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A STUDY OF THE MARKETING OF FEEDER CATTLE
AND CALVES BY THE FARMERS AND RANCHERS OF
SOUTH DAKOTA, 1947

by

Charles C. Micheel

Bachelor of Science Degree at South Dakota State College, 1946

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A Thesis

Submitted to the Faculty

of

The South Dakota State College

of

Agriculture and Mechanic Arts

June, 1949

In Partial Fulfillment of the Requirements

For the Degree of Master of Science

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This is to certify that, in accordance with the requirements of South Dakota State College for the Master of Science Degree, Mr. Charles C. Micheel has presented to this committee three bound copies of an acceptable thesis, done in the major field; and has satisfactorily passed a two-hour oral examination on the thesis, the major field, Agricultural Economics, and the minor field, History.

June 4, 1949

Date

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CHAPTER I

THE PROBLEM AND ITS SCOPE

Marketing, that is, the buying and selling of the various farm commodities is a problem that is of great interest and importance to all, farmers and non-farmers alike. One of the many problems that confront the farmers and ranchers of South Dakota is that of marketing their feeder cattle ^{1/} at the most advantageous time using the type of market and transportation best suited to their individual circumstances. An indication of the importance of the feeder cattle in the agricultural picture of this state is the fact that about 15% ^{2/} more feeder cattle than slaughter cattle are sold each year. Therefore, as the gross income from the sales of all cattle and calves amounted to 22.5% ^{3/} of the total gross farm income in 1947, it may be positively said that the gross income from the sale of feeder cattle would be equal to and very likely exceed that from the sale of slaughter cattle.

Thus, it is evident that a study which has as its aim the improvement of the marketing practices and the solution of the problems of the feeder cattle market, would be very beneficial to the welfare of the entire state.

OBJECTIVES OF STUDY

This study was undertaken in order to develop the information and analysis which are necessary as a basis for the improvement of the efficiency of the buying and selling of feeder cattle and calves in

^{1/} Feeder cattle are defined as those cattle and calves sold for further feeding before entering the slaughter market.
^{2/} W.P. Cotton, "Livestock Marketing Practices in South Dakota", p 60.
^{3/} South Dakota Crop and Livestock Reporting Service, "South Dakota Agricultural Statistics, 1946 and 1947".

South Dakota. The objectives of this thesis are (1) to determine the practices used by farmers and ranchers in marketing feeder cattle and calves through the various market channels to the feedlots and pastures and the means of transportation, (2) to determine the most advantageous time to sell and to buy various classes of feeder cattle considering both the physical (production and supply) and the market (price) factors, (3) to determine the advantage, if any, accruing to the producers who can sell large lots of feeder cattle and calves in comparison to those who sell in small lots, (4) to determine the price advantage of dehorning and castrating feeder cattle.

DELIMITATIONS OF THE STUDY

Many limitations are necessarily encountered and must be recognized in a general study of this nature. This study is not meant to be complete in itself but rather to open up the field for further research toward a more efficient marketing system for feeder cattle and calves in South Dakota.

One of the first problems encountered is that of securing continuous, reliable, and adequate data. Adequate business statistics are either not available or have not been compiled for public use on a problem of this nature.

The second problem deals with the accuracy of the primary data, which must necessarily be used, as others are not available. Such data had to be secured from the farmers and ranchers themselves. Because many of the farmers and ranchers do not keep detailed accurate records, much of the data obtained are based on the farmer's or rancher's recollection of a transaction or fact that was nearly one year old. 1/

1/ The information was obtained in 1948 on transactions made and practices carried out in 1947.

On an areal basis, it is noted that in area one^{1/}, the west river range area, the large majority, 87%, of the farmers and ranchers, maintained their cattle herd mainly for the production and sale of feeder cattle. At the other extreme is the southeastern section of the state, area seven, in which only 18% indicated that producing feeders for sale was their main cattle enterprise. In this area over one-half (53%) kept cows mainly for milk production. Farmers that produced cattle for slaughter or bought cattle to feed for slaughter made up the remaining 29% of the cattle business in this area.

In all other areas of the state the feeder cattle enterprise was the most important of any of the cattle uses.

On a state basis it is interesting to note the division between the age groups of the feeder cattle sold by the various reporting farmers and ranchers. Yearlings were the most important age group of feeders sold, as they made up 23% of all the different uses that farmers and ranchers reported as their main cattle enterprise. Those that sold feeders mainly as two and three year old cattle made up approximately 17% of the total and those that sold mainly calves constituted 10% of the total. Those farmers and ranchers that stated that the buying of feeder cattle to use up pasture and roughage and then later resell as feeders were relatively few, amounting to only 2.0% of the total.

From the state-total percentage figures (Table I) it is noted that the production and sale of feeder cattle was the main cattle enterprise for 53% while those that kept cattle for dairy purposes constituted about 30% and those that produced beef cattle for slaughter in one manner or another totaled only 18%. ^{2/}

^{2/} Based on the main use of cattle herd or reason for keeping cattle as stated by the farmers and ranchers interviewed.

^{1/} See Fig. 1, p. 17.

The above discussion shows the rather impressive importance of the feeder cattle business in the opinions of the farmers and ranchers interviewed. This is an additional reason or incentive for the study of the marketing problems and practices concerning feeder cattle and calves in South Dakota.

DEFINITIONS OF TERMS USED IN THIS STUDY

In any study which uses terms or words that may have several different meanings in various localities or under different circumstances, it is necessary to define and delimit those terms that may cause misunderstanding and confusion.

Usually several types of marketing agencies are available to farmers desiring to market their livestock. These market agencies vary in the nature of their operations and in different communities they are often known by different names. For this reason an explanation is made to define the various markets as used in this study.

Terminal Public Markets A terminal public market is a stockyards or market owned, maintained and operated by a stockyards company at some central point. Livestock is delivered to be sold and bought on a market that is open to the public. Other common names are: "public stockyards", "terminal markets", "central markets" and "union stockyards".

Auction An auction is an established place of business for the public sale and purchase of livestock consigned by farmers and others. These sales are usually held at more or less regular intervals. The auctions are also known as sale rings, sale barns, community sales, and community auctions.

Dealer A dealer is a private buyer who operates in the country or at his place of business, buying and selling livestock wherever

he can make the best deal.

Order Buyer An order buyer is a private dealer or buyer buying on order for other farmers, ranchers or feeders. 1/

Direct sales or purchases Direct sales or purchases are those transactions that take place between the producers or sellers of feeder cattle and the other farmers, feeders, or ranchers without any middleman operation.

Farm sales Farm Sales are markets where livestock and other possessions of a farmer or a rancher are offered for sale at a public auction. A farm sale differs from an auction or sale barn in that the farm sale is usually held at the home of the seller and the farm sales are not held at regular intervals but only when the owner is contemplating a change in business.

It was found that all farmers and ranchers do not determine the age of cattle in the same manner, for that reason, the various age groups as used in this study are defined as follows:

Calves The age group, "calves" includes all cattle under one year of age.

Yearlings All cattle over one year and up to two years of age were classified as "yearlings".

Two's and over All cattle over two years of age were placed in this group.

Mixed lots by age "Mixed lots by age" included any lot sold or bought that contained calves, yearlings, and/or two's and over.

1/ For much of the analysis in this study the purchases of the dealers and order buyers were combined because of the difficulty in separating the different types of purchases and sales.

The only term used in the sex and class classification that needs any clarification is that of "mixed lots by sex and class". This term, as used in this paper, refers to those lots bought or sold that were made up of steers and heifers together. The lots that were sold or bought containing bulls, calves, and cows were divided and considered as separate lots for each sex, class and age.

Weight classifications in this study are based on the average weight for each individual animal in the lot sold or bought and the range in weight for the lot whenever the weight was known. (i.e. a lot of seven yearling steers might have an average weight of 500 pounds and a range in weight of 500 to 630 pounds.) All lots where the weight was not known or the farmers declined to give the weight were combined under the heading "no weight listed".

The different types of transportation used to transport feeder cattle to and from the various types of markets were designated by these terms; "own trucks", "hired trucks", "buyers trucks", "on foot", "foot and railroad", "own truck and railroad", "hired truck and railroad", and "railroad alone", which are defined as follows:

Own trucks The term "own trucks" was used whenever the cattle sold were transported from the farm or ranch to the market or place of sale entirely by the owner's trucks or trailers.

Hired trucks This class or type of transportation included all movement of cattle on trucks that were hired by the seller of the cattle.

Buyers trucks Trucks owned or hired by the buyer of the cattle. The seller had no responsibility or visible costs in furnishing the transportation although the cost of transportation may have been reflected in the price offered for the cattle.

On foot This term was used to designate movement of cattle on foot from the producers farm or ranch to the market, point of sale, or the farm or ranch of the buyer or, when buying, from the market to the buyer's place of business.

Railroad transportation The ~~various~~ terms used to denote the various combinations of transportation are self-explanatory as they are merely the already explained types of transportation in combination with the railroad.

The farmers and ranchers interviewed were allowed to classify the cattle bought or sold in the various grades of "choice", "good", "medium", or "common". No definite illustrations or instructions were given as to the qualifications of the various grades. This was done in order to secure a more unbiased opinion from those interviewed and to obtain some idea of the relative knowledge that farmers and ranchers possess concerning the judging of feeder cattle. 1/

A "lot" of cattle in this study is defined as the number of cattle or calves bought or sold at one time that were of the same age and sex. Thus one sale could represent several lots. i.e. six yearling steers, seven two-year old steers, and ten calves might represent one sale but would be considered as three lots in this study.

The two methods of sale or purchase that were considered in this study were; "by the head" and "by weight". Selling or buying "by the head" is defined to mean the sale or purchase of cattle or calves for a specified sum per head. Usually the cattle sold on this basis were not weighed and the overall price was not based on the price per pound. "By weight" refers to sales or purchases of cattle and calves on the basis of a specified price per pound of live weight.

1/ Farmers and ranchers classed over 90% of the feeder cattle sold as either medium or good grade. (See Appendix, Table 10)

CHAPTER II

REVIEW OF PREVIOUS LITERATURE

The only work published that has any ^{specific} bearing on the subject of the marketing of feeder cattle in South Dakota is the South Dakota Experiment Station Bulletin #362, "Livestock Marketing Practices in South Dakota", which was published in June of 1942. The regional study, Bulletin #365, "Marketing Livestock in the Cornbelt Region", published in November of 1942 by the Corn Belt Livestock Marketing Research Committee is a consolidation of the various state reports thus adding little to the study of feeder cattle marketing in this state. 1/

The South Dakota Bulletin #362 does not deal entirely with feeder cattle. This bulletin is based on a study conducted in 1940. It deals with factual and descriptive material relating to the volume of feeder, slaughter, and breeding cattle bought and sold by South Dakota farmers and ranchers during 1940; to the use made of the various types of marketing agencies in moving animals from the farm to the feedlot and pasture or to the processor; and to the organization, customs, and practices of the market agencies in existence at that time.

The information in Bulletin #362 was obtained in the following manner: Some of the information was secured by means of questionnaires mailed to 10% of the farmers in each county. These lists were made up by county agents and county AAA chairmen by taking every tenth name on their mailing lists. In addition to the mailed questionnaires,

1/ This report was prepared by Knute Ejerka of the Bureau of Agricultural Economics, Division of Marketing and Transportation Research, in collaboration with the other members of the committee.

454 schedules were obtained directly from farmers by field visits. The farmers thus interviewed were selected at random from the eight type of farming areas together with the distribution of the different classes of livestock by areas.

In the 1940 study, 42% of the farms reported selling feeder cattle. Also according to the 1940 study, the percent of farms selling feeder cattle varied greatly by areas in the state, 85% of the farms in the Northwest or Area I reported selling feeder cattle, while in the Southeast or Area VII only 41% reported selling feeder cattle. Area VII was the only section of the state wherein the percent of farms selling slaughter cattle exceeded that of those selling feeder cattle. 1/

In respect to the type of market through which feeder cattle moved, the 1940 study found that the type of market which was of the most importance varied by areas in the state. On the extreme eastern side of the state the terminal public market was the most important market for feeder cattle, but in the range areas, (corresponding roughly to areas one, two, and five in the present study) a higher percentage of feeder cattle was sold by farmers to dealers than to any other type of market. In 1940 in the north central section (Area II) dealers bought 58% of all stocker and feeder cattle sold by farmers. The auction markets were also a very important outlet for feeder cattle in 1940, with no area reporting less than 18.5% of the feeder cattle being sold through auctions.

In the central area of the state (an area corresponding roughly to area two and parts of one and three in the present study) more

1/ Area designations as used in 1948 study. See Fig. 1, p. 17.

feeder cattle were sold directly to farmers than by any other method. Location may account for this, as this section of the state is quite close to the feeding areas in South Dakota, Minnesota, and Iowa.

Table 2. Percent of Stockers and Feeder Cattle Sold Through Various Types of Markets by Farmers in South Dakota, 1940

Species & Class: of cattle	TPM:	Con.Yds:	Pack.:	Dealers:	Local:	Auc- coop:	tions:	OTHERS:	Total
Stockers and Feeders	: 23.7:	2.9	: 1.1	: 27.5	: 1.4	: 25.0	: 18.4	: 100.0	

For the entire state the farmers and ranchers sold their feeders through the various types of markets as indicated in table 2. Almost an equal proportion were sold through the dealers, auctions, and the terminal public markets, with the sales to other farms and ranchers representing a slightly lower figure.

When considering the size of lots sold by the farmers and others, the 1940 study found that about one-half ^{sold} less than six cattle per sale. Less than ten percent of the farmers and ranchers sold more than 20 cattle per sale but the number of cattle sold in these larger lots represented one-third of all the cattle sold. $\frac{1}{3}$

PURCHASING FEEDER CATTLE IN SOUTH DAKOTA, 1940

The estimates of the 1940 study indicate that farmers sold about twice as many cattle, feeder and slaughter combined, as they bought. Of the stocker and feeder cattle bought about 50% came from the auction, 28% directly from other farmers and ranchers, and 15% from the terminal public markets.

The size of lots of the cattle purchased by farmers was relatively small in 1940. The average size lot for the entire Corn Belt was about eleven head. Cattle and calves were bought as singles by more than

$\frac{1}{3}$ Includes all types and classes of cattle sold; slaughter, feeder, and breeding.

one-fourth of the farmers buying feeders, but this sum comprised only about two percent of the total purchased. Fifty-seven percent of the farmers bought stockers and feeders in lots of five or less. The above figures are from the regional study but they seem to be applicable to the situation in South Dakota also. In South Dakota the purchases in lots over twenty-five head made up three-fourths of all the feeder cattle bought by farmers but these were purchased by only one-fifth of the farmers who bought feeders.

The 1940 study discovered that trading in feeder cattle by the head was much more frequent than was true in the case of slaughter cattle. About 45 percent of the feeders were bought by the head, whereas only 10 percent of the slaughter cattle and calves were purchased in this manner.

The average weight of the feeder cattle bought and sold by farmers and others was 544 pounds in 1940.

In the matter of transportation of livestock to and from the markets, the 1940 study did not differentiate between various species of livestock or whether they were feeder or slaughter animals. For all livestock sold the hired truckers were the principal means of transportation as they moved over 50% of the cattle, hogs, sheep and lambs in practically every area except the north central section of the state. In this area more of the cattle were moved by the buyers. Over the state as a whole, buyers moved almost one-fourth of the livestock to the markets. Farmers and ranchers transported most of the remainder in their own trucks, with railroads having a minor part.

In the conclusions the 1940 study listed the following problems and recommendations:

"Transportation is one of the greatest 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.

...

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

Lack of knowledge of market classes and grades puts the producer at a 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.

...

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."

SAMPLING METHOD USED IN COLLECTING DATA FOR THIS STUDY

The sampling method used in this study is that of the stratified random sampling type based on the number of farms and ranches selling livestock and livestock products in 1945. As a means of simplifying the process of sampling, the state was divided into seven distinct agricultural areas, which correspond with those areas set up in previous studies conducted by the South Dakota Agricultural Experiment Station. 1/ In the original division of the state referred to above there were eight areas but in this study the entire state was included in seven areas. For this study the entire west river area was designated as Area I, whereas, in the earlier work, this ^{region} was divided into two areas. ~~This was done in order to avoid confusion in sampling.~~

These seven types of farming areas were divided into subareas of from one to several counties. This made it possible to obtain a more even distribution of the points of interview by random sampling within the areas. 2/

The total number of sample farms to be interviewed in the state was set at approximately 280 farms, a sample which was deemed ample to represent the population and one which could be interviewed considering the time and the funds available. This number of farms and ranches equalled about .43% of the 65,257 farms and ranches over 50 acres in size. 3/ Distributing these 280 farms to be interviewed at the rate of four farms per spot 4/ resulted in approximately 72 spots or points of interview in the state.

- 1/ Heglund, C. R. "Facts for Prospective Farmers and Ranchers in South Dakota", Circular 59
2/ See map, page 17. Solid lines outline areas, dotted lines outline sub-areas.
3/ U.S. Census of Agriculture, 1945. Volume I Part II
4/ Base point or area in which interviews were taken.

In order to distribute the 72 spots according to the relative importance of the feeder cattle business and the number of farms in each sub-area, each sub-area was given a percentage weight relative to the ratio between the number of farms selling livestock and total number of farms in the unit. By using these percentage weights the number of spots for each sub-area was obtained. 1/

After the number of spots per sub-area had been determined, the townships in each sub-area were numbered consecutively on large county maps prepared by the South Dakota State Highway Commission in 1936 which showed the township boundaries and the location of the farms and ranches in that year. In order to locate the spot or township in which to interview the farmers enough numbers were drawn at random until the 72 spots were located.

In order to make the point of interview a more definite point within the township or spot one section was drawn at random as the base of interview. This definitely located the point at which to begin the interviews within each sub-area.

The sample farms at each point of interview were chosen in a predetermined manner. Using the section number chosen within each township as a base, the farms or ranches were visited in the manner shown by the following illustration. On the large county maps used the sections were numbered in the manner shown in the illustration.

:	:	:	:
:	4	5	1
:	:	:	:
:	:	:	:
:	8	Base	6
:	:	:	:
:	:	:	:
:	3	7	2
:	:	:	:

1/ Example: Sub-area A, Area I including Harding, Perkins, Butte, and Meade counties had a total of 2983 farms in the classification chosen. With a given weight of .05% this gave this sub-area a total of nine spots to be randomly distributed within the sub-area.

(Each square represents a section. Direction of travel was clockwise from one section to another and within sections.)

The route of travel was from the base section in each case taking the farms or ranches as they came until four schedules had been obtained or until all farms or ranches had been visited and for some reason or another it was impossible to secure the desired number of schedules. The four sample farms were taken from the "base" section whenever possible. If this section did not contain four farms or if some of the farmers refused to cooperate, the remaining number were taken from sections 1 to 8 as shown in the diagram. No "call backs" were made to any farms or ranches after the interviewer left the spot.

At each spot several other farms or ranches, usually two or three, that were definitely in the business of producing or feeding cattle on a large basis were also visited. These farms and ranches were not chosen at random but were visited at the recommendation of other farmers, ranchers, county agents and others. These schedules are not used in this study but will be used as a check in the state and regional study which will be completed at a later date.

The map of South Dakota, Figure 1, page 17; shows the area divisions and the location of the sampling spots within each area. As was stated before, to insure a more even distribution of the sampling points within the state, it ^(the state) was divided into areas based upon the type of farming within that area. The solid lines on the map indicate the area division boundaries and the broken lines indicate the boundaries of the sub-areas. The black spots indicate the location of the 72 points of interview in the state.

CHAPTER III

METHOD OR PROCEDURE OF STUDY

This study of the feeder cattle marketing problems and practices of the South Dakota farmers and ranchers is almost entirely based on primary data. The data were obtained by personal interview from a selected sample representing the entire state.

After the interviewing process was completed, the schedules were given a final editing in order to discard those that were incomplete in such a way that the information included was unsatisfactory. In order to simplify the tabulation process, much of the information from the schedules were transferred onto small cards. ^{1/} The information on the cards included numbers of feeder cattle bought and sold, age of cattle sold, type of markets used, methods of sale or purchase and the price received.

The information on these cards was on the basis of the individual lots bought and sold rather than the number bought or sold per schedule. However, these cards are identified by number so that it was a simple matter to make a count of the number, class and weight of the feeder cattle marketed from each ranch or farm. All tabulations were originally made on an areal basis.

In order to be able to add the area totals of the tables to obtain one state total, it was necessary to weight all area figures to represent an equal sampling rate for the state. ^{2/} Table 3 shows the rate of sampling which was used within each area in order to get a maximum of information considering the limited funds and time available. This resulted

^{1/} See appendix for samples of tabulation cards.

^{2/} The rate of sampling was heavier in the areas where the feeder cattle business was most important. This made possible a maximum of information on the time and funds allowed.

in a .4306% sample for the state but as some areas had to be sampled heavier than others it was necessary to use a conversion factor in order to place all areas on an equal ^{percentage} basis for purposes of comparison.

Additional information concerning the marketing of feeder cattle was transferred from the schedules directly to tabulation sheets. This information was condensed into a form that could be used in tables and graphs for purposes of cross-reference and analysis.

Table 3. Factors Used to Convert All Areas to a 0.43% Sampling Basis

Agricultural Area	% of farms in each area actually sampled	Factor to put all areas on a 1% sample basis	Factor to put all areas on a 0.43% sampling basis
I	.7287	1.372	.590
II	.4649	2.151	.925
III	.2362	4.237	1.822
IV	.4082	2.451	1.054
V	.3800	2.632	1.132
VI	.2946	3.390	1.458
VII	.4398	2.273	.977
State	.4306		.4306

CHAPTER IV

METHOD AND PRACTICES USED BY SOUTH DAKOTA FARMERS AND RANCHERS
WHEN SELLING FEEDER CATTLE, 1947

PRODUCERS PREFERENCES CONCERNING THE SALE OF FEEDER CATTLE ON A GRADED
OR UNGRADED BASIS

The farmers and ranchers interviewed in this study were asked whether they preferred to have their cattle closely graded and sorted as to sex, class, weight, age, conformation, and condition with the price varying with the grade or to have their cattle sold on a straight price per hundred-weight based on the average weight and grade for the lot sold.

Table 4. Percentage of Farmers and Ranchers Preferring to Sell Feeder Cattle on a Graded or Straight Basis, by Areas and State Total.
South Dakota, 1947

Method of selling	AREAS OF THE STATE							TOTAL	No of answers
	I	II	III	IV	V	VI	VII		
GRADED	52	53	45	77	64	61	58	57	113
STRAIGHT	48	47	55	23	36	39	42	43	85
	100%	100%	100%	100%	100%	100%	100%	100%	198*

Table 4 shows that almost as many farmers and ranchers preferred to sell on a straight basis as to have their cattle closely graded and sorted at the time of sale. However, in all areas except one, a greater percent of the farmers and ranchers indicated that they preferred to sell on a graded and sorted basis. The area that had the greater percent indicating that the preference was to sell cattle on a straight one price per lot basis was Area III, the North James River

* 29.5% of those interviewed expressed no opinion.

Area. This is the major wheat and cash grain area of the state although production of beef cattle does contribute greatly to the cash income of the farmers. 1/ Except in the northern section of this area, most of the cattle raised are not sold strictly as feeders, therefore, the farmers may consider it to their advantage to sell on an ungraded basis the few lots of mixed cattle that are sold as feeders.

In the state total, 57% of those answering preferred to sell on a graded basis while 43% preferred selling on a straight or ungraded basis. The reasons for these preferences seem to be based largely upon individual belief and custom. These preferences did not appear to be based upon any advantages to a particular area because of geographical location. Also, it did not seem that the preference for one method of sale over another was influenced much by the type of feeder cattle sold in an area.

