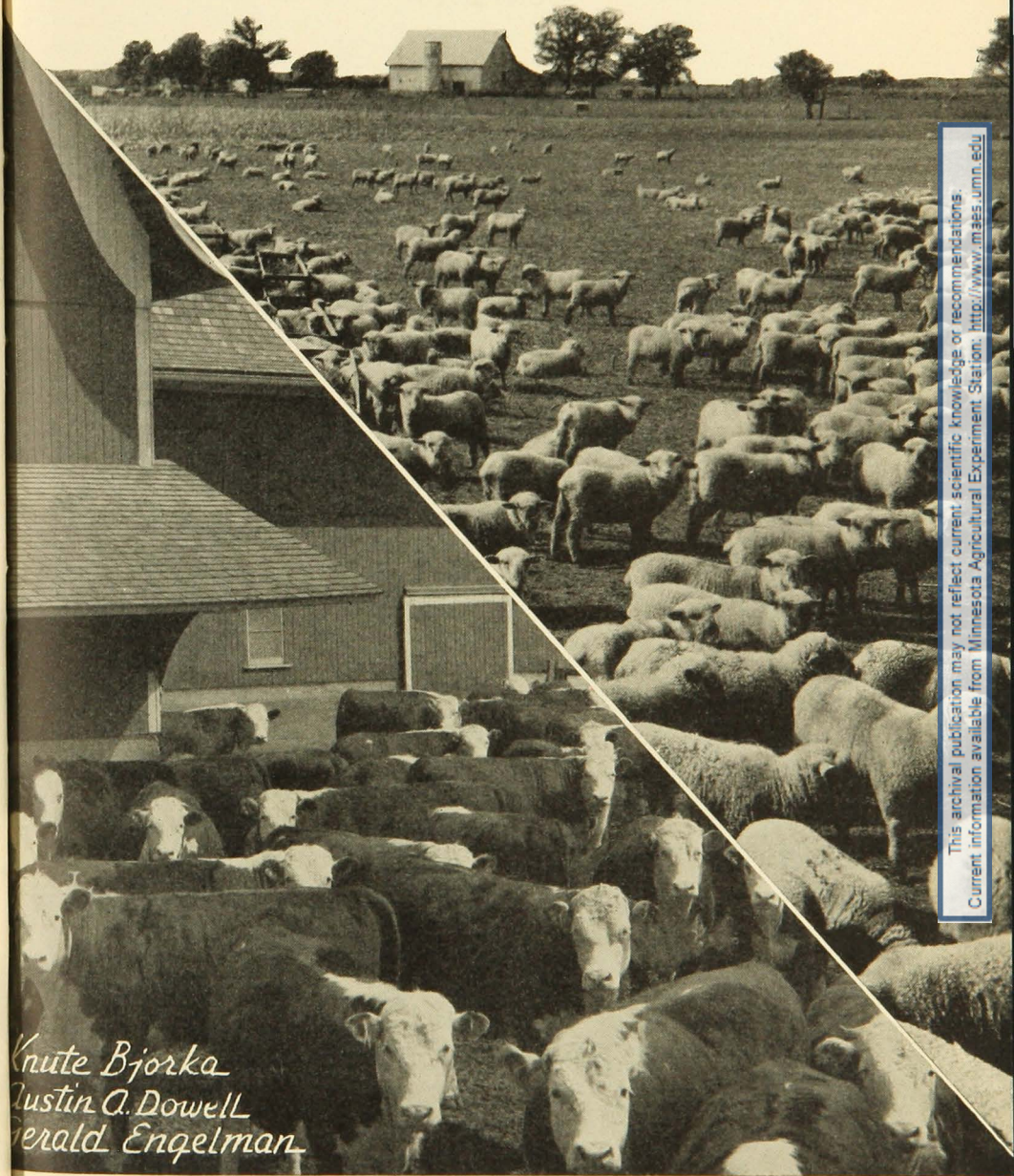
# FEEDER CATTLE AND SHEEP *shipped into* MINNESOTA



*Knute Bjorka*
*Justin A. Dowell*
*Gerald Engelman*



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# Feeder Cattle and Sheep Shipped into Minnesota[1]

**Knute Bjorka, Austin A. Dowell, and Gerald Engelman[2]**

SALE OF MEAT animals constitutes an important source of income to farmers in Minnesota. The average annual cash farm income for the five-year period 1936-40 was $351,000,000, of which $134,000,000, or 38 per cent, came from the sale of meat animals. Sixteen per cent of the cash farm income came from the sale of cattle and calves, 20 per cent from hogs, and 2 per cent from sheep and lambs.

Many cattle and sheep are fed in Minnesota that are not raised in the state. Those brought in from outside come largely from breeding grounds on western ranges. The available supplies of feed grain, forage, and pasture provide feed for the livestock shipped in as well as for that produced in the state. Most of the hogs fed and fattened are produced in the state.

The extent of feeding done and the practices followed are influenced largely by the kind, quantity, and prices of available feeds and the price relationship between feeder and slaughter animals. In the southwestern and south central parts of the state where corn is plentiful, the tendency is toward grain feeding. In the southeastern part of the state the tendency is toward more dairying and less feeding of cattle and sheep. In some cases the place where livestock is fed for the slaughter market is influenced also by the nearness to livestock markets or to slaughtering plants.

## Objectives of Study

The movement of feeder cattle and sheep into Minnesota is of interest to farmers, marketing agencies, transportation agencies, and slaughterers. These individuals and agencies are interested in the number of animals received both from public stockyards and direct from other states, as this gives some indication of the number of animals to be marketed over a period of time. Farmers also are interested in the source of supplies, in the channels through which feeder animals are marketed, and in the distribution of receipts within the state. Such information enables farmers to plan their feeding operations more intelligently.

Public planning agencies also are interested in the movement of feeder cat-

[1] The authors are indebted to the State Live Stock Sanitary Board of Minnesota for cooperation in supplying the data upon which this study is based. Data on monthly marketings from the state were obtained from the State Agricultural Statistician, Agricultural Marketing Service. Assistance in the preparation of this material was furnished by the personnel of Work Projects Administration, Official Project No. 65-1-71-140, Subprojects 429 and 481.

[2] Knute Bjorka, Bureau of Agricultural Economics, United States Department of Agriculture; Austin A. Dowell and Gerald Engelman, Division of Agricultural Economics, University of Minnesota.

tle and sheep into Minnesota. Data on the volume and distribution of inshipments are necessary to arrive at feed requirements in the different areas.

The analyses show the number of head of stocker and feeder cattle and sheep shipped into the state by years, and the proportions of these shipments that were obtained from public stockyards and direct from states. In the case of purchases at public stockyards, the number obtained at each individual market is shown. For shipments that came direct from other states the number coming from each state is presented. The seasonality of the movement from public stockyards is compared with the seasonal movement of animals received direct. The seasonality of inshipments is also compared with the seasonality of marketings for slaughter. This will throw light on the more common length of feeding period. A knowledge of the areas in the state to which the stocker and feeder cattle and sheep go will give some indication of the relative importance of feeding done and of the marketing of slaughter animals from the different areas. In order to understand better the methods and practices followed when distributing stocker and feeder animals, an analysis is made of the proportion of cattle brought in by dealers as compared with those brought in by farmers.

## Source and Nature of Data

Data on which this report is based were obtained from records of the Live Stock Sanitary Board of Minnesota. In common with many other states, Minnesota has a law requiring that livestock brought in from other states for purposes other than immediate slaughter be accompanied by health certificates, or come in on permits issued by the State Live Stock Sanitary Board. If shipments come from public stockyards, the certificates are issued by the United States Bureau of Animal Industry; if direct, by inspectors authorized by the State Veterinarians in the states where the shipments originate. Copies of such certificates and permits are filed with the Board. These records in Minnesota appear to be complete and accurate.

The records of the State Live Stock Sanitary Board do not include all of the livestock bought by Minnesota farmers for feeding and grazing. Some farmers buy animals direct from other farmers within the state but these are not included because records of such animals are not available. On the other hand, all of the livestock included in the records are not produced in other states. Some of the animals bought at the South St. Paul and West Fargo public stockyards were produced in Minnesota but the records giving shipments from public stockyards do not show the state from which the animals originally came. No attempt has been made to estimate either the number of head that were received at these markets from Minnesota and which were returned to the state, or the area of the state from which they came. Total number of such animals is not large.

Data on monthly marketings from the state were obtained from the Agricultural Marketing Service. These marketings comprise all livestock sold at public stockyards and direct to packers. Animals bought direct were received by packers either at their slaughtering plants or their concentration yards. Sales made direct to packers comprise animals that go for slaughter. Livestock sold at public stockyards also include animals that are bought by farmers for feeding or breeding purposes but the proportion of such animals is relatively small.

