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**ECONOMIC AND ORGANIZATIONAL ASPECTS
OF COOPERATIVE FEEDYARDS**

**BY
HARLAN J. DIRKS**

**A thesis submitted
in partial fulfillment of the requirements for the
degree Master of Science, Department of
Economics, South Dakota State
College of Agriculture
and Mechanic Arts**

June, 1960

**ECONOMIC AND ORGANIZATIONAL ASPECTS
OF COOPERATIVE FEEDYARDS**

This thesis is approved as a creditable, independent investigation by a candidate for the degree, Master of Science, and acceptable as meeting the thesis requirements for this degree; but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Thesis Advisor

Head of the Major Department

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HJD

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CHAPTER I

INTRODUCTION

During the past few years the cattle feeding industry in the United States has undergone many physical, technological, and geographical changes. One of the most noticeable changes has been the growth of commercial and large-scale cattle feeding operations. Practically all of these beef factories are located on the west coast and other states in the southwest. States where most of the commercial and large-scale feeding is done include: California, Texas, Oklahoma, Kansas, Colorado, Arizona, and Nebraska. In California, for example, 68 per cent of the cattle on feed are fed in lots of over 10,000 head.¹ There are a number of reasons why these areas are particularly well suited for large-scale feeding and they are: climate, extensive irrigation, and large supplies of low-cost feeder cattle. Another important reason is that there has been mass shifts of population to the coastal area creating a strong demand for meat products.

Most of these commercial and large-scale feedyards are privately owned. Some of the larger ones are organized either as corporations or partnerships. Another type that is relatively new is the cooperative feedyard. As of January, 1960, there were only four

¹Frank S. Scott, Jr., Marketing Aspects of Western Cattle Finishing Operations, Bulletin 190, p. 28, A Western Regional Research Publication, University of Nevada, Carson City, Nevada, December, 1955.

such operations in the United States. C. G. Randell states that considerable interest has developed in cooperative feedyards in the past three years, especially in the west. Cooperative yards are located at Oklahoma City; Edwall, Washington; Pendleton, Oregon; and Bainville, Montana. Producer groups in many sections of the country have shown an interest, but according to Randell the principal deterrents are adequate capital and leadership.²

Reasons for Undertaking the Study

Many farmers and ranchers in South Dakota depend on cattle feeding for their livelihood. Certain developments in recent years indicate that those connected with the cattle feeding industry as well as those interested in getting in the business may well pause and review the current trend in cattle feeding.

Cattle feeding has made considerable increases in many sections of the United States, whereas in South Dakota there has been very little growth. In spite of efforts to increase cattle feeding within the state, only a small percentage of the available feeder cattle are fed out in the state. Among the important reasons advanced for lack of interest in cattle feeding is that there is an inadequate feed supply.

²C. G. Randell, "Opportunities Unlimited for Livestock and Wool Cooperatives," News for Farmer Cooperatives, vol. 26, No. 10, p. 10, United States Department of Agriculture, Washington 25, D. C., January, 1960.

Yet, studies indicate there is a good potential for feed grain production in the state.³

If the lack of large-scale feeding enterprises is the main obstacle to increased cattle feeding within the state, then perhaps South Dakota farmers should consider the possibilities of pooling their resources in large-scale cattle feeding units. The capital investment in equipment and labor requirements on an individual basis may be too high for the individual feeder to compete against an efficient large-scale operation. Organization of a cooperative feedyard is one way that farmers themselves can increase the scale or size of their feeding business.

Since cooperative feedyards are relatively new and only a limited amount of information is available about them, more information concerning their organization and operation is needed. The purpose of this study is to supply this information by developing a model cooperative feedyard tailored to South Dakota conditions. The study will include chapters on organization, operation, capital investment, and marketing. Also, since raising adequate capital is one of the most important limiting factors in organizing a cooperative, this study will attempt to uncover or develop plans whereby interested farmers can obtain the needed capital.

³Lyle M. Bender, The Rural Economy of South Dakota, Special Report No. 1, pp. 121-150, Agricultural Extension Service, South Dakota State College, Brookings, South Dakota, March, 1956.

Objectives

This study was made to serve as a guide for farmers and ranchers in the organization and operation of a cooperative feedyard. The specific objectives of this study are: (1) to determine the feasibility of a cooperative feedyard as a means of feeding cattle, and (2) to investigate the problems involved in the organization, operation, financing, and marketing of livestock from a cooperative feedyard.

Procedure

This study presents information relative to development of cooperative feedyards. Data and information used in this study were obtained by analyzing the organization and operation policies of various large-scale feeding operations and adapting these ideas to a cooperative type arrangement. Additional information was obtained by personal visits to various types of feedyards, making a case study of a cooperative feedyard, and drawing on actual experience with different types of feedyard operations.

Costs and returns of a model cooperative feedlot are presented in this study by comparing the cost of feeding cattle in a cooperative feedyard as compared to feeding in a farm feedlot. Capital investment figures are presented to serve as a guide for interested groups planning to organize a cooperative feedyard. Capital requirements for the model feedyard developed in this study were obtained through the assistance of the Agricultural Engineering Department at South Dakota State

College⁴ and the Economic Research Division of the Consumers Cooperative, Kansas City, Missouri.⁵ Since these data do not involve projected prices, they cannot provide the relationship of what is to be expected in years ahead; however, enough flexibility is provided in the plan so that price adjustments can be readily made.

Alternative methods of organizing a cooperative feedyard are explored in this study. Methods of financing and managerial problems associated with the operation of a cooperative feedyard are presented. The advantages and disadvantages of various market outlets available to the feedyard are discussed and analyzed.

⁴Louis Lubinus, Extension Agricultural Engineer at South Dakota State College, Brookings, South Dakota.

⁵Russ Price, Commercial Cattle Feedyard Operating Policies, Facilities and Cooperative Organization Guides, Economic Research Division of Consumers Cooperative Association, Kansas City, Missouri, April 24, 1959.

CHAPTER II

SITUATION

South Dakota cash farm income data show that beef cattle is the state's most important agricultural enterprise. Beef cattle sales accounted for 40.3 per cent of the total cash farm income in 1958. Cash receipts from beef cattle, as a percentage of total cash farm income, more than doubled from 1945 to 1958. The number of fed cattle marketed during the same period remained relatively constant.⁶ Increased receipts resulted from expanded beef cow herds and increased feeder cattle sales.

In 1958 over 1,228,000 head of feeder cattle were available for feeding and only 388,000 cattle reached the market as fed cattle. A summary of the figures presented in Figure 1 shows that only about one-third of the cattle available for feeding were actually fed out in South Dakota for the years 1956 to 1959.

Feed grain production figures indicate that South Dakota has potential for increased cattle feeding. Feed grain production over the past 15 years has averaged 5 million tons annually. This includes all feed grains produced including corn, barley, oats, and sorghums.⁷ Prospects are that production will continue to increase. Bender's

⁶South Dakota Agriculture, 1959, p. 45, South Dakota Crop and Livestock Reporting Service, Sioux Falls, South Dakota, March, 1960.