UNIFORMITY OF SELLING AT THE SAME TYPE OF MARKET

Farmers and ranchers were asked whether they preferred to sell through the same type of market channels each year or if they preferred to shop around in an attempt to find the best type of market outlet when ready to sell. (Selling through the same channels in this interpretation was defined as selling to the auction, for example, each year but not necessarily to the same auction. It refers to the type of market outlet rather than the location of that market.) Table 5 shows the various percentages by areas and the state total of the farmers and ranchers that preferred to use the same type of market one year after another and those that preferred to change from one type of market to another in an attempt to find the best place to sell.

The percentages are based on the number that actually answered the question. Only slightly over 64% answered, the remaining either selling no feeder cattle or having no opinion on the question.

Table 5. Percentage of Farmers and Ranchers Preferring to Sell Feeder Cattle Through the Same Type of Market Channels each Year and the Percentage that Prefer to "Shop Around" Before Selling, by Areas and the State Total, South Dakota, 1947

	I	II	III	IV	V	VI	VII	TOTAL	No. of
Sell through same type of market channels	78	62	76	60	91	61	77	74	134
Shop around	22	38	24	40	9	39	23	26	47
	100%	100%	100%	100%	100%	100%	100%	100%	181*

On a state basis 74% of those answering expressed the opinion that they preferred to sell through the same type of market channels whenever they had established contacts which they considered were favorable to them. The remaining 26% stated that the various types of market outlets varied enough from one year to another or from one time of sale to another that it was to their financial advantage to devote some time and energy to shopping around for the best market outlet.

Farmers and ranchers that preferred to sell through the same type of market channels were in the majority in all areas, varying from 60% in Area IV to 91% in Area V.

This table must not be interpreted to mean that any one type of market was preferred over another by the majority. It does show that whenever a farmer or rancher sold at one type of market that met his approval he would prefer to sell there rather than consume time

* Represents only 64.4% of total interviewed.

and energy each year or at each time of sale in trying to find a better market outlet. Other sections of this paper will reveal which markets receive most of the feeder cattle in each area. ^{1/} In any case, some farmers and/or ranchers may prefer to sell to the auction most of the time while others may have established favorable contacts at the terminal public markets or with order buyers and continue to sell there.

All that can be determined from the table is that after farmers and ranchers have established favorable contacts with a certain type of market they generally do not switch markets each time cattle are sold. The reason for the majority of the farmers and ranchers preferring to sell through the same market channels may have no economic significance but rather be based on custom and habit which has been built up over years of cattle marketing.

UNIFORMITY OF TIME OF SALE OF FEEDER CATTLE

The farmers and ranchers interviewed were asked if they sold at approximately the same time each year in order to determine if there was any uniformity as to the time of sale of feeder cattle. Table 6 shows that 70% of those answering this question stated that they usually sold at about the same time each year while 30% followed no set plan or time in which to sell but sold whenever the markets were considered right, feed was in short supply, or the need for cash was urgent.

^{1/} See Table 15.

Table 6. Percentage of Farmers and Ranchers that Sell Feeders at Approximately the Same Time each Year, by Areas, South Dakota, 1947

AREAS OF SOUTH DAKOTA										
		I	II	III	IV	V	VI	VII	STATE	No. of Ans.
Sell at the same time each year	Yes	75	70	44	54	85	62	57	70	130
	No	25	30	56	46	15	38	43	30	56
TOTAL		100%	100%	100%	100%	100%	100%	100%	100%	186*

In Area I, the west river ranch area, over 75% stated that their sales were at about the same time each year. This 75% included practically all of the larger ranches that make cattle production their main source of income. The definite time of sale in this area probably results from the fact that these ranchers produce almost entirely for the feeder market for which the demand is largely concentrated at certain definite seasons of the year.

In Area II, a section having quite large farms and ranches but having a larger per cent in small grain than Area I, a large per cent of the farmers and ranchers reported one certain time of the year in which they sold their feeder cattle. 70% reported that they sold at one fairly definite time each year.

In Area III, an area which is largely made up of general farms that do not concentrate on any one farming enterprise, 56% of farmers and ranchers interviewed reported that they did not have any definite time of sale for their feeder cattle. This area has relatively smaller herds than the other two areas discussed and most of the farmers do not raise cattle as their main source of income. Many farms and ranches have small herds, the increase of which is fed for

* Total number of answers out of a total of 281.

a short "warm-up" period during certain years when feed is plentiful and in the other years the cattle are sold directly from the pastures or in the spring as feeders.

The Areas IV, VI, and VII are quite evenly divided between those farmers and ranchers selling feeders at the same time each year and those selling whenever the need for additional income or some other situation arises. In these areas, respectively, 54%, 62% and 57% of the farmers answering this question stated that they sold whatever feeder cattle they had at about the same time each year. Relatively few cattle are produced for the feeder markets in these areas as most of the farmers are able to feed out their cattle on the feed produced on the farm.

In Area V the larger percent of the producers sold their feeders at the same time each year. In this section of the state, 85% of the farmers and ranchers stated that they sold their feeder cattle at approximately the same time each year.

In the overall picture of the state it is evident that as the production of cattle for the feeder market decreased in importance the percentage of those selling at the same time each year also fell. In the range areas, I and parts of areas II and V, there is the highest percent of the sales by each farmer or rancher being made at the same time each year, possibly because the cattle are sold mainly in the fall after pasture or in the spring when winter roughage has been consumed and before beginning the spring pasture season.

RANCHERS' AND FARMERS' OPINIONS CONCERNING THE BEST TIME OF SALE BASED ON PRICE ALONE

Most farm commodities such as livestock and livestock products have seasonal variations in price that make the sale of these products more favorable from a price standpoint at one season than another. Table 7 is the result of the tabulation of the answers that farmers and ranchers gave to the following question which was included in the marketing study schedule for 1947: "What, in your opinion, is the best time to sell feeder cattle considering price factors alone?" Opinions were expressed for the best time for calves, yearlings, two-year olds, and feeder cows. As most of the farmers and ranchers lacked sufficient knowledge of monthly price variations the differences were placed on a seasonal basis. The actual numbers designating one season as being more favorable than another were converted to percents because an equal number of answers was not given for each age group of feeder cattle.

Table 7. Percent of Farmers and Ranchers Selecting Various Seasons as the Most Favorable Time of the Year in Which to Sell Feeder Cattle Considering Price Alone, South Dakota, 1947.

Time of Year	AGE OF FEEDERS SOLD			
	Calves	Yearlings	Two year old	Cows
SPRING	25.9	19.4	20.4	17.9
SUMMER	11.2	15.2	21.8	18.3
FALL	59.9	62.7	51.7	58.2
WINTER	3.0	2.7	6.1	5.6
TOTAL	100.0%	100.0%	100.0%	100.0%

For all age groups the farmers and ranchers expressed the opinion that the fall season (September, October, and November) was the most

favorable when considering price per hundred weight. Table 7 shows that there was very little variation in the opinions as to the best time to sell the feeders of various ages.

In the opinions of those interviewed, the spring months of March, April and May were the next best time to sell, considering price alone. Twenty-five and seven-tenths percent stated that the price was the highest for calves at this time, 19.4% for yearlings, 20.4% for two year olds and 17.9% for the feeder cows. Summer, as a time of sale, considering price per hundredweight, was about the same as the spring months, in the opinions of the farmers and ranchers. The season of the lowest price was winter as not over 6.0% stated that this season was the best for any age group of feeders according to price factors alone.

The above conclusions or opinions are considered as being unbiased by any other factors such as the weather, convenience or others. It was evident, however, that it was very hard for the farmers and ranchers to isolate the price factor.

In order to provide some basis for comparison between the time expressed by farmers and ranchers as being the most favorable from a price standpoint and the actual seasonal range of prices for feeder cattle over a fairly long period, a study of feeder cattle prices by the Kansas State College was referred to. ^{1/} These findings were based on the seasonal prices for different classes and grades of feeder cattle at Kansas City. The seasonal price indexes were arrived at by calculating the average prices for the period under study, (1922-41 or 1926-41), and the seasonal prices for each class and grade. Then the

^{1/} Wilson, C. P. Unpublished study of seasonal variation in Feeder Cattle Prices Kansas State College, Manhattan, Kansas.

seasonal price was divided by the average price for the period. This resulted in a percentage figure which is used as the seasonal index.

When Table 7 and Table 8 are compared it can readily be seen that the opinions of the farmers and ranchers do not coincide with the actual price trends from season to season over a period of years.

Table 8. Seasonal Index and Prices of Several Classes and Grades of Stocker and Feeder Cattle and Calves Based on a 15 and 20 Year Period at the Kansas City Market. 1/

Class or Grade	Good Stocker Steers	Medium Stocker Steers	Choice Stocker Heifers	Choice Stocker Heifers
Weight	500-800	500-1000	500-750	500 down
Years Included	1926-41	1926-41	1922-41	1922-41
	: SEASONAL	SEASONAL	SEASONAL	SEASONAL
	: Index: Price	Index: Price	Index: Price	Index: Price
Spring	: 105.8 8.73	106.9 7.74	105.2 7.55	103.9 9.53
Summer	: 100.3 8.27	100.3 7.26	101.3 7.28	98.7 9.06
Fall	: 95.7 7.89	94.4 6.83	97.5 7.00	98.0 9.00
Winter	: 98.2 8.10	98.4 7.12	95.9 6.89	99.3 9.12

For the classes of feeder livestock that were included in the Kansas study it will be noted that the index of prices was the highest during the spring whereas the farmers and ranchers were of the opinion that the fall would be the season of the highest price. In the case of good stocker and feeder steers the index dropped from a high of 105.8 to a low of 95.7 from the spring to the fall. The spread in the other classes was similar.

In the graphic presentation, Figures 2 and 3 the price trend as estimated by the farmers and the seasonality of prices based on a

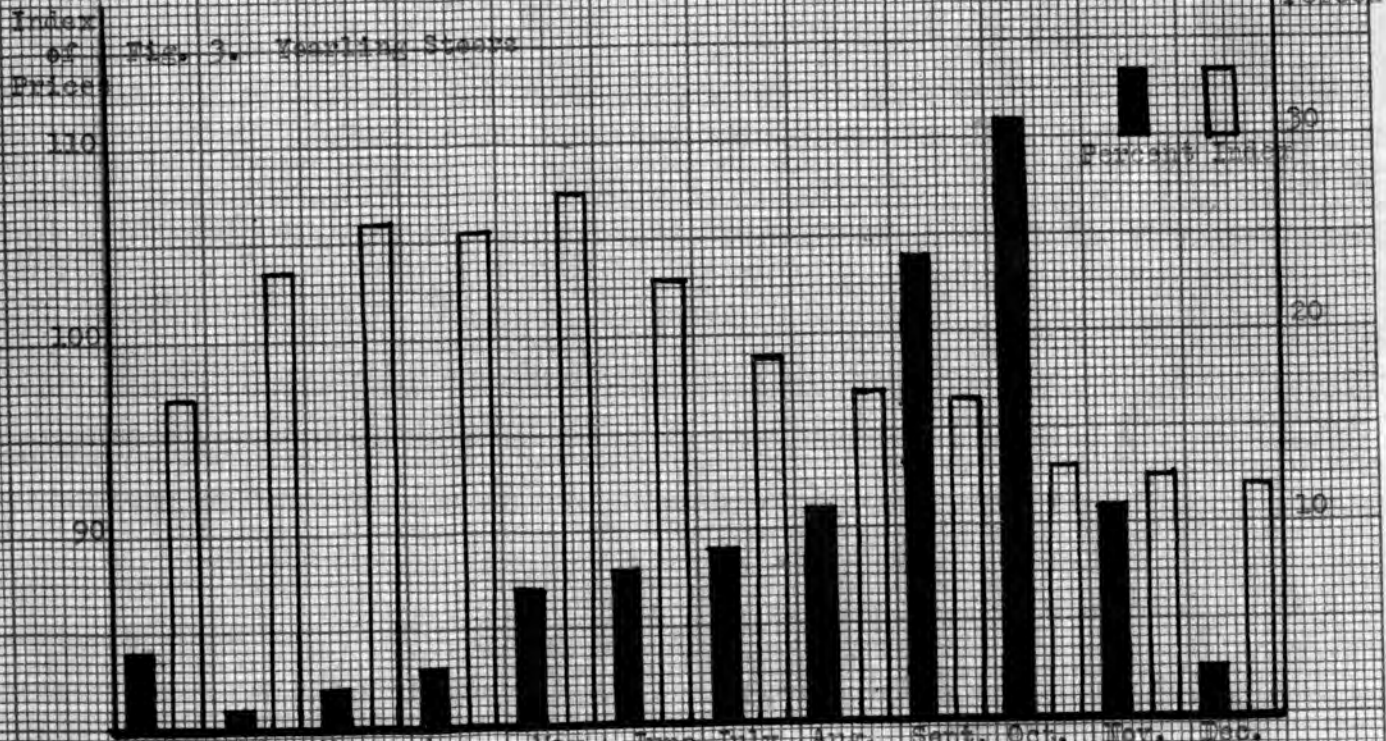
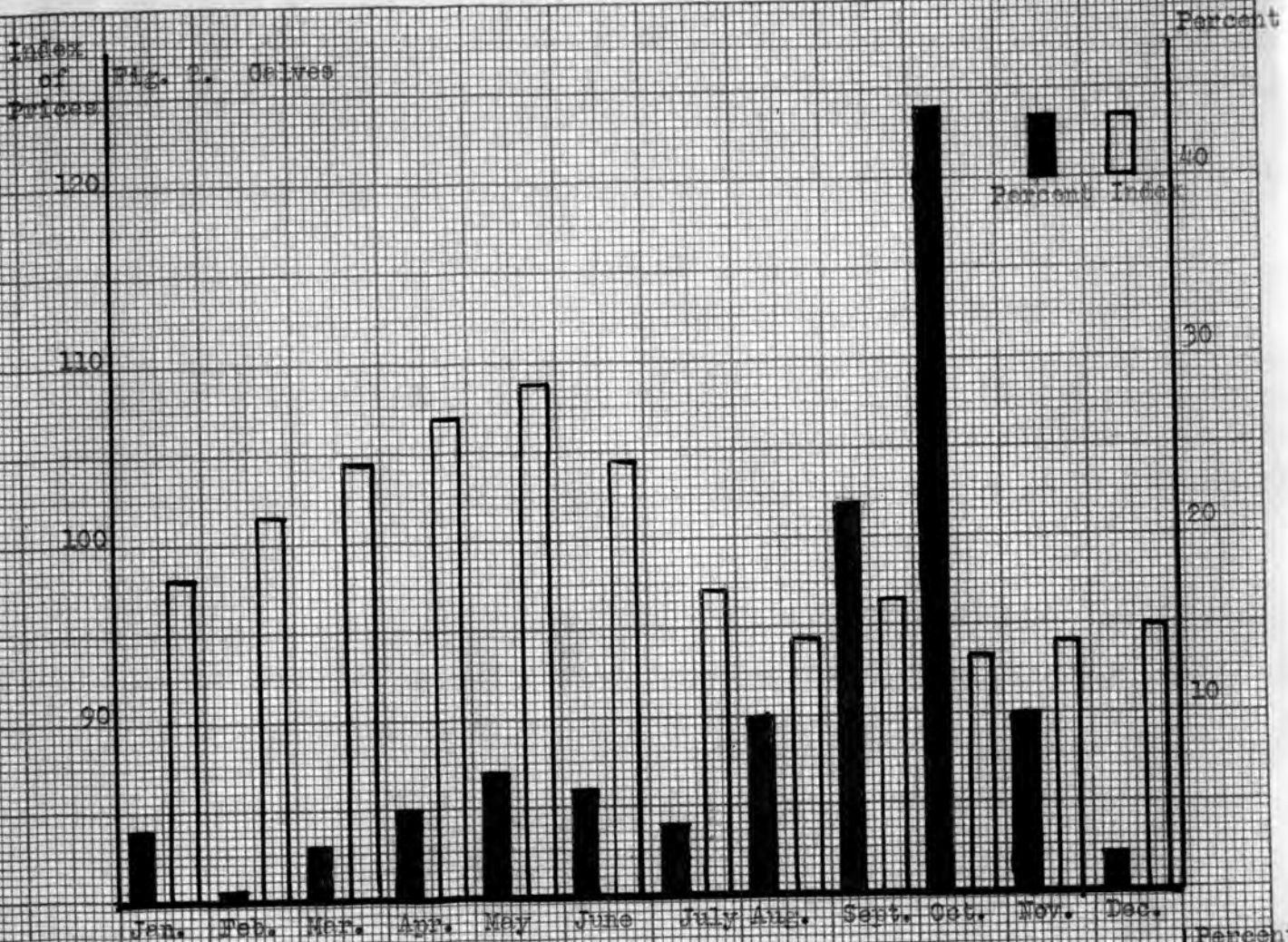
1/ Ibid.

15 and 20 year period is shown on a monthly basis instead of seasonal basis as in Tables 7 and 8. Although all farmers and ranchers did not give their answers on a monthly basis, enough did so to yield sufficient information which could be shown on a graph. The information obtained from these graphs is the same as was illustrated by the tables but becomes much more evident on a monthly basis when the smaller fluctuations are not ironed out.

Thus, it is seen ~~that~~ on the basis of an actual index of prices that May has been the month of highest price over a period of years whereas in the farmers' opinions the month of October would be the best time to sell feeder calves. This is based on the factor of price alone, disregarding any other reasons for sale.

In the case of yearling feeder cattle the farmers' estimate as to the best time to sell on a purely price basis was a bit wider as parts of the months of September and November were included with October in the best period but the price index still shows that March, April and May are the months of the highest average price. One point of interest in this case is that there is a definite upward trend in April and May in the farmers' opinions ^{on the seasonal prices} that coincides with the peak in the index of prices.

The reverse relationship between the actual index of prices and the opinions of the farmers and ranchers cannot be construed to mean that the farmers and ranchers are necessarily selling their cattle at the wrong time of the year because so many other factors combine to determine the time of sale. What it does reveal, however, is that the farmers and ranchers do not follow market quotations and information throughout the year or that either the market information available or



Percent of Farmers and Ranchers Selecting Each Month as the Best Time to Sell Feeder Steers and Calves on the Basis of Price Alone Compared with an Index of Average Seasonal Prices for 1922-1942.

the method of presenting it is inadequate. Farmers and ranchers perhaps need to be educated to make better use of market price information.

PHYSICAL FACTORS AFFECTING THE TIME OF SALE OF FEEDER CATTLE

In the preceding discussion concerning the best time of the year for the farmers and ranchers to sell their feeder livestock on the basis of price per hundredweight alone the conclusion was reached that as a whole the producers of livestock had opinions as to what was the highest price period of the year which were almost opposite of the periods that were actually the highest over a long range of years. As stated before, many other factors besides price enter into the problem of deciding when is the most profitable time of the year to dispose of feeder cattle from the standpoint of the producers. Some of these, which might be classed as production factors, are: Availability of adequate pasture or the condition of pasture available, availability of adequate water supplies, possible utilization of standing roughage, ^{1/} the supply of hay and grains, weight or condition of animals, and the progress of farmwork.

Table 9 shows the relative importance of the different factors as an influence on the month of sale, or, in other words, the percent of farmers and ranchers stating which month was the most favorable to them when these factors are considered. Table 9 is intended to show only the relative importance of the different months as the time of sale when considering each of the physical (production) factors separately. When attempting to determine which factor was the most important as a reason for sale, in the opinions of those

^{1/} Field roughage such as stubble, corn stalk, etc.

interviewed, the relationship are as shown in Table 10.

Table 9. Most Favorable Time to Sell Feeder Cattle when Considering Production Factors in the Opinions of Farmers and Ranchers, on a Percentage Basis, South Dakota, 1947

Month	PRODUCTION FACTORS					
	Pasture	Water	Roughage	Hay- Grain	Weight or Condition	Progress of Farm Work
Jan.			9.4	6.8	1.9	
Feb.			4.4	7.5	1.5	
Mar.	1.0		1.5	15.0	3.8	16.9
Apr.	.5			4.5	1.4	9.3
May	1.0		.7	1.5	.5	4.6
June	4.7			.8	5.3	1.5
July	10.4	46.1			7.7	6.2
Aug.	16.1	15.4		3.7	5.7	6.2
Sept.	27.5	15.4	9.4	5.3	18.7	16.9
Oct.	32.6	15.4	18.1	23.3	38.3	32.3
Nov.	6.2	7.7	29.7	18.8	10.5	4.6
Dec.			26.8	12.8	4.8	1.5
TOTAL	100%	100%	100%	100%	100%	100%

Table 10. Relationship Between the Physical Factors of Production as a Determinant of the Time of Sale of Feeder Cattle in the Opinions of Farmers and Ranchers, South Dakota, 1947

	PHYSICAL FACTORS OF PRODUCTION					
	Pasture	Water	Roughage	Hay- Grain	Weight or Condition	Progress of Farm Work
Of some import- ance	91.0%	11.6%	59.7%	60.5%	96.3%	29.3%

From Table 10 it is evident that the factors of adequate grazing or pasture and the weight or condition of the cattle to be sold are the most important consideration involved whenever the producers determine when to sell feeder cattle. On a percentage basis both factors are almost equally important, in fact, they could be said to be complementary as the weight or condition of the feeder cattle largely depends upon the

grazing in pastures and not on the feeds that are stored by the farmer.

In most cases the matter of an adequate water supply seemed to be of little importance as only about 12% stated that this entered into their consideration when they were deciding the time of sale of their feeder cattle. In the long run, this may not be strictly true because in recent years a fairly adequate rainfall has kept the stock dams and reservoirs filled. Most of the farmers and ranchers said that water was no problem affecting the time of sale until it became short, but then it was very important.

When considering the amount of roughage and hay and grain available, the farmers and ranchers were of the opinion that these two factors were almost equally important. About 60% stated that these two factors entered into the consideration in determining when to sell feeder cattle.

Returning to the analysis of Table 9, it is noted that on the basis of pasture or grazing conditions ~~the~~ the three months August, September and October were judged to be the best time to sell feeders. These months were listed as the best on the basis of pasture condition by 16.1%, 27.5% and 32.6%, respectively.

Water supply was listed as of some importance by only 12%. Forty-six and one-tenth percent indicated that July would be the best month to sell surplus feeders in order to conserve water. The only months in which the water supply was an influencing factor so far as the time of sale was concerned were July, August, September, October, and November. In all other months the water supply was considered adequate to all the needs of the farms and ranches in recent years.

The utilization of roughage grazing (cornstalks, stubble, etc.) was considered a factor of some importance in determining the best time of sale by the farmers and ranchers in the last four and the first three months of the year. The greatest number of the farms and ranches (30%) indicated that November would be the time to sell when the possibility of deriving the most use from the roughage grazing was considered.

When the supply of hay and grain is considered in relation to the time of sale of feeder cattle it will be noticed that there are two peaks or periods of the year when the feed supply would influence the time of sale. The largest peak extends from October through December and the second, but smaller peak, is in March (Figure 7). The greater number were of the opinion that it would usually be best to sell in October in view of the supply of feed usually on hand and in order to utilize this feed best.