Data on cattle and sheep received from other states were tabulated by individual lots. The following information is available on each lot: date of shipment; number of head; the public stockyard or state from which the animals came; the name of the consignee and the destination of the shipment; and in the case of cattle, the classification of the animals into steers, heifers, bulls, and cows. Most of the information is summarized for the five-year period 1936-40. But the analysis of the distribution of the inshipments in the state is limited to the first four years of this period.

The cattle and sheep received in the state are credited to the county in which the post office or the shipping point of the consignee is located. This may not in all cases be the county in which the animals are fed or grazed. If the consignee is a farmer, he may live in an adjoining county. Part of the animals received are brought in by dealers who resell to farmers. Some dealers distribute livestock in other counties than that in which they receive the shipment. Even though some discrepancy may exist between the county to which the livestock is shipped and where it is fed, this probably is not great. Apparently the relative significance of the feeding of cattle and sheep in the different areas in the state will be reliably indicated.

WESTERN CATTLE IN SOUTHWESTERN MINNESOTA FEEDLOT

# Feeder Cattle

FEEDER CATTLE as used in this bulletin refer to cattle and calves received in the state for feeding and grazing. They include animals of different ages ranging from calves to older cattle. They also comprise animals within a wide range of condition or finish. Some are poor in flesh requiring a relatively long period of grazing and feeding before they are marketed for slaughter. Others are heavy, "warmed up" cattle that go into feedlots for a short time to receive their final finish. Most of the cattle brought in for feeding and grazing are of the beef type but some are produced from dairy herds or are discarded dairy animals.

Part of the feeder cattle are bought by farmers who produce some animals but not as many as they feed at one time. Their purchases are often in small numbers. The larger shipments usually go to those who more or less specialize in feeding cattle, or to dealers who resell to farmers or feeders. Specialized feeders may be farmers who produce some or all of the feed used, or they may operate feeding yards and buy most or all of their feed. In some cases, cattle are bought for grazing and roughage feeding by farmers who have surplus forage or pasture that cannot be utilized effectively in other ways.

Most of the feeder animals brought into the state are resold by farmers and feeders for slaughter. A small number

**Table 1. Cattle and Calves Shipped into Minnesota from Public Stockyards and Direct from States, Classified by Purpose and Source, 1936-40**

| Purpose and source | 1936 | 1937 | 1938 | 1939 | 1940 | Average |
|---|---|---|---|---|---|---|
| | | | Number | | | |
| **For feeding** | | | | | | |
| From public stockyards | 81,271 | 75,037 | 72,956 | 93,601 | 110,076 | 86,588 |
| Direct from states | 67,521 | 52,603 | 51,216 | 72,114 | 82,438 | 65,178 |
| Total | 148,792 | 127,640 | 124,172 | 165,715 | 192,514 | 151,766 |
| **For breeding and dairying** | | | | | | |
| From public stockyards | 15,315 | 12,514 | 13,093 | 22,302 | 11,848 | 15,015 |
| Direct from states | 5,633 | 4,091 | 3,395 | 5,635 | 6,583 | 5,067 |
| Total | 20,948 | 16,605 | 16,488 | 27,937 | 18,431 | 20,082 |
| **Total** | | | | | | |
| From public stockyards | 96,586 | 87,551 | 86,049 | 115,903 | 121,924 | 101,602 |
| Direct from states | 73,154 | 56,694 | 54,611 | 77,749 | 89,021 | 70,246 |
| Total | 169,740 | 144,245 | 140,660 | 193,652 | 210,945 | 171,848 |
| | | | Percentage | | | |
| **For feeding** | | | | | | |
| From public stockyards | 54.6 | 58.8 | 58.8 | 56.5 | 57.2 | 57.1 |
| Direct from states | 45.4 | 41.2 | 41.2 | 43.5 | 42.8 | 42.9 |
| **For breeding and dairying** | | | | | | |
| From public stockyards | 73.1 | 75.4 | 79.4 | 79.8 | 64.3 | 74.8 |
| Direct from states | 26.9 | 24.6 | 20.6 | 20.2 | 35.7 | 25.2 |
| **Total** | | | | | | |
| From public stockyards | 56.9 | 60.7 | 61.2 | 59.8 | 57.8 | 59.1 |
| Direct from states | 43.1 | 39.3 | 38.8 | 40.2 | 42.2 | 40.9 |

are resold while still unfinished and are bought by other feeders for further fattening and finishing.

## Volume of Cattle Received

During the five-year period 1936-40, an average of 171,848 head of cattle (including calves) was received annually in Minnesota from all public stockyards and direct from other states (table 1). Of these, about 88 per cent were classed as feeders (including stockers) to be placed in pastures and feedlots for further growth and fattening and subsequently sold for slaughter. The remaining 12 per cent of the total were classed as dairy and breeding animals to be used to restock beef and dairy herds.

The number of feeder cattle received annually declined from 148,792 head in 1936 to 124,172 head in 1938, and then increased sharply to 192,514 head in 1940 (figure 1). The number of dairy and breeding animals received changed correspondingly except that there was a decrease instead of an increase in 1940 compared with 1939. The number of cattle brought into the state in any one year is influenced by the available feed supply and by the prospective profits in feeding cattle.

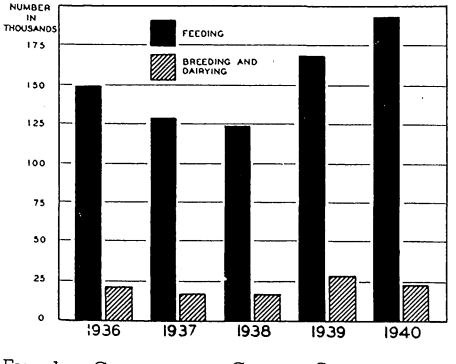


FIG. 1. CATTLE AND CALVES SHIPPED INTO MINNESOTA FOR FEEDING AND FOR BREEDING AND DAIRYING, 1936-40

## Proportions Bought at Public Stockyards and Direct

As an average for the five-year period, 57.1 per cent of the feeder cattle received in Minnesota were obtained at public stockyards and 42.9 per cent direct from other states (figure 2). The proportions received from public stock-

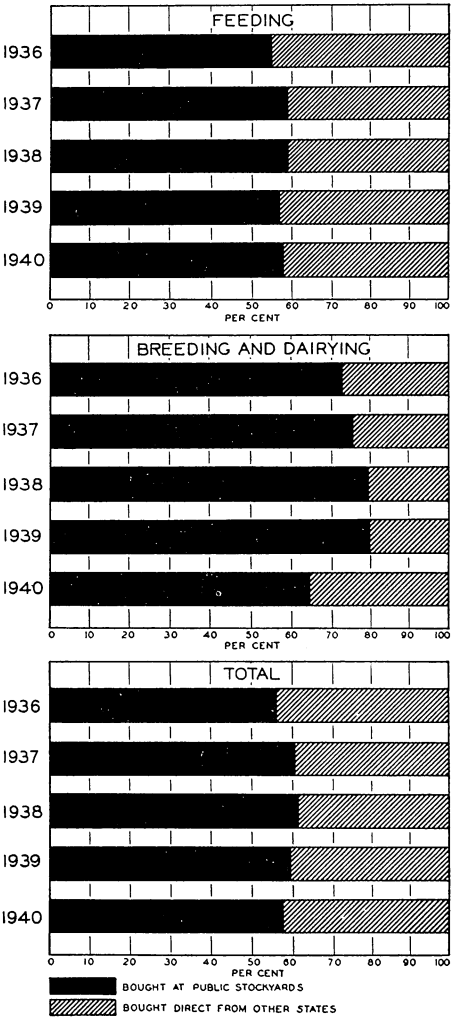


FIG. 2. PROPORTION OF CATTLE AND CALVES SHIPPED INTO MINNESOTA FOR FEEDING AND FOR BREEDING AND DAIRYING, FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, 1936-40

yards and direct from states each year did not vary greatly during this period, the smallest proportion received from public stockyards being 54.6 per cent in 1936 and the highest 58.8 per cent in each of the years 1937 and 1938. The proportion of feeder cattle bought direct by farmers in the state is larger than these percentages indicate because no account is taken here of the animals produced in the state that were obtained from other farmers, from dealers, or at auctions. In the case of cattle received from public stockyards the receipts from the South St. Paul and West Fargo markets are included and these comprise animals originating in Minnesota as well as in other states. Although reliable information on the proportion of feeder cattle received in the state direct is not available before 1936, indications are that it is higher now than 10 or 15 years ago. Direct movement of feeder cattle and sheep into other Corn Belt states also has increased in the last 15 years.

## Rank of Stockyards

As shown in figure 3, nearly 69 per cent of all feeder cattle shipped into Minnesota from public stockyards during the five-year period 1936-40 were bought at South St. Paul. West Fargo ranked second, supplying 11 per cent, Sioux Falls third, and Sioux City fourth. Receipts from all other public stockyards amounted to only about 5 per cent of the total receipts from all public stockyards.