⁷South Dakota Crop and Livestock Reporting Service, Sioux Falls, South Dakota. Information received in a letter February 24, 1960.

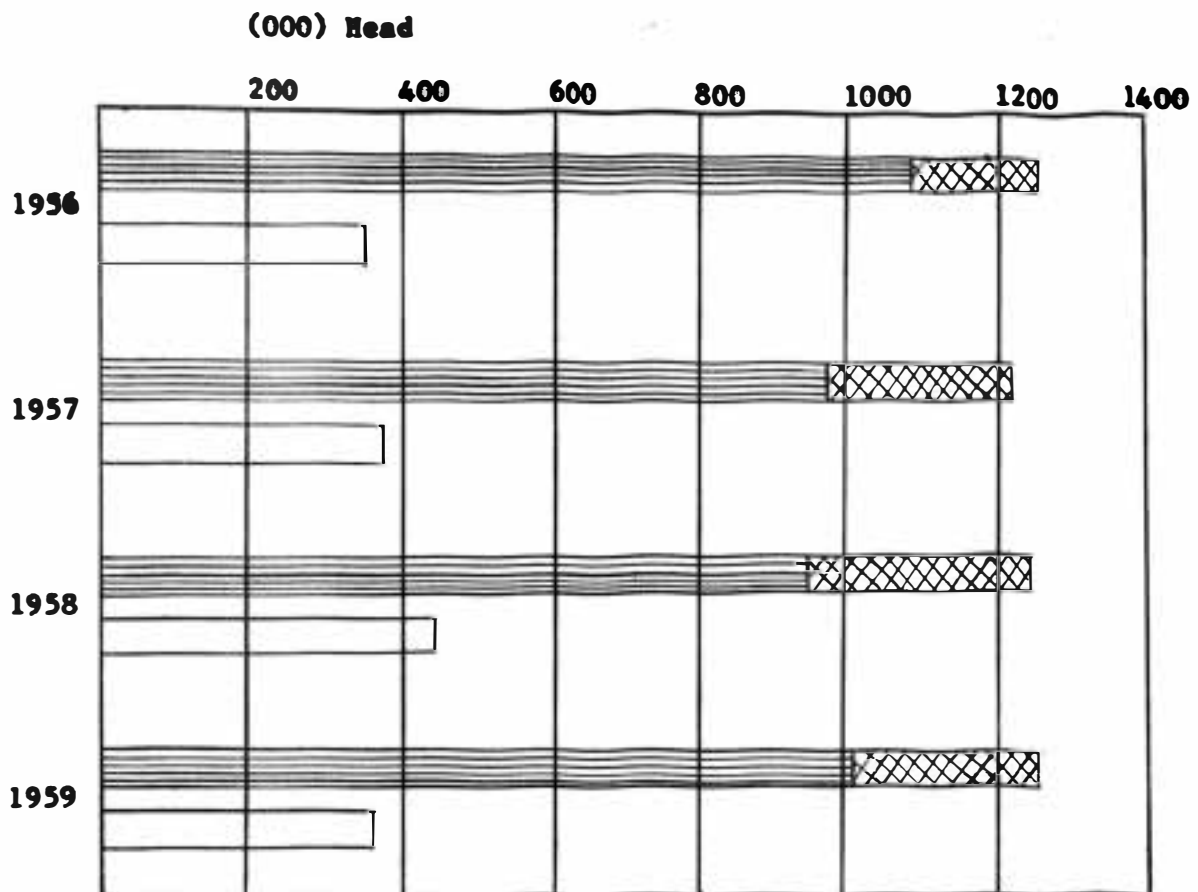





Figure 1. South Dakota Production of Cattle Available for Feeding and Fed Cattle Marketed

-  **South Dakota Produced Feeder Cattle***
-  **Feeder Cattle Shipped into South Dakota**
-  **South Dakota Fed Cattle Marketed**

**Source: South Dakota Crop and Livestock Reporting Service
Sioux Falls, South Dakota**

***Includes previous year's calf crop minus deaths, farm slaughter, and stock used for replacement purposes. Includes both beef and dairy animals.**

study indicates a 40 per cent increase in crop production in a period extending from 1930 to 1975. He explains that an increase in feed grain production will result from increased technology and shift from wheat production. Bender states that production could be increased even more rapidly depending on the need and the rate of adoption of improved practices.⁸ This production potential, along with the increased use of irrigation within the state, increases the possibility for expanded cattle feeding in South Dakota.

Can increased cattle feeding be brought about in South Dakota by expanding or increasing the volume of feedlot operations? This question is of considerable concern to South Dakota beef producers as integration, cow pools, super size feedlots, and contract farming become more popular. Since feedlots are getting larger and fewer throughout the United States, it would indicate that economies to scale do exist and that cattle feeding can be effectively performed on a large scale. Obviously, scale alone does not mean automatic success, but it does indicate that a large-scale farmer-owned co-operative feedlot has definite possibilities and warrants investigation.

To show the importance of the change that is taking place in beef production, the results of several recent studies are presented to point out trends and to relate the importance of scale in cattle feeding. Evidence of this phenomenon can be shown by referring to the number of cattle on feed January 1 in various states for a period

⁸Bender, op. cit., pp. 124-146.

from 1954 to 1960. Invariably the states where the trend has been toward larger-scale feeding have shown the largest increase in the number of cattle on feed. For example, the states of California, Colorado, and Arizona showed a 50 per cent increase in the number of cattle on feed, whereas South Dakota remained relatively constant during the same period.⁹

In an extensive study made in California, investigators found a definite trend in favor of large-scale feeding. The study was conducted on feedlots ranging from 1,000 up to 20,000 head in size. As the number fed increased, not only did the feed costs per hundred-weight of gain decrease, but the average daily gain also increased. The study indicated that the upper limit on size of feedyards had not yet been reached in California.¹⁰

Studies made in Minnesota show that the required man hours dropped rapidly as the number fed increased.¹¹

Large-scale and commercial feedlots are largely confined to the fringe or areas outside the corn belt. This would indicate that the area of adaption in South Dakota would probably be in the central

⁹South Dakota Agriculture, 1959, p. 35, South Dakota Crop and Livestock Reporting Service, Sioux Falls, South Dakota, March, 1960.

¹⁰David L. Grove, Cattle Feeding in California, A Study of Feedlot Finishing, Economics Department of Bank of America National Trust and Savings Association, San Francisco, California, February, 1957.

¹¹R. C. Johnson, T. R. Nodland, and C. D. Pond, Labor Requirements for Feeding Cattle as Affected by the Number of Cattle Fed, Report No. 241, p. 23, University of Minnesota, St. Paul, Minnesota.

or east-central part of the state. This area has an adequate supply of feeder cattle, good potential for feed grain production, and very few cattle being fed at the present time. Since not too many of the farmers and ranchers in this area have money invested in feedlot equipment, they may be more willing to invest in a cooperative feed unit.

