Do not buy	1	2	2	1
Bought on merits	1	1	1	
B. A. I. inspection			2	

Buyers at the terminal public market usually do not quote prices for particular grades of livestock in advance. The historical prices quoted are price ranges rather than a single price for a given class.

Degree of Choosing Between Markets Varies with Agency and Location. Of 20 dealers questioned who sold livestock to terminal public markets 8 replied that they consistently patronized the same market and 12 said that they chose between markets. Of these latter 12, 7 used two markets; 4 used three markets, and one shipped to five terminal markets. The reasons given for choice between markets were: According to class and grade of cattle to be sold; place from which there was a back haul; according to quotations; experimental; and nearest market to place of purchase.

Of eight shipping associations interviewed who shipped to terminal public markets five consistently patronized the same market because of location. The others chose among two markets according to kind of animals they had to sell and according to market reports.

Only two associations sold direct to packing plants and these sold consistently to the packing plant that was most accessible.

State Regulation and Supervision of Livestock Marketing¹²

Importation and Transportation of Livestock. All livestock brought into South Dakota for any purpose other than immediate slaughter must be ac-

12. Statutes, Rules and Regulations Pertaining to Sanitary Control Work South Dakota Livestock Sanitary Board—1940.

accompanied by a health certificate, issued by authority of the state or territory from which it originates or by authority of the United States Bureau of Animal Industry, stating that the livestock is free from all contagious, infectious, epidemic, or communicable disease and does not originate from a district of quarantine or infection, and showing inspection within 30 days prior to the arrival of such stock.

It is unlawful for any railroad or transportation company employee, or agent to release any livestock or permit the same to be released until the proper health certificate shall have been issued.

All swine imported or brought into South Dakota for the purpose of immediate slaughter, must be consigned to approved slaughter houses where the Federal Government maintains inspection, or slaughter establishments recognized by the State Department.

Transportation of Diseased Livestock. It is unlawful for any person to transport, drive, or trail any domestic animal, knowing it to be affected by an infectious, contagious, epidemic, or communicable disease upon any railroad or public highway in South Dakota, or to, upon, or across any land within the state, except land owned or leased by the owner of such animal, or land expressly permitted by ruling of the State Sanitary Board.

Supervision of Auctions. Every livestock auction agency in South Dakota is required to operate under license, the annual fee for which is \$100. This fee is paid to the State Livestock Sanitary Board, which has jurisdiction over the supervision and regulation of livestock auction agencies. In addition, the Board is permitted to collect 25 percent of all required inspection fees collected by each agency. These sums are used by the Board in support of its supervisory work.

Each auction agency is constrained by law to post a corporate surety bond with the State Livestock Sanitary Board guaranteeing the payment of sums due consignors for property sold through the auction and payment to the Board of the above license and inspection fees. The minimum amount of this bond is \$3,000, and may be increased at the judgment of the Board up to an amount not exceeding the average value of sales conducted by the auction agency.

Required Records, Facilities and Service. Every auction agency is required to keep complete records, on approved forms, of all consignors, livestock, description of livestock handled, and license number of motor vehicles making livestock deliveries to it. These records must be kept for three years and are to be available to peace officers, without charge, and to any other person upon payment of reasonable charges for making copies.

Every agency is required to provide adequate facilities for the care, sorting, feeding and handling of livestock, and for the proper inspection, testing and examination for disease. The issuance or revocation of license hinges upon the adequacy of facilities and maintenance of sanitary conditions.

Every livestock auction agency is required to furnish its services to all persons without discrimination. Its rates must be filed with the Sanitary Board and must be posted conspicuously on the premises. These rates must be non-discriminatory and are not subject to rebate for any service rendered.

It is unlawful for any agency to render its services to anyone without charging the rate posted and filed.

Sanitary Requirements. Every auction agency is required to provide inspection and examination for disease of all livestock handled. This inspection may be by a regularly employed veterinarian on the State Sanitary Board staff or by any veterinarian licensed in South Dakota. However, each inspecting veterinarian is under the supervision of the State Board and its regulations, and is subject to removal by the Board.

It is the duty of each inspector to examine all premises and equipment used in handling livestock at the auction's premises and to direct the cleaning and disinfection of motor vehicles transporting livestock to or from the sales barn as occasion may require.

All livestock that passes through an auction agency which falls within interstate traffic designations must be inspected, examined, and covered by a certificate of health in conformance with the regulations of the state of destination. This must be done before the animals leave the auction premises.

All animals sold as vaccinated must have been vaccinated within 30 days and affidavit of such vaccination must be submitted to the inspector by at least two reliable and disinterested witnesses.

All hog pens, sales rings and alleys must be equipped with hard surface floors of at least three inch thickness, and with drainage that facilitates cleaning and disinfecting. All hogs handled must be yarded and moved through spaces whose floors and enclosures have been sprayed thoroughly with a certified cresol solution of at least 3 percent strength, following each sale.

Inspection Fees. The inspection fees per head on all animals offered for sale are: cattle, 5 cents; horses, 10 cents; hogs and sheep, 2 cents.

Scale Inspection.¹³ "All track scales and all other scales in this state used by common carriers or by shippers for the purpose of weighing cars or freight offered for shipment in car lots and all scales and weighing devices in public warehouses and grain elevators and all stock scales at stockyards and all private farm, and town and city scales used in weighing hay, grain, wood, coal, and like subjects of commerce shall be under the supervision and control of the Public Utilities Commission and be subject to inspection by it. Farm scales shall be inspected only at the request of the owner.

"The Public Utilities Commission is authorized to provide itself with such standard weights and measures as such additional facilities and equipment including motor vehicles or other means of conveyance as in the judgement of the commission may be necessary and suitable in carrying on the work of inspecting, testing, repairing, and correcting scales and performing generally the duties entailed upon it by this chapter.

"The Commission or any one or more members thereof or any agent, employee, or scale inspector of the commission may at any time, without notice, enter any place maintaining a scale subject to all provisions of this chapter and test and seal all weighing scales and measures used in conducting such business. If the person making such inspection shall find any scales in use in such place inaccurate, he shall condemn the same and attach thereto a card, notice, or other device, indicating that the scales are condemned. It shall thereafter be unlawful for any person to remove, deface, or destroy such card, notice, or other device placed upon condemned scales, or to use again, or permit the use of such scales for any purpose, until the same shall have been repaired, retested, and found to be correct, and until the Public Utilities Commission, or the person making the inspection, shall consent to the further use of such scales."

Table 24 shows the frequency of inspection and test loads used for scales operated by 16 livestock dealers. These figures are presented as reported by

13. 1939 South Dakota Code—Chapter 63.03.

Table 24. Frequency of inspection and test loads used at scales operated by 16 dealers in South Dakota, 1940.

Frequency of inspection and testing:	No. of dealers	Test loads used:	No. of dealers
Once a year	2	1,000 lbs.	1
Once in two years	2	6,000 lbs.	1
Twice a year	3	8,000 lbs.	1
Every three months	1	Didn't know	13
Once to twice a year	8	Agency doing the testing State	16

the dealers, and are not necessarily in conformity with the state standards or ideals, which in part are set forth below.

"This Department has jurisdiction over the inspection of heavy scales and the amount of weight used in testing scales varies according to the size of the scale and the condition.

"Usually, a test of 2,000 pounds on each corner of the scale is used. A draft of 7,000 pounds is available with the full equipment and may be used as a center test when the conditions of the scales will permit. The scale is considered approved when the beam responds accurately to a variation of one pound to a thousand.

"It is our purpose to inspect each scale annually and at any other time requested by the owner when it is possible for the inspector to reach the locality at which the inspection is requested."

Table 25. Frequency of inspection and test loads used at scales operated by 16 auction agencies in South Dakota, 1940.