The opinions of the farmers and ranchers on the question of which month the feeder cattle would be in the best condition or weight varied more than any other factor. The least mentioned month was May, when only 0.5% stated that the feeder cattle would be in the best condition. The greatest number, 38.3%, chose the month of October as the month when the feeder cattle would be in the best weight and condition for sale. As the largest percent stated that this was the month that cattle were in the best condition, it is probable that this factor biased the answers on the question regarding the time of the year at which the price per hundredweight would be the highest. Over 96.0% of the farmers and ranchers stated that weight and condition were

Fig. 4. Pasture Conditions

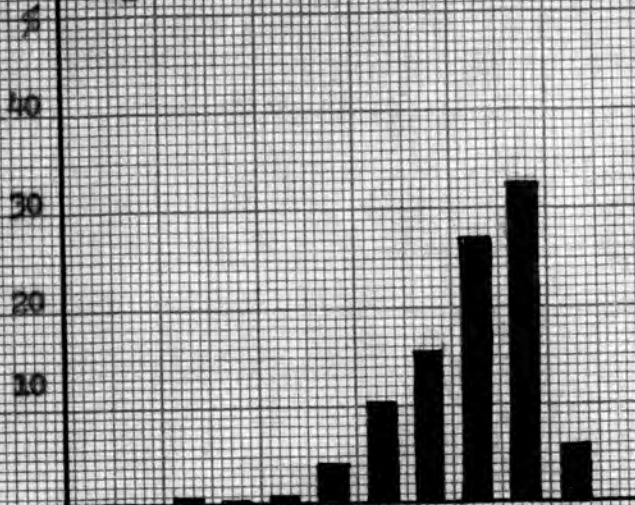


Fig. 5. Water Supply

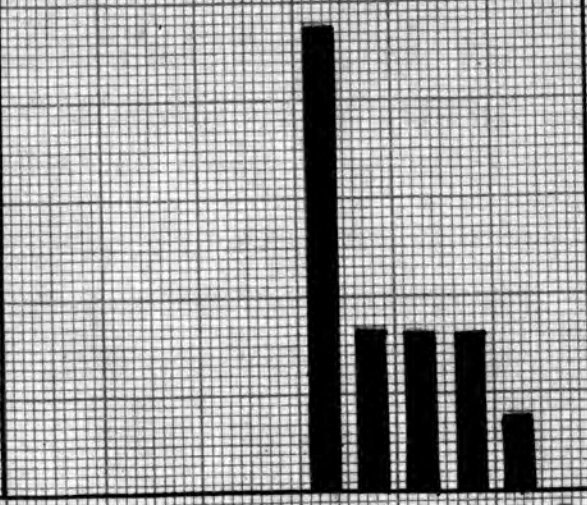


Fig. 6. Utilization of Roughage

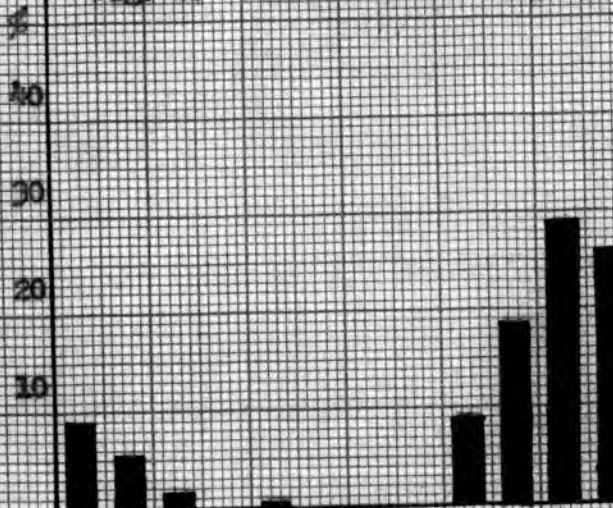


Fig. 7. Supply of Hay and Grain

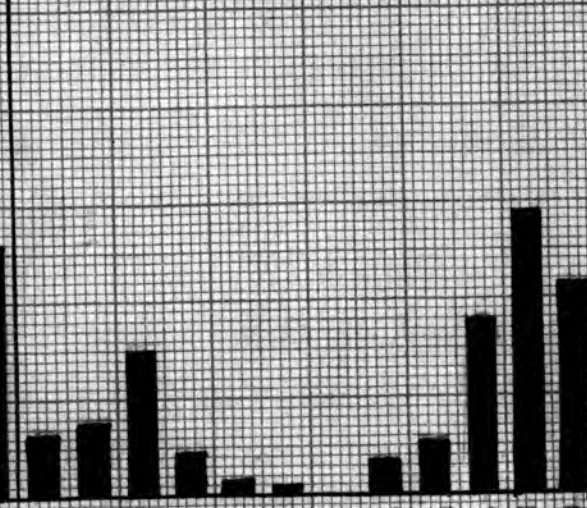


Fig. 8. Weight of Cattle

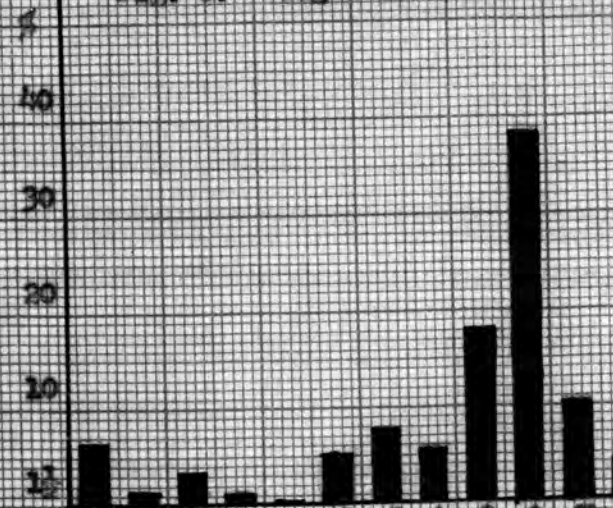
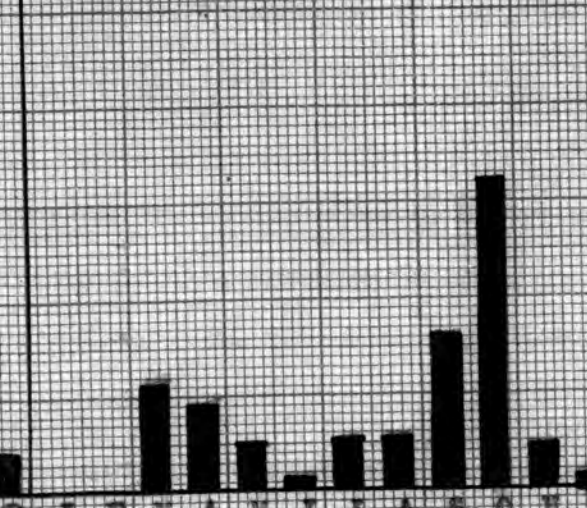


Fig. 9. Progress of Farm Work



Percent of Farmers and Ranchers Selecting Each Month as the Best in which to Sell Feeder Cattle when Considering Various Physical Factors, South Dakota, 1947

very important factors in determining the time of sale.

When the progress of the farm work is considered there are two periods during the year when farmers believed it most convenient to sell feeder cattle (Figure 9). The largest peak occurs in the fall during September and October after most of the farmwork is completed. The other peak is during the month of March before the actual field work begins but which is a time when the farmers do not want to spend a great deal of time feeding and caring for livestock.

AVERAGE GAINS DURING GRAZING SEASON AS A FACTOR IN DETERMINING THE TIME OF SALE OF FEEDER CATTLE AND CALVES

Such physical factors as the feed and grazing available, water supply, the weight and condition of the cattle were found to influence the time of sale of feeder cattle. The progress of farm work and market price factors were also found to be important. In addition, it may well be that the rate and amount of gain in weight that feeder cattle make during certain months of the year have important influences. At certain times of the year the gains made by cattle may not be great enough to offset prospective price drops. Or, if only slight price rises are anticipated, the gain may not pay for the continued risk, expense, and labor necessary to hold the cattle until that advance in price is realized.

As a basis for the assumption that the relative rate of gain in the various months might have some influence on the marketing practices of the farmers and ranchers of South Dakota, a question to that effect was included in the schedule in order to secure the opinions of the farmers and ranchers on this subject. The results of the tabulation of the answers is shown in Table 11. This table does not include the entire

year as it is intended to show only the main grazing period without including any period in which the gains in weight may be due to drylot feeding.

Table 11. Percent of Farmers and Ranchers Selecting Various Months as Poorest and Best with Respect to Gains of Feeder Cattle, South Dakota, 1947

MONTHS IN GRAZING SEASON										
	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	TOTAL	No. of Replies
BEST	4.2	23.4	36.6	8.5	5.8	13.7	6.9	1.0	100.0%	418
POOREST	13.6	4.9	6.2	32.6	25.4	4.9	6.4	6.0	100.0%	326

Table 11 shows, on a percentage basis, the various months which the farmers and ranchers believed were the best or the poorest in relation to the gains made by feeder cattle during the grazing season. While opinions varied somewhat, the greatest number believed that the best gains were made in May and June. July and August were placed low largely because of the usually excessive heat and the insect pests during these two months. Many were of the opinion that with the continuance and expansion of the fly-spraying program for cattle perhaps the gains made in July and August would increase appreciably, but this practice must be removed from the experimental stage before any definite results could be measured.

The fact that September was chosen as the best month by an increased percent (13.7% as compared with 5.8% and 8.5%) over the two preceding months is an interesting point. This has its basis in the belief that this month is usually a bit cooler, thus inhibiting the flies to some extent, and because the cooler weather and early fall rains allowed the range grass to make a comeback after the hot and

usually dry months of July and August. Many were also of the opinion that the fall grass was "harder" and put more "finish" on the cattle than did the early spring grazing.

As to the month in which feeder cattle make the best gains, most of the farmers and ranchers in this study agreed with a study conducted at the U. S. Dry Land Field Station, Ardmore, South Dakota from 1919-1930. ^{1/} The results of this study show that June was the month of the highest gain and thereafter the gains dropped until there was a material loss most of the years in October.

In this study, 32.6% of the farmers and ranchers chose July as the poorest month in which feeder cattle make the poorest gains. The Ardmore study, on the other hand, showed October to be the month in which feeder cattle made the least gain on pasture grazing. (Table 12)

Table 12 Average Gains of Steers on Experimental Pastures at the United States Dry Land Field Station, Ardmore, South Dakota, 1919-30 ^{2/}
(150 acre pasture. Entire pasture moderately grazed)

Length of Grazing Season	No. of steers	Ave. initial weight	Average gain or loss per head							Average gain per acre
			3/	4/	5/	6/	7/	8/	9/	
Days	Number	Lbs	May	June	July	Aug	Sept	Oct	TOTAL	Lbs
138	11	696	11	95	62	27	25	18	220	15.8

- ^{1/} John R. Mohler and H. C. McPhee, "Effect of Different Methods of Grazing on Native Vegetation and Gains of Steers in the Northern Great Plains" pp 11-15. U.S. Department of Agriculture, Washington, D. C. Technical Bulletin No. 547.
- ^{2/} Ibid, p. 11.
- ^{3/} As the pasture season began about May 21 each year, except in 1923, when the pasture had not yet made sufficient growth, the data given for this month are for the last ten days only.
- ^{4/} In many instances the pastures in October were too poor to maintain the animals without material losses in weight, consequently, the data for this month are not included in the total gains and the average gains per acre.

The results of the tabulation of the various opinions expressed by the farmers and ranchers in reply to this question tend to show that the majority of the farmers and ranchers are mistaken in their assumptions as to the poorest month for gains of feeder cattle but agree quite well with the experimental data on the month of the best gains.

In order to determine what the farmers and ranchers of South Dakota believed feeder cattle gain over a six months' grazing period, a question to that effect was included in the schedule used for this study. Table 13 presents a summary of the answers to this question in a percentage form. The percent in each weight class or column represents the proportion of the total number of farmers or ranchers answering that believed the gain of the feeder cattle would be that amount in a six month grazing period.

Table 13. Opinions of Farmers and Ranchers, in percents, on the Gains Made by Feeder Cattle of Various Ages During a Six Month Grazing Period (May through October), South Dakota, 1947

Age	AMOUNT OF GAIN IN POUNDS										TOTAL Percent
	Under 100	100- 150	151- 200	201- 250	251- 300	301- 350	351- 400	401- 450	451- 500	Over 500	
Calves		3.4	11.0	9.9	35.2	20.8	15.5	3.4	.8		100.0
Yearlings		2.3	20.1	23.1	29.5	14.4	8.0	1.1		1.5	100.0
Two's		4.1	14.1	21.8	28.2	15.0	11.4	2.7	2.7		100.0
Cows	20.9	17.8	21.8	10.2	14.7	6.2	4.4	1.3	.4	2.3	100.0

In the case of calves, which are defined as cattle less than one year old, over 35% of the farmers and ranchers agreed that the gain would be from 251 to 300 pounds, almost 21% believed that

calves gained on an average from 301 to 350 pounds and about 16% thought that the gain would be from 351 to 400 pounds, for a grazing period of six months.

For the gains of yearlings the estimates were slightly less. Twenty and one-tenth percent favored the 151-200 pound; 23.1%, the 201-250 pound; and 29.5%, the 251-300 pound gain for the six month grazing period. In most cases the farmers and ranchers reasoned that the yearling cattle would make smaller gains during this six month period because their feed consisted solely of grass whereas the calf had its grass diet supplemented by milk.

Since the number of farmers and ranchers that sell their feeders as two year olds are somewhat fewer than those selling calves or yearlings, it was expected that fewer would express an opinion on the gains of the two year old feeders. Such was the case. There were almost forty fewer answers to this part of the question but these were well enough distributed to give a sample representative of the entire state.

The estimates on the gains of the two year old feeders during the six month grazing period ranged from 150 pounds up to and including a gain of 500 pounds. The greatest percent (28.2%) of the farmers and ranchers expressed the opinion that the gain would be in the 251-300 pound class. Slightly fewer, 21.8%, placed the gain at 201-250 pounds. Fifteen and zero tenth percent favored the 301-400 pounds and only 11.4% the 351-400 pound gain. Relatively few, 2.7% in each case, thought that the gain would be as much as 401-450, or 451 to 500 pounds for this period.

The opinions concerning the average gains of feeder cows were scattered over a much wider range than on any of the other age groups. Some confusion and misunderstanding in the estimates of gains in this group was brought in because of the difficulty of separating the gains made by dry cows from that of those with calf. This probably accounts for the rather high percent (20.9) who stated that the gain of cows would be less than 100 pounds. The gains that could be considered as those made by the dry feeder cows would probably be those that ranged from 100 to 300 pounds. The majority of the opinions fell within this range. Seventeen and eight tenths percent estimated a gain of 100 to 150 pounds; 21.8% a gain of 151 to 200 pounds; 10.2% a gain of 201 to 250 pounds and 14.7% a gain of 251 to 300 pounds for feeder cows during a six month grazing period.

The foregoing discussion has little significance in respect to the marketing of feeder cattle when considered alone. However, if used in conjunction with the opinions expressed as to the best time to sell feeders because of price and production factors, the fact that most of the feeder cattle are sold in the fall of the year is justifiable even though long time averages of seasonal prices indicate that the prices are actually at a low point at this time.

Feeder cattle of all ages, in the belief of these farmers and ranchers, gain enough during the grazing period to make the practice of selling in the fall more profitable than selling at another time even though the price may be slightly higher at other seasons of the year on the average. Other factors covered in the preceding discussion that influence the time of sale are grazing conditions, supply of stored feeds, progress of farm work, and weight of condition of the

cattle. All of these favor a fall sale, in the opinions of the farmers and ranchers interviewed.

RELATIVE IMPORTANCE OF VARIOUS SIZE LOTS OF LIVESTOCK SOLD

The average size lot of feeder cattle and calves sold in South Dakota, according to the data obtained in this study, was slightly over 11 head. This is no indication of the range in the actual number of head sold per lot, nor the proportion of the feeder livestock sold in the lots of different sizes. The data furnished by the farmers and ranchers does permit such detailed analysis to be made. Classifications have been set up to show the percent of the livestock sold in each of the various size lots, and also the number and percent each of the size lots sold are of the total lots sold by the farmers and ranchers in the sample. This relationship is shown in Table 14.

Table 14. Number and Percent of Feeder Cattle and Calves Sold in Lots of Various Sizes by 281 Farmers and Ranchers, South Dakota, 1947

Size of lot	Number of lots	Number of head	Percent of lots sold	Percent of number sold	Average size lot sold
1 to 5	112	342	40.6	11.2	3.0
6 to 10	68	527	24.6	17.3	7.8
11 to 20	58	861	21.0	28.2	14.8
21 to 50	29	798	10.5	26.1	27.5
51 and over	9	525	3.3	17.2	58.3
TOTAL	276	3053	100.0%	100.0%	11.0

From Table 14 it is noted that 40.6% of all the lots sold were small, ranging from 1 to 5 head although only 11.2% of the total number of cattle were sold in lots of this size. As the size of lots increased from 1 to 51 head and over the number of lots fell. The size of lot in which the greatest percent of the feeder cattle are sold in South Dakota, according to the data available, is the one with from 11 to 20 head. This size of lot accounted for over 28% of the total feeder cattle sold. This Table shows that although the greater number of sales are in the small size lots as over 65% over all the lots sold had 10 head or less per lot, but these sales included only 8.5% of the total number of feeder cattle sold.

PRODUCERS' PRACTICES WHEN SELLING FEEDER CATTLE

The production and sale of feeder cattle is more widespread in the state than is the production and sale of any other type of feeder livestock. According to the 1940 study 42% of the farmers in the state reported selling feeder cattle. ^{1/} The percent of the farmers selling cattle varied from one section of the state to another. In all areas except the southeast or area seven ^{2/} the number of farms selling feeder cattle exceeded those selling slaughter cattle. That there is quite a contrast between areas, also, was shown by the 1940 study as the southeast (area seven) reported 55% selling slaughter cattle, while in the northwest (area one) only 15% reported sales of slaughter cattle. Reports of feeder cattle sales came from 71% of the farms in the northeast (area four) but from only 41% of the farms in the southeast (area seven).

^{1/} Cotton, W. OP. CIT. P. 13.

^{2/} Area designations as used in this study.

RELATIVE IMPORTANCE OF VARIOUS TYPES OF MARKETS WHEN SELLING FEEDER
CATTLE, BY AREAS AND THE STATE TOTAL

In the various areas of the state, the relative importance of the different types of markets varied considerably but in all areas either the auction (sale barn) or the terminal public market held the dominant position.

Table 15. Percent of Stocker and Feeder Cattle and Calves Sold Through Various Market Agencies by Farmers and Ranchers, by Areas and State Total, South Dakota, 1947

Area	TYPES OF MARKETS						TOTAL
	Terminal Public Market	Auction	Dealers	Order Buyers	Direct	Other	
I	13.3	46.3	7.5	6.6	24.4	1.9	100.0
II	25.2	30.3	19.1	15.2	9.0	1.2	100.0
III	31.0	53.0	13.0	2.0	1.0		100.0
IV	57.5	16.2	22.1		4.2		100.0
V	39.4	43.8			16.8		100.0
VI	53.2	25.3	11.0		10.5		100.0
VII	87.9	6.0	1.8		4.3		100.0
STATE TOTAL	34.8	41.3	10.1	4.3	8.7	0.8	100.0

From Table 15 it will be noted that in area one the ranchers sold slightly over 46% through the auction or sales ring. The next most important outlet in this area was that of direct marketing. In the case of direct marketing in this area some of the feeders are sold from one rancher to another for further grazing and the remainder

are sold to feeders in eastern South Dakota and other feeding areas through direct contacts established over a period of years.

In area two, the north central area, which is termed a transition area between the more intensive farming area to the east and the range area to the west, about 60% of the land is used for grazing and wild hay land. ^{1/} In this area the auction is still the most important outlet but not by as great a margin as in the west river range area. The auction takes slightly over 30% of all the feeder cattle sold in this area. The next market in importance is the terminal public market with 25% of the feeder cattle being sold there. (Table 15) Improved highway conditions and the fact that this area is nearer to the terminal public markets in North Dakota, South Dakota, and Minnesota probably accounts for the increase in sales to that type of outlet.

Dealers, order buyers, direct sales and other markets handled about 13, 15, 8 and 2.5%, respectively, in area two. This is the only area in the state in which the farmers and ranchers reported selling any appreciable amount through the order buyer market.

The auction was also the major market for feeder cattle in area three, the north James river area, as this type of market handled over 50% of the feeder cattle. (Table 15) The only markets of any great importance are the terminal public markets with slightly over 35% of the feeder cattle being sold here in 1947. The other markets outlets were of little importance for their combined total was only 16% of the feeder cattle sold in this area.

Continuing eastward to area four, the northeastern part of the state, it was found that the terminal public market held the lead in

the marketings of feeder cattle as almost 65% were sold at this agency. In this area the dealers were more important than the auctions as they handled about 22% whereas the auctions handled only slightly over 15% of the total. Sales to the order buyers and "other" outlets were negligible. Direct sales made up less than 10% of the total. As fewer feeder cattle are produced in this area relative to slaughter cattle it is logical that fewer would be sold to the auctions as the few feeder cattle that are sold are included with the sales of the slaughter cattle to the terminal public markets or the dealers.

In area five, which is also a transition area between the moderately intensive crop and livestock area to the east and the more extensive livestock range area to the west, ^{1/} the sales of feeder cattle were fairly evenly divided between the terminal public market and the auction with slightly under 40% going to the terminal public market and slightly under 45% to the auctions. Dealers, order buyers, and "other" outlets received only a negligible amount but sales directly to other feeders or ranchers totaled almost 20%. The increased number disposed of directly may be the result of the geographical location as this area is quite convenient for the feeders in eastern South Dakota to make personal contact with the producers.

The terminal public market was the dominant outlet for feeder cattle in area six the South James river area. This is the logical market for the feeder cattle in this area because relatively few are sold directly as feeders. They are usually sold as slaughter cattle with the few poorer ones and the odd lots being sold as feeders to the

terminal public market at the same time that the slaughter cattle are sold.

Sales to the auctions accounted for 25%, the sales to dealers and direct sales outlet slightly over 15% each with the order buyers and "other" outlets receiving a very small percent.

The sales of feeder cattle to the terminal public market in area seven, the southeastern area, included nearly 90% of the total number of the feeders sold in this area. This large percent sold at this market was probably due to two reasons; first, because of the nearness of the Sioux Falls terminal public market, and secondly, because relatively few feeder cattle are sold, those that are classed as feeders presumably were sold in the same sales as were the slaughter cattle to the terminal public market. The remaining feeder cattle sold in this area were almost equally divided between the auction, dealers, and direct sales. (Table 15, p 44)

In the state as a whole, the auction is the most important outlet for feeder cattle, accounting for almost 39% of the total sold. The market second in importance is the terminal public market with about 29% of the total sales. Dealers and order buyers accounted for slightly over 17%; direct sales about 14% and less than 2% to the other outlets. This is shown in Table 16.

From the information shown in Table 15, it is evident that the feeder cattle in the various farming areas of the state are sold at the type of market that is most convenient to the seller. This does not exclude the possibility of a financial advantage because of the type of market outlet which predominates in a certain area or section of the state.