Any farmer or rancher considering the possibilities of a cooperative feedyard will be faced with three basic alternatives:

- (1) the choice of feeding his cattle or selling them as feeders, and if his decision is to feed, then to (2) feed them at home himself, or (3) have them fed in a large-scale cooperative feedyard.

Technological advancement in the livestock feeding area is advancing at a rapid pace. This is especially true in the fields of rations, feed mixing, and feed distribution. The optimum combinations of feedstuffs, equipment, and labor will be necessary in order for South Dakota livestock feeders to compete with other livestock feeding areas.

Several types of business arrangements appear to have potential for facilitating an expanded cattle feeding program in South Dakota. It appears that both the cooperative and corporate type feedlots have possibilities. A cooperative type arrangement seems to hold the most promise for producers' groups wanting to take advantage of large-scale feeding. If farmers themselves do not work out arrangements for the management of commercial and large-scale feedyards, then more and

more cattle feeding will be done by large non-farm operators. These large-scale operators may very well be the meat packers and the chain stores.

CHAPTER III

HOW A COOPERATIVE FEEDYARD OPERATES

There can be several variations of a cooperative feedyard but they all involve a system of central, large-scale feeding. In an effort to obtain basic information, a study was made of a cooperative feedyard located at Bainville, Montana. A description of this operation is presented here to show how one cooperative feedyard was organized and how it operates.

This study was made by personal visit to the feedyard and by interviewing the manager¹² and one of its directors.¹³ This cooperative was selected because the area it serves approximates South Dakota conditions.

Organization

The Little Muddy Cooperative Livestock Feeders Yard was organized in 1957 by a group of 12 ranchers. Although this is primarily a ranching country, the members felt that an opportunity existed to increase their net returns by finishing their own feeder cattle. The group received some outside support and encouragement from local

¹²Clarence W. Detienne, Manager of Little Muddy Cooperative Livestock Feeders Yard, Bainville, Montana, Personal Interview, December 29, 1959.

¹³Albert Nelson, Director of the Little Muddy Cooperative Livestock Feeders Yard, Bainville, Montana, Personal Interview, December, 1959.

organizations and individuals that were primarily interested in increasing industry in the community; however, the basic motivating force came from within the membership itself.

The group had no previous model or study to guide the formulation of their plans. The planning and organization work was done by committees, each working on various phases of the overall plan. A local cooperative manager assisted the group in developing a cooperative charter. Plans for the layout of the feedlot were patterned after feedlots in other states which the group had visited.

The cooperative was organized on a membership fee basis. All of the capital needed was furnished by the membership itself. Since the original organization had 12 members, 12 equal shares were issued. Provisions were made in the charter to allow members to sell their interest; however, this type of transaction is done only with the approval of the board of directors.

Leadership for the association is provided by elected officers and a hired manager. The manager is delegated the full responsibility of supervising the operations of the feedyard and carrying out the orders of the board of directors. The treasurer is responsible for paying all bills and preparing the operating statement. The entire group serves as the governing body or in reality as the board of directors. Regular board meetings are held monthly or more often when needed.

Capital Investment

The members of the association have a total investment of \$75,000 in the feedyard. At the outset each of the original 12 members invested \$2,500, or a total of \$30,000. This amount of capital was adequate to build the original feedyard. Later the group invested another \$45,000 in feedyard facilities, primarily for the preparation of feed. This additional investment was assessed to each member and is now included as a part of the original shares. Each member's share represents an investment of \$6,250.

All financing was on an individual basis. Members not having sufficient capital obtained loans from outside sources. The local bank provided most of the needed capital for these loans. The cooperative itself has no financial indebtedness.

Physical Plant

The feedyard is constructed on a 40-acre plot adjacent to railroad facilities and an all-weather highway. The site has excellent drainage with adequate room for future expansion. The feedyard itself covers about eight acres and has a maximum capacity of 1,500 to 2,000 head of cattle, depending on their size.

The yard is well equipped but not elaborate. There are 13 pens, 120 by 160 feet in size. Each member has a certain pen or pens and the cooperative also has one pen for the feeding of cattle purchased from non-members. The lot is equipped with feeding alleys and fence line bunks. Each pen has an automatic all-season waterer. A two-way

scale is used for weighing both cattle and feed. The lot has adequate loading chutes and pens for spraying and treating animals. No housing or shade is provided for animals being fed. Board fences, 8 feet high, provide windbreak shelters on the north side of each pen.

The lot is equipped with facilities so that all unbranded cattle arriving at the yard can be branded. After the cattle have been branded, they are put in the owner's pen and the gates are kept locked at all times.

Feeding and Feed Supply

When first organized, the ~~cooperative~~ obtained its feed from a mill located a considerable distance from the yard. This proved to be an unsatisfactory arrangement. As a result of this experience, the cooperative installed its own feed mixing and grinding plant and storage facilities. The feed unit has a 5-ton per hour capacity and is housed in a steel building. All of the feed is prepared in bulk and the feeding is done with one ~~tractor-operated~~ self-unloading wagon and one self-unloading truck. All the feed is weighed and a record of the date, pen number, and ration is recorded.

The feeding rations are determined by the members collectively and are the only ones fed. Two rations are used in the feeding program. These rations are referred to as a "calf ration" and a "fattening ration." The only difference in the two is the per cent of concentrate contained in each. The rations contain the following three ingredients: alfalfa, beet pulp, and barley. According to the

manager, beet pulp is used because alfalfa and barley alone do not make a satisfactory ration.

Since Bainville is located in a dry-land farming area, the cooperative does have some difficulty in securing an adequate feed supply. All of the feed is bought locally either directly from farmers or elevators, except the beet pulp which is bought from a sugar refinery at Sidney, Montana. Some of the feed is furnished by the members themselves. They can sell their feed to the cooperative and either draw cash for it or credit it to their account. The influence of the feedlot has increased the market price for feed in the area. However, the cooperative is able to make some savings on quantity buying.

Operation Policies

The majority of the cattle fed in the lot belong to the members but the cooperative maintains one pen of cattle at all times. Income from the company cattle is used to help defray part of the expenses of the yard. For complete utilization of the yard, a policy was established which gave the cooperative the option of filling any member's pen after it stood empty for a certain length of time. This was necessary in order to maintain an optimum feeding operation. Company cattle are purchased on borrowed capital at a current rate of interest.

Schedule of Charges

The members pay a flat daily charge to have their cattle fed in the lot. The charge is made according to weight and age of the cattle. The following system is used:

Under 400#	20¢ per day
400 - 500#	25¢ per day
500 - 600#	30¢ per day
600 - 700#	35¢ per day
700 - 800#	40¢ per day
800 - 900#	45¢ per day
900 -1000#	50¢ per day

The cattle are weighed once each month and the charge adjusted accordingly. Operating costs are allocated monthly to the members.