South St. Paul is a significant market for feeder cattle, considerable numbers of which come from the range states. Because this is the only public stockyard in the state and it is well established, it is patronized extensively by farmers in Minnesota who buy feeder cattle at public stockyards. Purchases of feeder cattle by Minnesota farmers at West Fargo, Sioux Falls, and Sioux City tend to be largely by those living relatively near these markets.

Over 91 per cent of all breeding and dairy cattle received in Minnesota from all public stockyards during this period came from South St. Paul. Presumably a large proportion of these animals were consigned to that market from Minnesota. West Fargo supplied about 7 per cent of the dairy and breeding cattle bought at public stockyards and all other public stockyards combined supplied less than 2 per cent.

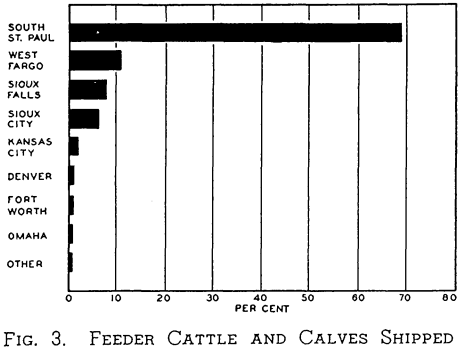


FIG. 3. FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA FROM INDIVIDUAL PUBLIC STOCKYARDS, EXPRESSED AS PERCENTAGES OF TOTAL INSHIPMENTS FROM ALL PUBLIC STOCKYARDS, FIVE-YEAR AVERAGE, 1936-40

## Rank of States

South Dakota ranked first among the states from which feeder cattle were received direct in Minnesota during the period 1936-40. More than 44 per cent of all feeder cattle bought direct came from that state (figure 4). Montana ranked second with 27 per cent, North Dakota third with 11 per cent, and Nebraska fourth with 8 per cent. All other states combined supplied 10 per cent. Most of these cattle came from the range areas in these states. A large proportion of cattle from these ranges are unfinished and move into states

farther east for further grazing and feeding. Some, however, are bought by slaughterers.

Feeder cattle received direct in Minnesota are handled in several different ways. Some cattle feeders go to the range to make their own selection, or if they have previously made satisfactory contacts with ranchers, may place their orders with them without examining the animals. Independent livestock dealers and cooperative commission agencies located at public stockyards handle some feeder livestock direct, that is, without clearing it through public stockyards. These individuals and agencies may select the cattle on the range, move them into the state, and resell to farmers and feeders; or, they may obtain orders to buy the animals for farmers and feeders before the selection is made. Some feeder cattle are cleared through livestock auctions, being consigned there by the owners, by independent dealers, or by auction operators, and are bought by farmers and feeders.

Breeding and dairy cattle were shipped direct into Minnesota from 36 different states. However, 88 per cent of the total was supplied by the four adjoining states. South Dakota led with 35 per cent. North Dakota ranked second with 21 per cent, Iowa third with more than 16 per cent, and Wisconsin fourth with slightly less than 16 per cent.

## Seasonal Distribution

The movement of feeder cattle into Minnesota is heavily concentrated in the late summer and early fall months. As shown in the lower part of figure 5, the peak of receipts, averaged for the five years 1936-40, was reached during September and October. Over 21 per cent arrived in September and 24 per cent in October, or 45 per cent of the total during these months. Approximately 77 per cent were purchased during the five-month period from July to November and only 23 per cent during the remaining seven months. Receipts were lightest January and February.

The seasonality of the direct movement of feeder cattle (and calves) is much greater than the seasonality of the movement from public stockyards. Over half of the direct movement of feeder cattle occurred during September and October compared with 39 per cent of the public stockyards movement. Approximately 86 per cent of the direct shipments were brought in during the five months from July to November, while 71 per cent of the public stockyards shipments were made during this period. The proportion of direct shipments received during the remaining seven months was about half that of public stockyards shipments during the same period.

The season of heaviest marketings of feeder cattle may vary somewhat from one year to the next. This is influenced by grazing conditions on the range and by pasture and forage conditions in the feeding states. It is also influenced by

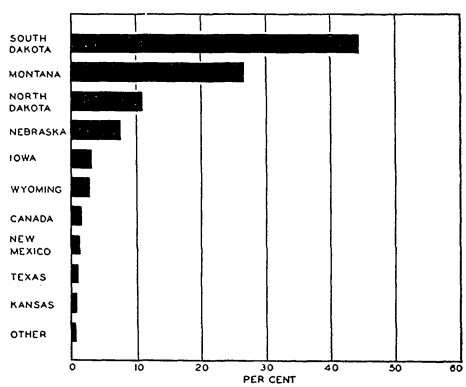


FIG. 4. FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA FROM INDIVIDUAL STATES, EXPRESSED AS PERCENTAGES OF TOTAL DIRECT SHIPMENTS FROM ALL STATES, FIVE-YEAR AVERAGE, 1936-40

the indicated profitableness of feeding. If feeding margins appear narrow, the buyer may delay purchasing feeders in the hope that their prices will decline. If feeding margins are wide, the seller, if his feed situation is satisfactory, may delay selling in hope of better demand for feeder animals.

The operating practices of both feeders in the Corn Belt and producers of range cattle are such as to favor relatively large marketings of feeder cattle in the late summer and early fall.

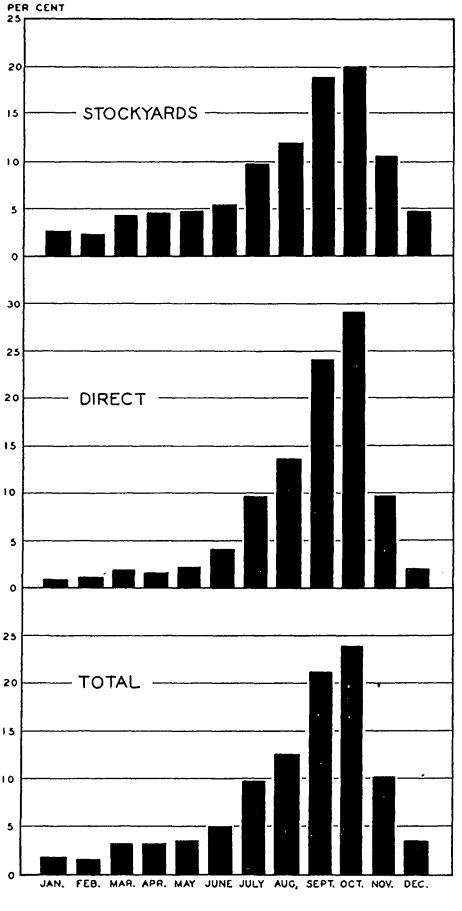


FIG. 5. SEASONAL DISTRIBUTION OF FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, FIVE-YEAR AVERAGE, 1936-40

Feeders generally buy at that time because they are then practically assured of the quantity of corn and other feeds they will have for feeding. Rains are common in the fall, and this results in better grazing than during the hot summer months. Fields from which hay and grain crops have been harvested are available on many farms and they often have no value except when used for grazing. Cattle are often turned into corn fields after the corn is picked, thereby salvaging much feed that otherwise would be wasted.

The feeding of cattle is most common during the late fall and winter when the temperature is more favorable and when the fly season is over. Farmers also have more time then to attend to feeding than they have during the spring and summer when crops are being produced. By placing the cattle on feed in the fall when grass is plentiful they will have an opportunity to become acclimated before being placed on a more concentrated ration.

The most logical time to sell feeder cattle from the range is also the fall. Hay and grass for winter feeding on ranges are usually limited and shelter often inadequate. As a result, the animals are usually in better condition in the fall than in the winter or spring. Then, too, as feeders find it desirable to buy their animals in the fall, this market is naturally taken advantage of by the sellers. Some of the cattle marketed from ranges go for immediate slaughter and they are generally disposed of in the fall when they are in relatively good condition.

The seasonal distribution of receipts of breeding and dairy cattle differed greatly from the seasonal distribution of feeder cattle and calves. As shown in the lower part of figure 6, there was considerably less variation in the shipments of breeding and dairy cattle

throughout the year than of feeder animals (figure 5). While the seasonal peak occurred in September and October in both cases, the proportion of breeding and dairy cattle received during those months was much less than the proportion of feeder cattle. The proportion received each month from December to June was greater in the case of breeding and dairy animals. With the exception of January, when receipts declined sharply, and the September-October peak, shipments of breeding and dairy cattle were fairly constant from month to month.

Direct receipts of breeding and dairy cattle were more uniform throughout the year than were those of feeder cattle. However, the receipts were relatively large during two periods of the year—the late summer and early fall, and again in the late winter. The late winter peak appears to be largely due to the movement of dairy cows and heifers prior to freshening in the spring rather than to the movement of beef cows and heifers for breeding purposes. But the late summer and early fall peak probably reflects the increased purchases both of beef cows and heifers for breeding and of dairy cows and heifers for fall freshening.