Frequency of inspection and testing:	No. of auctions
Once per year	2
Twice a year	5
Three times per year	1
Four times per year	1
Every six months	1
Every three months	1
Every two months	1
Each month	3
Each week	1
Test loads used:*	
20,000 lb.	2
8,000 lb.	1
6,000 lb.	1
5,000 lb.	2
4,000 lb.	2
2,000 lb.	1
1,000 lb.	1
50 lb.	1
10 lb.	1
no answer	4

* Several sales managers were uncertain as to actual weights used.

Table 25 shows the frequency of inspection and test loads used as reported by 16 auctions in South Dakota. Several of these auctions come under the supervision of the Packer and Stockyard Administration and have their scales federally inspected regularly at capacity weights. The balance is state inspected.

Of nine packing plants reporting on frequency of scale inspection, two stated biannually; three, quarterly; one, three times a year; and three, monthly.

Problems in Livestock Marketing as Seen by South Dakota Farmers and Ranchers.

One question asked on the mail schedule to farmers was, "What do you consider to be your most important problem when marketing livestock?" Table 26 presents a summary of the replies from 477 farmers and ranchers.

Table 26. A Summary of Most Important Livestock Marketing Problems Met as Stated by 477 Farmers Selling Livestock in South Dakota in 1940.

Problem	No. of Reports
1. Problems of Transportation Facilities:	
Means by which transportation to market may be speeded up, made more dependable and more available, and thus reduce losses, shrinkage, and enable selling on a desirable market.	126
2. Current Market Information:	
Means by which more accurate information may be had on time and place to sell particular grades.	111
3. Price Outlook Information:	
Means of determining uptrend in prices.	63
4. Cost and Expense:	
Means of reducing high transportation and commission charges.	36
5. Production Problems:	
Means of finishing livestock to top market.	17
6. Problems in Price Fluctuation:	
Means of reducing wide fluctuations in price in a short period.	15
7. Grading Problems:	
Means of obtaining a more equitable system of grading.	12
8. Price Differentials on Small Shipments:	
Means of obtaining fair price on small shipments.	5
9. Specific Types of Market Problems—88 Reports	
<hr/>	
A. Auctions—30 Reports	
1. Make good local markets possible	5
2. Uncertain market	5
3. Buy too cheap	3
4. Too high commissions	1
5. Need for supervision by Department of Agriculture	3
6. Getting competition of buyers	3
7. Spread disease	2
8. Oppose sales barns	8
<hr/>	
B. Terminal Markets—30 Reports	
1. Honest grading	1
2. Obtaining fair price on small shipments	3
3. Distance for slaughter stock	1
4. Not being able to select commission firm in pick-up load	1
5. Yardage and commission too high	6
6. Dishonest dealers	2
7. Fair price	3
8. Finding reliable commission firms	2
9. Not enough competition	2
10. Care of stock	1
11. Delay of stock at terminal	1
12. Lower price paid than quoted in market reports	1
13. Good for finished animals, but need better price on fair stock	2
14. No problems at terminal market	4

C. Packing Plants—12 Reports	
1. Obtaining fair price on small shipment	2
2. Honest grading	2
3. Demand over-night shrink or 3% cut for fill	1
4. Not enough competition	3
5. Best for finished stock	1
6. Oppose direct buying by packers	2
7. No problems at packing plant	1
D. Dealers—11 Reports	
1. Finding reliable buyers	5
2. Buy too cheap	5
3. Opposed to dealers	1
E. Cooperative Marketing—5 Reports	
1. Need cooperative market	2
2. Approve cooperative market	2
3. Slowness of cooperative market in hauling stock.	1

From this it is seen that almost one-third found transportation facilities a principal problem. The criticisms in this respect varied from its non-availability when wanted, to rough or careless handling, and to high shrinkage due to slow transportation or long hauls.

The second most frequent problem mentioned was that of obtaining sufficient current market information to enable the seller to select the time and place to sell a particular grade of livestock. About one-fourth of the farmers replying voiced this problem.

Other problems raised frequently dealt with various phases of (1) price outlook information, (2) costs and expenses, (3) price fluctuations in short periods, (4) price differentials for small and large lots, (5) grading, (6) finding buyers, (7) finishing animals for the market, and (8) comments (both favorable and critical) in regard to specific types of marketing agencies. This latter item is interesting when compared with reasons given for selecting particular types of markets (See Page 31).

State and Regional Summary¹

Relative Importance of Livestock

South Dakota. For the five-year period 1936-40 livestock sources were responsible for 78.7 percent of all farm cash income in South Dakota, exclusive of government payments. Of all the cash income from livestock sources the sales of the following species of animals accounted for specified percentages: Cattle, 32.7; hogs, 25.5; and sheep, 5.5.

Corn Belt Area. Of the livestock sold from farms in the United States in 1940, 63 percent of the cattle, 52 percent of the calves, 87 percent of the hogs, and 40 percent of the sheep and lambs came from the 12 North Central States, Kentucky and Oklahoma. These were the states in which the regional study was conducted.

Livestock Sold by Farmers

South Dakota. Farmers sold about 15 percent more feeder than slaughter cattle, about 10 times as many slaughter hogs as feeders and about 5 percent more feeder than slaughter lambs in 1940.

The eastern and south central sections of the state (areas 1, 2 and 6) are the principal feeding areas and producers of slaughter livestock. In 1940 slaughter livestock sales by farmers in these three areas represented 83 percent of all slaughter hogs; 80 percent of all slaughter cattle and calves; and 70 percent of all slaughter sheep and lamb sales made by farmers in the state.

Corn Belt Area. Most of the livestock sold by farmers went for slaughter. Of the cattle and calves sold, slaughter cattle (exclusive of veal calves) comprised 53 percent, and veal calves 21 percent, or a total of 74 percent. The stockers and feeders sold were 19 percent of the total, and dairy and breeding animals 7 percent. Slaughter hogs amounted to 89 percent of all hogs sold, and slaughter sheep and lambs 82 percent of all sheep and lambs. In Wisconsin, the sale of veal calves comprised nearly two-thirds of all cattle and calves marketed. Veal calves were also sold in relatively large numbers in Ohio, Minnesota, and Michigan. The marketing of stocker and feeder cattle was important in the States along the western tier of the region. Feeder lambs were sold in large numbers in South Dakota, Kansas, and Nebraska.

Where Farmers Sold Livestock

South Dakota. The type of market employed by South Dakota farmers in selling livestock varied materially according to location, class of animals, and number of animals sold per sale.

Farmers sold about one-half of their slaughter cattle through terminal public markets, and about one-fourth direct to packing plants in 1940. In contrast, one-half of farmer sales of slaughter hogs went to packing plants,

1. The summary relating to the Corn Belt Area was adapted from the manuscript prepared for a published report "Marketing Livestock in the Corn Belt Region" (See introductory note to this bulletin).

and slightly less than one-third to central public markets. Each of these two types of markets secured direct about 45 percent of the slaughter sheep and lambs sold by farmers. Farmers sold more veal calves (about 36 percent) through auction agencies than through any other type of market.

Farmers sold about an equal proportion of feeder cattle to dealers, auction agencies and terminal public markets, with sales to other farmers, representing a slightly lower share. Over one-half of the feeder hogs sold by farmers were consigned to auctions, while another one-fifth were bought directly by other farmers. Dealers obtained over one-half of all feeder sheep and lambs sold by farmers, with another one-third sold direct to farmer feeders. Direct sales from farmers to farmers were more frequent for breeding stock of all species than to any other type of marketing outlet.

Corn Belt Area. More livestock was sold by farmers at the terminal public markets than at any other type of market in 1940. These sales comprised 44 percent of the cattle and calves, 36 percent of the hogs, and 45 percent of the sheep and lambs. Relatively large proportions of livestock were sold at these markets by farmers in Illinois, Indiana, Missouri, Nebraska and Kansas (except for hogs). Sales of livestock at terminal public markets were relatively small in Ohio, Wisconsin, and Michigan. They were also small for sheep and lambs in Kentucky.