Management

The cooperative has a full-time manager who is also one of the 12 owners. The manager has a background in cattle feeding but has had no special training for the job. The manager's salary is based on the number of cattle on feed. He is guaranteed \$200 a month for the first 600 head and 1 cent a day for each head over that with a maximum of \$400 per month.

The manager is responsible for directing labor. Two full-time men are required on a year-around basis with two additional men when the plant is operating at capacity. Individual members occasionally do some repair work on their own pens but receive no reimbursement.

The cooperative is generally responsible for keeping the pens clean and in good condition. The manager has the responsibility of keeping all the feedlot records and collecting bills. He also has the responsibility of maintaining an adequate feed supply.

It was estimated by the manager of the cooperative that they needed to feed 1,500 head of cattle to operate efficiently. The length of time cattle are held in the feedyard varied among classes of animals. The feeding period for all classes averaged six months. The greatest problem encountered by the feedyard was keeping the pens full, especially when the feeding margins were small.

Infirmary Pen

The cooperative operates an infirmary or sick pen at no additional cost to the members. The association pays for all the veterinarian costs and medicines used in treating sick animals; however, members stand their own death losses. This program has proven to be an effective way to cut losses. Daily checks are made of all pens to detect any sick or unthrifty animals. This program has not been very costly and has helped to improve member relations.

Marketing

Marketing of fat cattle is somewhat of a problem in the area since it is a considerable distance from any major slaughtering plant. It is the responsibility of the individual member to market his cattle when and where he desires. Owners can and have on occasion pooled

their cattle to make a load for shipping and selling. They have shipped to South St. Paul and to the Portland Stockyards. They have taken packer bids at the lot and have sold a number of fat cattle through the public auction at Sidney, Montana. Another outlet is a small packer in Williston, North Dakota, who purchases about 35 head per month to supply the local trade.

The group has had no contracts with any commercial concerns either for the fed beef or for supplies, thus maintaining an independent organization. Each individual uses his own marketing skill and information in marketing his cattle.

Various aspects of this feedyard will be referred to periodically in this study to point out the weaknesses and strong points in its operation. The following chapter presents the costs and returns of a model cooperative feedyard designed to South Dakota conditions.

CHAPTER IV

COMPARATIVE COSTS AND RETURNS OF VARIOUS ALTERNATIVE
FEEDING SYSTEMS

There is a wide range of alternative feeding programs available to farmers and ranchers in South Dakota. Assuming that the operator has equal preference for the various alternatives, he will normally choose the one that returns the greatest profits. A comparison of the costs and returns from feeding 200 head of 650-pound yearling steers under three different alternatives is presented in this chapter. These alternatives are: (1) selling the steers as feeders, (2) feeding the cattle at home under farm conditions, and (3) having the cattle fed in a cooperative feedyard.

A model cooperative feedyard was developed in this study to serve two functions: (1) to present cost figures that can be used to serve as guides for groups planning to build a cooperative feedyard, and (2) to develop cost figures that were used in the cost and return comparisons of the various alternative feeding systems. The model was designed for a 5,000-head daily capacity and a 10,000-head yearly operation. Studies indicate that this size operation is large enough to produce the returns to scale that would normally be expected from a large-scale feeding operation.¹⁴

¹⁴Price, op. cit., p. 22.

Capital Requirements for a Cooperative Feedyard

Costs for the model feedyard were broken down into three categories: (1) capital requirements for constructing the feedyard, (2) capital costs on an annual basis, and (3) current operating expense.

The size of the yard has a direct bearing on the capital requirements for construction. In this model costs have been estimated for a yard with a 5,000-head daily capacity and a yearly total of twice that number. The total capital requirement for a yard of this size is estimated at \$228,050. This figure includes the fixed assets as well as the equipment necessary to operate a modern large-scale feedyard. The estimate includes \$125,000 for a feed mill capable of preparing feed for 10,000 cattle per eight-hour day. This also allows for future expansion. It is assumed that all feed will be handled in bulk and no provision is made for pelleting. A summary of the capital requirements is shown in Table I.

A breakdown for the estimate of the capital costs on an annual basis is shown in Table II. The total capital costs on an annual basis is \$22,197. This includes such items as depreciation, repairs, interest, insurance, and taxes.

TABLE I. CAPITAL REQUIREMENTS FOR FEEDYARD 5,000 HEAD DAILY CAPACITY

Land - 40 acres	\$ 4,000	
Concrete (for around waterers and 10 feet behind bunks)	17,500	
Feed bunks (fence line, wood)	17,250	
Pen construction (windbreak)	6,900	
Infirmary pens, loading, and holding facilities	1,750	
Feed mill and storage	125,000	
Other buildings - office and equipment storage	5,000	
Two-way scale and pens	2,400	
All-weather water system and well	10,000	
Excavation of trench silo (15 cents a yard)	750	
TOTAL		\$190,550
Manure-handling equipment		
Used cat with scoop	3,000	
Dump truck used	1,500	
TOTAL		4,500
Feeding equipment		
Auger wagon	850	
Flat bed wagon	250	
Tractor and silage loader	2,800	
Two trucks	3,000	
Two feeding boxes	2,600	
TOTAL		9,500
Miscellaneous equipment		
Tractor	1,000	
Pickup	1,500	
Cattle-handling equipment	1,000	
TOTAL		3,500
Working capital		<u>20,000</u>
Total investment required		\$228,050
Investment per head fed annually		\$22.80

TABLE II. ANNUAL CAPITAL INVESTMENT COSTS FOR FEEDYARD
OF 5,000 HEAD CAPACITY

Land		
Interest \$4,000 @ 5½%	\$ 220	
Taxes @ \$2 per acre	80	
Annual cost		\$ 300
Working capital: \$20,000 @ 6%		1,200
Improvements		
Feed mill and storage	125,000	
Pens	6,900	
Bunks	17,250	
Concrete	17,500	
Other buildings	5,000	
Infirmiry pens	1,750	
Cattle scales	2,400	
Total improvements	\$175,800	
Taxes (20-year depreciated value)		
	1,250	
Interest ½ of \$175,800 @ 5%	4,395	
Depreciation @ 5%	8,790	
Insurance (50% value of mill @ \$1.30)	812	
Repairs	500	
Total		15,747
Equipment		
Cat and blade	3,000	
Dump truck	1,500	
Two trucks	3,000	
Feeding boxes	2,600	
Water system	10,000	
Tractor	1,000	
Tractor silage loader	2,800	
Pickup	1,500	
Cattle-handling equipment	1,000	
Total	\$26,400	
Depreciation @ 10%		
	2,640	
Interest ½ of \$26,400 @ 6%	795	
Insurance	350	
Repairs	1,000	
Taxes (depreciated value)	165	
Annual cost		4,950
Total annual capital cost		22,197

The necessity of keeping the yard operating at capacity is indicated by data shown in Table III. When the yard is operating at capacity or 10,000 head annually, the capital cost per head fed is \$2.21. When the total number fed annually drops to 7,000, the cost increases to \$3.17 per head.