## Geographical Distribution

The distribution by counties of feeder cattle received in Minnesota during the four-year period 1936-39 is shown in figure 7. This comprises receipts both from public stockyards and direct from other states. As pointed out earlier, this is a four-year period instead of a five-year on which the preceding analysis was based. All of the feeder cattle are credited to the counties in which the post offices or shipping points of the consignees are located, as shown on health certificates and permits in the office of the Live Stock Sanitary Board. But these may not be the counties in which the animals were fed. The address or shipping point of a farmer receiving the cattle is sometimes in a county adjacent to the one in which he lives. In many cases, the cattle were received by local dealers, cooperative commission agencies distributing feeders, or at livestock auctions, and the animals were subsequently sold to farmers in other counties.

Feeder cattle were received in greatest numbers in southwestern Minnesota, particularly from Martin and Faribault counties north and west through Watonwan, Renville, Redwood, Lyon, and Chippewa counties. These counties are all located in the heart of the beef cattle and hog feeding areas where an abundance of corn is available for fattening. The relatively small number of feeders shipped into the extreme southwestern counties is due in part to the fact that this is more of a cash grain area than in the counties

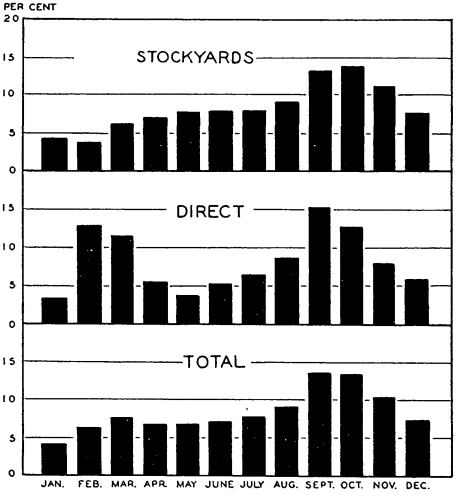


FIG. 6. SEASONAL DISTRIBUTION OF BREEDING AND DAIRY CATTLE AND CALVES SHIPPED INTO MINNESOTA FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, FIVE-YEAR AVERAGE, 1936-40

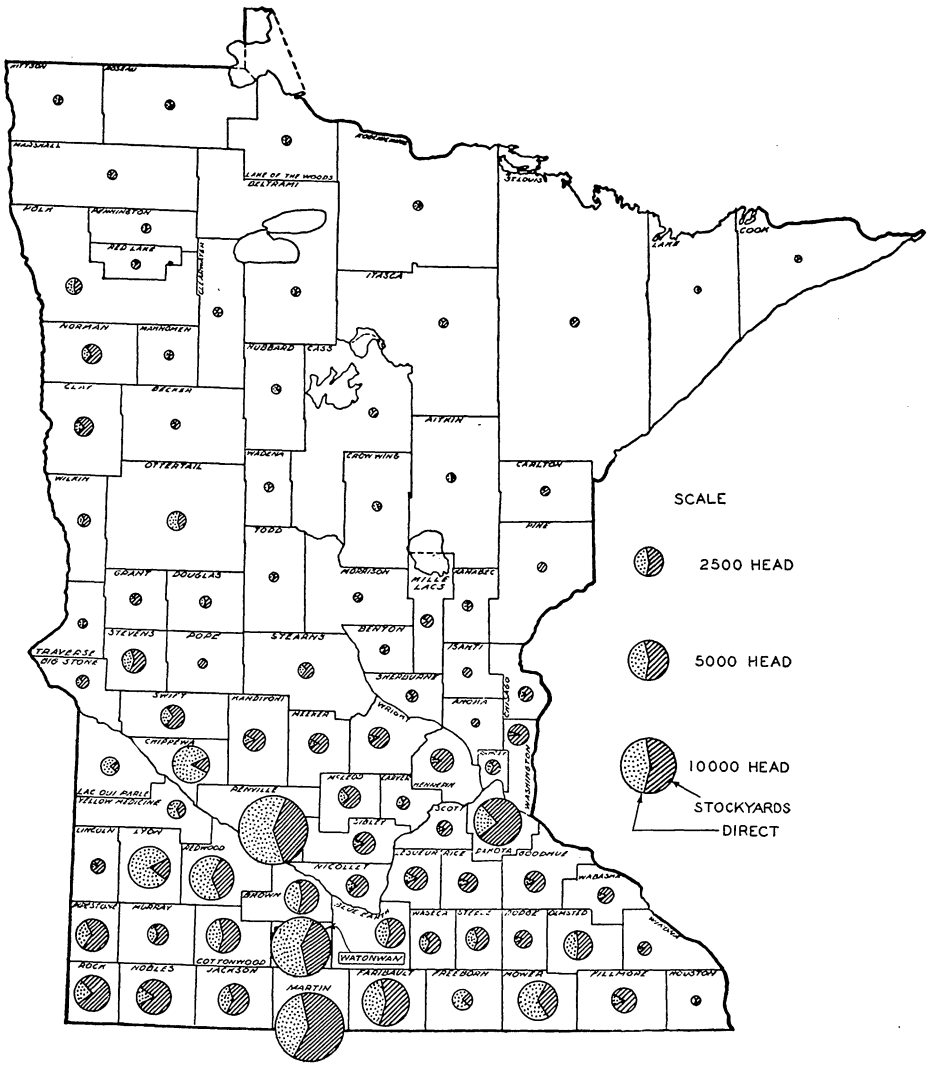


FIG. 7. DISTRIBUTION OF FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, BY COUNTIES, FOUR-YEAR AVERAGE, 1936-39

lying to the east and north. It also is probable that more beef breeding herds are to be found in this area than in the counties to the east and north, so that a higher proportion of the cattle that are fed is raised in the area. Drouth in the western part of the state tended to reduce feeding operations during the early part of this period.

The type of farming in the region lying to the east and north of the most concentrated beef cattle feeding area gradually changes from a predominance of beef cattle and hogs to the dairy and hog enterprises. In the extreme southeastern counties less corn is produced than in the south central and southwestern parts of the state.

Other significant but rather limited cattle feeding areas include Mower and Dakota counties in the southeastern part of the state. The relatively large number of cattle fed in Mower County is due in part to the influence of a nearby packing plant. Farms in this county also are somewhat larger with a higher proportion of tillable land, which results in a greater output of concentrate feeds per worker and so gives beef production some advantage over dairying as compared with surrounding counties. Feeding operations in Dakota County are a result of nearness to the South St. Paul public stockyards.

Figure 7 also shows the proportion of the shipments of feeder cattle into each county that was obtained at public stockyards and the proportion obtained direct from other states. In general, direct shipments constituted a larger proportion of the total than the public stockyards shipments in the areas in which the largest number of feeders were bought. Direct shipments were especially important in Chippewa, Lyon, Renville, Redwood, Watonwan, and Mower counties, and accounted for nearly half of the total in Martin, Faribault, and Brown counties. Public stockyards shipments comprised the major proportion in the area surrounding and to the north and west of the South St. Paul public stockyards, in counties in the southwestern part of the state near the Sioux Falls and Sioux City public stockyards, and in west central counties adjacent to West Fargo.

## Proportions Handled by Dealers and Farmers

Local livestock dealers play a significant part in the distribution of feeder cattle in Minnesota. As shown in table 2, nearly 43 per cent of all feeder cattle purchased at public stockyards and direct from other states during 1936-39 were handled by livestock dealers. But a marked difference was found in the proportion purchased by dealers at public stockyards and the proportion purchased by them direct from other states.

Available records do not indicate whether the individuals who bring cattle into the state are dealers or feeders. However, it is believed that the methods employed in arriving at a division between the two give reasonably accurate results. Dealers who handle slaughter cattle are required to be licensed, and cattle brought in by them were classed as brought in by dealers. A list of others who received 100 or more head of cattle during any of the four years was prepared. This was checked by fieldmen of the State Live Stock Sanitary Board who were acquainted with most of the dealers and larger feeders in the state, and the individuals were classed as farmers or

**Table 2. Proportion of Feeder Cattle and Calves Shipped into Minnesota from Public Stockyards and Direct from States, by Farmers and Dealers, 1936-39**

| Year | From public stockyards | | Direct from states | | Total | | |
|---|---|---|---|---|---|---|---|
| | By farmers | By dealers | By farmers | By dealers | By farmers | By dealers | Total |
| | | | | Per Cent | | | |
| 1936 | 42.7 | 11.9 | 16.7 | 28.7 | 59.4 | 40.6 | 100.0 |
| 1937 | 41.2 | 17.6 | 16.8 | 24.4 | 58.0 | 42.0 | 100.0 |
| 1938 | 42.9 | 15.9 | 10.7 | 30.5 | 53.6 | 46.4 | 100.0 |
| 1939 | 42.1 | 14.4 | 15.2 | 28.3 | 57.3 | 42.7 | 100.0 |
| Average 1936-39 | 42.4 | 14.8 | 14.8 | 28.0 | 57.2 | 42.8 | 100.0 |

dealers. Several dealers probably brought in less than 100 head and may have been classed as farmers, but this was offset, in part at least, by the fact that some of the dealers also fed some of the livestock they bought. According to this classification, there were approximately 230 Minnesota dealers in feeder cattle in the four-year period.