The second most important outlet for livestock marketed by farmers was packing plants for hogs, sheep, and lambs, but dealers were second in importance for cattle and calves. Sales to packers by farmers represented 20 percent of the hogs, 15 percent of the sheep and lambs, and 11 percent of the cattle and calves. Farmers in Minnesota, Iowa, and Wisconsin sold relatively large proportions of livestock to packers. Sales to packers were also important in South Dakota and Kansas for hogs.

Farmers sold to country dealers or truck buyers 14 percent of the cattle and calves, 13 percent of the hogs, and 9 percent of the sheep and lambs. They sold 15 percent of their hogs at concentration yards, but this type of market outlet was not important for other species. Auction markets were used by farmers for disposing of 10 percent of the cattle, calves, sheep and lambs, and 6 percent of the hogs. Farmers used auctions to a greater extent in Kentucky and Ohio than in other States. However, auctions were also important markets in Nebraska and Kansas for hogs, and in South Dakota for feeder cattle and feeder pigs. Local cooperative associations were made use of to a small extent, but were more important in Wisconsin and North Dakota than elsewhere. Sales to other farmers and to unclassified buyers amounted to 12 percent of the cattle and calves, 5 percent of the hogs, and 9 percent of the sheep and lambs.

Slaughter livestock was marketed in larger proportions at terminal public markets, at concentration yards, and through local cooperative associations than were stockers, feeders and breeding animals. Packing plants received primarily slaughter livestock. Stockers, feeders and breeding animals were sold in relatively large proportions to dealers at auctions, and to other farmers.

Relative Number and Place Where Farmers Bought Livestock

South Dakota. Estimates indicate that in 1940 farmers sold about twice as many cattle and sheep and eight times as many hogs as they bought. Of the stocker and feeder cattle bought about 50 percent came from auctions, 28 percent directly from farmers, and 15 percent through terminal public markets.

Auctions were also the most important source from which farmers secured feeder pigs, supplying 68 percent in 1940, with another 25 percent coming directly from farmers.

The following proportions of farmer bought feeder sheep and lambs were secured from specified sources: farmers, 54 percent; dealers, 26 percent; auctions, 13 percent; and terminal markets, 7 percent. Other farmers were the most important source of breeding stock of all species.

Corn Belt Area. Farmers bought fewer animals than they sold. In 1940, farmers bought 54 percent as many cattle and calves as they sold, 16 percent as many hogs, and 49 percent as many sheep and lambs. Most of the cattle and lambs were bought for feeding purposes. Relatively few feeder pigs were bought.

Most of the markets used by farmers when selling livestock were also used by them when buying, but they were not used in the same proportions. Terminal public markets and concentration yards or local markets were used relatively less, and auctions were used relatively more. Of the livestock bought by farmers in 1940, 29 percent of the cattle and calves, 7 percent of the hogs and pigs, and 35 percent of the sheep and lambs were bought at terminal public markets. Purchases from other farmers and ranchers were very important, amounting to 30 percent of the cattle and calves, one-half of the hogs and pigs, and one-third of the sheep and lambs bought that year.

Size Lots of Livestock Sold by Farmers

South Dakota. Of the farmers selling different species of livestock about one-half sold less than 6 cattle and less than eleven hogs per sale, and one-third sold less than twenty sheep and lambs per sale. Less than 10 percent of the farmers sold more than 20 cattle per sale, but the number of cattle sold in these larger groups represented one-third of all cattle sold. Fifteen percent of the farms sold and 29 percent of all hogs were sold in lots of more than 25 head.

Sheep were sold in larger lots more extensively than any other species. Forty-three percent of the farms sold and 91 percent of the sheep marketed were in lots of more than 25 head per sale with a state average of 60 head. To a considerable extent this seems to explain a greater prevalence of the direct marketing of sheep.

Corn Belt Area. The average head per sale by farmers who marketed livestock of each species was 6 cattle, less than 2 calves, 14 hogs, and 27 sheep and lambs. The average number of cattle per sale ranged from 2 head in Wisconsin to 12 head in Kansas and Oklahoma. The number of calves per sale was on the average uniformly small in all States, except in Nebraska where it was 6 head. Hogs per sale ranged from an average of 7 head in Michigan to 19

head in Indiana, and sheep and lambs per sale from 13 head in Missouri to 66 head in Nebraska. Some farmers in the region sold no livestock.

The sale of single animals and small lots was common. Nearly one-third of the farmers sold cattle as single animals, and one-fifth sold in lots averaging 2 head. About three-fourths of them sold in lots that averaged from 1 to 5 head, but this accounted for only about one-fourth of the cattle marketed. Less than 4 percent of the farmers sold cattle in lots that averaged 26 head and over, but these sales comprised nearly one-third of the cattle marketed. With calves, more than one-half of the farmers sold single animals. Only one-fifth of them sold calves in lots that averaged more than 2 head. Five percent of the farmers sold hogs a head at a time. Three-fourths of them marketed in lots that averaged six head or more, but this accounted for 94 percent of the hogs sold. Sheep and lambs were also sold as single animals by 5 percent of the farmers. One-fifth of them sold in lots that averaged 26 head or more, and this involved 70 percent of the sheep and lambs sold.

Size Lots of Livestock Bought by Farmers

South Dakota. Purchases in lots of over 25 head constituted three-fourths of all feeder cattle bought by farmers and these were purchased by one-fifth of the farmers who bought. Sixty-five percent of all feeder hogs bought by farmers were obtained in lots of over 25 head and were purchased by only one-tenth of the farmers buying. Ninety-seven percent of all sheep and lambs purchased by farmers were bought in lots of over 25 head and were secured by about one-half of the farmers buying.

Corn Belt Area. The average size lot of stocker and feeder cattle and calves bought by farmers was 11 head, ranging from about 7 head in Kentucky, Indiana, and Michigan, to 17 head in Kansas. The average number of hogs bought per lot was 12 ranging from 8 head in Oklahoma and North Dakota to 25 head in Iowa. Purchases of sheep and lambs averaged 74 head per lot, ranging from an average of 15 head in Kentucky to 246 head in Kansas.

Cattle and calves were bought as single animals by more than one-fourth of the farmers who made purchases, but this comprised only 2 percent of the animals bought. Lots averaging two head were bought by 12 percent of the farmers. Fifty-seven percent of the farmers bought stockers and feeders in lots of 5 head and smaller. Purchases in lots of 26 head and over were made by 12 percent of the farmers buying stocker and feeder cattle but this accounted for one-half of the animals bought. Sheep and lambs were bought as single animals by 14 percent of the farmers, and 6 percent bought in lots of 2 head. In 1940, 91 percent of the feeder sheep and lambs were obtained in lots of 26 head and over.

Relationship Between Volume of Livestock Sold and Bought and Type of Market Used

South Dakota. As the size of sales of slaughter animals increased there seemed to be an influence on the type of market selected, but in many instances this relationship seemed to be influenced by the location and concen-

tration of the animals sold, and the degree of competition of other markets. In other words no given type of market appeared to be first choice in all areas of the state even where number marketed per sale was considered.

As the number of feeder animals marketed per sale increased the proportion of all species sold direct to feeders increased, while the proportion of cattle and sheep sold by farmers through auctions decreased and that of hogs increased, and the proportion of feeder cattle sold to packing plants decreased.

As the size of purchases by farmers of feeder livestock increased there was a tendency to patronize producers less and auctions more for cattle and hogs, but auctions less and producers more for feeder sheep and lambs.

Corn Belt Area. The study shows that the various types of markets were not used to the same extent by farmers who sold and bought livestock in large numbers as by those who sold and bought in small numbers. The comparisons were limited to the sale of slaughter livestock and to the purchase of stockers and feeders. Farmers who sold relatively large numbers of livestock made greater use of terminal public markets than those selling small numbers. Those marketing a few head more generally used nearby markets, such as country dealers, local cooperative associations, auctions and other farmers. Concentration yards or local markets were used to greater extent by farmers selling few numbers of cattle, calves, sheep and lambs than by those selling larger numbers, but the reverse was the case when selling hogs. Selling to packers was as common by farmers marketing large numbers as by those marketing only a few head.