Table 16. Number and Percent of Feeder Cattle and Calves of Various Ages Sold at Different Types of Markets, by 281 Farmers and Ranchers, South Dakota, 1947

Types of Markets :	NUMBER OF HEAD				Total
	Calves	Yearlings	2's & over	Mixed lots	
TPM	158	299	420		877
Auction	512	301	316	55	1184
Dealers & Order buyers	116	187	216	4	523
Direct	174	244	19		437
Farm sale		24			24
Other*	8				8
TOTAL	968	1055	971	59	3053
PERCENT OF VARIOUS AGES SOLD AT DIFFERENT MARKETS					
TPM	18.0	34.1	47.9		100.0
Auction	43.2	25.4	26.7	4.7	100.0
Dealers & Order buyers	22.2	35.7	41.3	.8	100.0
Direct	39.8	55.8	4.4		100.0
Farm Sale		100.0			100.0
Other*	100.0				100.0
TOTAL	31.7	34.6	31.8	1.9	100.0
PERCENT OF EACH AGE SOLD AT DIFFERENT MARKETS					
TPM	16.3	28.4	43.3		28.7
Auction	52.9	28.5	32.5	93.2	38.9
Dealers & Order buyers	12.0	17.7	22.2	6.8	17.1
Direct	18.0	23.1	2.0		14.3
Farm Sale		2.3			.8
Other*	.8				.2
TOTAL	100.0	100.0	100.0	100.0	100.0

* One sale to Coop. Shipping Association.

When the month of the year in which the sales were made was considered in relation to the various type of markets, Table 17 shows that farmers and ranchers sell throughout the year to the terminal public market and the auction but for all other types of markets the sales are largely concentrated in the last six months of the year. Dealers, order buyers, and the direct sales do not receive many cattle during the spring and the summer because the small number available during these seasons are not very economical for these agencies to handle. The small lots at the auctions and the terminal public market can be purchased and intermingled with the others by the feeders in order to make an economical unit to feed.

Table 17. Number of Head of Feeder Cattle and Calves that were Sold at the Various Types of Markets in Different Months by 261 Farmers and Ranchers, South Dakota, 1947

Month	TYPE OF MARKET					TOTAL
	TPM	Auction	Dealers**	Direct	Others***	
January	29	32	48	15		124
February	6	29		35		70
March	3	14				17
April	83	16	18	3	24	144
May	55	8		3		66
June	32	56				88
July	13	107	88	54		212
August	38	53	58	27		176
September	109	251	145	164		669
October	223	282	105	132	8	750
November	104	188	61	13		366
December	182	148		41		371
TOTAL	877	1184	523	437	32	3053

* Terminal Public Market

** Includes sales to order buyers

***24 head sold at a farm sale and 8 head at a cooperative shipping association.

SELLING FEEDER CATTLE BY WEIGHT OR BY THE HEAD AT THE VARIOUS MARKET OUTLETS

The selling of feeder cattle on a "by the head" or "lumping" basis is not very common with the farmers and ranchers of South Dakota as only about 20% of the total number of feeder cattle sold in 1947 were marketed on this basis.

Table 18. Percentage of Feeder Cattle and Calves Sold by Farmers and Ranchers by Weight by the Head by Areas, South Dakota, 1947

Method of Sale	AGRICULTURAL AREAS							STATE TOTAL
	I	II	III	IV	V	VI	VII	
By Weight	71.2	82.4	83.0	77.8	86.9	93.7	95.7	79.3%
By the Head	28.8	17.6	17.0	22.2	13.1	6.3	4.3	20.7%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 18 shows that in area one about 29%; in area 2, about 18%; area 3, about 17%; area 4, slightly over 22% and area 5 about 13% of the feeder cattle were sold by the head. In all of these areas except area four most of the feeder cattle were marketed through the auction rather than the terminal public market. The reason that a relatively high percentage of the feeders are sold by the head in area one results from the fact that there are quite a few head sold direct from one rancher to another. These cattle are usually resold later as feeders. As most ranchers do not have weighing facilities available, the cattle must almost of necessity be sold by the head. (See Table 14).

Areas six and seven have almost a negligible number sold by the head. Of the factors contributing to this result, the facts that most of the cattle are sold at the terminal public market and that few feeders are sold are probably the most important as over 98% of the feeders sold at the terminal public market were sold by weight.

On a state basis when considering the type of market and the method of sale it is noted that in all market categories except that of direct sales (Table 19) the majority of the cattle were sold by weight. In the case of the direct sales, as was stated before, the high percent of cattle sold by the head resulted from transfers between ranchers in the west river range area (area one)

RELATIONSHIP BETWEEN SEX AND CLASS AND THE METHOD OF SALE

When considering the relationship between the sex and class of the feeder cattle and the method of sale Table 20 shows that over 90% of the steers were sold by weight whereas in the case of heifers the percentage sold by weight falls down to slightly over 50%. There is no definite reason for this in the sense that they were sold as feeders. It probably results from selling of heifers to other producers perhaps to be used as breeding stock or because the ranchers believed that they could do better financially if the heifers were sold by the head. The consensus of opinion was that heifers are discriminated against when they are sold by weight.

Farmers and ranchers sold a relatively high percent of the calves, almost 29%, by the head. In the opinions of the producers, this was due to the fact that they believe that because calves are immature animals the price per hundredweight does not accurately reflect the

Table 19. Number and Percent of Head of Feeder Cattle and Calves that were Sold by Weight and by the Head at the Different Types of Markets, by 281 Farmers and Ranchers, South Dakota, 1947

Type of Markets	METHOD OF SALE		Total
	By Weight	By the Head	
TPM	865	12	877
Auction	1000	184	1184
Dealers	227	112	339
Order Buyers	156	28	184
Direct	166	271	437
Farm Sale		24	24
Other*	8		8
TOTAL	2422	631	3053

PERCENT SOLD BY WEIGHT AND BY THE HEAD AT EACH MARKET

TPM	98.6	1.4	100.0
Auction	84.4	15.6	100.0
Dealers	67.0	33.0	100.0
Order Buyers	84.8	15.2	100.0
Direct	38.0	62.0	100.0
Farm Sale		100.0	100.0
Other	100.0		100.0
TOTAL	79.3	20.7	100.0

PERCENT OF TOTAL SOLD BY WEIGHT AND BY HEAD AT EACH MARKET

TPM	35.7	1.9	28.7
Auction	41.3	29.2	38.8
Dealers	9.4	17.8	11.1
Order Buyers	6.4	4.4	6.0
Direct	6.9	42.9	14.3
Farm Sale		3.8	.8
Other	.3		.3
TOTAL	100.0	100.0	100.0

* One sale through a cooperative shipping association.

Table 20. Number and Percent of Feeder Cattle and Calves of Different Sexes and Classes that were Sold by Weight and by the Head by 281 Farmers, and Ranchers, South Dakota, 1947

Sexes and Classes	METHOD OF SALE		Total
	By Weight	By the Head	
Steers	959	90	1049
Heifers	150	107	257
Steers & Heifers	480	92	572
Calves	691	277	968
Cows	142	65	207
TOTAL	2422	631	3053

PERCENT SOLD BY WEIGHT AND BY THE HEAD IN EACH SEX AND CLASS

Steers	91.4	8.6	100.0
Heifers	58.4	41.6	100.0
Steers & Heifers	83.9	16.1	100.0
Calves	71.4	28.6	100.0
Cows	68.6	31.4	100.0
TOTAL	79.3	20.7	100.0

PERCENT OF TOTAL SOLD BY WEIGHT AND BY THE HEAD IN EACH SEX AND CLASS

Steers	39.6	14.3	34.4
Heifers	6.2	16.9	8.4
Steers & Heifers	19.8	14.6	18.7
Calves	28.5	43.9	31.7
Cows	5.9	10.3	6.8
TOTAL	100.0	100.0	100.0

* Lots of steers and heifers mixed, not the lots of steers or heifers alone added together.

actual value of the animal.

Slightly less than one-third of the feeder cows were sold by the head. The cows that enter the feeder market are usually those that are out of production or culls and are usually sold in small lots either to dealers or at auctions. In many cases it was felt that the per head basis is more beneficial financially or more convenient to the seller.

RELATIONSHIP BETWEEN THE AVERAGE WEIGHT AND THE SALE BY WEIGHT AND BY THE HEAD

That farmers and ranchers do not prefer to sell their feeder cattle by the head is further substantiated by Table 21. This table shows that the number of cattle sold by weight exceeded the number sold by the head in every weight class. The average weight classes of less than 400 pounds, 400-599 pounds, and 800-999 pounds had the largest percent sold "by the head" with 34.8%, 17.4% and 16.5%, respectively. The rather high percent sold by the head in the "under 400 pound" average weight class is attributed to the fact that the calves of this weight are definitely immature. This leads the sellers to believe that the price per pound would not adequately reflect the actual value of the livestock. The same reasoning would apply in a lesser degree to the 400-599 pound average weight class. The 800-999 pound average weight class would include most of the cows sold as feeders. As 16.5% of the total sold by the head were in this average weight class, this probably represents an attempt to secure the maximum return on the sale of feeder cows. This is assumed because farmers and ranchers believe that the price per pound does not truly represent the value of feeder cows.

Table 21. Number and Percent of Head of Feeder Cattle and Calves of Various Average Weights that were Sold by Weight and by the Head by 281 Farmers and Ranchers, South Dakota, 1947

Average Weight :	METHOD OF SALE		Total
	By Weight	By the Head	
Less than 400 lbs.	155	83	238
400 to 599 lbs.	683	144	827
600 to 799 lbs.	873	92	965
800 to 999 lbs.	441	87	528
1000 to 1199	247	21	268
1200 & over	10		10
No weight listed	13	204	217
TOTAL	2422	631	3053

PERCENT SOLD BY WEIGHT AND BY THE HEAD IN EACH WEIGHT CLASS

Less than 400 lbs.	65.2	34.8	100.0
400 to 599	82.6	17.4	100.0
600 to 799	90.5	9.5	100.0
800 to 999	83.5	16.5	100.0
1000 to 1199	92.2	7.8	100.0
1200 & over	100.0		100.0
No weight listed	6.0	94.0	100.0
TOTAL	79.3	20.7	100.0

PERCENT OF TOTAL SOLD BY WEIGHT AND BY THE HEAD IN EACH WEIGHT CLASS

Less than 400 lbs.	6.4	13.2	7.8
400 to 599	28.2	22.8	27.1
600 to 799	36.1	14.6	31.6
800 to 999	18.2	13.8	17.3
1000 to 1199	10.2	3.3	8.8
1200 & over	.4		.3
No weight listed	.5	32.3	7.1
TOTAL	100.0	100.0	100.0

Of the feeder cattle sold by weight, slightly over 36% (Table 21) were in the 600-799 pound class, which would include most of the one and two-year old feeders. The next most important average weight class sold on a weight basis is the 400-599 pound class.

The relationship between the various average weight classes for the cattle sold by the head is similar to that of those sold by weight with the 400-599 pound and 600-799 pound weight classes being in the highest position except for those feeders sold by the head for which no weight was given. This class constituted 32.3% of the total sold by the head.

Of the total number of feeder cattle sold both by weight and by the head, slightly over 31% were in the 600-799 pound class. Twenty-seven percent in the 400-599 pound class and about 17% in the 800-999 pound class with the remaining 25% quite evenly distributed between the other weight classes.

COMPARISON OF SIZE OF LOTS AND THE METHOD OF SALE

When considering the size of lot and the method of sale, it was found that in lots of all sizes the majority of the feeders were sold on a weight basis. The very small and the largest lots of over 50 head had the largest percent sold by the head. In the small lots of from 1 to 5 head slightly over 24% were sold by the head and in the lots of 51 head and over 40% were sold in this manner, as shown in Table 22.

It was found that the largest number (31.2%) of the cattle sold by weight were in lots of 11 to 20 head each. The next most important lot size in terms of number sold was the 21-50 group in which slightly over 26% of the total were sold. Of the feeders sold by the head the greatest percent were sold in the 21-50 and the 51 head and over

Table 22. Number and Percent of Head of Feeder Cattle and Calves Sold by Weight and by the Head when Sold in Lots of Different Sizes by 281 Farmers and Ranchers, South Dakota, 1947

Head per Lot	METHOD OF SALE		Total
	By Weight	By the Head	
1 to 5	259	83	342
6 to 10	451	76	527
11 to 20	756	105	861
21 to 50	641	157	798
51 & over	315	210	525
TOTAL	2422	631	3053

PERCENT SOLD BY WEIGHT AND BY THE HEAD IN LOTS OF DIFFERENT SIZES

1 to 5	75.7	24.3	100.0
6 to 10	85.6	14.4	100.0
11 to 20	87.8	12.2	100.0
21 to 50	80.3	19.7	100.0
51 & over	60.0	40.0	100.0
TOTAL	79.3	20.7	100.0

PERCENT OF TOTAL SOLD BY WEIGHT AND BY THE HEAD IN LOTS OF DIFFERENT SIZES

1 to 5	10.7	13.2	11.2
6 to 10	18.6	12.0	17.3
11 to 20	31.2	16.6	28.2
21 to 50	26.5	24.9	26.1
51 & over	13.0	33.3	17.2
TOTAL	100.0	100.0	100.0

classes. Each class accounted for 24.9% and 33%, respectively. The smaller lots of 1 to 5 head, 6 to 10 head and 11 to 20 head accounted for 13.2%, 12.0% and 16.6%, respectively.

RELATIONSHIP BETWEEN THE METHOD OF SALE AND THE AGE OF THE FEEDERS SOLD

In the comparison of the age of the various lots of feeder cattle sold and the method of sale it was found that the age group of under one year (calves) and the groups of two years and over were the most important in the "by the head" method of marketing with about 29% and 20% being sold by the head in each age class, respectively. Figure 10 (below) illustrates graphically the information included in Table 23 and on a state basis, which shows that farmers and ranchers are not favorable to selling on a per head basis but do so only because of the lack of weighing facilities, occasional small lots, or immature and old animals.

Figure 10. Percent of Feeder Cattle in Different Age Groups Sold by Weight and by the Head in South Dakota, 1947.

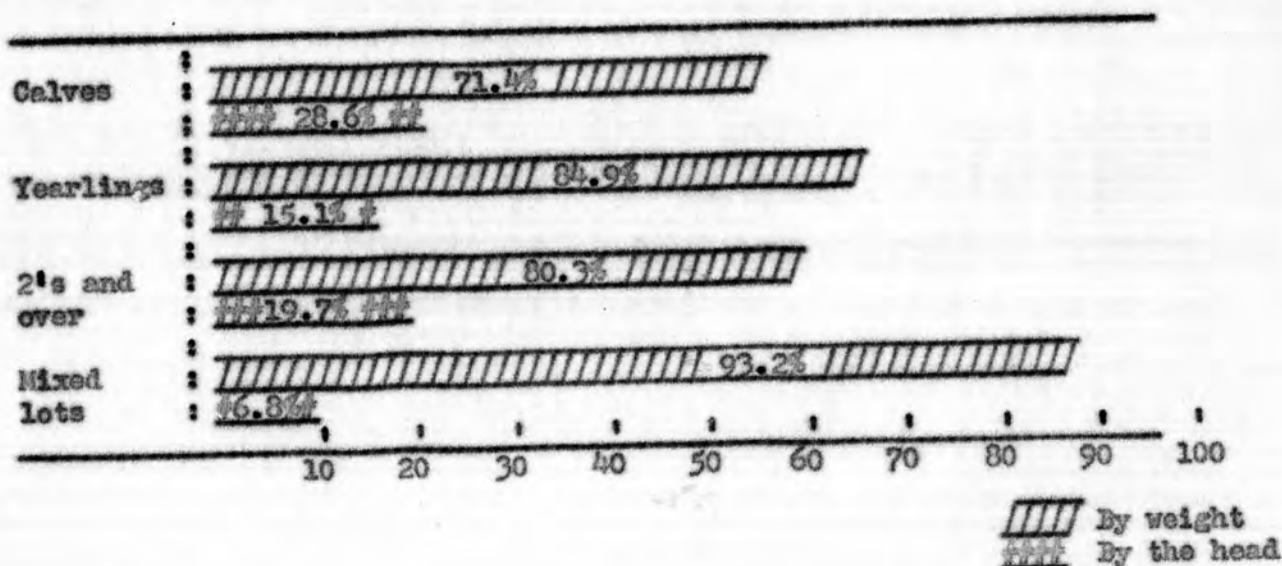


Table 23. Number and Percent of Head of Feeder Cattle and Calves of Different Ages that were Sold by Weight and by the Head by 281 Farmers and Ranchers, South Dakota, 1947

Age	METHOD OF SALE		Total
	By Weight	By the Head	
Calves	691	277	968
Yearlings	896	159	1055
Two's & over	780	191	971
Mixed lots*	55	4	59
TOTAL	2422	631	3053

PERCENT SOLD BY WEIGHT AND BY THE HEAD IN DIFFERENT AGE GROUPS

Calves	71.4	28.6	100.0
Yearlings	84.7	15.1	100.0
Two's & over	80.3	19.7	100.0
Mixed lots*	93.2	6.8	100.0
TOTAL	79.3	20.7	100.0

PERCENT OF TOTAL SOLD BY WEIGHT AND BY THE HEAD IN DIFFERENT AGE GROUPS

Calves	28.5	43.9	31.7
Yearlings	37.0	25.2	34.6
Two's & over	32.2	30.3	31.8
Mixed lots*	2.3	.6	1.9
TOTAL	100.0	100.0	100.0

* Lots made up of calves, yearlings, cows, etc.

METHODS OF TRANSPORTATION USED BY FARMERS AND RANCHERS WHEN
MARKETING FEEDER CATTLE

As used in this study, transportation of feeder cattle to the markets refers only to the method of movement from the producers' or sellers' place to the buyers'. In the case where the title to the cattle was transferred at the seller's place, the method by which the purchase was moved by the first buyer is used. This was done because it is impossible to trace a lot of feeder cattle through the various means of transportation from the producer or the seller to the final buyer or even as far as the terminal public market or auction in certain cases.

The relative importance of the various types of transportation in the different types of farming areas in the state is shown in Table 24. In all areas the hired truck is the most important means of transporting feeder cattle to the markets although this importance does vary between areas.

Table 24. Percentage of Feeder Cattle and Calves Transported to Markets or Other Outlets by Various Means by Farmers and Ranchers of South Dakota, by Area, 1947

Type of Transportation	AGRICULTURAL AREAS							State Total
	I	II	III	IV	V	VI	VII	
Own trucks	12.2	3.2	19.0	1/	1.3	2.0	9.5	9.0%
Hired trucks	56.8	53.0	72.3	73.6	98.7	98.0	88.8	66.7%
Buyers' trucks	7.4	33.7	7.4	26.3	1/	1/	1.7	12.4%
On foot	7.6	8.9	1.3	1/	1/	1/	1/	5.1%
Railroad	16.0	1.2	1/	1/	1/	1/	1/	6.8%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1/ Less than 1%.

In area one, the west river range area, in which the production of cattle for sale as feeders is relatively more important than in any other area of the state, the majority of the cattle were transported to markets by the hired trucks. The next most important means of transportation was by the railroad $\frac{1}{2}$, which accounted for 16.0% of the total sold. The use of the railroads as a means of transporting feeder cattle to the market from any area is largely limited to those shipments made to the more distant markets of which the terminal public market would be the most important.

The producers or sellers used their own trucks to transport slightly over 12% of the feeder cattle from the farms or ranches to the markets. The buyers transported 7.4% in their own trucks or in trucks hired by them, which was considered to be the same thing as the class of transportation was based on the producers' or sellers' viewpoint. The 7.6% that were transported to the market on foot would consist of those feeders sold from one producer to another or those sales to dealers who maintain places of business near enough to make transportation on foot feasible.

Farmers and ranchers in area two, the north central area, used the hired trucks to transport 53% of the feeder cattle marketed which is slightly less than was true in area one. In area two more than one-third of the total sold were transported by the buyers trucks. In this area dealers and order buyers bought more cattle than they purchased in any other area. This may account for the

1 "Railroad", as used here, includes movement to the railroad by foot or truck while the cattle are still in the possession of the seller. If the title to the cattle changed hands at the railroad, the means of transportation from the ranch to the railroad was considered as the means of transporting the cattle to the market.

rather large volume of feeders transported by the buyers' trucks. The producers' own trucks transported only 3.2% of the feeder cattle sold. Cattle that were marketed on foot amounted to 8.9% and by railroads only 1.2%, thus the hired trucks and the buyer's trucks were the major means of transporting feeder cattle to the markets in this area.

In area three, which is largely a cash grain area with the production of feeder cattle in a minor position, the hired trucks accounted for slightly over 72% of the feeder cattle marketed. Owners' trucks were of more importance in this area than in areas one and two as 19.0% of the cattle were moved in this manner. Buyers' trucks, foot transport and the railroads did not transport 9.0% of the total.

In the northeast section of the state, area four, which is quite near several terminal markets and auction barns, almost all of the cattle are either transported by means of hired trucks or by trucks of the buyers. The transportation categories of "own trucks", "on foot" and the "railroad" are of little importance in this area as shown by Table 24.

The area in which the hired truck transported the greatest percent of the cattle sold was area five or the south central area in which almost 99% of the feeder cattle were moved to market by this type of transportation. The only other transportation that moved any measurable amount of cattle was the sellers' own trucks and in this case it was less than 2% of the total sold.

The number of feeder cattle transported by the hired trucks in area six, the south James river area, was approximately the same as in area five and the farmers' or ranchers' trucks also moved about the same number or 2% of the total. Other types of

transportation were too small in volume of cattle moved to give a measurement.

Area seven, an area in which relatively few feeder cattle are sold, those cattle that were placed on the market as feeders were largely moved by hired trucks. In this area slightly under 10% were transported in the trucks of the owners.

As stated above, the hired trucks transported the great majority in all areas but this majority varied from over 98% in area five to 53% in area two. Hired trucks probably were used in the majority of the cases because of the convenience and economy offered by this means of transportation.

METHODS OF TRANSPORTATION IN RELATION TO THE SIZE OF LOTS SOLD

When the size of the lots sold is considered in relation to the method of transportation, it was discovered that in all sizes of lots the hired trucks transported the greater percent ranging from 77.0% in lots of 6 to 10 head to 55.0% in the lots of 21 to 50 head. Hired trucks transported 31.0% of the cattle which were sold in lots of 11 to 20 head. This size of lot was also important for the owners' trucks as slightly over 41.0% of the cattle moved by the owners' trucks were sold in lots of this size. The livestock moved to the markets by the owners' trucks were lighter and smaller in most cases as 55.4% of those transported by this type of transportation were calves, whereas, for the hired trucks only 27.4% were in this classification. (Table 26).

The buyers of feeder cattle, mainly dealers, order buyers and those buying direct transported only 12.4% of the feeders sold. In

Table 26. Number and Percent of Head of Feeder Cattle and Calves of Different Ages that were Transported from Farms and Ranches by Various Means by 281 Farmers and Ranchers, South Dakota, 1947

Age	MEANS OF TRANSPORTATION						Total
	Own Truck	Hired Truck	Buyer's Truck	On Foot	Foot to RR	Hired T to RR	
Calves	153	557	90	90	35	43	968
Yearlings	57	845	108	23	22		1055
2's & over	65	579	178	42	16	91	971
Mixed lots (by age)*	1	54	4				59
TOTAL	276	2035	380	155	73	134	3053
PERCENT SOLD IN DIFFERENT AGE GROUPS TRANSPORTED BY VARIOUS MEANS							
Calves	15.8	57.6	9.3	9.3	3.6	4.4	100.0
Yearlings	5.4	80.1	10.2	2.2	2.1		100.0
2's & over	6.7	59.6	18.3	4.3	1.7	9.4	100.0
Mixed lots (by age)	1.7	91.5	6.8				100.0
TOTAL	9.0	66.7	12.4	5.1	2.4	4.4	100.0
PERCENT OF TOTAL TRANSPORTED BY VARIOUS MEANS THAT WERE SOLD IN DIFFERENT AGE GROUPS							
Calves	55.4	27.4	23.7	58.0	48.0	32.1	31.7
Yearlings	20.6	41.5	28.4	14.9	30.1		34.6
2's & over	23.6	28.5	46.8	27.1	21.9	67.9	31.8
Mixed lots (by age)	.4	2.6	1.1				1.9
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Lots made up of calves, yearlings, cows, and 2's.

the case of the buyers' trucks the percent moved by this method increased with the increase in the size of the lots as follows: lots of 1 to 5 head, 9.7%; lots of 6 to 10 head, 13.2%; lots of 11 to 20 head, 22.4%, and lots of 21 to 50 head, 30.8% while with the large lots of 51 head and over the percent fell again to 23.9%. This shows that these buyers prefer to purchase the larger lots possibly because of the greater economy of buying in larger lots which is discussed in another section of this paper.