As an average for the four-year period, livestock dealers handled only one fourth of all feeder cattle bought at public stockyards (figure 8). In such cases, the usual procedure is for the dealers to make their own selections and consign the animals in their own names to country points where they are sold to farmers either by private treaty or at public auctions. Most of the feeder cattle obtained at public stockyards are bought by individual farmers through commission men who serve as the farmers' agents. The animals are then shipped in the name of the farmer purchasers, either by rail to their nearest shipping points or by trucks to their respective farms.

On the other hand, livestock dealers handled nearly two thirds of all feeder cattle purchased direct from other states. Many farmers who obtain their supplies direct feel that they lack the time, information, or experience necessary to buy their feeder animals from distant producers. They prefer to make their selections from animals shipped in by dealers who offer them for sale at private treaty or at local community livestock auctions.

A larger proportion of the direct shipments originating from the four states bordering Minnesota and from Canada was brought in by farmers than that of shipments originating from more distant states (figure 9). About 40 per cent of the direct movement of cattle from North Dakota, South Dakota, Iowa, Wisconsin, and Canada were shipped by farmers, whereas they received only 28 per cent of the direct movement from the more distant states.

Livestock dealers were especially important in the most concentrated cattle feeding areas. These were the areas in which large proportions of the animals were obtained direct from other states (figure 7). As shown in figure 10, over three fourths of all the feeder cattle received in Watonwan County from public stockyards and direct from other states during the four-year period were shipped in by livestock dealers. The dealer group handled about three fourths of the total in Martin, Lyon, and Chippewa counties and more than half of the inshipments in Renville, Redwood, Cottonwood, Mower, and Dakota counties.

## Classification of Feeder Cattle

In most cases the health certificates indicated whether the feeder cattle were steers, heifers, cows, or bulls. Only

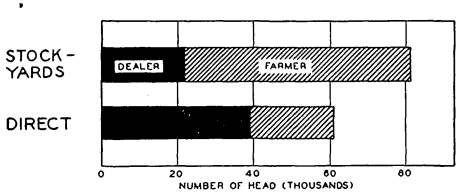


FIG. 8. FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA BY DEALERS AND FARMERS FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, FOUR-YEAR AVERAGE, 1936-39

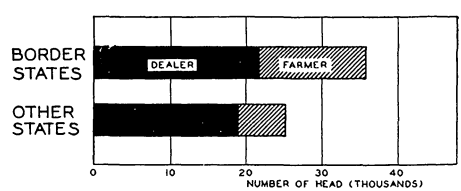


FIG. 9. FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA FROM BORDERING STATES AND FROM OTHER STATES BY DEALERS AND FARMERS, FOUR-YEAR AVERAGE, 1936-39

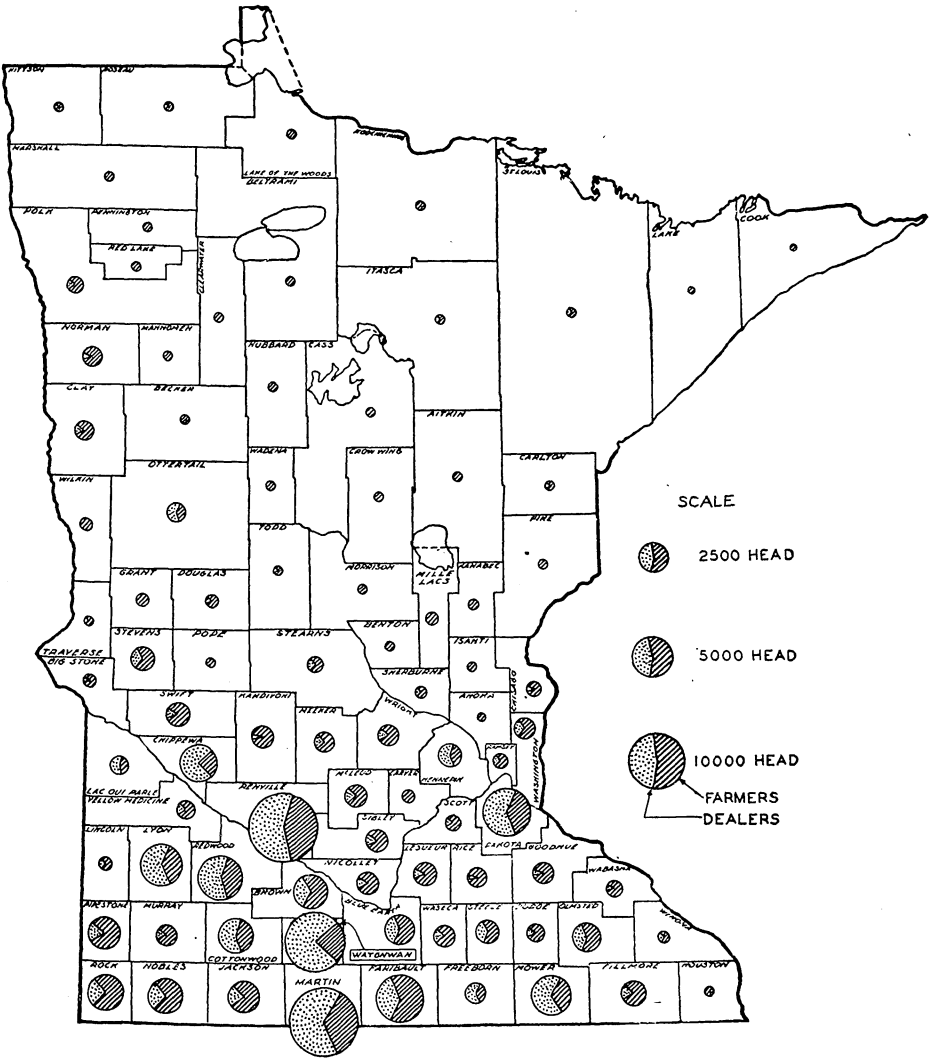


FIG. 10. DISTRIBUTION OF FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA BY DEALERS AND FARMERS, FOUR-YEAR AVERAGE, 1936-39

2 per cent of the animals bought at public stockyards were listed merely as cattle on the records of the State Live Stock Sanitary Board compared with 30 per cent of those purchased direct from other states.

Steers accounted for 73 per cent of the classified feeder cattle bought at public stockyards during the four-year period, 1936-39, heifers 20 per cent, cows 7 per cent, and bulls 0.4 per cent, compared with steers 70 per cent, heifers 18 per cent, cows 11 per cent, and bulls 0.6 per cent among the classified animals purchased direct (figure 11). Thus, steers and heifers comprised

**Table 3. Shipments of Feeder Cattle and Calves into Minnesota in Relation to Total Marketings of All Cattle, Exclusive of Veal Calves, by Minnesota Farmers, 1936-40**

| Year | Inshipments | Marketings | Percentage |
|---|---|---|---|
| | Number | Number | Per Cent |
| 1936 | 148,792 | 846,703 | 17.8 |
| 1937 | 127,640 | 741,711 | 17.2 |
| 1938 | 124,172 | 864,487 | 14.4 |
| 1939 | 165,715 | 831,059 | 19.9 |
| 1940 | 192,514 | 875,167 | 21.5 |
| Average | 151,766 | 831,825 | 18.2 |

a slightly higher proportion of the total among animals bought at public stockyards while cows and bulls were relatively more numerous in the direct shipments.

## Relationship Between Inshipments and Marketings of Cattle

On the average, 18.2 per cent as many cattle (and calves) were brought into Minnesota for feeding and grazing as the total number of cattle marketed from the state during the five-year period 1936-40 (table 3). These marketings include all cattle, exclusive of calves, sold at public stockyards and direct to packers. Animals sold to other farmers in the state either directly or through auctions or dealers are not included. The cattle marketed included those bought for slaughter and those sold at public stockyards that went back to farms for feeding, dairy, or breeding purposes. During this period, the inshipments of feeder cattle in relation to marketings were lowest in 1938 when they comprised 14.4 per cent, and were highest in 1940—21.5 per cent.

To compare the inshipments of feeder cattle in any one year with the total marketings during the same year is not altogether satisfactory. Most of the feeder cattle bought one year are not marketed until the next. Nevertheless, by comparing inshipments with marketings over a period of several years it is possible to determine what this relationship normally is.