The farmers who bought stocker and feeder livestock in relatively large numbers also used terminal public markets to a greater extent than those buying small numbers. Dealers were patronized to a greater extent by farmers who bought hogs, sheep and lambs in large numbers than by those buying a few head, but the reverse was the case when buying cattle and calves. Farmers buying a few head used auctions to a greater extent than those buying large numbers.

Trading in Livestock by Weight and by the Head

South Dakota. Practically all slaughter hogs and lambs sold by farmers in the state were sold by weight, but about 10 percent of the slaughter cattle and 66 percent of the veal calves were sold by the head.

In buying stockers and feeders farmers traded by the head much more frequently than in selling slaughter animals, with reports showing 45 percent of the cattle and calves, 41 percent of the hogs and pigs, and 24 percent of the sheep and lambs bought by the head.

Livestock auctions sell slaughter animals of all species mostly by weight, while feeder and breeding animals are sold about as commonly by the head as by weight. Sales by the head are much less prevalent at the auctions in the eastern fifth of the state than in other areas.

A large percentage of the hogs handled by dealers are slaughter animals. Hence, about 95 percent are bought by weight. In contrast, about 30 percent of the sheep and lambs and 58 percent of the cattle and calves were reported by 66 dealers as bought by the head.

Packing plants bought practically 100 percent of all species by weight, with only occasional animals being bought by the head.

Corn Belt Area. Farmers sold 99 percent of their slaughter hogs and 97 percent of their lambs by weight. The slaughter cattle sold by weight made up 94 percent of the total, and veal calves 87 percent. Cattle were sold by the head in larger proportions in Wisconsin, North Dakota, and Michigan than in the other States. More than one-fifth of the veal calves were sold by the head in Illinois, Michigan, Missouri, Kansas, and Oklahoma. Slaughter hogs were sold almost entirely by weight, except in Oklahoma where 13 percent were sold by the head. Slaughter lambs were sold in most States by weight, the sale on a head basis being most common in Missouri and North Dakota.

It was more common for farmers to buy stocker and feeder livestock by the head than for them to sell slaughter animals on this basis. This apparently was due to the fact that it involved immature animals of light weight and also that some were bought where scales were not conveniently available. Feeder lambs were bought by weight in larger proportions than other species.

Dealers or truck buyers bought 48 percent of their cattle, 39 percent of their calves, 18 percent of their hogs and 31 percent of their sheep and lambs by the head. At concentration yards and packing plants practically all of the livestock was bought by weight. At some auctions, sale was by weight and at others by the head. Where scales were available slaughter livestock was sold by weight, but some stockers and feeders were sold by weight and some by the head. Dairy and breeding animals were usually sold by the head.

Weights of Livestock Sold and Bought by Farmers

South Dakota. The average weight of fed cattle sold by farmers was 944 pounds, but ranged from 900 pounds in the eastern part of the State to 1,100 pounds in the south central and western sections. Butcher hogs sold averaged 227 pounds for South Dakota, but ranged up to 270 pounds in the central and western sections of the state. Slaughter lambs sold weighed on the average 88 pounds with a range by areas from 81 to 95 pounds. The average weight for stocker and feeder cattle bought by farmers was 544 pounds, and for feeder lambs, 69 pounds.

Corn Belt Area. The average weight of the fed cattle sold in the region was 937 pounds, ranging from 679 pounds in Oklahoma to 1,048 pounds in Iowa. They are generally marketed at heaviest weights in States in which the supply of corn is large and feeding is important. The average weight of butcher hogs sold by farmers was 230 pounds. The weight ranged from 207 in Kentucky to 249 pounds in Nebraska. Slaughter lambs averaged 86 pounds. The lightest average weight, 78 pounds, was marketed from Oklahoma and the heaviest, 95 pounds, from Nebraska and Michigan.

Stocker and feeder steers bought by farmers weighed an average of 544 pounds, and feeder heifers averaged 449 pounds. These animals varied in weight among States and among purchasers in the same State. The feeder lambs bought by farmers averaged 67 pounds.

Feeding and Watering before Weighing

South Dakota. All livestock delivered at terminal markets in South Dakota are fed and watered before being weighed. Livestock auctions reported that 100 percent of the cattle and calves, 99 percent of the sheep and lambs, and 74 percent of the hogs had feed and water before weighing. Packing plants reported that 29 percent of the cattle, 49 percent of the calves, 22 percent of the sheep and lambs, and 8 percent of the hogs had both feed and water before being weighed. In contrast shipping associations stated that all livestock was weighed without being given feed and water beforehand.

Corn Belt Area. Nearly all of the livestock delivered at concentration yards, and more than 90 percent of the animals sold direct to packers were weighed without feed or water. At auctions, 40 percent of the cattle, 32 percent of the calves, 25 percent of the hogs, and 27 percent of the sheep and lambs were fed and watered before being weighed to the buyer. Smaller proportions of cattle and calves, but larger proportions of hogs, sheep and lambs were given water but no feed.

Transportation of Livestock

South Dakota. Hired truckers were the principal means by which livestock was moved from farms to market, with this group moving over 50 percent of the cattle, hogs, sheep and lambs in practically every area of the state except the north central (area 4). In this area the bulk of the livestock was moved by the buyer. Buyers in the state as a whole move almost one-fourth of all livestock. Farmers transport most of the remainder in their own trucks.

Packing plants received over 90 percent of their hogs and about two-thirds of other species by truck. Ninety-nine and nine-tenths percent of the hogs, 96.6 percent of the cattle, and 88.1 percent of the sheep received at the Sioux Falls terminal market were delivered by truck. Auction agencies also secure most of their livestock by trucks, except a few in the east side that receive shipments from the territory west of the Missouri River.

Corn Belt Area. Seventeen percent of the cattle, 30 percent of the calves, 21 percent of the hogs, and 27 percent of the sheep and lambs sold by farmers were moved from farms in their own truck, more than one-half by hired truckers, and less than one-fifth by dealers who bought and took possession at the farm. Most of the livestock transported by farmers was delivered to the markets or to packing plants by trucks, but small numbers were delivered to local railroad shipping points and from there shipped by rail to markets or to packing plants. Farmers in Michigan transported their own livestock in larger proportions than those in other states. In Iowa and Illinois large proportions of livestock were moved from farms by hired truckers.

The truck was the most important means for transporting livestock from local markets. Truck transportation from auctions was used to move 90 percent of the cattle, and about 85 percent of the calves, hogs, sheep and lambs. However, shipments from auctions by rail were important in North Dakota and Kentucky. Dealers used trucks for transporting about three-fourths of the livestock they assembled. In Iowa, nearly one-half of the cattle assembled by dealers was moved to market by rail, and rail was also used to a consider-

able extent for transporting livestock assembled by dealers in North and South Dakota. In Nebraska, rail transportation was used for two-thirds of the hogs. Local cooperative associations used truck and rail transportation in about equal proportions. The associations in Indiana, Iowa, and Michigan used rail transportation to a greater extent than those in other States. Some of the livestock handled by local cooperative associations was not assembled but were picked up at farms by trucks they owned or hired and were moved to market or to packing plants.

Relatively large proportions of the livestock were moved from concentration yards or local markets by rail. Shipments by rail were relatively large from concentration yards in Iowa, North Dakota, Kansas, Nebraska, Wisconsin and Michigan, but trucks were mostly used in Illinois. The fact that part of the livestock assembled at these markets was sorted and sold in carlots, and that these yards were located on main lines of railroads, apparently contributed to the relatively large shipments by rail.

Grade Classification and Market News

South Dakota. Farmers generally recognized that it is more difficult to differentiate between the various classes and market grades of cattle than other species, and that market news covers these various grades less adequately than for other species of livestock. Over 30 percent of the farmers reporting stated that they did not consider themselves qualified to act as their own cattle salesman.

Of the livestock bought by 38 dealers about 5 percent of the hogs, and 25 percent of the veal calves and lambs were reported as bought in mixed lots, were ungraded, and paid for at a flat price per pound for the lot. Definite schedules of grades are used by a very small percentage of dealers.