Movement of feeder cattle on foot is relatively unimportant as a means of transportation to the markets as only 5.1% of those sold were moved in this manner. Of the feeders moved on foot the great majority, 78.7%, were in lots of 21 to 50 and 12.3% were in lots of 11 to 20 head. It is evident that when moved on foot, most of the cattle are sold in larger lots.

When all or part of the movement from farm or ranch to the market was by means of the railroad the lots tend to be larger. This is probably due to the fact that carload lots are much more economical to ship. In the case where the cattle were sold in lots of 21 to 50 head and 47.9% in lots of 51 head and over. (Table 25) When the hired truck was used in conjunction with the railroad, slightly over 70% of the cattle transported by this means were in lots of over 51 head.

METHODS OF TRANSPORTATION USED IN MARKETING FEEDER CATTLE OF VARIOUS AVERAGE WEIGHTS AND AGES

In a previous portion of this paper a section was devoted to the study of the various methods of transportation and the relative importance of each in moving the cattle to the markets. This was

considered on an areal basis and it was discovered that although there was some variation between areas, the hired trucks were the most important means of transportation throughout the state.

Disregarding the relative importance of each type of transportation in regard to the number of cattle moved, this section of this paper will show the ages and average weight of the cattle that are most frequently moved by the different means of transportation. When the farmers used their own trucks for marketing feeder cattle slightly over 55% were calves and weighed under 600 pounds. (Tables 26 and 27)

Although feeder cattle of two years and over are normally heavier and harder to haul than the younger animals, this age group was second in importance when farmers used their own trucks. Twenty-three and six tenths percent of the own-truck moved cattle were two's or over. This is a result of the fact that dry cows and heifers that are not considered suitable for breeding purposes are not usually sold in large lots that would make an economical load for a commercial trucker. They are sold whenever the farmer has need for extra cash or the cattle are taken to the market as a payload whenever the truck may be going to or near the market on other business.

Yearling feeders constituted 20.6% of the total number that are moved in the owners trucks. As slightly over one-third of all feeders sold are in this age group it would be logical to assume, and Appendix Table 4 supports this assumption, that the greater number of the yearlings are sold in lots of from 11 to 50 head. These lots

Table 27. Number and Percent of Head of Feeder Cattle and Calves of Various Average Weights that were Transported by Different Means from Ranches and Farms to the Markets and Other Outlets, South Dakota, 1947

Average Weight	MEANS OF TRANSPORTATION						Total
	Own Truck	Hired Truck	Buyers Truck	On Foot	Foot to RR	Hired T to RR	
Less than 400 lbs.	31	56	35	46	35	35	238
400 to 599	122	574	56	68		7	827
600 to 799	66	724	130	5	22	18	965
800 to 999	10	292	145	7		74	528
1000 to 1199	40	180	3	29	16		268
1200 & over		8	2				10
No weight listed	7	201	9				217
TOTAL	276	2035	380	155	73	134	3053
PERCENT SOLD IN VARIOUS AVERAGE WEIGHTS TRANSPORTED BY VARIOUS MEANS							
Less than 400 lbs.	13.0	23.5	14.7	19.4	14.7	14.7	100.0
400 to 599	14.8	69.4	6.8	8.2		0.8	100.0
600 to 799	6.8	75.0	13.5	0.5	2.3	1.9	100.0
800 to 999	1.9	55.3	27.5	1.3		14.0	100.0
1000 to 1199	14.9	67.2	1.1	10.8	6.0		100.0
1200 & over		80.0	20.0				100.0
No weight listed	3.2	92.6	4.2				100.0
TOTAL	9.0	66.7	12.4	5.1	2.4	4.4	100.0

are too large to be handled economically in the trucks owned by the farmers as their trucks are not normally especially constructed for livestock transportation. Because the yearling feeders are sold in relatively large lots at relatively few times per year the farmers and ranchers hire the trucks built to transport livestock as a matter of economy and convenience.

The percentage of the number of cattle in the different age groups which were moved by the hired trucks is almost opposite from the percent moved by the farmers' and ranchers' own trucks. In this class of transportation the yearling feeders constituted slightly over 40% which is in support of the statement made in the discussion about owned trucks. Calves and feeders two years old and over were transported almost to an equal extent by the commercial trucks the percentage being 27.4 and 28.5, respectively.

Buyers using their own trucks, dealers, order buyers, and feeders buying direct, went to the other extreme from the practice of producers using their own trucks. Nearly one-half (46.8%) of the cattle sold that were transported in the buyers' trucks were two years old and over.

Only 5.1% of the feeder cattle sold were moved to the markets on foot. Of the number moved in this manner 58.0% were calves. This would indicate that the majority of the feeder cattle that are moved to the markets on foot are calves that are sold directly from one rancher to another nearby. Transportation on foot for long distances is not as common as formerly.

When the movement to the market was a combination of by foot and the railroad 48.0% of the total were calves, 30.1% were yearlings,

and 21.9% were two's and over. When hired trucks were used in combination with the railroad almost 68% were feeders of two years of age and over.

METHODS OF TRANSPORTATION IN RELATION TO THE TYPE OF MARKETS

When considering the method of transportation in relation to the type of markets it is evident that the loading method of transportation is not the same for all types of markets. When the producers used their own trucks as the means of moving the feeder cattle to the markets, over 95% of these cattle moved to the auctions or sale rings. This is because of the fact that the auctions are usually quite near to the place of production and that the lots sold at the auctions are usually small enough for the individual farmers to use their own trucks, which are usually not built for livestock transportation but are more often of the general-purpose type. As 95% of the cattle transported in the producers' trucks were sold at the auction, very few were sold or allotted to the other types of markets. (Table 28)

Hired trucks, the most important means of transporting feeder cattle from the farms and ranches to the markets, moved 66.7% of all the feeder cattle sold. Of this number, 36.4% were sold at the terminal public market, 43.7% were sold at the auctions, 5.9% were bought by the dealers, and 14.0% were sold directly to the other farmers, ranchers, or feeders. The order buyers used hired trucks very little when buying cattle as there were no lots in the sample that were sold to the other buyer and moved by the hired trucks. The hired trucks moved 84.4% of the cattle sold to the terminal

Table 28. Number and Percent of Feeder Cattle and Calves Sold at Different Types of Markets, that were Transported from Farms and Ranches by Various Means, South Dakota, 1947

Type of Market	MEANS OF TRANSPORTATION						
	Own Truck	Hired Truck	Buyers' Truck	On Foot	Foot to RR	Hired T to RR	Total
TPM	6	740			40	91	877
Auctions	264	890		30			1184
Dealers	4	121	198		16		339
Order Buyers			132		17	35	184
Direct	2	284	50	101			437
Farm Sale				24			24
Other*						8	8
TOTAL	276	2035	380	155	73	134	3053

PERCENT SOLD AT DIFFERENT TYPES OF MARKETS TRANSPORTED BY VARIOUS MEANS							
TPM	0.7	84.4			4.5	10.4	100.0
Auction	22.3	75.2		2.5			100.0
Dealers	1.2	35.7	58.4		4.7		100.0
Order Buyers			71.8	9.2		19.0	100.0
Direct	0.5	65.0	11.4	23.1			100.0
Farm Sale				100.0			100.0
Other*						100.0	100.0
TOTAL	9.0	66.7	12.4	5.1	2.4	4.4	100.0

PERCENT OF TOTAL TRANSPORTED BY VARIOUS MEANS THAT WERE SOLD AT DIFFERENT TYPES OF MARKETS							
TPM	2.2	36.4			54.8	67.9	28.7
Auction	95.7	43.7		19.3			38.8
Dealers	1.4	5.9	52.1		21.9		11.1
Order Buyers			34.7		23.3	26.1	6.0
Direct	.7	14.0	13.2	65.2			14.3
Farm Sale				15.5			.8
Other*						6.0	.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* One sale through a Cooperative Shipping Association.

public market, 75.2% of those sold at the auction, 35.7% of those bought by the dealers, and 65.0% of the direct sales. The rather low percent in the case of the dealers is due to the fact that many dealers have their own trucks. This is shown by the fact that 58.4% of the cattle purchased by dealers was moved in the buyers' or dealers' own trucks.

Buyers' trucks were of importance only in the case of dealers, order buyers and direct sales. Buyers' trucks are seldom used to transport feeder cattle to the terminal public market or the auction because the buyers at these markets usually do not know the origin of these cattle in advance. If the buyers at the terminal public market or auction did know the origin of the cattle beforehand they would most likely buy directly from the producer. Buyers' trucks moved 58.4% of the dealers' purchases, 71.8% of the order buyers, and 11.4% of the direct sales.

The cattle and calves moved into the feeder market on foot amounted to only 5.1% of the total number sold as feeders. Of this number, 19.3% went to the auctions, 65.2% to the other farmers and feeders as direct sales, and 15.5% were sold at the farm auctions, which was the only time that the farm sale was of any importance as a market outlet for feeder cattle.

When the cattle were moved on foot in combination with the railroad, a method of transportation which moved only 2.4% of the total number of cattle sold as feeders, the terminal market received 4.5%, the dealers 4.7% and the order buyers 9.2% of their total volume. Of the total number moved in this way 54.8% went to the terminal public markets, 21.9% to the dealers, and 23.3% to the order buyers. The hired trucks in combination with the railroad moved only 4.4%

of the total sold. This is a very small percent in comparison with the volume handled by the hired trucks alone. Of this number 67.9% were moved into the terminal public markets, order buyers took 26.1% and the remaining 6.0% were taken by other market channels.

CHAPTER V

METHODS AND PRACTICES OF FARMERS, RANCHERS, AND FEEDERS WHEN BUYING FEEDER CATTLE AND CALVES

Farmers, ranchers, feeders and others sold more feeder cattle than they bought in 1947. In all areas except area seven, the southeast section of the state, the sale of feeder cattle was greater than the purchase of the same type of cattle. According to the 1940 study, farmers in this area buy twice as many feeder cattle as they sell. This amounts to 65% of the feeder cattle purchased in the state. 1/ Farmers in another eastern area, (area three) bought an additional 10%. Data on the total number of feeder cattle bought and sold in the state was not obtained for 1947 but it should compare rather closely to the estimate made in 1940 when the farmers and ranchers sold an estimated 592,000 feeder cattle and calves and bought 456,000. This means that the remainder were either shipped out of the state or sold to buyers other than farmers or ranchers. 2/

METHODS OF TRANSPORTATION USED BY FARMERS, RANCHERS AND FEEDERS WHEN BUYING FEEDER CATTLE

When tabulating the data on the purchases of feeder cattle by the farmers, ranchers, and feeders in the various types of farming areas of the state, it was discovered that in area two, three, four, five and six, according to the sample, relatively few feeder cattle were purchased. Because of this these five areas are combined for all of the tables and analyses in this section of this paper.

1/ C.P. Cotton, "Livestock Marketing Practices in South Dakota", p. 26
2/ Ibid., p. 26

Farmers, ranchers, and feeders in the west river range area that bought feeder cattle used the hired truck to transport 61.8% of the cattle purchased in that area. The buyers' own trucks accounted for another 5.7% of the cattle purchased as feeders in this area. Although farmers and ranchers reported that 7.6% of the feeders sold were transported on foot, 1/ none of these reappeared in the purchases by other farmers or ranchers in the sample. The only other method of transportation that was of any importance when buying was that of the railroads. Thirty-two and five tenths percent of the total purchased were moved from the markets to the ranches, farms, or feedlots by this means.

In the entire section of the state east of the Missouri river, exclusive of area seven, the buyers' own trucks were used to a greater extent than in area one. Thirty-three and five tenths percent of the feeders bought in this combined area were transported to the farms, ranches, or feedlots by the buyers' trucks as shown in Table 29. Slightly over one-half (53.1%) were transported from the markets or point of purchase by hired trucks. Slightly over 2.0% were moved on foot. The railroads were used as the means of transportation for the remaining 11.0% of the cattle purchased as feeders by the farmers, ranchers, and feeders in this combined area.

1/ Table 24, page 60.

Table 29. Percentage of Feeder Cattle and Calves Bought by Farmers, Ranchers and Feeders that were Transported from the Markets or Place of Purchase by Various Means, South Dakota, 1947

Type of Transportation :	AGRICULTURAL AREAS					State Total
	I	II	III VI combined	IV V and	VII	
Own truck	5.7		33.5		1.3	9.5
Hired truck	61.8		53.1		81.1	65.2
On foot	<u>1/</u>		2.4		<u>1/</u>	0.8
Railroad	32.5		11.0		17.6	24.5
TOTAL	100.0		100.0		100.0	100.0

* Areas were combined because of the small number purchased in each area.

1/ Less than one percent.

In area seven, which is the most important feeding area of the state and the only area wherein the purchase of feeder cattle exceeds the sale of the same, 2/ 81.1% of all the feeder cattle and calves purchased were moved from the markets by the hired trucks. Own trucks and the movement of cattle on foot were very minor in this area as they moved only 1.3% together. Railroads were second in importance as a means of transporting feeders to the feedlots. This means of transportation moved 17.6% of the feeders purchased by farmers, feeders, and others.

For the state as a whole, the hired trucks were used to transport 65.2% of the feeder cattle from the markets to the farmers and feeders. The next in importance as a means of transportation were the railroads which handled almost one-fourth of the total. Own trucks were used

2/ Based on the data obtained in this study, almost twice as many feeder cattle were bought as sold in area seven.

for only 9.5% and less than 1.0% were moved to the farms and feedlots on foot.

METHODS OF TRANSPORTATION IN RELATION TO THE SIZE OF LOTS PURCHASED

When buying feeder cattle, the farmers, ranchers and feeders bought the various sized lots in almost equal proportions. Of the 35 lots purchased in the sample, 8 lots had from 1 to 5 head, 7 lots had from 6 to 10 head, 8 lots had from 11 to 20 head, 8 lots had from 21 to 50 head and 4 lots had 51 head and over. 1/

When the purchasers of the feeder cattle used their own trucks 74.4% of the cattle bought were in lots ranging in size from 21 to 50 head and 20.7% were in lots ranging from 21 to 50 head per lot. As will be noted in table 30, the owners' trucks transported no cattle in the lots of 6 to 10 head nor in the lots of 51 head or over. The fact that there were no lots of 6 to 10 head can probably be attributed to sampling error but the omission of the larger sized lots would be expected as the larger lots would be more economically transported in the hired trucks that are especially constructed for this purpose.

When hired trucks were used to transport feeder cattle from the markets to the farms and feedlots the percent of cattle moved by this means increased as the size of lot increased. As shown in Table 30, only 1.1% were in lots of 1 to 5 head, 4.6% in lots of 6 to 10 head, 20.7% in lots of 11 to 20 head, 33.5% in lots of 21 to 50 head, and 40.1% in lots of 51 head and over. This shows that as the size of lots increased, the purchasers used the hired trucks more because they were more convenient, economical or for some other reason.

Table 30. Number and Percent of Feeder Cattle and Calves Bought in Lots of Different Sizes that were Transported by Various Means by 281 Farmers, Ranchers and Feeders, South Dakota, 1947

Size of Lot	MEANS OF TRANSPORTATION				Total
	Own Truck	Hired Truck	On Foot	Railroad	
1 to 5	4	6	7		17
6 to 10		26			26
11 to 20	17	116		26	159
21 to 50	61	188		39	288
51 & over		225		146	371
TOTAL	82	561	7	211	861
PERCENT SOLD IN LOTS OF DIFFERENT SIZES TRANSPORTED BY VARIOUS MEANS					
1 to 5	4.9	1.1	100.0		2.0
6 to 10		4.6			3.0
11 to 20	20.7	20.7		12.3	18.5
21 to 50	74.4	33.5		18.5	33.4
51 & over		40.1		69.2	43.1
TOTAL	100.0	100.0	100.0	100.0	100.0
PERCENT OF TOTAL TRANSPORTED BY VARIOUS MEANS THAT WERE SOLD IN LOTS OF DIFFERENT SIZES					
1 to 5	23.5	35.3	41.2		100.0
6 to 10		100.0			100.0
11 to 20	10.7	72.9		16.4	100.0
21 to 50	21.2	65.3		13.5	100.0
51 & over		60.6		39.4	100.0
TOTAL	9.5	65.2	0.8	24.5	100.0

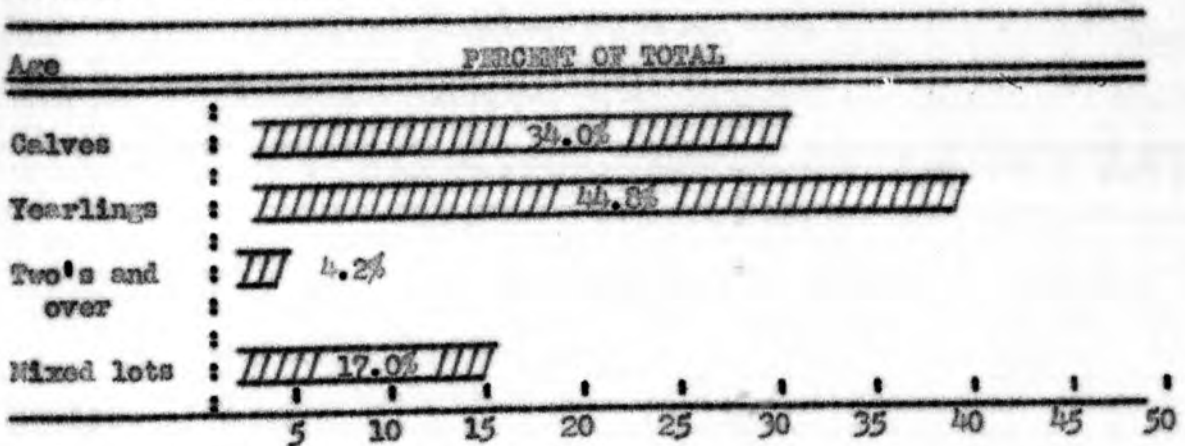
The number of cattle transported by the railroads also increased with the increase in the size of the lots with 12.3% in lots of 11 to 20 head, 18.5% in lots of 21 to 50 head, and 69.2% in lots of 51 head and over. The great increase in the lots of 21 to 50 head and 51 head and over is partially due to the fact that carload lots or over have cheaper freight rates than less-than-car load lots.

RELATIONSHIP BETWEEN THE AGE OF THE FEEDERS PURCHASED AND THE TYPE OF TRANSPORTATION USED

In this study both the feeder cattle purchased and those sold were classified into four age groups, i.e. calves, yearlings, two-years old and over, and mixed lots as to age. Mixed lots are interpreted, as defined in the section on definitions, to mean lots of cattle that were made up of calves, yearlings, etc which could not be classified into definite age groups.

As is evident from Figure 11 (below) and Table 31, the purchase of calves and yearlings together made up almost 79% of the feeders

Figure 11. Percent of Feeder Cattle Purchased in Each Age Classification, South Dakota, 1947



purchased in the state. The other two age classifications made up slightly over 21% of the total. Tables 31 and 32 show that farmers

Table 31. Number and Percent of Head of Feeder Cattle and Calves of Different Ages that were Transported by Various Means from the Markets, or from the Regions where They were Produced to the Farms, Feedlots, and Ranches, South Dakota, 1947

Age	MEANS OF TRANSPORTATION				Total
	Own Truck	Hired Truck	On Foot	Railroad Only	
Calves	60	233			293
Yearlings	19	301	1	65	386
2's & over	3	27	6		36
Mixed lots*				146	146
TOTAL	82	561	7	211	861
PERCENT OF DIFFERENT AGES TRANSPORTED BY VARIOUS MEANS					
Calves	20.5	79.5			100.0
Yearlings	4.9	78.0	0.3		100.0
2's & over	8.3	75.0	16.7		100.0
Mixed lots*				100.0	100.0
TOTAL	9.5	65.2	0.8	24.5	100.0
PERCENT TRANSPORTED BY VARIOUS MEANS THAT WERE OF DIFFERENT AGES					
Calves	73.2	41.5			34.0
Yearlings	23.2	53.7	14.3	30.8	44.8
2's & over	3.6	4.7	85.7		4.2
Mixed lots*				69.2	17.0
TOTAL	100.0	100.0	100.0	100.0	100.0

* Lots containing calves, yearlings, and cows.

Table 32. Number and Percent of Head of Feeder Cattle and Calves of Various Average Weights that were Transported by Different Means to Farms, Feedlots, and Ranches from Markets, or from the Regions where They were Produced, by 281 Farmers, Ranchers, and Feeders, South Dakota, 1947

Average Weight	MEANS OF TRANSPORTATION				Total
	Own Truck	Hired Truck	On Foot	Railroad	
Less than 400 lbs.		65			65
400 to 599	61	225	1		287
600 to 799	21	230	5	65	321
800 to 999		21	1		22
No weight listed		20		146	166
TOTAL	82	561	7	211	861

PERCENT OF NUMBER IN VARIOUS WEIGHT CLASSES TRANSPORTED BY DIFFERENT MEANS

Less than 400 lbs.		100.0			100.0
400 to 599	21.2	78.4	0.4		100.0
600 to 799	6.5	71.7	1.6	20.2	100.0
800 to 999		95.5	4.5		100.0
No weight listed		12.0		88.0	100.0
TOTAL	9.5	65.2	0.8	24.5	100.0

PERCENT OF NUMBER TRANSPORTED BY VARIOUS MEANS IN DIFFERENT WEIGHT CLASSES

Less than 400 lbs.		11.6			7.5
400 to 599	74.4	40.1	14.3		33.3
600 to 799	25.6	41.0	71.4	30.8	37.3
800 to 999		3.7	14.3		2.6
No weight listed		3.6		69.2	19.3
TOTAL	100.0	100.0	100.0	100.0	100.0

and ranchers buy mostly feeder calves that weigh from 400 to 599 pounds when using their own trucks as the means of transportation. The calves transported by the buyers' trucks made up only one-fifth of the total number of the calves purchased but constituted 73.2% of the total number of feeder cattle moved by the buyers' trucks. Yearlings were the only other class of feeders that were transported to any extent by the buyers' own trucks as slightly over 23% of the total transported by this type of transportation were in this age group.

When purchasing feeders, the farmers, ranchers and feeders used the hired trucks to transport 75% and over of all ages of feeders except those lots wherein the ages were mixed, that is, lots of calves, yearlings, etc. together. Of those feeders transported to the feedlots by the hired trucks, the majority were calves and yearlings. Calves made up 41.5% and yearlings 53.7% of this total. The two year old and over feeders were relatively few as they made up less than 5.0% of the total transported by the hired trucks.

BUYING FEEDER CATTLE BY THE HEAD AND BY WEIGHT, ACCORDING TO AREAS,
IN SOUTH DAKOTA

According to the data obtained in the 1947 survey shown in Table 33, cattle were purchased almost entirely by weight in the section of the state east of the Missouri river. In the combined area consisting of areas two, three, four, five and six, 98.0% of the cattle purchased for feeding was bought on the basis of weight. 1/

1/ Areas two, three, four, five and six were combined because of few feeder cattle purchased by the sample farms in each area.