TABLE III. SUMMARY OF CAPITAL COSTS AS AFFECTED BY THE NUMBER OF CATTLE FED ANNUALLY

Annual cost of capital	Total number fed annually	Capital cost per head	
		Year	Day
\$22,197	10,000	\$ 2.21	\$.006
22,197	9,000	2.47	.007
22,197	8,000	2.77	.008
22,197	7,000	3.17	.009
22,197	6,000	3.70	.010
22,197	5,000	4.48	.012
22,197	4,000	5.55	.015
22,197	3,000	7.40	.020
22,197	2,000	11.10	.030
22,197	1,000	22.20	.061

The current operating expense includes salaries of employees, utilities, supplies, and miscellaneous expenses. The total operating costs on an annual basis are \$98,047. With the yard operating at full capacity, the daily operating cost is 2.7 cents per head. A summary of the non-feed costs is shown in Table IV.

TABLE IV. OPERATING STATEMENT SHOWING COSTS AS AN ESTIMATE
OF CURRENT OPERATING EXPENSES AND CAPITAL COSTS
ON A YEARLY AND DAILY PER HEAD FED BASIS

Item	Yearly cost	Daily cost
Salaries		
Manager	\$ 7,500	\$ 20.53
Employees (8) @ \$3,600	28,800	78.90
Bookkeeper @ \$2,400	2,400	6.58
Utilities		
Electricity	4,800	13.15
Equipment expense		
Gas and oil	6,000	16.45
Other	2,000	5.50
Other		
Office maintenance and supplies	350	.96
Veterinarian and supplies	4,000	10.95
Operating margin (undivided gain)	20,000	54.80
Capital cost	<u>22,197</u>	<u>60.81</u>
Totals	\$98,047	\$268.65
Total daily operating costs per head fed (10,000 head per year basis)		.027

Capital Requirements and Cost for a Farm Feedlot

Capital requirements for a farm feedlot can be broken down much the same as for the cooperative feedlot. These costs are: (1) capital investment in feedlot equipment, and (2) current operating expenses.

The capital investment costs for the farm feedlot were calculated for a modern 200-head capacity feedlot. The total investment

in feedlot equipment was estimated at \$13,000. The capital costs on a per head fed basis was estimated at \$3.26 per year (Table V).

Current operating expenses for the farm feedlot were estimated at \$13 per head fed. This estimate was made under the assumption that 200 head of cattle would be fed in the lot 240 days with a net gain of 500 pounds each. Labor requirements were estimated at 5 hours per head at a \$1.50 cost per hour or a total of \$7.50. Miscellaneous expenses include veterinarian expenses, death loss, minerals, and equipment operating costs. These costs are estimated to be \$1.10 per hundred-weight of gain or a total cost of \$5.50 per head.

TABLE V. TOTAL NON-FEED COSTS FOR CATTLE FED IN A
TYPICAL 200-HEAD CAPACITY FARM FEEDLOT
ON A PER HEAD FED BASIS

Item	Per head
Capital investment:	
Feedlot improvements costs: [*]	
Total (20-year life)	\$13,004.00
Per head fed	65.20
Yearly cost per head fed (capacity)	\$ 3.26
Current operating expenses:[†]	
(Feeding 650-pound yearling for 240 days)	
Labor costs (5 hours per head @ \$1.50)	7.50
Miscellaneous costs (gain x 1.10/cwt.)	
500 pounds at 1.10/cwt.	5.50
Total expense per head fed	\$16.26
Total daily expense per head fed	.068

^{*}Louis Lubinus, Extension Agricultural Engineer, South Dakota State College, Brookings, South Dakota.

[†]Hal Route and Paul Hasbarger, Planning Your Cattle Feeding Program, Leaflet FM9, Agricultural Extension Service, University of Minnesota, St. Paul 1, Minnesota, October, 1959.

Comparison of Various Feeding Alternatives

Profit prospects from feeding 650-pound good to choice yearling steers for the three alternatives proposed earlier are shown in Table VI. The cost and return comparisons were computed by holding the price of the feeder steers, feed costs, and market value of the slaughter steers constant and comparing the non-feed costs for the various alternatives.

The non-feed costs for the cattle fed in the farm feedlot were estimated at \$22.36 per head. This estimate of overhead was calculated from two sources: (1) the total operating expense, and (2) interest on investment. The operating expense was estimated at \$1626 per head. This was computed by multiplying the daily operating expense times the number of days in the feedlot. The interest on investment was calculated at 5 per cent on \$182 for 8 months or \$6.10.

An estimate of the non-feed costs for the cattle fed in the cooperative was \$15.30. This cost was broken down into four categories which included yardage, death loss, interest on investment, and transportation. The yardage charges were calculated by multiplying 2.7 cents times 240 days, totaling \$6.48. Since members of the cooperative stand their own death losses, the rate was estimated at 1 per cent for 8 months or \$1.22 per head. An additional \$1.50 was added to cover the cost of transporting the cattle to the feedyard and \$6.10 was added for interest on investment. The comparison is shown in Table VI.

In this analysis no advantage was attributed to the cooperative for savings that are possible from quantity feed buying. A survey of three feed companies indicated that a saving of \$6 a ton could be made on quantity buying of supplement.¹⁵ With an estimated use of 800 tons annually, this would mean a saving of \$4,800. Also, no allowance was made for patronage refunds of undivided gain.

TABLE VI. ESTIMATED COSTS AND RETURNS FOR ALTERNATIVE METHODS OF MARKETING STEERS

	I Selling ^a feeders	II Farmlot ^b feeding	III Cooperative ^b feeding
Price of feeder steers/cwt.	\$ 28.00	\$ 28.00	\$ 28.00
Selling price of slaughter steers/cwt.		27.00	27.00
Value of feeder steers	182.00	182.00	182.00
Feed costs ^c			
Corn, 52 bu. @ \$1.05		54.60	54.60
Hay, 1,500 lbs. @ \$22/ton		16.50	16.50
Supplement, 160 lbs. @ \$80/ton		6.40	6.40
Total feed cost		77.50	77.50
Non-feed costs		22.36	15.30
Total costs (including cost of feeder steer)		281.86	274.80
Market value slaughter steer		297.00	297.00
Profit from feeding		15.14	22.20
Total returns (including value of feeder steer)	182.00	197.14	204.20

^aGood to choice 650-pound yearling steers.

^bYearling steers on full feed 240 days and sold as 1,100-pound choice and prime slaughter steers.

^cArt Anderson and Leonard Benning, Livestock Feeding Outlook for the 1959-60 Feeding Season, Circular No. 509, pp. 27-30, South Dakota State College, Brookings, South Dakota, September, 1959.

¹⁵The average savings were calculated from prices quoted by three feed companies selling feed in South Dakota.