On the whole, livestock at auction agencies seems to be graded into fairly uniform lots in regard to size, color, finish, and weight. This is simplified by a very large percentage of the lots sold consisting of single or a very few animals.

Corn Belt Area. The grade nomenclature used when trading in livestock was found to lack uniformity in all parts of the region and among all types of markets. Uniform Federal grades and grade terms were used for reporting prices at many important terminal public markets and at some packing plants and concentration yards but the grade terms used when trading were often different. Livestock was bought according to the Federal grades in larger proportions by the interior packers and at concentration yards in the North-western Corn Belt States than elsewhere. At many markets, particularly the smaller ones, price information was released on grade and weight classifications that differs from the Federal standards. This made it difficult for farmers to compare the prices quoted, or the prices paid at alternate markets.

Market information was widely disseminated by radio and newspapers, and to a less extent by other means. The telephone was used to a considerable extent for obtaining prices by farmers who had livestock to sell.

Extent of Cooperative Marketing

South Dakota. Less than 3 percent of the farmers reporting stated that they were affiliated with any form of livestock marketing cooperative. However, almost one-fourth of the livestock sold at the Sioux Falls Public Market is consigned to cooperative commission firms.

Corn Belt Area. Of the farmers visited in 1941, nine percent reported they were members of local cooperative associations. The largest proportions were: North Dakota, 30 percent; Michigan, 23 percent; Indiana, 18 percent; and Wisconsin, 15 percent. In some of the States few farmers are members. However, membership does not give an accurate indication of the extent to which associations are being used, since many of the associations list as members all farmers who consign any livestock through the association.

Source and Disposition of Livestock Handled by Types of Markets

South Dakota. Sixty-eight dealers reporting secured over 50 percent of their cattle and calves, over 60 percent of their hogs, and over 75 percent of their sheep and lambs directly from farmers. Another 40 percent of the cattle and calves, 35 percent of the hogs and 5 percent of the sheep and lambs came from auctions. In each species they obtained a slightly larger proportion of purchased feeder and breeding animals from farmers than of the total purchased slaughter animals. But a higher percentage of slaughter animals than "other" were bought from auctions.

These dealers sold about one-half of their slaughter cattle and calves and 95 percent of their slaughter hogs and lambs directly to packing plants. The balance of the slaughter cattle and calves was divided about equally between terminal public markets and auction agencies. Dealers' principal disposition of feeder and breeding cattle, calves and hogs was through auctions, while about 83 percent of the feeder and breeding sheep and lambs was sold direct to farmers.

Approximately 80 percent of the cattle, calves, sheep and lambs and 60 percent of the hogs sold through 23 auctions were reported as falling in the feeder or breeding classes.

Farmers' reports indicate that they consign about one-half of the cattle and sheep, and about one-fourth of the hogs; while they buy about 75 percent of the cattle, 60 percent of the sheep, and 40 percent of the hogs handled through auctions.

Packing plants obtain about 70 percent of their hogs, sheep and lambs, and about 45 percent of their cattle and calves from farmers direct or from packer buyers in the country. Terminal public markets supply packers with about one-fourth their cattle, one-eighth their calves and hogs, and 5 percent of their sheep and lambs. Dealers and local cooperatives supply most of the balance.

Of the livestock received at the Sioux Falls Public Market in 1940 about one-half the hogs, 60 percent of the cattle; three-fourths of the sheep and lambs, and 90 percent of the calves were shipped out for stocker and feeder, breeding and slaughter purposes. The balance was slaughtered locally.

Corn Belt Area. Of the livestock handled by country dealers, 76 percent of the cattle, 79 percent of the calves, 84 percent of the hogs, and 81 percent of the sheep and lambs were obtained from farmers. Auctions were the next important source of livestock bought by dealers. The dealers disposed of nearly one-third of the cattle handled at terminal public markets. About two-thirds of the hogs, and more than one-third of the calves, sheep and lambs handled were sold at packing plants. Some dealers apparently had arrangements whereby they delivered their livestock to certain packers. They sold some of their livestock at auctions. Sales to farmers of stockers, feeders, and breeding animals were also relatively large.

Of all livestock handled for farmers by local cooperative associations 85 percent of the cattle and calves, 68 percent of the hogs, and 79 percent of the sheep and lambs were sold at terminal public markets. Sales at packing plants were more important for hogs than for other species of livestock.

Seventy-seven percent of the cattle, and more than 80 percent of the calves, hogs, sheep and lambs, received at concentration yards or local markets were furnished by farmers. The rest was received chiefly from dealers. Most of the livestock handled at concentration yards operated independently, and virtually all at yards owned by packers, was disposed of at packing plants.

Of the livestock received at auctions or sale barns in 1940, farmers furnished 69 percent of the cattle, 72 percent of the calves, 78 percent of the hogs, and 82 percent of the sheep and lambs. The balance came from dealers, except in Indiana, Ohio, and Iowa, where small numbers were consigned by local cooperative associations. The slaughter livestock handled at auction markets was bought by dealers who resold to packers or at other markets, by order buyers who purchased for packers, and by packers. Stockers, feeders, and breeding animals were bought by farmers or feeders, and by dealers who resold to farmers or bought for farmers. The auctions more generally patronized by packers were those where livestock was sorted and sold in large lots of uniform grade and weight, such as many of those in Kentucky, and some hog auctions in Ohio.

Packing plants for which information was obtained comprised only those where all or part of the livestock was bought direct. For some plants practically all of the livestock was bought direct. For others livestock was obtained in relatively large numbers from terminal public markets. Receipts from farmers were large, and smaller numbers were obtained from dealers, through packer buyers operating in the country, from auctions, from their own and other concentration yards, and from local cooperative associations. Of the livestock bought elsewhere than at terminal public markets by these packers, 28 percent of the cattle, 43 percent of the calves, 48 percent of the hogs, and 35 percent of the sheep and lambs were purchased at the plant. The rest was obtained at their own and at other concentration yards, by their own buyers in the country, at auctions, and from dealers at country points. Nearly all of the livestock bought by packers was slaughtered, small numbers being resold to other packing plants, at terminal public markets and at auctions.

Distances from Which Various Types of Markets Received Livestock

South Dakota. Almost one-third of the hogs and one-half of the other livestock passing through auction rings or handled by dealers, but not picked up on farms, comes from more than 50 miles from the location of the auction or dealer. A smaller percentage of animals picked up on farms by dealers' trucks comes from outside a fifty mile radius. Local cooperative livestock marketing associations secure practically all of their livestock from within a 25 mile limit. About 20 percent of the truck transported cattle and sheep and 12 percent of the hogs came from a radius outside of 100 miles. Of the rail transported animals about 5 percent of the hogs and 95 percent of the cattle and sheep came from over 200 miles. Terminal markets received more than two-thirds of each species transported by truck from within a 50 mile radius of the market.

Corn Belt Area. The distances from which livestock was received at different markets varied and there was considerable overlapping of territory. Local cooperative associations and retail meat dealers who slaughter operated over more limited areas than other types of markets. Cooperative associations received more than three-fourths of the livestock from within a 10-mile range, and practically all the livestock they handled came from within 25 miles. Dealers also drew heavily from nearby areas although some, particularly those who obtained feeders from ranges, received livestock from a considerable distance. At auctions 15 percent of the cattle, 9 percent of the calves, 4 percent of the hogs, and 9 percent of the sheep and lambs came more than 100 miles. Practically all livestock received at packing plants by rail came from distances over 100 miles. About 10 percent of the livestock received by truck also came from this distance.

Place of Price Agreement

South Dakota. Prices on practically all cattle, calves, sheep and lambs bought by dealers are agreed on after examination, while about one-fifth of the hogs are bought by telephone description. This emphasizes the greater uniformity and wider spread knowledge of grades in hogs.

Packing plants reported that approximately 99 percent of hogs and lambs were priced at the plant, but that about 30 percent of the cattle, sheep, and lambs, were inspected, and had the price agreed on before being moved to the plant.