The inshipments of feeder cattle have a definite seasonal pattern (figure 12). The largest number of animals are usually brought into the state in October, and receipts are also large in September (figure 5). In 1936, the receipts were larger in September than in October. Marketings, however, are less regular. The yearly peak during this period, except for 1936, was most commonly in March, the marketings in April being next in importance. But in 1940 marketings in April were larger than in March. The relatively large marketings in the fall of 1936 were the result of a severe drouth which caused a shortage of feed in much of the state.

The length of feeding period for feeder cattle received in Minnesota varies considerably. Some cattle which are in good condition when received are fed only 60 or 90 days. Young, thin cattle may be grazed for a year or more

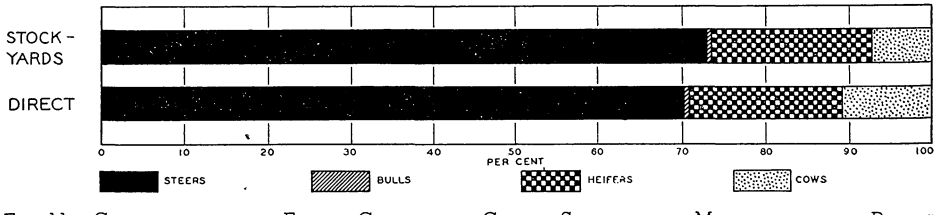


FIG. 11. CLASSIFICATION OF FEEDER CATTLE AND CALVES SHIPPED INTO MINNESOTA FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, FOUR-YEAR AVERAGE, 1936-39

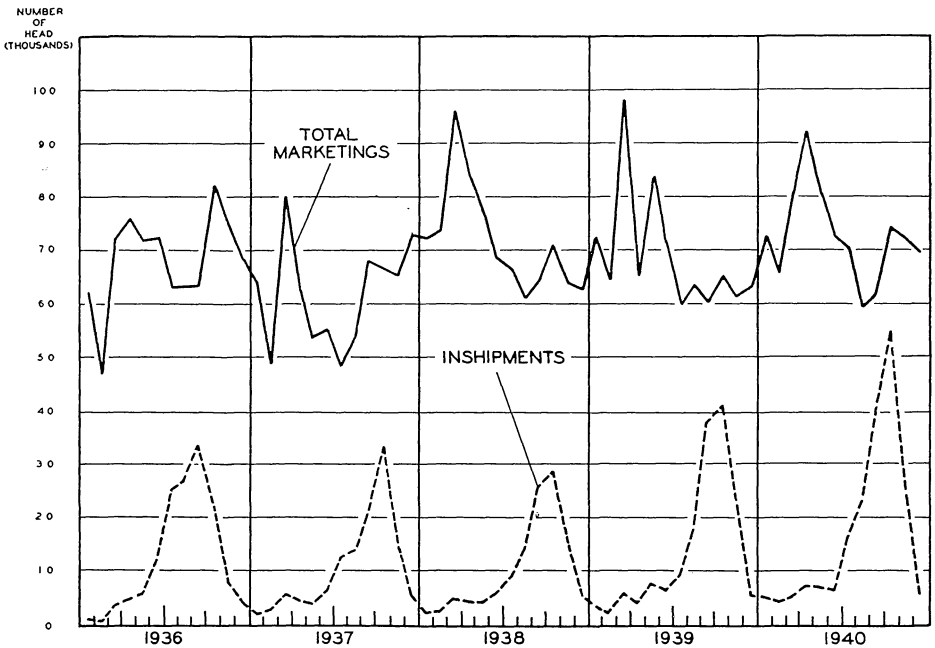


FIG. 12. SHIPMENTS OF FEEDER CATTLE AND CALVES INTO MINNESOTA IN RELATION TO TOTAL MARKETINGS BY MINNESOTA FARMERS, BY MONTHS, 1936-40

after which they are fed grain for a period of several months before they are marketed. The average period may be assumed to be indicated by the time elapsing between the peak of inshipments and the peak of marketings. The lag between these peaks during the period for which data are presented was six or seven months.

Although a fairly definite relationship exists between the seasonal peak of inshipments of feeder cattle and the seasonal peak of marketings of all cattle, the number of feeder cattle received in the late summer and fall of one year does not bear a close relationship to the total number of animals marketed the following spring. As the receipts of feeders are only about one fifth as large as total marketings, the lack of relationship may be largely due to the marketing of the other four fifths of the cattle—those produced in the state. To compare the inshipment of feeders with the marketing of the same animals is not possible because such marketings cannot be segregated in the records.

# Sheep

SHIPMENTS of sheep into Minnesota were not tabulated in exactly the same manner as for feeder cattle. In tabulating data on cattle, those brought in for breeding and dairy were listed separately from those brought in for feeding and grazing. With sheep, the records did not permit a satisfactory segregation; thus the total number shipped in is shown. On the original certificates, sheep were listed separately from lambs, but to use this as a basis for segregating breeding from feeding animals is not satisfactory. Some of the lambs received were presumably retained on farms for breeding purposes, and some of the sheep were grazed or fed for the slaughter market. It was also apparent that on some of the original certificates lambs were recorded as sheep. The number of sheep received in the state for breeding, however, is relatively small, so the total shown may be assumed to indicate the inshipment of feeder animals.

An average of 450,464 head of sheep (mostly lambs) was received in Minnesota during the five-year period 1936-40 (table 4). This number is about three times as large as the number of cattle (and calves) received. However, a comparison based on number of head is somewhat misleading because of the difference in the size and weight of cattle and sheep. In terms of carlots, cattle receipts during this period were more than twice the receipts of sheep.

The number of sheep received in the state each year varied considerably more than the number of feeder cattle although the general trend in the numbers received was much the same for the two species. Sheep receipts declined sharply from 608,473 head in 1936 to 337,782 head in 1938, and then increased to 525,898 head in 1940 (figure 13).

## Proportions Bought at Stockyards and Direct

A much larger proportion of the sheep was purchased direct and a smaller proportion at public stockyards than was the case with feeder cattle. Approximately 67 per cent of the sheep were obtained direct for the five-year period, compared with 43 per cent of the feeder cattle (table 4 and figure 14). The proportion purchased direct varied from 51 per cent in 1938 to 76 per cent in 1940. The same as with cattle, the proportion received direct by farmers in the state was actually somewhat higher than is indicated by these figures. The direct movement from one farmer to another in the state is not accounted for, while the movement from Minnesota farms through public

**Table 4. Sheep and Lambs Shipped into Minnesota from Public Stockyards and Direct from States, Classified by Source, 1936-40**

| Source | 1936 | 1937 | 1938 | 1939 | 1940 | Average |
|---|---|---|---|---|---|---|
| | | | Number | | | |
| From public stockyards | 161,532 | 145,597 | 164,181 | 151,219 | 128,291 | 150,164 |
| Direct from states | 446,941 | 213,165 | 173,601 | 270,185 | 397,607 | 300,300 |
| Total | 608,473 | 358,762 | 337,782 | 421,404 | 525,898 | 450,464 |
| | | | Percentage | | | |
| From public stockyards | 26.5 | 40.6 | 48.6 | 35.9 | 24.4 | 33.3 |
| Direct from states | 73.5 | 59.4 | 51.4 | 64.1 | 75.6 | 66.7 |

stockyards to other farms in the state is included. Indications are that a larger proportion of the sheep brought into Minnesota for feeding is bought direct today than a decade ago.

The number of sheep bought at public stockyards by Minnesota farmers and feeders was less variable from year to year during this period than the number purchased direct from states. The relatively large receipts in 1936 were largely due to the drouth on the western ranges which supplied most of the inshipments of sheep.

Sheep are bought direct in much the same way as are cattle (pages 8 and 9). However, sheep appear to be handled by fewer dealers than are cattle, and the number handled by some of the dealers is large. Livestock auctions in the state are not used for distributing sheep to as great an extent as they are used for distributing feeder cattle.

## Rank of Stockyards

The public stockyards at which Minnesota farmers obtain sheep for feeding receive their supplies largely from western ranges. South St. Paul supplied 61 per cent of all sheep (and lambs) received in the state from public stockyards during the five-year period (figure 15). The Ogden public stockyards ranked second with 9 per cent, West Fargo third with 8 per cent, and Denver fourth with 7 per cent. Sioux City, Sioux Falls, and Omaha each supplied between 3 and 5 per cent of the total purchased at public stockyards. Seven other public stockyards combined supplied only 2 per cent.