Summary of Costs and Returns

Feeding the steers in the cooperative feedyard showed an advantage of \$7.06 per head fed over feeding the cattle in the farm feedlot. Both methods showed an advantage over selling the steers as feeders. Total returns for the 200 steers from the three alternatives were as follows: (1) returns from selling the steers as feeders, \$36,400; (2) profits from feeding the steers in the farm feedlot plus the value of the feeder steers, \$39,428; and (3) profits from feeding the steers in the cooperative feedlot plus the value of the feeders, \$40,840.

The capital investment in the farm feedlot was \$65.20 per head fed as compared to \$22.80 per head fed in the cooperative feedlot. The total capital investment in feedlot equipment is not only lower for the cooperative but the transfer of ownership would be much simpler.

Not all of the advantages of a cooperative feedyard appear to be in the form of lower feed costs. Other important advantages appear to be reduced capital investment per animal fed and the opportunity to expand production through specialization. Advancing technology has provided pressure for increasing the size of the farm and ranch business and a cooperative feedyard provides a means for expanding the beef enterprise without the need for greater managerial ability and a large capital investment in equipment.

CHAPTER V

IMPORTANT ASPECTS OF ORGANIZING A COOPERATIVE FEEDYARD

The task of determining the best way to organize a cooperative feedyard will require a certain amount of study and planning. This can usually best be done by small committees. Large public meetings and extensive surveys would be quite unproductive, especially when considering a limited membership cooperative. Most of the necessary information for organizing can be obtained easily and quietly. Since a description of the little Muddy Cooperative Feed Yard organization was presented in a preceding chapter, only a few of the more important aspects of organization will be presented here.

Preliminary Planning

There are a number of important considerations that should be taken into account before any construction of the feedyard begins. Among these are location, drainage, design, and water supply. Many times these important items are overlooked and future expansion is limited because of it. Probably one of the most important aspects of organizing a cooperative feedyard is the allowance of sufficient flexibility for future growth in order that the organization can expand to include new members and to meet the future needs of the present membership. Also, an allowance should be made for the addition of other facilities as they become feasible. In other words, a long-range plan should be developed.

Membership Requirements

Organizers of a cooperative feedlot should give some thought to membership requirements. It may be most desirable to organize on a limited rather than an open-membership basis. In any event, certain standards for membership should be established. One requirement would be that sufficient cattle would be provided to fill a pen at the feedyard. It would also be desirable to obtain some sort of assurance of continued membership support. Relatively high initial investment would help assure continued support.

Full utilization of the feedyard is a problem that must be dealt with firmly. If the original size of the yard is tailored to the needs and capabilities of the membership, it will help to minimize the problem of utilization. Yards that are built for anticipated membership would not appear to be economically sound.

Alternative Ways of Organizing

The best way to organize a cooperative feedyard will depend to a large extent on local conditions. There is no one best method of organizing. Only after all of the local possibilities have been surveyed can the best alternative be determined. Three alternative plans for organizing a cooperative feedyard are described in this study.

1. Part of an Existing Cooperative

In some cases it might be feasible and advantageous to organize as part of an existing cooperative. This could be accomplished when organized as part of a marketing or feed supply cooperative. Even though the feedyard would be considered as a part of the cooperative, generally it is more desirable to organize as a separate department. In all probability, only a limited number of the members would be using this service at any given time. A policy of membership in a new department would need to be established. Inasmuch as the feedyard would represent a considerable investment, it would not be desirable to charge all of the construction costs against the original association because of its restricted use by the entire membership. Record keeping, financing, management, and the distribution of refunds would be simplified under this system.

One of the greatest advantages of utilizing existing facilities is in reducing the total capital outlay. This is especially true when existing feed preparation facilities can be utilized. One of the largest items of expense in organizing a cooperative feedyard is the costs of the feed mill.

There are many other requirements of a feedyard that would complement the services offered by existing cooperatives. A grain marketing cooperative could be of much assistance in the procurement of feed grains. A feed supply cooperative, through expanded output, would be in a good position to serve the feedyard. A marketing cooperative could be utilized in marketing the finished cattle as well as assisting in supplying feeder cattle.

On the other hand, a modern feedyard is a highly specialized operation. Some of the advantages gained by utilizing existing facilities might be more than offset by the disadvantages. The distance that the feed mill is from the yard site will be an important factor. The problems associated with the preparing of complete rations including silage and hay at a mill located some distance from the yard may prove to be more of a problem than a solution. These factors must all be weighed in deciding the best alternative.

2. Organizing as a New Cooperative

The construction of a completely new feedyard may prove to be the best alternative. In the long run, this may prove to be the most advantageous even though the initial capital outlay may be higher.

When a new feedyard is constructed, the design and location of the feed facilities can be tailored to the specific needs of the feedyard, both present and future. It is difficult to design a highly efficient operation with part of the equipment located some distance from the feedyard. Also, when using a part of an existing facility, other problems may become evident, such as a competitive labor schedule in serving both cooperatives. Also, there is always the possibility of conflicting management ideas between the cooperatives.

A new cooperative could still work closely with other cooperatives in the procurement of feed ingredients and supplements. Under this plan the feedyard would be operated in the interest of the members, not in the interest of another cooperative. Also, as new technological efficiencies become available, the independent association

would be in a more favorable position to take advantage of them with the facilities constructed at the yard site.

3. Incorporated Partnership¹⁶

Although this study is devoted primarily to a cooperative-type feedyard, the possibilities of a corporate arrangement should not be overlooked. Organizing on a corporate basis works especially well when the organization has limited membership. When organized under the conditions listed above, there is very little difference in the method chosen. A corporate-type arrangement can work especially well when organized on a family or on a small community basis.

The tax treatment under an incorporated partnership would be the same as a regular partnership providing the following requirements were met: (1) only individuals or estates as stockholders, (2) no more than ten stockholders, (3) only one class of stock issued, (4) the corporation's income from rent, royalties, dividends, interest, and annuities does not exceed 20 per cent. A corporation taxed as a partnership cannot own land and rent it out if this rent exceeds 20 per cent of the corporation's gross receipts.

Incorporated multiple ownership offers advantages other than that of scale of operation. Among the advantages are limited liability, ease of transfer of ownership, and a possible improvement in the

¹⁶Laurel D. Loftsgard, Family Farming Incorporated, Circular A-321, North Dakota Agricultural Experiment Station, Fargo, North Dakota, January, 1960.

availability of credit. A potential lender may look with favor to these features of a business organization. Also, personal debts and liabilities of the individual shareholders do not impair the credit of the corporation.

CHAPTER VI

ALTERNATIVE OPERATION POLICIES FOR COOPERATIVE FEEDYARDS

There are many different operating policies that can be used by cooperative feedyards. An attempt will be made to point out some of the more important operating policies that can serve as a guide for planning committees. Most of the policies discussed are applicable to all forms of large-scale feeding operations including commercial, cooperative, or corporate feedyards.

Operation Goals for a Local Cooperative Feedyard

The operation of a cooperative feedyard should be conducted in such a way that it will derive the greatest benefits for its patron members. It should be operated so that interested farmers and ranchers can take advantage of low-cost, large-scale feeding at the actual cost of production as opposed to the price of production paid in a private yard. The yard must be operated as a service to the members and this service must be performed more efficiently than the members can do it individually.