Corn Belt Area. Part of the livestock sold by farmers was priced before being moved from the farm. This applied to 94 percent of the cattle bought by dealers, 50 percent of those bought at concentration yards, and 39 percent of those bought direct by packers. Most of the livestock was examined at the farm by the buyers, but on some price was agreed on by telephone. Smaller proportions of other species of livestock bought at these markets were priced before delivery. Large proportions of the livestock bought direct by packers were received without previous price agreement. This comprised 62 percent of the cattle, hogs, sheep and lambs, and more than 80 percent of the

calves. Delivery of livestock before price was agreed upon was also common at concentration yards. As a result of radio reports which were available every day, and telephone which was extensively used by certain groups of packers for getting their bids out to the country, sellers had information on the prices paid even in livestock that was delivered before being sold.

Of the livestock dealers sold to packers more than 70 percent of the cattle and calves, and more than one-half of the hogs, sheep and lambs were bought and delivered to packing plants without previous price agreement. On 18 percent of the cattle, 23 percent of the calves, 33 percent of the hogs, and 19 percent of the sheep and lambs the dealers obtained bids from packers before they bought from farmers. On the rest, bids were obtained from packers after the purchases were made but before the livestock was delivered.

Characteristics of Livestock Auction Agencies in South Dakota

Of the 49 livestock auctions doing business in South Dakota in 1940 the six largest handlers of each species accounted for 45 percent of all cattle and sheep and 36 percent of all hogs sold through auctions. Eighteen auctions studied did an average yearly business of three-quarters of a million dollars. Of these, the largest accounted for two and one-half million and the second largest for one and one-half million dollars.

The average number of buyers and sellers attending each sale, as reported by 15 auctions, was 35 and 105, respectively. The extreme low reported was 15 buyers and 35 consignors, while the extreme high was 100 buyers and 400 consignors.

Only 4 of 21 auction operators reporting stated that they, or the auctioneer, never bought livestock in the country for resale at the auction, nor bought at the auction.

Of 21 auctions reporting four charged commissions on the basis of percentage of gross sales on cattle, calves and horses, while three used a similar basis for hogs and sheep. These were either flat rates or graduated on a value basis. The balance charged by the head. But, here, the majority graduated their charges either on a basis of value, numbers, size of animal, or some combination of these factors.

Each auction agency is required to post a surety bond guaranteeing the sums due consignors of livestock or other property. The amount of this bond ranges from a minimum of \$3,000 up to the average weekly value of sales conducted by the agency. Every auction agency is under the supervision of the State Livestock Sanitary Board and is required to provide veterinary inspection of all livestock handled.

Supervision of Terminal Public Markets and Weighing in South Dakota

All firms operating on the terminal public market are bonded and are under the supervision of the Packer and Stockyards Administration. This supervision also includes veterinary inspection of all livestock and regular testing of all scales.

All livestock scales used for public weighing are under the supervision of the Public Utilities Commission and are supposed to be inspected and tested periodically. In those markets which come under the Packers and Stockyards Act scales are federally inspected at regular intervals.

Problems Listed by South Dakota Farmers

Principal problems in livestock marketing as listed by farmers were: Transportation, current market information that would be adequate for making time and place choices of marketing, price outlook information, expense, price fluctuations in short periods, and price differentials for small and large lots.

Conclusions

TRANSPORTATION IS ONE of the greatest livestock marketing problems in South Dakota. This is voiced most frequently by producers in the central and western areas of the state. Space is primarily responsible for this situation, space that first must be covered to secure an economical load, and second, space that must be covered from the point of production to the ultimate market. This distance means high costs in mileage, shrinkage, bruising and crippling, non-availability of transportation when needed, and often poor service when secured.

Scarcity of livestock per square mile, particularly when broken down into slaughter and feeder classes, accentuates the marketing problem because of the lack of most types of marketing agencies in such areas.

The majority of farmers in South Dakota sell cattle and hogs in much fewer numbers than truck or car lots, and hence are limited in economical marketing opportunities, both as to transportation and knowledge of time and place to sell.

In certain areas of the state dealing in feeder or slaughter animals by the head puts the seller at a disadvantage compared to the more experienced buyer.

Lack of knowledge of market classes and grades puts the producer at a distinct disadvantage in selling or buying livestock, particularly of cattle. This lack of grade knowledge is supplemented by a scarcity of market news that is specific enough for the producer to apply it to the particular grade of animal that he has for sale.

The prevalence of consignments and purchases at livestock auctions by dealers and truck buyers indicates a service rendered in the marketing process. But in many cases it is questionable if the volume handled by individual

dealers or methods employed in their purchases, or sales, lead to economy for either the producer or the ultimate consumer. This is particularly true of those dealers who buy at one auction agency and sell at another.

The desirability of the practice of some auction operators buying or sponsoring purchases in the country for resale at their auctions, or of purchasing at the auction, is open to question.

Some livestock producers raise the question as to whether small shippers get the same price as large sellers at the terminal public market, and a number of producers complain that yardage commission and feed rates at the terminal public market are too high.

Packing plants receive some criticism on the grounds of lack of competition and differentiation in price for small shipments.

Wide price fluctuations from day to day are a source of concern to most producers, and are a distinct detriment to efficient transportation and orderly marketing.

Future reforms in livestock marketing in South Dakota will probably be centered about more efficient assembly and transportation methods; an improved system of grading and pricing; the direction of those grades toward those outlets which have the greater demand for particular grades at a particular time; dissemination of more perfect market news in regard to specific grades; control of the extent to which prices may fluctuate from day to day; and still greater attention toward bringing the buyers and sellers of feeder livestock into direct contact with one another in sufficient volume to insure competitive pricing, efficient transportation, and more equal bargaining strength. The more attention the individual marketing agency pays to these factors the better will it serve the livestock industry and thereby perpetuate itself.

Appendix Tables

Appendix Table 1. Percentage livestock sold through various types of outlets by farmers in South Dakota classified by species and classes, 1940

Species and class	Term. public markets	Concen. yards or local markets	Packing Plants	Dealers or truck buyers	Local coop ass'ns	Auctions or sale barns	Farmers or others	Total
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Cattle and calves								
Slaughter	52.1	2.6	26.9	7.5	.8	9.3	.9	100.0
Veal calves	24.8	10.4	9.3	15.8	.7	35.6	3.4	100.0
Stocker and feeder	23.7	2.9	1.1	27.5	1.4	25.0	18.4	100.0
Dairy and breeding	8.0	4.8	3.4	20.7	1.1	27.4	34.6	100.0
TOTAL	34.6	3.0	12.1	18.6	1.1	18.9	11.7	100.0
Hogs and pigs								
Slaughter	31.2	4.5	48.3	4.6	1.6	8.8	1.0	100.0
Feeder	4.6	7.3	5.4	10.4		53.6	18.7	100.0
Breeding	4.5	28.7	5.6	5.9		10.0	45.9	100.0
TOTAL	28.4	5.0	43.8	5.2	1.5	12.9	3.2	100.0
Sheep and lambs								
Slaughter	45.0	1.0	44.4	4.4	.2	3.9	1.1	100.0
Feeder	3.4	1.6	2.7	52.7		3.6	36.0	100.0
Breeding	.2	.2	.2	26.4		11.9	61.1	100.0
TOTAL	20.7	1.2	20.0	28.8	.1	4.8	24.4	100.0

Appendix Table 2. Percentage slaughter livestock sold through each type of outlet in South Dakota, classified by number sold per farm for each species, 1940.