## Rank of States

As most of the sheep fed in Minnesota came from western ranges, the states from which the sheep were ob-

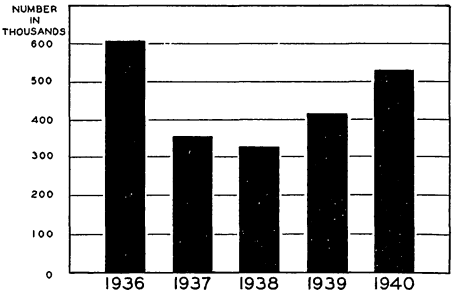


FIG. 13. SHEEP AND LAMBS SHIPPED INTO MINNESOTA FOR FEEDING AND BREEDING, 1936-40

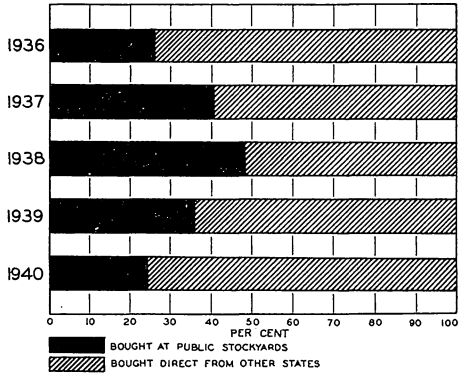


FIG. 14. PROPORTION OF SHEEP AND LAMBS SHIPPED INTO MINNESOTA FOR FEEDING AND BREEDING FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, 1936-40

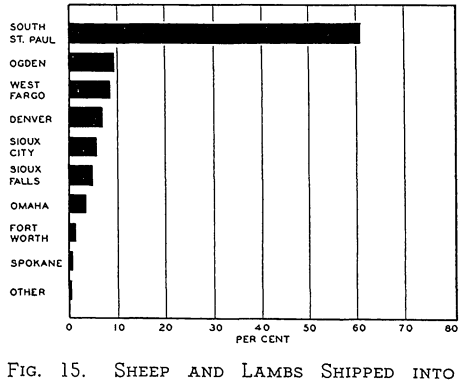


FIG. 15. SHEEP AND LAMBS SHIPPED INTO MINNESOTA FROM INDIVIDUAL PUBLIC STOCKYARDS, EXPRESSED AS PERCENTAGES OF TOTAL INSHIPMENTS FROM ALL PUBLIC STOCKYARDS, FIVE-YEAR AVERAGE, 1936-40

tained direct were naturally the range states. Among these states, Montana ranked first, supplying 50 per cent of all sheep received direct from other states during 1936-40. South Dakota ranked second with 17 per cent and Wyoming third with 9 per cent. From 3 to 6 per cent of the total came from each of the states, Idaho, Oregon, Texas, and North Dakota. Twelve other states furnished the remaining 7 per cent (figure 16).

## Seasonal Distribution

Receipts of sheep are more heavily concentrated in the late summer and early fall months than are receipts of feeder cattle. As shown in the lower part of figure 17, about 79 per cent of the total movement of sheep into Minnesota occurred during August, September, and October. Nearly 36 per cent were brought in during September alone. The movement declined sharply during November and December and remained relatively small from January to June. Only 7 per cent of all shipments were made the first six months.

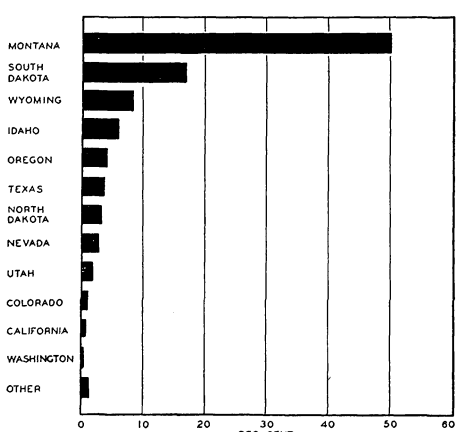


FIG. 16. SHEEP AND LAMBS SHIPPED INTO MINNESOTA FROM INDIVIDUAL STATES, EXPRESSED AS PERCENTAGES OF TOTAL DIRECT SHIPMENTS FROM ALL STATES, FIVE-YEAR AVERAGE, 1936-40

The seasonal variation in receipts of sheep is greater for purchases made direct than for those made at public stockyards. Of the total number bought direct, 87 per cent were obtained during three months, August, September, and October. Over 41 per cent of the total direct movement took place during September. Only 3 per cent of the sheep bought direct were obtained during the first six months of the year.

Of the sheep received in Minnesota from public stockyards, 63 per cent were obtained during August, September, and October. The largest receipts were in September when 25 per cent of the total was received. The movement from public stockyards is characterized by a more gradual decline during the late fall and a relatively larger movement during the first half of the year than was the case with direct receipts. Over 15 per cent of the sheep obtained from public stockyards were received during the first six months of the year.

## Geographical Distribution

The average yearly distribution by counties in Minnesota of sheep bought at public stockyards and direct from other states during the four-year period 1936-39 is shown in figure 18. Although this distribution is based on only a four-year average, the distribution is probably not greatly different than if a five-year average had been used. As explained in the discussion of the distribution of feeder cattle, it does not necessarily follow that all of the animals were retained and fed in the counties into which they were shipped. In some cases they were shipped in by livestock dealers or were distributed through auctions and were sold to farmers living in adjacent or nearby counties. In the case of feeder cattle, the proportion brought in by dealers as

compared with that brought in by farmers and feeders was determined (page 13). These proportions have not been determined for the sheep received in the state.

Sheep are usually fed in larger lots than cattle. Feeding tends to be concentrated in areas where the feed supply is plentiful. Some feeding also takes place near public stockyards or near slaughtering plants at which the sheep may conveniently be marketed.

The largest numbers of sheep were shipped into Pipestone County in the southwestern part of the state. More than four and a half times as many animals were received in that county as in any other county in the state. Sheep received in Pipestone County are distributed over a number of counties in southwestern Minnesota with quite a few going into nearby Iowa counties. During this period Polk County in the Red River Valley ranked second in importance. Attention should be called to the fact that the importance of Polk County is primarily accounted for by the heavy receipts in 1936. In that year 78,000 head of sheep were received, whereas in each of the other three years the receipts were only about 4,000 head. Other leading feeding counties were Watonwan, Nobles, and Mower. Large numbers also were received in Clay, Murray, Dakota, Hennepin, Renville, Lyon, Swift, Jackson, Faribault, and Martin counties. Sheep feeding is extensive in many of the counties in southwestern Minnesota. Feeding in Dakota and Hennepin counties is influenced by the South St. Paul market and in Mower and Clay by local packing plants.

The relative importance of the receipts of sheep from public stockyards and direct from states in each county also is shown in figure 18. In Dakota and Hennepin counties, located near the South St. Paul market, the receipts from public stockyards were relatively large. In all of the other main feeding counties in the state, except Nobles, the movement direct from other states was larger than the movement from public stockyards. The proportion shipped into Polk County from public stockyards was relatively insignificant. More than three fourths of the total receipts in Renville and Swift counties and approximately three fourths of the

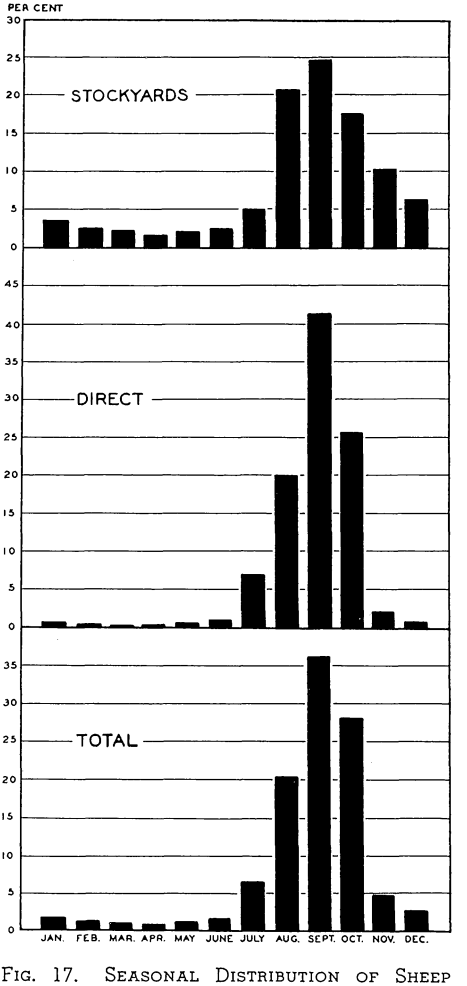


FIG. 17. SEASONAL DISTRIBUTION OF SHEEP AND LAMBS SHIPPED INTO MINNESOTA FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, FIVE-YEAR AVERAGE, 1936-40