Management

Probably the most important single factor in the success of a cooperative feedyard is management. One of the main reasons cooperatives fail is because of lack of proper management. The following

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Management

Probably the most important single factor in the success of a cooperative feedyard is management. One of the main reasons cooperatives fail is because of lack of proper management. The following

table shows the reasons why cooperatives fail and why management is by far the most important.

TABLE VII. REASONS FOR FAILURE OF COOPERATIVE ASSOCIATIONS

Cause	Percentage of association reporting*
Inefficient management	72%
Insufficient working capital	24
Insufficient business	23
Too liberal credit to patrons	17
Voluntary dissolution	12
Dishonest management	8
Acts of providence	6
Unfair competition	2
Miscellaneous causes	8

Source: Bakken and Schaars, Economics of Cooperative Marketing, McGraw and Hill Book Company, Inc., New York, and London, 1937, p. 197.

*Many associations gave several reasons for their cessation which explains why the percentage exceeds a total of 100.

The manager must have a good background in feeds and feeding as well as being a good businessman. He will have to assume the full responsibility of the operations of the feedyard. His greatest responsibility will be to see that the yard operates as close to capacity as possible and that adequate feed is on hand at all times. In short, the manager will need to have a good all-around understanding of large-scale cattle feeding.

The manager will be responsible for supervising the labor required to operate the feedyard. Since the feedyard operations are continuous, it will be necessary to set up shifts for the men. A rule-of-thumb is that seven to eight employees are required to handle

a 5,000-head daily capacity feedyard.¹⁷ In most yards the manager is also responsible for keeping the records. Usually it is advantageous to have at least a part-time bookkeeper especially when the lot is of sufficient size to warrant the additional expense.

The level of management cannot be over-emphasized in considering the success of a feedyard. An incentive or a bonus program of some type may be necessary to attract the kind of manager desired.

Pooling or Individual Ownership

An important decision to be made by the members is whether to operate the yard on an inventory contract basis or to maintain individual ownership of the cattle. One of the procedures used in a cooperative feedyard is to put each member's cattle in an individual pen and to keep separate records of feed consumption for each lot. Under the inventory contract system the cattle are pooled and no ownership identity is maintained. An alternative method that may be used is a combination of the individual ownership and the pooling systems. Under this system, members are given the opportunity to pool their cattle or have them fed separately.

The early experience of pooling milk cows or centralized milking systems may serve as a useful guide for farmers or groups planning large-scale feedyards. Cow pools encountered considerable dissatisfaction on the part of the owners when individual identity of the cows

¹⁷Price, op. cit., p. 20.

was maintained; however, this situation was alleviated when associations began buying or issuing stock for the value of the cows. This procedure not only improved membership relations but it also improved the efficiency of their operations.

Although the problems of a cow pool and a feedyard are not the same, some value can be gained from their experience. The advantages of operating the feedyard on a pool basis are: (1) need for less pens, (2) less record keeping, (3) easier to group and handle smaller incoming lots of cattle, (4) cattle can be grouped according to weight, quality, and grade for marketing, (5) seasonal price variations are leveled out by continuous year-around marketing, and (6) eliminates the problem of under and over-utilization of individual pens.

The most difficult part of the inventory system is to develop a formula that is acceptable to the entire membership. A brief example of the inventory contract system is as follows:

Members of the cooperative deliver their cattle to the feedyard to be fed. The cattle are sorted, graded, and appraised according to current market prices. If the member agrees to the price, he signs a contract and the cattle are turned into the lot. He receives either cash or a book entry for the value of the cattle. If he refuses the price, he can ask that the cattle be fed separately.

Members using the inventory basis become eligible for patronage refunds after the cattle have been in the lot a certain length of time. Refunds are based on net pounds of gain and the margin above all costs per pound of gain. Under the pooling system the profit or loss is

calculated on the entire operation and is referred to as averaging. Members are prorated refunds in direct proportion to the amount of business done with the cooperative which would be the net pounds of gain in relation to the pounds of feeder livestock pooled.

The pooling system is complicated by the fact that the quality of the cattle will vary from one member to the next. One of the more satisfactory ways of handling quality differences is by adjusting inventory values at the time of entry. A fairly high degree of uniformity of quality is needed to make the pooling system work effectively. At any rate, certain minimum quality standards would need to be established.

Although there are many advantages to be gained by pooling, it is doubtful that a new association could operate under this plan because of the lack of capital and managerial ability. Since capital would be the major problem when using the pooling method, this study directs more attention toward the individual ownership arrangement. However, as capital reserves build up the association may want to develop a pooling system in their long-run planning.

Schedule of Charges

In developing a schedule of charges, several criteria can be used. Charges must be set at a level so that income to the cooperative will cover the current operating expenses and build a reserve for future emergencies, depreciation, and other needs of the yard. This is an operating policy which must be determined by the board of directors and the members.

Basically there are four main methods of making charges for cattle being fed in the yard and they are:

- (1) Straight tonnage feed markup charged in addition to cost of the feed.
- (2) Daily yardage charges plus feed costs.
- (3) Charge for pound of gain from entry into the lot until departure.
- (4) Flat daily charge per head fed.

The first two methods are the most commonly used by commercial feedlots. One main exception is that meat packers usually insist on the cost per pound of gain type of agreement. Most yards tend to use a uniform system for all their customers.

The straight tonnage markup probably offers the most promise for a cooperative feedyard.¹⁸ In using this system, it is very important to have adequate equipment for measuring, weighing and mixing the feed. The general procedure is usually to have the yard prepare a list of various rations available and the price per ton. The patron is then charged for the amount of feed used. Enough markup is added to each ton of feed to cover the operating expenses and whatever margin is considered necessary by the cooperative. Usually the cooperative is not in a position to offer a guaranteed price for feed for more than a 30-day period.¹⁹

¹⁸Charles R. Koch, "Super Sized Feedlots," The Farm Quarterly, vol. 12, pp. 60-63, Cincinnati, Ohio, Spring, 1957.

¹⁹Detienne, loc. cit.

Contracts with Feeders

The cooperative may or may not use written contracts with the feeders. Some commercial feedyards insist on written contracts, or agreements, but this usually varies considerably. Some feeders, especially packers, insist on contracts that clearly define all the details of the agreements. When feeders other than members have cattle fed in the yard, it might be well for the cooperative to have a written contract with them.

The matter of written or verbal contracts is a problem of local management. It is very important that there be a complete understanding on the part of the members regarding their responsibilities and liabilities to prevent any misunderstandings.

Credit Policies

A cooperative feedyard should not be too liberal with its credit policies. Practically all commercial feedyards insist upon prompt payment of feed bills. A definite policy for collecting bills should be established, such as, the first of the month or every two weeks. Collecting feed bills promptly shifts the responsibility of providing the operating capital back to the patrons.