Species and No. of head sold per farm	Number of farms	Term. public markets	Con. yards or local markets	Packing Plants	Dealers or truck buyers	Local coop. Ass'ns	Auctions or sale barns	Farmers or others	Total
		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Cattle and calves									
Less than 5 head	191	36.2	5.8	16.1	13.4	2.5	22.6	3.4	100.0
5 to 19 head	179	45.1	6.4	13.5	16.8	1.2	14.4	2.6	100.0
20 head and over	70	51.2	.1	34.0	4.1	.6	10.0		100.0
TOTAL	440	48.2	2.4	26.4	8.6	.9	12.4	1.1	100.0
Hogs and pigs									
Less than 10 head	105	9.3	3.7	44.7	22.0	6.5	11.6	2.2	100.0
10 to 59 head	309	23.5	5.2	51.2	5.8	2.8	10.6	.9	100.0
60 head and over	112	35.3	3.9	46.2	2.8	1.1	9.6	1.1	100.0
TOTAL	526	29.1	4.5	48.4	4.8	2.1	10.1	1.0	100.0
Sheep and lambs									
Less than 20 head	74	16.8	3.5	56.4	9.3		14.1		100.0
20 to 99 head	84	26.2	2.2	47.8	9.9	.6	10.8	2.5	100.0
100 head and over	23	57.0	.2	40.5	1.1		.8	.4	100.0
TOTAL	181	42.6	1.2	44.4	4.9	.2	5.5	1.2	100.0

Appendix Table 3. Percentage feeder livestock sold through each type of outlet in South Dakota by areas classified by number sold per farm for each species, 1940

Species and No. of head sold per farm	Number of farms	Term. public markets	Con. yards or local markets	Packing plants	Dealers or truck buyers	Local coop. ass'ns	Auctions or sale barns	Farmers or others	Total
		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Cattle and calves									
Less than 5 head	27.3	20.1	5.1	5.1	24.2	.5	38.6	6.4	100.0
5 to 19 head	54.1	25.6	4.1	1.6	29.7	2.6	26.6	9.9	100.0
20 head and over	18.6	18.7	.5		26.8	3.9	23.7	26.4	100.0
TOTAL	100.0	21.1	1.9	.8	27.7	3.3	25.4	19.4	100.0
Hogs and pigs									
Less than 10 head	33.3	9.7	13.1		13.1		50.5	13.6	100.0
10 to 59 head	59.8	4.4	9.2	5.8	10.8		52.8	17.0	100.0
60 head and over	6.9	3.3			1.6		66.8	28.3	100.0
TOTAL	100.0	4.4	6.7	3.6	8.1		56.9	20.3	100.0
Sheep and lambs									
Less than 20 head	33.3	3.2	14.9	6.5	6.5	4.5	61.0	3.2	100.0
20 to 99 head	37.5	7.2	6.0	7.2	37.9		25.0	16.8	100.0
100 head and over	29.2	8.3	2.5	6.4	32.8		12.1	37.8	100.0
TOTAL	100.0	8.0	3.3	6.6	32.9	.1	15.1	34.0	100.0

Appendix Table 4. Slaughter livestock sold by weight and by the head in South Dakota, classified by species and class, 1940

Species and class	Number of head			Total	Percentage		Total
	Farms Reporting	By Weight	By the Head		By Weight	By the Head	
	Number	Number	Number		Percent	Percent	
Slaughter cattle	182	2379	249	2628	90.5	9.5	100
Veal calves	14	21	41	62	33.9	66.1	100
Slaughter hogs	249	10398	160	10558	98.5	1.5	100
Slaughter lambs	107	4187	56	4243	98.7	1.3	100

Appendix Table 5. Means by which livestock sold by farmers in South Dakota were moved from farms, classified by species, 1940

How moved from farms	Farms reporting	Number of head				Percentage			
		Cattle	Calves	Hogs	Sheep and Lambs	Cattle	Calves	Hogs	Sheep and Lambs
		Number	Number	Number	Number	Percent	Percent	Percent	Percent
In farmers own trucks	286	1906	391	5469	3334	17.9	17.9	25.5	13.9
By hired truckers	543	5983	1034	12305	13334	56.3	47.4	57.3	56.0
By the buyer	336	2749	758	3693	7179	25.8	34.7	17.2	30.1
TOTAL	1165	10638	2183	21467	23847	100	100	100	100

Appendix Table 6. Percentage livestock bought at or from various types of markets or marketing agencies by farmers in South Dakota, classified by species and classes, 1940

Species and class	Term. public markets	Coop. agencies	Concentration yards	Dealers or truck buyers	Auctions or sale barns	Farmers or ranchers	Total
		distributing direct	or local markets				
		Percent	Percent				
Cattle and calves							
Stocker and feeder	14.5	.7	.7	7.3	50.3	26.5	100.0
Dairy and breeding	2.0	.1	.5	8.5	33.3	55.6	100.0
TOTAL	13.1	.6	.7	7.4	48.4	29.8	100.0
Hogs and pigs							
Feeder	1.1		1.7	4.3	68.1	24.8	100.0
Breeding	2.7		1.1	.3	31.5	64.4	100.0
TOTAL	1.3		1.6	3.7	62.3	31.1	100.0
Sheep and lambs							
Feeder	6.9		.1	25.8	12.8	54.4	100.0
Breeding	.2			30.2	7.0	62.6	100.0
TOTAL	2.6		.3	28.5	9.1	59.5	100.0

Appendix Table 7. Percentage stocker and feeder livestock bought at or from each type of market or marketing agency by 931 farmers in South Dakota, classified by number purchased per farm for each species, 1940

Species and no. of head bought per farm	Number of farms	Term. public markets	Con.yards or local markets	Packing plants	Dealers or truck buyers	Local coop. ass'n	Auctions or sale barns	Farmers or others	Total						
										Percent	Percent	Percent	Percent	Percent	Percent
										Percent	Percent	Percent	Percent	Percent	Percent
Cattle and calves															
Less than 5 head	37	11.8			10.8		43.0	34.4	100.0						
5 to 19 head	63	8.3			13.9	2.5	57.4	17.9	100.0						
20 head and over	56	15.5	.8		6.1	.5	49.4	27.7	100.0						
TOTAL	156	14.5	.7		7.3	.7	50.3	26.5	100.0						
Hogs and pigs															
Less than 10 head	36	5.5	1.6		3.1		45.7	44.1	100.0						
10 to 59 head	32	2.6	5.5		13.5		50.6	27.8	100.0						
60 head and over	18						78.2	21.8	100.0						
TOTAL	86	1.1	1.7		4.3		68.1	24.8	100.0						
Sheep and lambs															
Less than 20 head	12	11.4	4.8		16.2		46.6	21.0	100.0						
20 to 99 head	13	28.4			16.2		39.9	15.5	100.0						
100 head and over	11	3.2			27.7		7.1	62.0	100.0						
TOTAL	36	6.9	.1		25.8		12.8	54.4	100.0						

Appendix Table 8. Farmers' reasons for selling different species of livestock at specific types of markets

Type of Market	Reasons	Number of replies by species of animals				Total
		Cattle	Calves	Hogs	Sheep	
Terminal Public	Most competition	28		4	2	34
	Most money	24	6	13	9	52
	Best market	4				4
	Largest demand	3				3
	Least expense	1				1
	Better weights			2		2
	Closer			1		1
	TOTAL	60	6	20	11	97
Packing Plants	Most money	51		81	40	172
	Closest	7		26		33
	Least trucking cost	4				4
	Little shrinkage			3		3
	No middlemen				6	6
	No large selling expense				1	1
	TOTAL	62		110	47	219
Auctions	Most money	82		47	14	143
	Best market for small no.	22				22
	More convenient	17				17
	Most competition	13	2	11	10	36
	Saves long trucking			11		11
	Good market for feeders			7		7
	Better chance to look for other livestock				2	2
	TOTAL	134	2	76	26	238
Dealers	Farm agreed price	52		7		59
	Least expense	33	2			35
	Most money	23	3	8	22	56
	More convenient	8		5	5	18
	Most competition			10		10
	TOTAL	116	5	30	27	178
Direct to Farmers	Least expense	2		5	6	13
	Least trucking cost		2			2
	Most money			1	2	3
	TOTAL	2	2	6	8	18
Concentration Yards or Local Markets	Least expense	7		11	5	23
	Most money	3			1	4
	Least shrinkage				4	4
	TOTAL	10		11	10	31

Appendix Table 9. Farmers' reasons for buying livestock of different species at specific types of markets