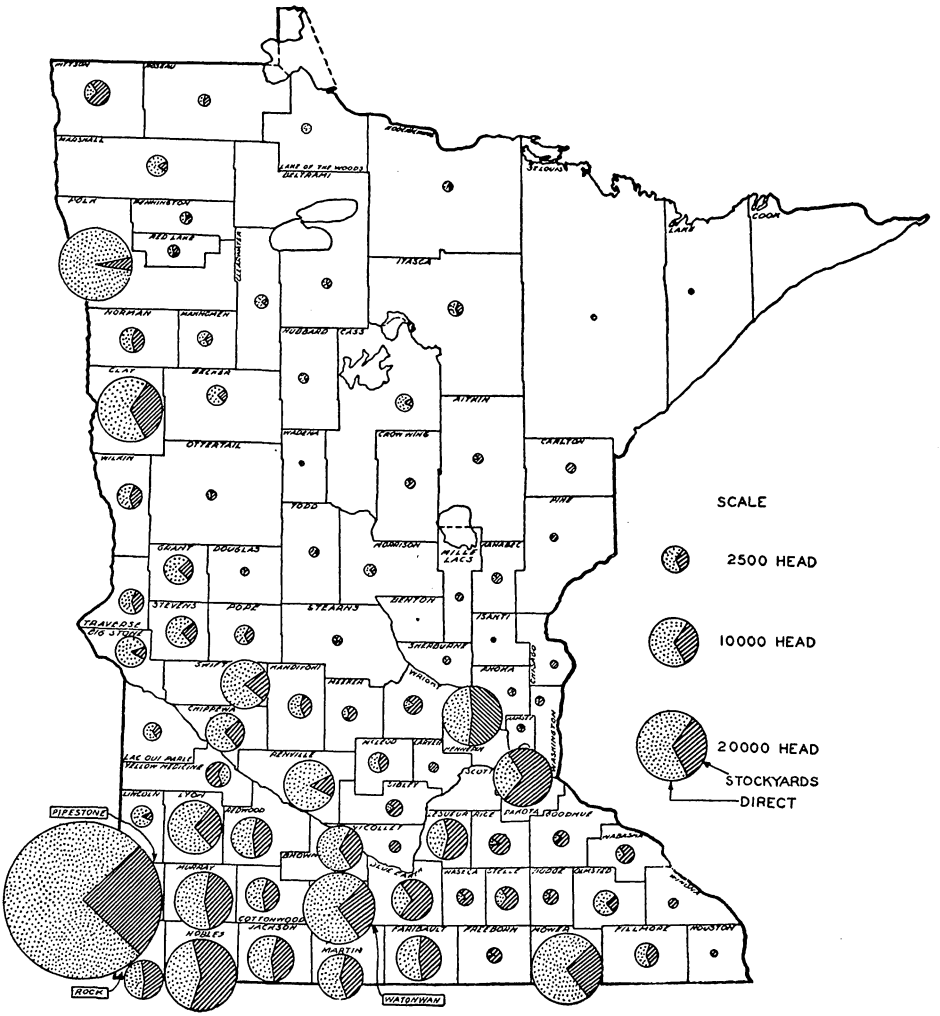


FIG. 18. DISTRIBUTION OF SHEEP AND LAMBS SHIPPED INTO MINNESOTA FROM PUBLIC STOCKYARDS AND DIRECT FROM STATES, BY COUNTIES, FOUR-YEAR AVERAGE, 1936-39

total in Pipestone, Mower, Clay, and Watonwan counties were purchased direct from other states.

## Relationship Between Inshipments and Marketings of Sheep

Of the sheep (and lambs) marketed by Minnesota farmers during the four-year period, June, 1936 to May, 1940, 42 per cent were represented by animals shipped into the state either from public stockyards or direct from other states (table 5). The remaining sheep were produced in the state. The relationship between annual inshipments and marketings varied during this period, ranging from 35 per cent during the marketing year 1937-38 to 52 per cent during the year 1936-37. As might

be expected, the variation in the number of head marketed each year was affected more by the variation in the number of animals shipped in than in the number produced in the state. Sheep marketed, as shown by these records, are composed mostly of animals sold for slaughter, although a few of those sold at South St. Paul and West Fargo were probably returned to Minnesota for feeding and grazing.

The feeding period for sheep is on the average shorter than for cattle. The month of heaviest receipts was September, but receipts were also relatively large in August and October. The month of largest marketings was either October or November. These marketings were largely of locally-raised lambs. Relatively large marketings normally extended from September to January, after which they sharply decreased. The heavy movement of fed western lambs does not usually begin until the end of November and continues to the middle of March. The difference in the seasonality of marketings as compared with inshipments is accounted for by the variation in length of feeding period. Some sheep are fed for 30 or 60 days; others are fed for several months.

**Table 5. Shipments of Sheep into Minnesota in Relation to Total Marketings of All Sheep by Minnesota Farmers, Marketing Years 1936-37 to 1939-40**

| Year Beginning June 1 | Inshipments | Marketings | Percentage |
|---|---|---|---|
| | Number | Number | Per Cent |
| 1936-37 | 621,530 | 1,200,158 | 51.8 |
| 1937-38 | 355,887 | 1,030,623 | 34.5 |
| 1938-39 | 348,847 | 974,451 | 35.8 |
| 1939-40 | 423,622 | 955,136 | 44.4 |
| Average | 437,472 | 1,040,092 | 42.1 |

As the shipment of sheep into Minnesota for feeding represents a significant proportion of the sheep sold for slaughter from the state, the volume of inshipments is useful in estimating subsequent marketings. Even if marketings could be reliably estimated from inshipments to Minnesota, this would not necessarily serve as a basis for estimating the prices that are likely to be paid for sheep in the state. Prices are also affected by marketings elsewhere. If the relationship between inshipments and marketings were determined for all of the states where feeding sheep is significant, current data on inshipments would be much more useful. An analysis of data on inshipments and their relationship to marketings in Minnesota should be useful to producers.

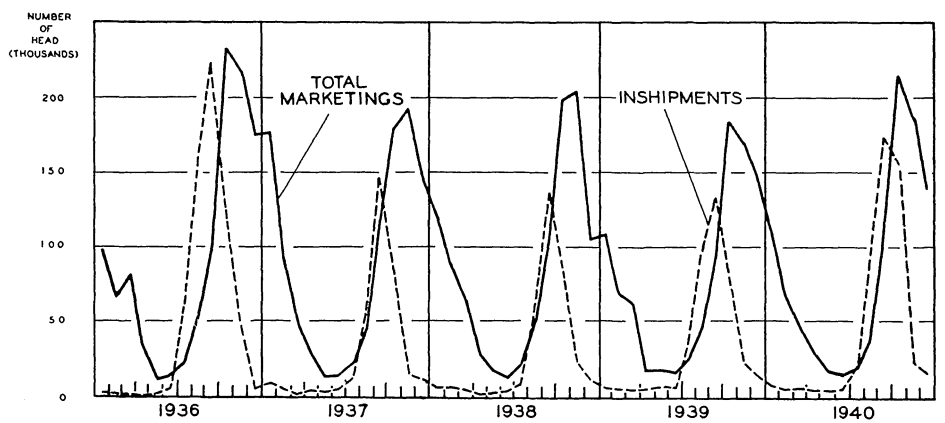


FIG. 19. SHIPMENTS OF SHEEP AND LAMBS INTO MINNESOTA IN RELATION TO TOTAL MARKETINGS BY MINNESOTA FARMERS, BY MONTHS, 1936-40

# Summary

THE CATTLE and sheep marketed for slaughter from Minnesota are not all produced in the state. Part are brought in from other states. Practically all of the calves marketed are raised in the state because the feeder calves shipped in are marketed as "cattle." During the five-year period 1936-40, the inshipments of feeder cattle were about 18 per cent as large as marketings, and of sheep about 42 per cent as large. Most of the feeder animals received are produced on western ranges. The feeder cattle when purchased range in age from calves to two years old and even over. The feeder sheep are mostly lambs from five to seven months old.

Both feeder cattle and sheep are received in Minnesota in largest numbers during the three months August to October, the largest movement of cattle being in October, and of sheep, in September. The movement of feeder cattle, however, extends over a longer season than that of sheep, considerable numbers usually being received both in July and November. The feeding period for cattle is also more variable than that for sheep. The feeder cattle purchased usually are kept anywhere from two to eight months, and some are grazed and fed for a year or longer. Sheep are usually fed for from one to five months, although some are kept longer.

Of the feeder cattle received in the state during 1936-40, 57 per cent were cleared through public stockyards and 43 per cent came direct from other states. The direct movement of sheep was relatively more important than that of cattle, amounting to 67 per cent of the total brought into the state. South St. Paul supplied the largest number of the feeder cattle and sheep obtained at public stockyards. Montana and South Dakota were the two states from which most of the feeder cattle and sheep were received direct, Montana supplying the most sheep and South Dakota the most cattle. Livestock dealers received and distributed 43 per cent of the feeder cattle brought into the state, the other 57 per cent being brought in by farmers and feeders.

Cattle and sheep are fed in largest numbers in the southwestern section of the state, an area where an abundance of corn and forage are available. Some cattle and sheep are fed near the South St. Paul market and some near other large slaughtering establishments.

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