Table 33. Percentage of Feeder Cattle and Calves that were Bought by the Head and by Weight by Farmers, Ranchers and Feeders by Areas and State Total, South Dakota, 1947

Method of Purchase :	AREAS OF THE STATE				State Total
	I	II III IV V & VI Combined	VII		
By weight	35.0	98.0	96.0		63.9%
By the head	65.0	2.0	4.0		36.1%
TOTAL	100.0%	100.0%	100.0%		100.0%

The farmers in area seven purchased 96.0% of their feeder cattle by weight. The four percent that were purchased by the head possibly were several small lots purchased by small feeders or perhaps one or two larger lots purchased on the western range by a larger feeder. The fact that weighing facilities are quite convenient in this area may be a contributing factor to the large percent bought by weight. Most of the farmers and ranchers expressed the opinion that the sale or purchase by weight was the most equitable for both parties if weighing facilities were conveniently located. Selling by weight eliminates some of the advantage one party to a sale or purchase might have over the other in judging the weight and value of the cattle.

In area one, the west river range area, the purchases of feeder cattle by weight were less than those purchased by the head. Only 35.0% of the feeders changed hands on the basis of price per pound, whereas 65.0% were purchased at a lump sum per head. In this area relatively few feeders were purchased in comparison to those sold. Those feeders that were purchased by the ranchers in area one were usually bought from a neighbor or at least another rancher. Therefore,

facilities are very seldom available or convenient for weighing even though practice might be desired by both parties. Also, many of the feeders purchased in this area are calves and short yearlings for which the price per pound is not considered as equitable in view of their immaturity.

PURCHASING FEEDER CATTLE BY WEIGHT AND BY THE HEAD AT THE DIFFERENT TYPES OF MARKETS

The practice of buying feeder cattle by the head seems to be decreasing quite rapidly. Thus, in 1947 almost 64.0% of the feeder cattle were bought by weight whereas in 1940, 55.0% were bought in this manner. ^{1/} In other words, there was an increase of over 16% in the purchases by weight in seven years.

When considering the method of purchase at the various markets it was discovered that no feeder cattle were bought at the terminal public market by the head although the buyer is given the option of buying by the head if this is agreeable with the seller. (Table 34) Purchases at the auction were almost entirely by weight, for only 2.3% of the total purchased at this market were bought by the head.

Purchases from dealers and order buyers were 100.0% by weight, while the direct purchases and those purchased at the farm sales were respectively 84.3% and 100.0% by the head. As stated in the previous discussion on the methods of purchase in each area, most of the direct purchases were between farmers and ranchers in the west river area and consisted mainly of calves and other young, immature stock. Purchases at farm sales must almost of necessity be by the head because very few farms have facilities available for weighing

^{1/} W. P. Cotton, op. cit. P. 30.

Table 34. Number and Percent of Head of Feeder Cattle and Calves Bought by Weight and by the Head at Different Types of Markets, by 281 Farmers and Ranchers, South Dakota, 1947

Type of Market	METHOD OF PURCHASE		Total
	By Weight	By the Head	
TPH	204		204
Auctions	256	6	262
Dealers & Order Buyers	39		39
Direct	51	274	325
Farm Sale		31	31
TOTAL	550	311	861

PERCENT BOUGHT BY WEIGHT AND BY THE HEAD AT VARIOUS MARKETS

TPH	100.0		100.0
Auctions	97.7	2.3	100.0
Dealers & Order Buyers	100.0		100.0
Direct	15.7	84.3	100.0
Farm Sale		100.0	100.0
TOTAL	63.9	36.1	100.0

PERCENT OF TOTAL BOUGHT BY WEIGHT AND BY THE HEAD AT VARIOUS MARKETS

TPH	37.1		23.7
Auctions	46.1	1.9	30.4
Dealers & Order Buyers	7.1		4.5
Direct	9.3	88.1	37.8
Farm Sale		10.0	3.6
TOTAL	100.0	100.0	100.0

cattle.

RELATIONSHIP BETWEEN SIZE OF LOT AND THE METHOD OF PURCHASE

In this study the lot sizes were divided into five classes consisting of lots of from 1 to 5 head, 6 to 10 head, 11 to 20 head, 21 to 50 head, and 51 head and over. These lot sizes were chosen because they seemed most nearly to fit the sales of the various sizes of farms. The smallest group would represent less than a truckload, the next two lot sizes would represent truckloads of various sizes, and the two largest groups, carloads or their equivalent.

Feeder cattle bought by the head were important in the small lots and the largest lots only, as 58.8% of the feeders purchased in lots of 1 to 5 head and 71.7% of those purchased in lots of over 51 head were purchased by this method. As the size of the lots purchased increased from 1 to 50 head, the percent purchased by weight increased ranging from 41.2% for lots of 1 to 5 head to 95.5% for lots of 21 to 50 head.

When the feeder cattle are purchased by weight the percent of the total that were in each lot classification increased as the size of the lots increased up to the large lots of 51 and over, as Table 35 shows. The small lots of 1 to 5 head included 1.3%; lots of 6 to 10 head, 3.6%; lots of 11 to 20 head, 26.0%; and lots of 21 to 50 head, 50.0% of the total number that were purchased by weight. In the case of the large lots of 51 head and over only 19.1% were bought by weight, which is not necessarily an indication that the larger lots are usually bought by the head but it is more likely that by chance more rather large lots showed up in the "bought by the head" class. It seems reasonable to suppose that it would be more desirable and equitable for both buyer and seller to transact business in large

Table 35. Number and Percent of Head of Feeder Cattle and Calves Bought by Weight and by the Head in Lots of Different Sizes by 281 Farmers, Ranchers and Feeders, South Dakota, 1947

Size of Lot	METHOD OF PURCHASE		
	By Weight	By the Head	Total
1 to 5	7	10	17
6 to 10	20	6	26
11 to 20	143	16	159
21 to 50	275	13*	288
51 & over	105	266	371
TOTAL	550	311	861
PERCENT BOUGHT BY WEIGHT AND BY THE HEAD IN LOTS OF DIFFERENT SIZES			
1 to 5	41.2	58.8	100.0
6 to 10	76.9	23.1	100.0
11 to 20	89.9	10.1	100.0
21 to 50	95.5	4.5	100.0
51 & over	28.3	71.7	100.0
TOTAL	63.9	36.1	100.0
PERCENT OF TOTAL BOUGHT BY WEIGHT AND HEAD IN LOTS OF DIFFERENT SIZES			
1 to 5	1.3	3.2	2.0
6 to 10	3.6	1.9	3.0
11 to 20	26.0	5.2	18.5
21 to 50	50.0	4.2	33.4
51 & over	19.1	85.5	43.1
TOTAL	100.0	100.0	100.0

* Due to converting all area totals to one state total on a percentage basis.

lots by weight rather than by "lumping".

RELATIONSHIP BETWEEN THE AGE AND THE METHOD OF PURCHASING FEEDER CATTLE

When comparing the methods of purchase (by the head or by weight) with the age of the livestock bought for feeding, it is noted that, farmers and ranchers bought calves on nearer equal basis than any other age group. Almost 54% of the calves were bought by weight and slightly over 46% were bought by the head. Altogether calves constituted 34.0% of the total number of feeders bought. Yearlings, which made up 44.8% of the total feeders purchased, were purchased almost 96% by weight. Two year old and over feeders were only a small percent of the total number bought but almost two-thirds of this age class were purchased on a weight basis. Feeders bought in lots of mixed ages were quite numerous as 17% of all the feeders purchased were in this class. In this age classification all of the feeders were bought by the head, according to the data obtained in the 1947 survey and as tabulated in Table 36.

Table 37 shows the relationship between the sex and class of the feeders purchased and the method of purchase. In the case of steers it will be noted that almost 97% were purchased by weight. As steers are more often bought for the purpose of feeding it is quite evident that the majority of the purchasers of feeders feel that in most cases this method has an advantage over buying on a per head basis.

Heifers, when bought for feeding, were also largely handled on a weight or per pound basis but when heifers and steers were in mixed lots by sex the majority of the purchasers seemed to prefer buying by the head as over 87% in this class were purchased by this method.

Table 36. Number and Percent of Head of Feeder Cattle and Calves of Different Ages that were Bought by Weight and by the Head, by 281 Farmers, Ranchers, and Feeders, South Dakota, 1947

Age	METHOD OF PURCHASE		Total
	By Weight	By the Head	
Calves	158	135	293
Yearlings	370	16	386
Two's & over	22	14	36
Mixed lots*		146	146
TOTAL	550	311	861

PERCENT BOUGHT BY WEIGHT AND BY THE HEAD IN DIFFERENT AGE GROUPS

Calves	53.9	46.1	100.0
Yearlings	95.9	4.1	100.0
Two's & over	61.1	38.9	100.0
Mixed lots*		100.0	100.0
TOTAL	63.9	36.1	100.0

PERCENT OF TOTAL BOUGHT BY WEIGHT AND BY THE HEAD IN DIFFERENT AGE GROUPS

Calves	28.7	43.4	34.0
Yearlings	67.3	5.2	44.8
Two's & over	4.0	4.5	4.2
Mixed lots*		46.9	17.0
TOTAL	100.0	100.0	100.0

* Lots containing calves, yearlings, two's and over.

Table 37. Number and Percent of Head of Feeder Cattle and Calves of Different Sexes and Classes Bought by Weight and by the Head by Farmers, Ranchers, and Feeders, South Dakota, 1947

Sex and Class	METHOD OF PURCHASE		Total
	By Weight	By the Head	
Steers	252	8	260
Heifers	106	20	126
Heifers & Steers*	21	146	167
Calves	159	135	294
Cows	12	2	14
TOTAL	550	311	861
PERCENT BOUGHT BY WEIGHT AND BY THE HEAD IN DIFFERENT SEXES AND CLASSES			
Steers	96.9	3.1	100.0
Heifers	84.1	15.9	100.0
Heifers & Steers*	12.6	87.4	100.0
Calves	54.1	45.9	100.0
Cows	85.7	14.3	100.0
TOTAL	63.9	36.1	100.0
PERCENT OF TOTAL BOUGHT BY WEIGHT AND BY THE HEAD IN DIFFERENT SEXES AND CLASSES			
Steers	45.8	2.6	30.2
Heifers	19.3	6.4	14.6
Heifers & Steers*	3.8	47.0	19.4
Calves	28.9	43.4	34.2
Cows	2.2	.6	1.6
TOTAL	100.0	100.0	100.0

* Steers and heifers sold in mixed lots.

MARKETS THROUGH WHICH FARMERS, RANCHERS, AND OTHERS
PURCHASED FEEDER CATTLE

When buying stocker and feeder cattle the farmers, ranchers and other buyers of the state did not patronize the markets in the same proportion as when selling. ^{1/} The auction was the leading market for the sale of feeder cattle but when purchasing the proportion is somewhat different. Table 38 shows that 37.5% of the feeders, the greatest percent at any one market, were bought direct whereas when selling only 14.3% were sold through these channels. ^{2/} This difference is due to the fact that there are many more sellers of feeder cattle in South Dakota than buyers. This fact prevents all sellers from making direct contact with the buyers of the livestock even though it may be desirable to do so.

Auctions were second in importance as a source of feeder livestock for the farmers and others when purchasing. Some of the reasons for buying at the auctions as stated by the farmers are: 1. most convenient market, 2. only place available, 3. can bid my own price, 4. can look cattle over better before buying, 5. get cleaner cattle than at the TPM. The most frequent reasons given for purchasing at the auctions were the first three with the third appearing the most frequently. Whether there is much actual truth in this statement is doubtful as the bids must meet the competition at the other markets and of the other buyers present at the sales. Of course, the reasons given for buying at the other markets were very similar but this cannot be termed inconsistent, as each purchaser has his own individual situation and problem with which to contend when giving his reasons for patronizing a certain market.

^{1/} Table 19, page 52
^{2/} Ibid.

Table 38. Number and Percent of Head of Feeder Cattle and Calves that were Bought at Various Types of Markets, in Different Months, South Dakota, 1947

Month of Purchase:	TYPES OF MARKETS					Total
	TPM	Auction	Dealers & O. Buyers	Direct	Other	
January						2
February				2		2
March	20			2		22
April				146	20	166
May	20	6				26
June				120		120
July						
August	32	60		12		104
September				5		5
October	72	82	39	38	10	241
November	18	114				132
December	42				1	1
TOTAL	204	262	39	325	31	861

PERCENT OF HEAD BOUGHT AT VARIOUS MARKETS, IN DIFFERENT MONTHS

January						100.0
February				100.0		100.0
March	90.9			9.1		100.0
April				88.0	12.0	100.0
May	76.9	23.1				100.0
June				100.0		100.0
July						100.0
August	30.8	57.7		11.5		100.0
September				100.0		100.0
October	29.9	34.0	16.2	15.7	4.2	100.0
November	13.6	86.4				100.0
December	97.7				2.3	100.0
TOTAL	23.7	30.4	4.5	37.8	3.6	100.0

AGE OF FEEDER CATTLE PURCHASED AT THE VARIOUS TYPES OF MARKET OUTLETS

The age groups that are the most important when feeders are purchased are those of calves and yearlings. The yearlings lead in number with 44.8% and the calves are next with 14.0% of the total feeders purchased by farmers and ranchers of South Dakota as shown in Table 40.

Of the feeder cattle bought at the terminal public markets, 53.9% were yearlings and 36.3% were calves, with the cattle of two years and over making up the remainder. The yearling feeders were of the most importance at the auctions also as 44.0% of all the feeders purchased at this market were yearlings. Calves were quite important also as 30.7% of the volume purchased at the auctions were in this group. Dealers and order buyers were relatively unimportant as a market for the purchase of feeder cattle according to the data available but of those purchased at these outlets all were in the yearling age class.

Direct purchases made up one of the more important sources when buying feeder cattle, as 37.8% of all feeder cattle purchased originated at this type of market. The auction was next in importance as the source of feeder cattle. The auction received 38.8% of the feeder cattle sold and handled 30.4% of those purchased by the farmers and ranchers of South Dakota in 1947, 1 thus being the most important market for feeder stock in this state. Almost 45% of the feeder cattle purchased direct from the producers were in lots of mixed ages according to the data available. This percentage is no doubt somewhat exaggerated because of one or two large lots that were obtained

1 Tables 19, 38 and 39.

Table 39. Percentage of Feeder Cattle and Calves Bought by Farmers, Ranchers and Feeders Through Various Agencies, by Areas, South Dakota, 1947

Type of market	AREAS OF THE STATE			
	I	II III IV V & VI combined	VII	State
TPM		31.1	60.8	23.7
Auction	34.6	35.4	18.9	30.4
Dealers & order buyers			17.6	4.5
Direct	58.9	32.9	2.7	37.8
Other	6.5	.6		3.6
TOTAL	100.0	100.0	100.0	100.0

in the sample. Another age group that made up quite a large percent of those purchased direct was that of the calves.

The terminal market as place of purchase for feeder cattle ranked third in importance with 23.7% of the total bought, which is also less than the percent sold at this market. ^{1/}

Farm sales as a source of feeder cattle were almost negligible in importance as only 3.6% of the total number of cattle purchased as feeders were obtained through these channels. Those feeders that were purchased at the farm sales were quite evenly divided as to age groups, 32.3% being calves, 41.9% yearlings, and 25.8% two's and over.

No purchases were reported as being made through the order buyers but it would seem logical that some of the larger feeders in the state would avail themselves of the service provided by this type of market agency. The reason that no purchases from order buyers appeared in the study is probably because there are relatively few order buyers

^{1/} Table 19.

Table 40. Number and Percent of Head of Feeder Cattle and Calves of Various Ages that were Bought at the Different Types of Markets by 281 Farmers, Ranchers, and Feeders, South Dakota, 1947

Type of Markets	AGE OF CATTLE BOUGHT				Total
	Calves	Yearlings	2's & over	Mixed Lots	
TPM*	74	110	20		204
Auction	90	170	2		262
Dealers & Order Buyers		39			39
Direct	119	54	6	146	325
Farm Sale	10	13	8		31
TOTAL	293	386	36	146	861

PERCENT OF NUMBER BOUGHT AT EACH MARKET IN DIFFERENT AGE GROUPS

TPM*	36.3	53.9	9.8		100.0
Auction	34.3	64.9	0.8		100.0
Dealers & Order Buyers		100.0			100.0
Direct	36.6	16.6	1.9	44.9	100.0
Farm Sale	32.3	41.9	25.8		100.0
TOTAL	34.3	44.8	4.2	17.0	100.0

PERCENT OF EACH AGE BOUGHT AT DIFFERENT MARKETS

TPM*	25.3	28.5	55.6		23.7
Auction	30.7	44.0	5.5		30.4
Dealers & Order Buyers		10.1			4.5
Direct	40.6	14.0	16.7	100.0	37.8
Farm Sale	3.4	3.4	22.2		3.6
TOTAL	100.0	100.0	100.0	100.0	100.0

* Terminal Public Markets.

in comparison with the number of other markets.

It is concluded that farmers and ranchers usually buy their feeders wherever most convenient, where available, because of contacts made in previous years which gave them the satisfaction they desired, or because they felt that the market at which they have purchased their feeders offered them the best quality animals at the most reasonable prices.

RELATIVE IMPORTANCE OF VARIOUS SIZE LOTS OF FEEDER CATTLE BOUGHT

The average number of feeder cattle and calves bought per lot by farmers, ranchers and feeders was 24 head in 1947, but this does not show the relative importance of the various size lots purchased. From Table 41 it is evident that farmers and others who buy cattle and calves to feed prefer to buy in lots of more than 10 head because over 65% of all of the lots bought were larger than 10 head per lot. Another good indication that large lots are preferred is that only 5% of the number of feeder cattle and calves bought were in lots of less than 10 head.

Table 41. Number and Percent of Feeder Cattle and Calves Bought in Lots of Various Sizes by 281 Farmers and Ranchers, South Dakota, 1947

Size of lot	Number of lots	Number of head	Percent of lots bought	Percent of number bought	Average size lot bought
1 to 5	8	17	22.9	2.0	2.0
6 to 10	4	26	11.4	3.0	6.5
11 to 20	9	159	25.7	18.5	17.6
21 to 50	9	288	25.7	33.4	32.0
51 & over	5	371	14.3	43.1	74.0
TOTAL	35	661	100.0%	100.0%	24.6

The fact that the majority of the lots of feeder cattle and calves bought are larger than 10 head per lot is another indication that the producers of feeder cattle would find it to their advantage to make an attempt to sell in larger lots. This would economize on transportation and offer the possibility of a higher price per hundredweight paid by buyers for the larger lots of cattle.

CHAPTER VI

PRICE DIFFERENTIALS BETWEEN TWO OR MORE FEEDER CATTLE THAT ARE IDENTICAL EXCEPT FOR CERTAIN SPECIFIED CHARACTERISTICS

The farmers and ranchers interviewed were asked to express their opinions concerning the price differentials between two or more feeder cattle that were identical except for certain specified characteristics. 1/ The questions concerning the price differentials were included in order to establish some basis for the evaluation of castration, dehorning, sale of large lots and the production of a definite breed of beef cattle. In each case the differential is that amount which the farmers or ranchers would be willing to pay in addition in order to purchase the animal with the characteristics which they preferred.

PRICE DIFFERENTIALS BETWEEN STEER AND BULL CALVES

Much has been said about the relative value of castration. One of the questions requested the farmers and ranchers to state what they thought the differential should be or what difference in price they would be willing to pay in order to buy a steer calf instead of a bull calf. The tabulation of the answers to this question is shown in Table 42. Originally the differentials were taken in whatever amount the farmers and ranchers felt the differences should be. In this analysis, the differentials were placed in class intervals of \$0.50 for the sake of clarity. 2/

The differentials are tabulated by areas and by state totals in all tables. Table 42 shows that in areas one, two, three, and four the greatest number favored a differential in the \$1.51 to

1/ Appendix, Schedule I, Last nine questions.

2/ This is true of all tables, 42 through 48.

Table 42. Price Differentials of Steer Calves Over Bull Calves When Bought as Feeders, According to Estimates of Farmers and Ranchers, South Dakota, 1947

Price Differentials	NO. OF RESPONDENTS PER AREA							Total
	I	II	III	IV	V	VI	VII	
\$0 to \$.50	7	5	5	3	3	7	11	41
.51 to 1.00	9	12	5	5	7	14	18	70
1.01 to 1.50	9	7	1	3	3	3	2	28
1.50 to 2.00	21	12	19	11	8	6	13	80
2.01 to 2.50	13	4	1	1	4		4	27
2.51 to 3.00	4	1	2	2	1		5	15
3.01 to 3.50	5		1	2	1		1	10
3.51 to 4.00	4			1	1		2	8
4.01 to 4.50	1			2	1		2	6
4.51 to 5.00	4			2		3	2	11
5.01 to 5.50	1		1	2	1			5
TOTAL	78	41	25	34	30	33	60	301*

Average difference, all respondents -- \$1.68 per cwt.

Modal difference, all respondents -- \$2.00 per cwt.

Median difference, all respondents -- \$2.00 per cwt.

36.8% reported difference of \$1.00 or less.

13.3% reported differences of over \$3.00.

49.9% reported differences of \$1.00 to \$3.00.

* Includes all farmers and ranchers interviewed. 123 did not answer this question.

\$2.00 class. These areas are the major feeder cattle producing regions in the state. In areas six and seven, the south James River area and the Southeastern area, respectively, more corn and other grain feeds are raised so consequently more cattle are purchased to be fed for slaughter. The most frequent price differential for steer over bull calves in this area was in the \$0.51 to \$1.00 class. Fourteen out of thirty-three respondents in area six and eighteen out of sixty in area seven stated that they believed the differential should be this amount. An additional thirteen farmers in area seven believed that there should be a differential ranging from \$1.51 to \$2.00 in favor of the steer calf.

For the entire state, the average differential for all respondents was \$1.68 per hundredweight. The modal and median differences were both \$2.00. This indicates that the farmers and ranchers are definitely aware that castration has a financial advantage.

The same information was obtained on the yearling steers and bulls as feeders. Table 43 shows that the farmers and ranchers of the state would be willing to pay \$2.29 per hundredweight more on the average for a yearling steer. The farmers and ranchers were willing to pay this differential because the castration of a yearling bull might cause a staggy appearance and would definitely increase the risk of loss by death because of castration.

Because of the increase in the differential as the age of the animal increases, it is important that early castration be stressed. The advantages of early castration should be fully demonstrated to all producers of feeder cattle.

Table 43. Price Differentials of Yearlings Steers Over Yearling Bulls When Bought as Feeders, According to Estimates of Farmers and Ranchers, South Dakota, 1947

Price Differentials :	NUMBER OF RESPONDENTS PER AREA							Total
	I	II	III	IV	V	VI	VII	
\$0.00 to \$.50		5	1		1	2	3	12
.51 to 1.00	4	12	2	3	3	4	7	35
1.01 to 1.50	2	7		3	2	3	3	20
1.51 to 2.00	14	12	9	9	10	14	16	80
2.01 to 2.50	11	3	1	1	2	1	3	22
2.51 to 3.00	12	1	4	3	5		6	31
3.01 to 3.50	11	1	1	3	3		7	26
3.51 to 4.00	4		2	1	2		5	14
4.01 to 4.50	2		1	2				5
4.51 to 5.00	2			2	1	3	8	16
5.01 to 5.50	6			2	1		3	12
TOTAL	68	41	21	29	30	27	61	277*

Average difference, all respondents -- \$2.29 per cwt.

Modal difference, all respondents -- \$2.00 per cwt.

Median difference, all respondents -- \$2.00 per cwt.

16.9% reported differences of \$1.00 or less.

35.6% reported differences of over \$3.00.