Type of Market	Reasons	Number of Replies by Species of Animal				Total
		Cattle	Calves	Hogs	Sheep	
Terminal Public	Offers kind wanted	4				4
	Best place for feeders	2				2
	Lower priced	1				1
	TOTAL	7				7
Auctions	Kind wanted offered	15		3	3	21
	Best place for feeders	6		7		13
	Best place to get small no.	6				6
	More convenient	5		6	2	13
	Farmer able to bid own price	2				2
	Only place available			2	3	5
	TOTAL	34		18	8	60
Dealers	Stock offered at good price	2			2	4
	More convenient	1				1
	Only source available				2	2
	TOTAL	3			4	7
Direct from Farmers	Know what you are getting	36		14	19	69
	Best price offered			1		1
	TOTAL	36		15	19	70

Appendix Table 10. Markets and marketing agencies for which current prices on livestock are obtained for determining where to sell livestock

Market	Marketing Agency	No. Reported Using
1. Sioux City, Iowa	Public Stockyards	351
2. Sioux Falls, S. Dak.	Packing Co.	193
3. Watertown, S. Dak.	Packing Co.	79
4. St. Paul, Minn.	Public Stockyards	61
5. Huron, S. Dak.	Packing Co.	49
6. Chicago, Ill.	Union Stockyards	42
7. Omaha, Nebr.	Public Stockyards	32
8. Fargo, N. Dak.	Public Stockyards	26
9. Mitchell, S. Dak.	Abattoir	12
10. Aberdeen, S. Dak.	Dealers	10
11. Presho, S. Dak.	Livestock Auction Agency	7
12. Rapid City, S. Dak.	Packing Plant	5
13. Chadron, Nebr.	Auction Agency	5
14. Wagner, S. Dak.	Auction Agency	3
15. Denver, Colo.	Stockyards	2
16. Winner, S. Dak.	Dealers and auction	2
17. Yankton, S. Dak.	Dealers and auction	2
18. Brookings, S. Dak.	Auction Agency	1
19. Gettysburg, S. Dak.	Auction Agency	1
20. Montevideo, Minn.	Abattoir	1
Total		884

Appendix Table 11. Charges for selling livestock at 21 livestock auctions in South Dakota, 1940

Charges	Cattle	Insurance Charges			
		Calves	Hogs	Sheep and Lambs	Horses and Mules
1/5c				1	
1c	2	2	4	4	
2c	12	13	11	11	11
5c	1				1
10c					1
No charge	4	4	4	4	4
No rate given	2	2	2	1	4
TOTAL	21	21	21	21	21

Charges	Brand Inspection	
	Cattle	Horses
10c	1	1

Charges	Cattle	Veterinary Charges ¹			
		Calves	Hogs	Sheep and Lambs	Horses and Mules
1c				1	
2c			11	10	
3c			2	3	
4c			1		
5c	15	16	1		1
6c	1				
7c					1
10c	1				11
15c					
No charge	2	2	2	2	2
No rate given	2	3	4	5	6
TOTAL	21	21	21	21	21

1. These rates do not conform in a few cases with those set by the State Sanitary Board. The discrepancies may be due to mistakes on the part of reporting sales managers.

Appendix Table 11 Cont'd. Charges for selling livestock at 21 livestock auctions in South Dakota, 1940

	Number of Auctions Making Commission Charges on Various Bases								Total
	Rates as percentage of gross sales			Rates on per Head basis					
	Flat rate	Graduated on Value basis	Flat rate	Graduated on					
				Value basis	Physical basis	Value and Physical basis	Volume basis	Value and Volume basis	
Cattle	2	2	5	4			7	1	21
Calves	2	2	1	10	1	2	3		21
Hogs	1	2	2	14	1		1		21
Sheep	1	2	6	4			8		21
Lambs	1	2	6	1					10
Horses	4		1	16					21
Rates Charged:									
Most usual									
Cattle	3%	3%	\$1				1@ \$1. 5@ 70c	74c-\$1.30	
Calves	3%	3%	50c	50c-75c	35c-50c		1@ 75c 16@ 45c		
Hogs	3%	3%	25c-50c		20c-30c		up to 25@ 30c over 25@ 25c up to 50@ 20c over 50@ 15c over 100@ 10c		
Sheep	3%	3%	25c						
Lambs	3%	3%							
Horses	4%	4%	\$2.	\$1.25-\$3.00					
Range:									
Cattle	3-5	3-5%	\$1.	50c-\$1.			70c-\$1.		
Calves	3-5	3-5%	50c	20c-\$1.	35c-50c	35c-60c	45c-75c		
Hogs	3-5	3-5%	25c-50c	10c-50c	20c-30c		25c-30c		
Sheep	3-5	3-5%	20c-35c	10c-50c			10c-40c		
Lambs	3-5	3-5%	20c-35c	15c-25c					
Horses	3-4	3-4%	\$2.	\$1.-\$3.					

Appendix Table 12. How livestock bought by 63 livestock dealers in South Dakota was moved from place of purchase, classified by species, 1940¹

Methods of moving from farm	Number of head				Percentage			
	Cattle	Calves	Hogs	Sheep and Lambs	Cattle	Calves	Hogs	Sheep and Lambs
	Number	Number	Number	Number	Percent	Percent	Percent	Percent
Delivered to dealers' yards by farmers or custom truckers	17548	3122	95298	142895	26.9	17.1	63.6	77.5
Picked up on farms by trucks owned or hired by dealers	43014	14764	48414	34660	65.9	80.7	32.3	18.8
Delivered to yards by other livestock dealers	4676	403	6099	6840	7.2	2.2	4.1	3.7
TOTAL	65238	18289	149811	184395	100	100	100	100

¹ Several questionnaires were mailed and this question was not answered in some cases.

Appendix Table 13. Livestock bought by weight and by the head by 66 dealers in South Dakota, classified by species, 1940

Species	By weight	Number of head	Total	By weight	Percentage	Total
	Number	By the head		Percent	Percent	
Cattle	29514	38828	68342	43.2	56.8	100
Calves	7438	10731	18169	40.9	59.1	100
Hogs	151137	6550	157687	95.8	4.2	100
Sheep and Lambs	141364	62486	203850	69.3	30.7	100

Appendix Table 14. Classes and grades of livestock usually bought by the head by dealers in South Dakota, 1940.

Classes and grades	No. of dealers	Classes and grades	No. of dealers
Cattle and calves		Sheep and lambs	
Feeder cows	7	Feeder lambs	4
Feeder steers	6	Breeding ewes	3
Feeder heifers	3	Miscellaneous	
Yearlings	2	All kinds	7
Milk cows	4	According to seller's desire	10
Breeding bulls	1	Slaughter and some feeder	1
Calves	6	Lighter stuff	3
Hogs		Medium and common grade	1
Feeder hogs	5		
Brood sows	2		

Appendix Table 15. Extent of selling livestock by weight and by the head at 21 livestock auctions in South Dakota, 1940

Species and classes	Number of auctions					Total
	By Weight Only	By Weight Largely	By Head Only	By Head Largely	Equally both ways	
Slaughter cattle	12	6	3			21
Feeder cattle	5	6		3	7	21
Slaughter calves	8	8	4		1	21
Feeder calves		9	4	3	5	21
Slaughter hogs	16	2	2			20
Feeder pigs	1	6	5		8	20
Slaughter sheep and lambs	10	6	2		1	19
Feeder sheep and lambs	4	7	3		6	20
Milk cows		1	15	3	2	21
Brood sows		4	6	1	9	20
Breeding ewes			18	2		20

Appendix Table 16. Livestock bought by 58 dealers in South Dakota by different methods of pricing, classified by species, 1940

Methods of pricing	Cattle	Calves	Hogs	Sheep
	Percent	Percent	Percent	Percent
By telephone without previous examination	1.4	.6	21.2	1.6
Price agreed upon after examination	92.6	97.4	27.7	91.4
Animals priced upon delivery	6.0	2.0	51.1	7.0