56.7% reported differences of \$1.00 to \$3.00.

* Includes all farmers and ranchers interviewed. 147 did not answer this question.

PRICE DIFFERENTIALS BETWEEN HORNED AND DEHORNEED FEEDER CATTLE

Another practice that is usually assumed to have some influence on the price paid for feeder cattle is that of dehorning. In order to secure their opinions on the differentials in price because of dehorning, the farmers and ranchers were asked to answer questions concerning the price differences between horned and dehorned feeder cattle.

When horned or dehorned calves are considered as feeders, 82.3% of all respondents were of the opinion that the price preference for dehorned calves should not be over \$1.00 per hundredweight as shown in Table 44. The average differential for all respondents is \$0.75 per hundredweight in favor of the ~~horned~~^{dehorned} calf. As the majority felt that the differential between horned and dehorned calves would be less than \$1.00, it appears that most farmers and ranchers believe that horns do not detract much from the value of feeder calves. This is based on the opinion that dehorning of young calves is a relatively simple and inexpensive matter. The respondents also believed that dehorning of calves after purchase did not result in much loss in weight or much of an increase in the length of the feeding period.

Table 45 presents the same information for steers as table 44 did for the calves. The average difference in price between horned and dehorned yearling steers was somewhat higher than for the calves. The average differential was \$0.96 per hundredweight higher for the dehorned steer. Thus, it is evident that in the opinions of the farmers and ranchers, early castration and dehorning is definitely an advantage to both the producers and the feeders of livestock. The

Table 44. Price Differentials of Dehorned Over Horned Calves When Bought as Feeders, According to Estimates of Farmers and Ranchers, South Dakota, 1947.

Price Differentials	NUMBER OF RESPONDENTS PER AREA							Total
	I	II	III	IV	V	VI	VII	
\$0.0 to \$0.50	29	27	17	17	18	15	45	168
.51 to 1.00	33	15	6	7	7	11	8	87
1.01 to 1.50	4			2	2	2	1	11
1.51 to 2.00	7	1	1	2	2	5	5	23
2.01 to 2.50	2							2
2.51 to 3.00	1			1	1	4	1	8
3.01 to 3.50								
3.51 to 4.00						1	5	6
4.01 to 4.50			1					1
4.51 to 5.00						3		3
5.01 to 5.50						1		1
TOTAL	76	43	25	29	30	42	65	310*

Average difference, all respondents -- \$0.75 per cwt.

Modal difference, all respondents -- \$0.00 or no difference per cwt.

Median difference, all respondents -- \$0.50 per cwt.

82.3% reported differences of \$1.00 or less.

3.5% reported differences of over \$3.00.

14.2% reported differences of \$1.00 to \$3.00.

* Includes all farmers and ranchers interviewed. 114 did not answer this question.

Table 45. Price Differentials for Dehorned Over Horned Yearling Steers When Bought as Feeders, According to Estimates of Farmers and Ranchers, South Dakota, 1947

Price Differentials	NUMBER OF RESPONDENTS PER AREA							Total
	I	II	III	IV	V	VI	VII	
\$0.00 to \$0.50	20	16	5	15	11	11	28	106
.51 to 1.00	30	19	14	8	9	11	20	111
1.01 to 1.50	8	2		1	3	2	1	17
1.51 to 2.00	11	5	2	6	3	7	5	39
2.01 to 2.50	9				2			11
2.51 to 3.00					2	1		3
3.01 to 3.50	2		1				4	7
3.51 to 4.00	1						2	3
4.01 to 4.50								
4.51 to 5.00	2		2			1		5
5.01 to 5.50								
TOTAL	83	42	24	30	30	33	60	302*

Average difference, all respondents -- \$0.96 per cwt.

Modal difference, all respondents -- \$1.00 per cwt.

Median difference, all respondents -- \$1.00 per cwt.

71.9% reported differences of \$1.00 or less.

5.0% reported differences of over \$3.00.

23.1% reported differences of \$1.00 to \$3.00.

* Includes all farmers and ranchers interviewed. 122 did not answer this question.

producer nets more on the sale of dehorned and castrated cattle. The feeder does not need to incur the possibility of excessive weight loss or death because of castration or dehorning after purchase.

PRICE DIFFERENTIALS BETWEEN STEERS AND HEIFERS AS FEEDERS

Table 46 shows the price differentials that farmers and ranchers believe would be equitable between yearling steers and yearling open heifers when purchased for feeding. The average differential was \$1.65 per hundredweight in favor of the steer. In this comparison, 54.4% reported that the difference should be from \$1.00 to \$3.00 per hundredweight for steers.

PRICE DIFFERENTIALS BECAUSE OF SIZE OF LOT

In many instances, producers sell their feeder cattle in lots of one or two animals which are not an economical unit for a prospective feeder to buy. In an attempt to ascertain whether purchasers of feeder cattle would be willing to pay more for the opportunity of buying the larger lots of uniform cattle, a question to that effect was included in the schedule. The tabulation of the answers to this question appears in table 47. It may be noted that over one-half of all respondents stated that they would be willing to pay up to fifty cents more per hundredweight for the larger lots. The arithmetic mean or average of all differentials is approximately \$0.63 per hundredweight for the larger lots. This average difference between large and small lots should be enough to call forth some effort on the part of the producers of feeder cattle to increase the size of their individual sales or to combine their small sales with those of other producers.

Table 46. Price Differentials of Yearling Steers Over Yearling Open Heifers When Bought as Feeders, According to Estimates of Farmers and Ranchers, South Dakota, 1947

Price Differentials	NUMBER OF RESPONDENTS PER AREA							Total
	I	II	III	IV	V	VI	VII	
\$0.0 to \$0.50	16	7	3	9	9	11	12	67
.51 to 1.00	7	12	4	4	5	2	9	43
1.01 to 1.50	8		4	1	2	10	7	32
1.51 to 2.00	30	11	8	9	4	1	17	80
2.01 to 2.50	4	4		2	2		6	18
2.51 to 3.00	6	8	2	2	5	4	5	32
3.01 to 3.50	2			1		1	2	6
3.51 to 4.00	1	1	1	1	1	2	3	10
4.01 to 4.50	1		1					2
4.51 to 5.00			1		1	1	1	4
5.01 to 5.50	2		1		1			4
TOTAL	77	43	25	29	30	32	62	298*

Average difference, all respondents -- \$1.65 per cwt.

Modal differences, all respondents -- \$2.00 per cwt.

Median difference, all respondents -- \$2.00 per cwt.

36.9% reported differences of \$1.00 or less.

8.7% reported differences of over \$3.00.

54.4% reported differences of \$1.00 to \$3.00.

* Includes all farmers and ranchers interviewed. 126 did not answer this question.

Table 47. Price Differentials of Uniform Lots of Twelve or More Over Individual Animals When Bought as Feeders, According to Estimates of Farmers and Ranchers, South Dakota, 1947

Price Differentials	NUMBER OF RESPONDENTS PER AREA							Total
	I	II	III	IV	V	VI	VII	
\$0.0 to \$0.50	42	21	17	14	17	19	38	168
.51 to 1.00	26	14	6	10	9	9	16	90
1.01 to 1.50	4	5	1	3	4	1	3	21
1.51 to 2.00	8	1	1	2		4	4	20
2.01 to 2.50	2	1				1		4
2.51 to 3.00		1						1
3.01 to 3.50								
3.51 to 4.00								
4.01 to 4.50	1							1
4.51 to 5.00							1	1
TOTAL	83	43	25	29	30	34	62	306*

Average difference, all respondents -- .63 per cwt.

Modal difference, all respondents -- .00 or no difference per cwt.

Median difference, all respondents -- .50 per cwt.

84.3% reported differences of \$1.00 or less.

0.6% reported differences of over \$3.00.

15.1% reported differences of \$1.00 to \$3.00.

* Includes all farmers and ranchers interviewed. 118 did not answer this question.

DIFFERENTIALS IN PRICE BECAUSE OF BREEDING

Many producers of feeder livestock do not raise cattle that are of any definite beef breed. Many raise crosses of one or more beef breeds and, in some cases, merely nondescript cattle of many crosses between dairy and beef breeds. Whether justifiable or not, even though two animals are of equal quality and conformation, the one with the definite breed markings seems to have a price advantage. Table 48 shows what the reactions of the farmers and ranchers were to the question of the price differentials between feeder cattle of definite breed markings and others that are of equal quality but are of no definite breed.

The average differential in price, as seen by the farmers and ranchers, was approximately \$1.02 per hundredweight for the definite breed. This should be enough to give a substantial advantage to the producer of a definite breed. Some of the reasons given for preferring definitely marked steers over those of mixed breeding were: 1. mixed breeds increase the risk of poor gains because there may be dairy lines included although the steer exhibits beef characteristics. 2. it is almost impossible to have a uniform lot of feeders if mixed breed, nondescript animals are included. 3. many preferred a definite breed for reasons not connected with any economic factors.

Table 48. Price Differentials of Steers of Regular Hereford Markings Over Steers of Mixed Beef Breeding When Bought as Feeders, According to Estimates of Farmers and Ranchers, South Dakota, 1947

Price Differentials	NUMBER OF RESPONDENTS PER AREA							Total
	I	II	III	IV	V	VI	VII	
\$0.0 to \$0.50	26	20	13	14	11	11	25	120
.51 to 1.00	14	11	6	5	9	6	18	69
1.01 to 1.50	9	5	3	3	2	2	2	26
1.51 to 2.00	12	5	1	3	3	9	13	46
2.01 to 2.50	6	1	1	2	4	2	2	18
2.51 to 3.00	3	1				3	3	10
3.01 to 3.50				1				1
3.51 to 4.00	1						2	3
4.01 to 4.50					1			1
4.51 to 5.00			1		1		1	3
5.01 to 5.50	2							2
TOTAL	73	43	25	28	31	33	66	299*

Average difference, all respondents -- \$1.02 per cwt.

Modal difference, all respondents -- \$0.00 or no difference per cwt.

Median difference, all respondents -- \$1.00 per cwt.

63.2% reported differences of \$1.00 or less.

3.3% reported differences of \$3.00 or over.

33.5% reported differences of \$1.00 to \$3.00.

* Includes all farmers and ranchers interviewed. 125 did not answer this question.

CHAPTER VII

SUMMARY AND CONCLUSIONS

This study of the marketing of feeder cattle and calves in South Dakota may be summarized as follows:

1. The production and marketing of feeder livestock is one of the more important agricultural enterprises in South Dakota.

2. According to the data available, 53% of the farmers and ranchers in South Dakota consider either the production of feeder cattle or the purchase of cattle for feeding as their major livestock enterprise.

3. Approximately 30% of the farmers keep cattle mainly for dairy purposes.

4. Fifty-seven percent of the farmers and ranchers in South Dakota prefer to sell their feeder cattle on a graded and sorted basis.

5. In three-fourths of the cases a farmer prefers to sell at the same type of market each year.

6. In the majority of the cases, a farmer prefers to sell at the same time of the year each year.

7. Over 50% of the farmers and ranchers were of the opinion that the market price for feeder cattle was the highest during the fall.

8. The physical factors of production, i.e. pasture conditions, weight of cattle, condition of cattle, supply of water and others, favor the fall as the best time during which to sell feeder cattle.

9. Farmers and ranchers believe that the gains made by feeder cattle during the grazing season are adequate to make a fall sale the most profitable.

10. The auction is the most important outlet for feeder cattle. Its importance varies by agricultural areas in the state. The auction is relatively more important as an outlet in the western than in the eastern area of the state.

11. The sale of feeder cattle by the head is decreasing in South Dakota.

12. More cattle are sold by the head in the west river area than in the areas east of the Missouri river.

13. Most of the cattle sold by the head are handled by auctions, dealers or order buyers, and direct sales. Virtually none are sold at the terminal public market by this method.

14. Auctions and terminal public markets are the recipients of 77% of the feeder cattle sold on a per pound basis.

15. Over 79% of all feeder cattle were sold on a per pound basis in 1947.

16. Of the feeder cattle sold by the head, 28.6% are calves and almost 20.0% are two-year old and over.

17. The hired truck is the most important means of transporting feeder cattle to the market, as it transported 66.7% of the total sold.

18. Dealers and order buyers transport most of their purchases in their own trucks.

19. The hired truck is the most important means of transportation when feeder cattle are bought.

20. Purchase of feeder cattle by the head at the terminal public markets and the auctions is unimportant. Most of the purchases by the head occur when feeders are purchased direct from the producers.

21. Sixty-seven percent of the feeders purchased by weight are yearlings.

22. Over 43% of the feeders purchased by the head are calves.

23. Fifty-five percent of the feeders purchased in the western area of the state are purchased directly from the producers.

24. Cattle feeders in the eastern one-half of the state buy their feeders almost equally from the terminal public market, auctions and by direct purchases.

25. The price differential between steer calves and bull calves should be about \$1.68 per hundredweight according to the opinions of the farmers and ranchers.

26. The price differential between yearling steers and yearling bulls should be about \$2.29 per hundredweight according to the opinions of farmers and ranchers.

27. Dehorning should increase the value of calves about \$0.75 per hundredweight and yearling steers about \$1.00 per hundredweight according to the opinions of farmers and ranchers.

28. Buyers of feeder cattle are willing to pay about \$0.75 a hundredweight more for feeder cattle if bought in lots of 12 head and over.

29. Feeder cattle of a definite breed are worth approximately \$1.00 per hundredweight more than similar animals of mixed breeding according to the estimates of those farmers and ranchers interviewed.

This study may be considered as a preliminary base or starting point for further, more intensive research into the marketing problems and practices of the South Dakota feeder cattle producers and buyers. The following conclusions concerning the various problems of feeder cattle marketing were reached in this study:

1. Additional study should be conducted on the adequateness of the market news reports. These reports should be made available in ~~such~~ a form that fits the conditions of the individual farmer and rancher. The education of the farmers and ranchers toward the proper use of the market reports and price quotations should be expanded.

2. There should be more research aimed at the problem of smoothing out the seasonal peaks in the sales of feeder cattle. More orderly marketing would increase the profitability of the feeder cattle business for both the producers and feeders of this class of livestock.

3. The advantages and advisability of early castration and de-horning should be further stressed and explained to all producers of feeder cattle.

4. The advantages of the direct marketing of feeder cattle should be further investigated because of the possibility of reducing marketing costs ~~that~~ ~~are~~ ~~possible~~ through direct marketing.

APPENDIX

Table 2. Number and Percent of Lots of Various Sizes of Feeder Cattle and Calves that were Sold at Different Types of Markets, by 281 Farmers and Ranchers in South Dakota, 1947

Head per Lot :	TYPE OF MARKET					Total
	TPM*	Auction	Dealers & C. Buyers	Direct	Other	
1 to 5 head	46	41	15	10		112
6 to 10 "	24	34	6	3	1	68
11 to 20 "	19	26	8	5		58
21 to 50 "	5	11	9	3	1	29
51 & over "	2	2	2	3		9
Total	96	114	40	24	2	276

PERCENT OF LOTS OF VARIOUS SIZES THAT WERE SOLD AT DIFFERENT MARKETS

1 to 5 head	41.1	36.6	13.4	8.9		100.0
6 to 10 "	35.3	50.0	8.8	4.4	1.5	100.0
11 to 20 "	32.8	44.8	13.5	8.6		100.0
21 to 50 "	17.2	37.9	31.1	3.5		100.0
51 & over "	22.2	22.2	22.2	33.4		100.0
Total	34.8	41.3	14.5	8.7	0.8	100.0

PERCENT OF LOTS SOLD AT EACH MARKET IN VARIOUS LOT SIZES

1 to 5 head	47.9	36.0	37.5	41.7		40.6
6 to 10 "	25.0	29.8	15.0	12.5	50.0	24.6
11 to 20 "	19.8	22.8	20.0	20.8		21.0
21 to 50 "	5.2	9.6	22.5	12.5	50.0	10.5
51 & over "	2.1	1.8	5.0	12.5		3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

* Terminal Public Market

** One lot sold at a farm sale and one lot sold through Coop. Shipping Association.

Table 3. Number and Percent of Feeder Cattle and Calves of Different Sexes and Classes Sold that were Transported from Ranches and Farms by Different Means by 281 Farmers and Ranchers, South Dakota, 1947

Sex & Class	MEANS OF TRANSPORTATION						Total
	Own Truck	Hired Truck	Buyers' Truck	On Foot	Foot to RR	H. Truck to RR	
	Number of Head						
Steers	64	657	188	35	34	71	1049
Heifers	20	204	11		4	18	257
Heifers & Steers	7	480	62	23			572
Calves	153	557	90	90	35	43	968
Cows	32	137	29	7		2	207
TOTAL	276	2035	380	155	73	134	3053
PERCENT OF HEAD OF EACH SEX & CLASS THAT WERE TRANSPORTED BY VARIOUS MEANS							
Steers	6.1	62.7	17.9	3.3	3.2	6.8	100.0
Heifers	7.7	79.3	4.3		1.6	7.0	100.0
Steers & Heifers	1.2	83.9	10.9	4.0			100.0
Calves	15.8	57.5	9.3	9.3	3.6	4.5	100.0
Cows	15.4	66.2	14.0	3.4		1.0	100.0
TOTAL	9.0	66.7	12.4	5.1	2.4	4.4	100.0
PERCENT OF NO. TRANSPORTED BY VARIOUS MEANS THAT WERE OF DIFFERENT SEX & CLASS							
Steers	23.2	32.3	49.5	22.6	46.6	53.0	34.4
Heifers	7.3	10.0	2.9		5.5	13.4	8.4
Steers & Heifers	2.5	23.6	16.3	14.8			18.7
Calves	55.4	27.4	23.7	58.1	47.9	32.1	31.7
Cows	11.6	6.7	7.6	4.5		1.5	6.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Mixed lots of steers and heifers, not included in the lots of steers and heifers separately.

Table 4. Number and Percent of Feeder Cattle and Calves of Various Ages that were Sold in Lots of Different Sizes by 281 Farmers and Ranchers, South Dakota, 1947

Head per Lot	NUMBER OF HEAD BY AGE				Total
	Calves	Yearlings	2's & Over	Mixed by Age	
1 to 5	76	97	167	5	342
6 to 10	112	209	193	13	527
11 to 20	337	228	255	41	861
21 to 50	256	333	209		798
51 & over	187	188	150		525
TOTAL	968	1055	971	59	3053
PERCENT OF CATTLE OF VARIOUS AGES SOLD IN LOTS OF SPECIFIED SIZES					
1 to 5	22.2	28.4	47.9	1.5	100.0
6 to 10	21.3	39.6	36.6	2.5	100.0
11 to 20	39.1	26.5	29.6	4.8	100.0
21 to 50	32.1	41.7	26.2		100.0
51 & over	35.6	35.8	28.6		100.0
TOTAL	31.7	34.6	31.8	1.9	100.0
PERCENT OF CATTLE OF SPECIFIC AGE SOLD IN VARIOUS LOT SIZES					
1 to 5	7.9	19.2	16.9	8.5	11.2
6 to 10	11.6	19.8	19.9	22.0	17.3
11 to 20	34.8	21.6	26.3	69.5	28.2
21 to 50	26.4	31.6	21.5		26.1
51 & over	19.3	17.8	15.4		17.2
TOTAL	100.0	100.0	100.0	100.0	100.0

Table 5. Number and Percent of Feeder Cattle and Calves of Various Sexes and Classes that were Bought at Different Types of Markets by 261 Farmers, Ranchers, and Feeders, South Dakota, 1947

Type of Market :	SEX AND CLASS					Total
	Steers	Heifers	Calves	Cows	Mixed Lots	
TPM*	82	19	74	10	19	204
Auction	133	36	90	3		262
Dealers & Order Buyers		39				39
Direct	45	13	119		148	325
Farm Sale		19	11	1		31
TOTAL	260	126	294	14	167	861
PERCENT OF EACH HEAD BOUGHT AT EACH MARKET OF VARIOUS SEXES & CLASSES						
TPM	40.2	9.3	36.3	4.9	9.3	100.0
Auction	50.8	13.7	34.4	1.1		100.0
Dealers & Order Buyers		100.0				100.0
Direct	13.9	4.0	36.6		45.5	100.0
Farm Sale		61.3	35.5	3.2		100.0
TOTAL	30.2	14.6	34.2	1.6	19.4	100.0
PERCENT OF A SPECIFIED SEX & CLASS BOUGHT AT DIFFERENT MARKETS						
TPM	31.5	15.1	25.2	71.4	11.4	23.7
Auction	51.2	28.6	30.6	21.4		30.4
Dealers & Order Buyers		30.9				4.5
Direct	17.3	10.3	40.5		88.6	37.8
Farm Sale		15.1	3.7	7.2		3.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

* Terminal Public Market.

Table 6. Number and Percent of Feeder Cattle and Calves of Various Average Weights that were Bought at Different Types of Markets by 281 Farmers, Ranchers, and Feeders, South Dakota, 1947

Type of Market	AVERAGE WEIGHT CLASSES					Total
	Less than 400	400-599	600-799	800-999	No weight listed	
TPM*	25	68	91	20		204
Auction	30	97	135			262
Dealers & Order Buyers			39			39
Direct		122	56	1	146	325
Farm Sale	10			1	20	31
TOTAL	65	287	321	22	166	861

PERCENT OF HEAD IN VARIOUS WT. CLASSES SOLD AT DIFFERENT MARKETS						
TPM*	12.3	33.3	44.6	9.8		100.0
Auction	11.5	37.0	51.5			100.0
Dealers & Order Buyers		100.0				100.0
Direct		37.6	17.2		44.9	100.0
Farm Sale	32.3			3.2	64.5	100.0
TOTAL	7.5	33.3	37.3	2.6	19.3	100.0

PERCENT OF HEAD IN SPECIFIED WT. CLASSES SOLD AT DIFFERENT MARKETS						
TPM*	38.5	23.7	28.3	90.9		23.7
Auction	46.1	33.8	42.1			30.4
Dealers & Order Buyers			12.1			
Direct		42.5	17.5	4.5½	88.0	37.8
Farm Sale	15.4			4.5½	12.0	3.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

* Terminal Public Market.

Table 7. Number and Percent of Various Sizes that were Bought at Different Types of Markets by 281 Farmers, Ranchers, and Feeders, South Dakota, 1947

Size of Lots	TYPES OF MARKETS					Total
	TPM*	Auctions	Dealers & O. Buyers	Direct	Farm Sale	
1 to 5	1	1		5	1	8
6 to 10	2	1		1		4
11 to 20	6	1			2	9
21 to 50	2	4	1	1	1	9
51 & over		2		3		5
TOTAL	11	9	1	10	4	35
PERCENT OF LOTS OF VARIOUS SIZES BOUGHT AT DIFFERENT MARKETS						
1 to 5	12.5	12.5		62.5	12.5	100.0
6 to 10	50.0	25.0		25.0		100.0
11 to 20	66.7	11.1			22.2	100.0
21 to 50	22.2	44.5	11.1	11.1	11.1	100.0
51 & over		40.0		60.0		100.0
PERCENT OF LOTS BOUGHT AT EACH MARKET IN DIFFERENT SIZE CLASSES						
1 to 5	9.1	11.1		50.0	25.0	22.9
6 to 10	18.2	11.1		10.0		11.4
11 to 20	54.5	11.1			50.0	25.7
21 to 50	18.2	44.5	100.0	10.0	25.0	25.7
51 & over		22.2		30.0		14.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

* Terminal Public Market.

Table 8. Number and Percent of Head of Feeder Cattle and Calves Bought at Different Types of Markets that were Transported by Various Means from the Markets, from the Railroad Receiving Points, or from the Regions where They were Produced to Farms, Feedlots, or Ranges as Reported by 281 Farmers, Ranchers, and Feeders, South Dakota, 1947

Type of Market	MEANS OF TRANSPORTATION				Total
	Own Truck	Hired Truck	On Foot	Railroads	
TPM*	17	187			204
Auction	63	173		26	262
Dealers & Order Buyers				39	39
Direct	2	171	6	146	325
Farm Sale		30	1		31
TOTAL	82	561	7	211	861

PERCENT OF TOTAL BOUGHT AT DIFFERENT MARKETS TRANSPORTED BY VARIOUS MEANS

TPM*	8.3	91.7			100.0
Auction	24.0	66.0		10.0	100.0
Dealers & Order Buyers				100.0	100.0
Direct	0.6	52.6	1.9	44.9	100.0
Farm Sale		96.8	3.2		100.0
TOTAL	9.5	65.2	0.8	24.5	100.0

PERCENT OF TOTAL MOVED BY VARIOUS MEANS BOUGHT AT DIFFERENT MARKETS

TPM*	20.7	33.3			23.7
Auction	76.8	30.8		12.3	30.4
Dealers & Order Buyers				18.5	4.5
Direct	2.5	30.5	85.7	69.2	37.8
Farm Sale		96.8	14.3		3.6
TOTAL	100.0	100.0	100.0	100.0	100.0

* Terminal Public Market.

Table 10. Number of Lots of Various Sizes that were Bought at Different Types of Markets, by 281 Farmers, Ranchers, and Feeders in South Dakota, 1947

Size of Lot	TYPE OF MARKET					Total
	TPM	Auction	Dealers & O. Buyers	Direct	Other	
1 to 5 head	1	1		5	1	8
6 to 10 "	2	1		1		4
11 to 20 "	6	1		1	2	9
21 to 50 "	2	4	1	1	1	9
51 & over "		2		3		5
TOTAL	11	9	1	10	4	35

PERCENT OF NO. OF LOTS OF VARIOUS SIZES BOUGHT AT EACH MARKET

1 to 5 head	12.5	12.5		62.5	12.5	100.0
6 to 10 "	50.0	25.0		25.0		100.0
11 to 20 "	66.7	11.1			11.1	100.0
21 to 50 "	22.2	44.5	11.1	11.1	11.1	100.0
51 & over "		40.0		60.0		100.0
TOTAL	31.4	25.7	2.9	28.6	11.4	100.0

PERCENT OF ALL LOTS BOUGHT AT VARIOUS MARKETS IN EACH LOT SIZE

1 to 5 head	9.1	11.1		50.0	25.0	22.9
6 to 10 "	18.2	11.1		10.0		11.4
11 to 20 "	54.5	11.1			50.0	25.7
21 to 50 "	18.2	44.5	10.0	10.0	25.0	25.7
51 & over "		22.2		30.0		14.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

* Terminal Public Market.

** Purchased at a farm sale.

Table 11. Grades of Feeder Cattle and Calves as Reported for 419 Lots Sold and 182 Lots Bought by the Farmers and Ranchers Interviewed in 1947, South Dakota

Conformation or type	Number of lots sold	Percent of lots sold	Number of lots bought	Percent of lots bought
Choice	21	5.0	5	2.7
Good	184	43.9	82	45.1
Medium	201	48.0	83	45.6
Common	13	3.1	12	6.6
TOTAL	419	100.0	182	100.0

Condition	Number of lots sold	Percent of lots sold	Number of lots bought	Percent of lots bought
Fleahy	28	6.7	8	4.4
Good	236	56.3	60	33.0
Medium	149	35.6	70	38.5
Thin	6	1.4	41	22.5
TOTAL	419	100.0	182	100.0

Note: This table includes both the sales and purchases of feeder cattle and calves by the "sample" farms and the "extra" farms.

Table 12. Factors Influencing the Time of Sale of Feeder Cattle in the Opinions of 281 Farmers and Ranchers, South Dakota, 1947

Month :	NUMBER OF ANSWERS FOR EACH FACTOR					
	Pasture	Water	Roughage	Hay-Grain	Weight or Condition	Progress of Farm Work
January			13	9	4	
February			6	10	3	
March	2		2	20	8	11
April	1			6	3	6
May	2		1	2	1	3
June	9			1	11	1
July	20	12			16	4
August	31	4		5	12	4
September	53	4	13	7	39	11
October	63	4	25	31	80	21
November	12		41	25	22	3
December		2	37	17	10	1
No Importance	19	200	93	87	8	157
TOTAL	212	226	231	220	217	222
IMPORTANCE OF VARIOUS FACTORS ON A PERCENT BASIS						
January			5.6	4.1	1.8	
February			2.6	4.5	1.4	
March	.9		.9	9.1	3.7	4.9
April	.5			2.7	1.4	2.9
May	.9		.4	.9	.5	1.4
June	4.3			.5	5.1	.5
July	9.4	5.3			7.4	1.8
August	14.6	1.8		2.3	5.5	1.8
September	25.0	1.8	5.6	3.2	17.9	5.0
October	29.7	1.8	10.8	14.1	36.9	9.4
November	5.7		17.8	11.4	10.1	1.3
December		.9	16.0	7.7	4.6	.5
No Importance	9.0	88.4	40.3	39.5	3.7	70.7
TOTAL	100.	100.0	100.0	100.0	100.0	100.0
IMPORTANCE OF VARIOUS FACTORS ON A PERCENT BASIS**						
January			9.4	6.8	1.9	
February			4.4	7.5	1.4	
March	1.0		1.5	15.0	3.8	16.9
April	.5			4.5	1.4	9.3
May	1.0		.7	1.5	.5	4.6
June	4.7			.8	5.3	1.5
July	10.4	46.1			7.7	6.2
August	16.1	15.4		3.7	5.7	6.2
September	27.5	15.4	9.4	5.3	18.7	16.9
October	32.6	15.4	18.1	23.3	38.3	32.3
November	6.2	7.7	29.7	18.8	10.5	4.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

* Out of the 281 farms and ranches in the sample.

** Includes only those answers that indicated that the various factors were of importance when considering the time of sale.

FARM AND RANCH SCHEDULE

Date _____ 1948

Name _____ Post Office _____ County _____

- (1) Total Acres operated _____ (4) Acres in Crops _____
- (2) Acres owned _____ (5) Acres tame hay or pasture _____
- (3) Acres leased _____ (6) Acres native hay & pasture _____
- (7) Range or grazing permits for _____ cattle.

(8) Cattle Numbers, Jan. 1, 1948

	<u>All</u>	<u>In Feed Lot</u>
Milk Cows	_____	_____
Beef Cows	_____	_____
Heifers, 2's	_____	_____
Heifers, Yrlgs.	_____	_____
Steers, 2's	_____	_____
Steers, Yrlgs.	_____	_____
Calves	_____	_____
Bulls	_____	_____
Totals	_____	_____

(9) No. sows spring farrow, 1947 _____

No. sows spring farrow, 1948 _____

No. sows fall farrow, 1947 _____

(10) Sheep Jan. 1, 1948.
Total _____

CATTLE PRODUCTION PRACTICES

- (11) Breeding of herd _____ (12) a. Do you have reg. brand? Y_N_
- b. Do you have unreg. " Y_N_
- (13) Do you use purebred bull(s)? Y_N_ (14) For the last bull(s) bought list
- following: (a) Age ___ yrs. (b) When bought _____ 19___. (c) Breed _____
- (d) Price paid \$ _____. (e) Where obtained? _____
- Breeders name & address if possible
- (15) When did your cows calve in 1947? Majority about _____ Range: From _____
- (16) Do you breed heifers to calve as two's? Y_N_ To _____
- Why? _____

(17) No. of calves raised in 1947 _____ : No. of "pail" calves _____

(18) At what age do you cull cows? _____ yrs. (19) At what age, or when is

castrating done? _____ (20) Why at this time? _____

(21) At what age, or when is dehorning done? _____ How done? Paste _____

Clippers _____ Other _____ (22) Are calves raised (a) always dehorned _____

(b) Usually dehorned _____ (c) Seldom dehorned _____ (d) Never dehorned _____

(23) Are stocker or feeder cattle bought (with horns) dehorned? Always _____ Usually _____

Seldom _____ Never _____. (24) Why do you, or do you not dehorn your cattle?

(25) What cattle program do you follow? Maintain a beef cow herd and sell calves

_____ (b) Maintain beef cow herd and sell yearlings _____ (c) Beef cow herd

and sell 2's or 3's _____ (d) Maintain mainly a milk cow herd _____ (e) Buy

calves or yearlings and resell as feeders _____ (f) "Commercial" feeder _____

(g) Feed out only own cattle _____.

(26) Do you plan on making any changes in your cattle program in near future?

Y ___ N ___. Explain _____

	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5
:	:	:	:	:Purchase:	Purchase
:	: Purchase/Sale:	Purchase/Sale:	Purchase/Sale:	/Sale :	/Sale

(27) Number of head

(28) Age

(29) Sex & Class

(30) Average Weight

(31) Range

(32) Type and Location of Market used

(33) Breeding

- (34) Conformation or type (Ch., Good, Med. Fair, Common, Poor)
-
- (35) Condition (Fleshy Good, Medium, Thin Very thin)
-
- (36) Price Per cwt.
paid or
received Per head
-
- (37) Probable origin or destination
-
- (38) How transported to or from farm (if RR show shipping point)
-
- (39) Month of sale or purchase
-
- (40) Why did you sell or buy when you did?
-
- (41) Why did you sell or buy at the type of market indicated? i.e. where you did?
-
- (42) Was a CONTACT used? If so, explain details on sep. page
-
- (43) If made direct:
(a) How was contact made?
(b) Did buyer inspect before buying?
(c) What basis used for arriving at price to ask or offer?
(d) Where weighed & "special" weighing arrangements
(e) Were you satisfied? Why or why not?
-

(44) If sale or purchase was made at an auction agency (sale barn) were you satisfied with the transaction? Lot Yes No Lot Yes No
 Lot Yes No Lot Yes No

(Give reasons) _____

(45) If sale was made at a distant market (approx. 100 miles) was the shipment satisfactory with respect to the following?

- (a) Shrinkage? Yes No (b) Approx. shrink per head _____ lbs.
- (c) Losses from death, crippling, or sickness? Yes No
- (d) Method of handling in transit? Yes No
- (e) Method of handling at market? Yes No

(46) If sale was made at central public market, were you satisfied? Lot Y N
 Lot Y N
 Lot Y N

Reasons: _____

(47) Were the animals purchased satisfactory with respect to the following:

- (a) Shrinkage? Lot Yes No
 Lot Yes No

(b) Approx. shrink per hear Lot () _____ lbs: Lot () _____ lbs: Lot () _____ lbs.

- (c) Losses from sickness, death or crippling? Lot Yes No
 Lot Yes No
 Lot Yes No

Explain: _____

(d) Quality of the animals? Lot Yes No Explain: _____
 Lot Yes No _____
 Lot Yes No _____

(e) Gains made (in feedlot or on pasture)? Lot Yes No Lot Yes No
 Lot Yes No Explain: _____

(48) Did you have "feeding in transit privileges" for animals received by rail?
 Yes No If so give nature of privileges and estimate of their worth to you. _____

Cattle Selling Practices.

(49) Do you prefer to sell on a graded basis (rather close sorts) or on a "straight across the board" basis? Graded___ "Straight"___ Why?_____

(50) Do you normally sell feeders thru the same channels each year, or do you "shop around" considerably? Same___ Shop around___ Why? _____

(51) If calves are sold, are they weaned before selling? Yes___No___. Why? _____

(52) Do you plan on selling about the same time each year? Yes___No___. Explain why or why not: _____

(53) What, in your opinion, is the best time to sell from a price standpoint?

Calves _____ Two's _____
Yearlings _____ Cows _____

(54) When is the best time for you to sell due to other than price considerations? Month: _____

Very Little No
Imp. Imp. Imp. Imp.

- A. (a) Condition of pasture or range _____
- (b) Available water supplies _____
- (c) Other roughage grazing _____
- (d) Supply of hay, fodder, grains _____
- B. Weight and condition of cattle _____
- C. Progress of farm work _____
- D. Other (list) _____

(55) During which of the following months do stock cattle make best gains & poorest gains.

	April	May	June	July	August	Sept.	Oct.	Nov.	Av. # gain **
Calves									
Yearlings									
Two's									
Cows									

** Average lbs. gain during six month (May thru Oct.) grazing period.

CATTLE BUYING PRACTICES

(56) What do you look for when buying feeder cattle? (What characteristics, qualities, or points do you look for: breeding, weighting condition (fill), castrated, dehorned, fleshiness, condition of hair, sex, weight, age, etc) Explain in detail: _____

(57) Do you prefer to buy in relatively large lots (ie 10 or more)? Yes___No__ Why? _____

- (58) Do you prefer to buy closely sorted or graded lots, or do you prefer buying on a "straight across the board" basis? Graded ___ "Straight" ___ Why? _____
- (59) What type of cattle do you usually feed? (grade, weight, sex, age, etc) _____
Why? _____
- (60) To what grade do you usually aim to feed? _____ Why? _____
- (61) Are stockers and feeders bought to utilize roughages and range or pasture and resold as feeders? Yes ___ No ___. Explain _____
- (62) Do you normally buy feeders through the same channels each year, or do you "shop around" considerably? Same ___ "Shop" ___. Explain: _____
- (63) When buying feeder cattle what importance, if any, do you place on point of origin? None ___ Considerable ___ Little ___ Explain: _____
- (64) Have you used any of the following practices? If so, give comments on their worth:
- (a) Creep feeding of calves? Yes ___ No ___
 - (b) Use breeding or calving pastures? Yes ___ No ___
 - (c) Spraying of herd for flies? Yes ___ No ___
 - (d) Rotenone spraying of herd for grubs? Yes ___ No ___
 - (e) Is herd treated for lice? Yes ___ No ___
 - (f) Any other "unusual practice"? _____

General

- (65) By what principal means do you obtain market news for determining where and when to sell or buy, feeder cattle and lambs?
Cattle and calves _____
- (66) Do you think that the market news information available to you on feeder cattle and lambs is adequate? Yes ___ No ___ No Opinion ___. If answer is no, what do you think should be done to improve market news to make it more helpful or useful to you? _____

For the following questions assume that the animals being compared are identical except for the characteristic specified. Indicate your preference, if any, and the price differential you would make if you were to buy today.

	<u>No preference or price difference</u>	<u>Amount of difference in price per cwt.</u>
(67) 350-400 lb. steer calf	_____	\$ _____
350-400 lb. bull calf	_____	\$ _____
(68) 550-650 lb. yearling steer	_____	\$ _____
550-650 lb. yearling bull	_____	\$ _____
(69) 350-400 lb. steer calf (dehorned)	_____	\$ _____
350-400 lb. steer calf (horned)	_____	\$ _____

(70)	550-650 lb. yrlg. steer (dehorned)		\$	_____
	550-650 lb. yrlg. steer (horned)	_____	\$	_____
(71)	550-650 lb. yearling steer		\$	_____
	550-650 lb. yearling open heifer	_____	\$	_____
(72)	Lot of 12 uniform calves		\$	_____
	Lot of one (same as above otherwise)	_____	\$	_____
(73)	600# steer, regular Hereford markings		\$	_____
	600# steer, Brocho face (Mixed breeding)	_____	\$	_____

General Comments: _____

(Enumerator)

Appendix Figure 2

SAMPLES OF THE TABULATION CARDS USED IN THIS STUDY

1. South Dakota, Marketing Practices in South Dakota, Survey Report
1934.

2. South Dakota, Marketing Practices in South Dakota, Survey Report
Bureau of Agricultural Economics, Bulletin 101, South Dakota
State College Agricultural Experiment Station, Brookings,
South Dakota.

3. South Dakota, Marketing Practices in South Dakota,
South Dakota State College Agricultural Experiment Station,
Brookings, South Dakota, Bulletin 101, June 1934.

4. South Dakota, Marketing Practices in South Dakota,
South Dakota State College Agricultural Experiment Station,
Brookings, South Dakota, Circular 39, June 1934.

5. United States Census of Agriculture, 1930, Volume 1, Part 22,
Statistics for counties, United States Department of Agriculture,
Office, Washington 25, D. C., 1930.

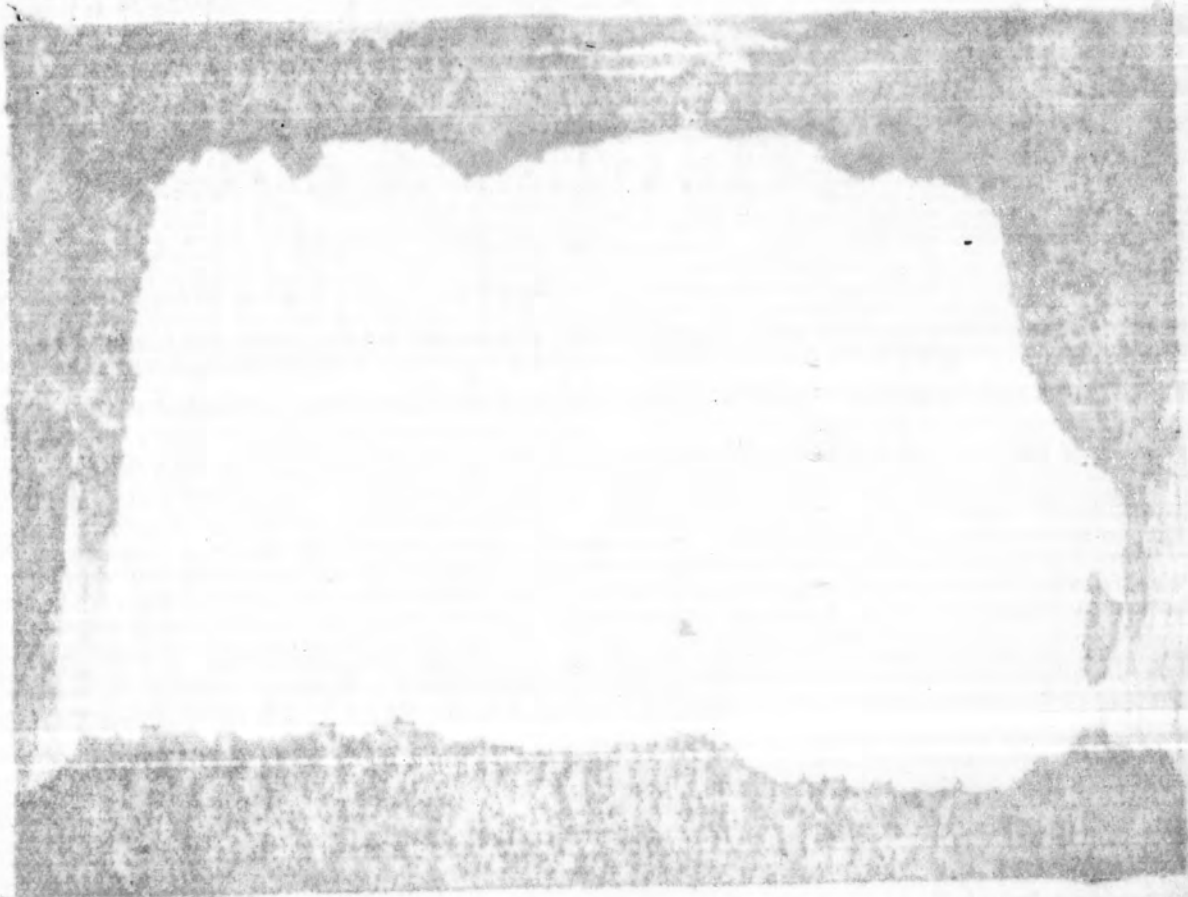
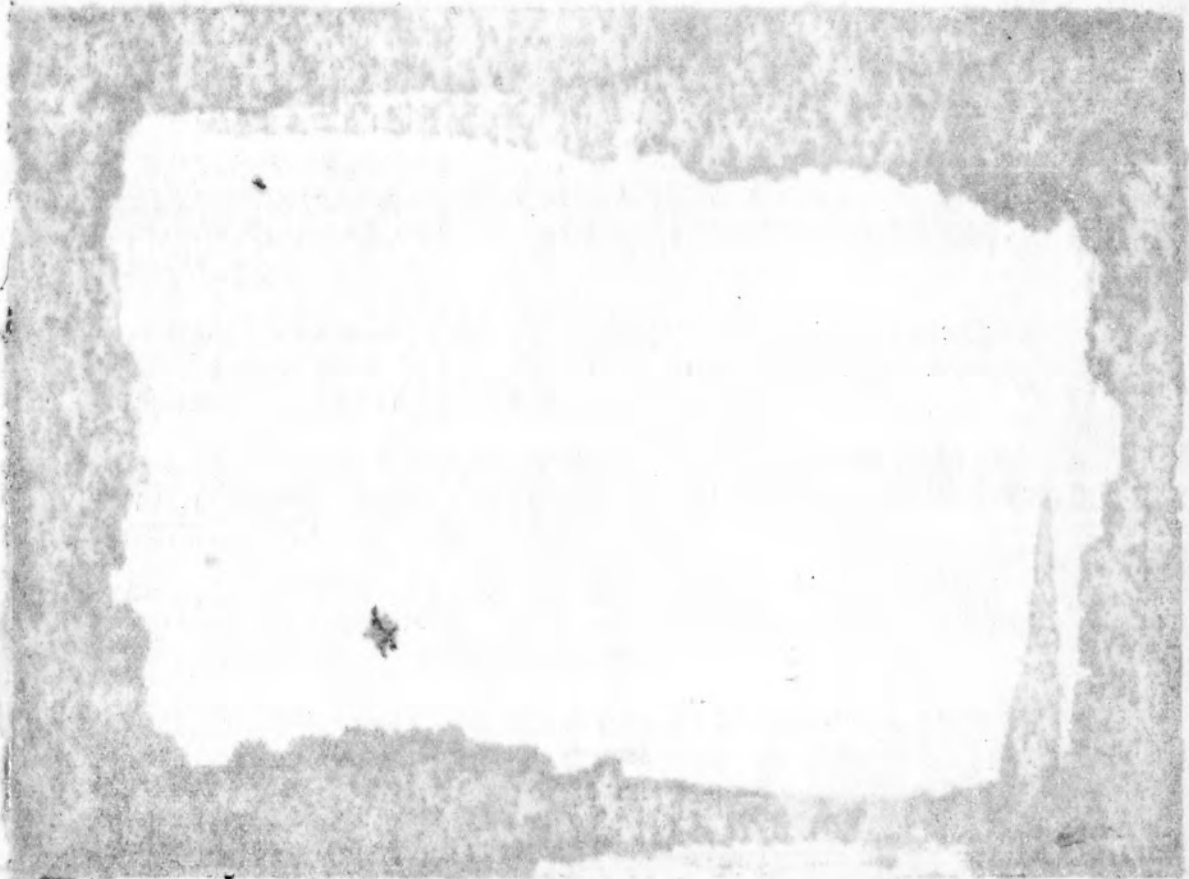
6. John R. and Walter H. G., "Effect of Commercial Sale of
of Growing on Native Vegetation and Soil of South Dakota in
Northern Great Plains", Technical Paper No. 1, South
Dakota State Department of Agriculture, Brookings, South Dakota,
1934.

7. South Dakota, Marketing Practices in South Dakota, Survey Report
Agricultural Statistics, 1946-1950.

8. South Dakota, Marketing Practices in South Dakota, Survey Report
Bureau of Agricultural Economics, Bulletin 101, South Dakota
State College Agricultural Experiment Station, Brookings,
South Dakota.

Appendix Figure 2

SAMPLES OF THE TABULATION CARDS USED IN THIS STUDY



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