Some cooperative feedyards have a policy which allows members to sell their surplus feed to the feedyard. They can either draw

cash for it or credit it to their account.²⁰ This procedure not only cuts down on the need for extra operating capital but also assists in the procurement of an adequate feed supply.

Custom Feeding

It may be advisable under certain conditions for a cooperative feedyard to do some commercial feeding. This may be necessary from time to time in order to maintain satisfactory level of operation. Since a cooperative yard is operated primarily for its members, only a small portion of the business should be expected from commercial sources.

In general, there are three classes of customers: ranchers, meat packers, and speculators. In most areas packers seem to own the largest percentage of cattle on feed in commercial yards. Cattle owned by chain stores are included in the packer category.²¹

Policy for charging customers will have to be established by the local association. In most cases the charge will be the same for both members and non-members, but the savings are prorated back to the members in the form of patronage refunds.

²⁰Policy of the Little Muddy Cooperative Livestock Feeders Yards, Bainville, Montana. Information obtained from personal interview with the manager.

²¹Price, op. cit., p. 3.

Death Loss Liability and Infirmary

In most commercial feedyards, the owner of the cattle assumes all the death losses. This procedure would probably be best for a cooperative also. This, of course, can be determined by prior agreement between the cooperative and the members. Regardless of the plan that is used to handle death losses, there should be a complete understanding so that there is no disagreement among the members.

All commercial feedyards have some program to care for sick animals. This is usually done by removing the sick animals to an infirmary pen where they can be treated. Many different methods are used in handling the cost of caring for sick animals, but the most common procedure is to charge the owner for the cost of the treatment. In some yards a veterinarian makes a daily routine inspection of the pens to detect sick animals. Some commercial and cooperative yards assume all the veterinarian charges plus the cost of the treatment. The cost of the treatment in this case is considered as part of the operating expense.²²

Patronage Refunds

There are a number of ways that patronage refunds can be handled. Two methods that may be used would be either on a feed tonnage utilization basis or on a dollar volume of business done with the cooperative.

²²Policy used by Tovrea Land and Cattle Company Commercial Feedlot, located at Phoenix, Arizona.

Either method would be a more satisfactory arrangement than to prorate refunds on the number of head fed, since there is a wide variation in the size, age, and weight of the cattle. As in all cooperatives, the refunds are usually made at the end of the year.

CHAPTER VII

METHODS OF FINANCING A COOPERATIVE FEEDYARD

After the need for a cooperative feedyard has been determined and the decision to build has been made, the task of financing becomes the major consideration. Raising adequate finances may be and often times is one of the limiting factors in organizing new cooperatives. In order for a cooperative feedyard to develop, much careful planning and study must be done so that the best possible financial structure be attained. Inadequate financing is one of the major reasons cooperatives fail, so every possible effort should be made to avoid financial difficulties from the outset. Since farmers and ranchers often lack adequate knowledge in the area of organizing and financing cooperatives, it is imperative they seek the counsel of persons qualified in this field for assistance.

Sources of capital for financing a cooperative feedlot can be broken down into three main categories. The actual financing is likely to be done with capital from a combination of several sources.

Sources of Capital for Organizing New Cooperatives²³

Members

- (1) Individual patron members

Non-member investors

- (1) Individual investors

²³Bakken and Schaars, op. cit., p. 408.

Loans from other agencies

- (1) local banks
- (2) bank for cooperatives
- (3) merchant loans
- (4) insurance companies

Methods of Obtaining Money from Membership

Membership Fees

A cooperative itself is not in business to make a profit of its own but to increase the profits or reduce the expenses of the individual members. Since this type of cooperative is run by members and strictly as a service to the members, it is natural that a major share of the capital comes from the membership. It is especially true of this type of venture since the success or failure of the cooperative is linked directly to membership utilization. There are, of course, many other methods of financing but none better than that of the membership financing their own business.

There are three basic arguments why the membership should finance their own cooperative feedyard: (1) it encourages the membership to maintain democratic control of the feedyard operations, (2) the feedyard will be operated in the interest of the membership, not outside investors, and (3) the membership will have a greater responsibility for the success and operation of the association.

A conservative estimate is that the membership should provide a minimum of 50 per cent of the needed capital through membership fees.²⁴ A relatively high membership fee will also tend to improve the quality of the membership.

Sale of Stock

Purchase of stock is a condition for membership in many cooperatives. The number of shares and the par value can vary according to the needs. Par value generally varies from \$25 to \$100.

The total amount which can be obtained through the sale of capital stock is small in comparison to what is needed. This method alone is insufficient to build a large-scale cooperative feedyard.

Certificates of Indebtedness

Funds can also be obtained by borrowing from members. The cooperatives usually issue certificates of indebtedness which bear interest. This method offers the greatest possibilities for financing a new cooperative with limited membership.²⁵

The advantage of certificates of indebtedness is that members with surplus funds may be willing to invest when they know they will receive a specified rate of interest on their investment. This method may secure funds which would not be invested in capital stock.

²⁴Detienne, loc. cit.

²⁵Ottar Nervik and Robert Gunderson, Financing Cooperatives, Bulletin No. 434, p. 7, Agricultural Economics Department, South Dakota State College, Brookings, South Dakota, February, 1954.

Certificates also take prior claim over capital stock in the event the business should fail.

Preferred Stock

As an alternative, some cooperatives sell preferred stock with a fixed dividend. Preferred stock is equity capital, but the cooperative may have to pay income tax on the amount paid in dividends. In contrast, interest on certificates of indebtedness is considered a business expense.

Deferred Patronage Refunds²⁶

Cooperatives can obtain capital from its members indirectly by deferring patronage refunds. Instead of paying patronage refunds in cash, cooperatives can allocate certificates to the members and hold them for a period of years before making payment. Such decisions are usually made by the members at the annual meeting. By doing this, the cooperative can build up its capital reserves to meet the needs of the business. Under this plan, member investment is in direct proportion to the amount of business done with the cooperative.

Although the principle of this method is fairly simple, there are some problems in its use. One problem is whether deferred refunds are to be considered part of the member's equity or a claim against the cooperative. Some cooperatives issue capital stock or stock credit for deferred refunds, and if this is done, it is clear that they are member

²⁶Ibid., p. 7.

equities. In other cases, there is a question whether to consider the deferred refunds as equities or liabilities. Sometimes legal clarification is necessary.

The deferred refund may be a good source of operating capital for the cooperative, especially to help maintain an adequate feed supply.

Revolving Funds

Among methods used in paying off patronage refunds, use of revolving funds has become the most common in recent years. With a revolving fund, patronage refunds are held back for a certain number of years and when cash payments are made, the oldest obligations are paid first. This is one method of maintaining a constant amount of working capital at all times. This also provides a reserve for emergencies.

Advanced Payments

One method that can be used is advanced payments on cattle being fed in the yard. This method was used when needed by the Little Muddy Cooperative Feeders Yard. This plan may be necessary when operating capital is low or in the case of emergencies. All members are not willing, and some are not capable of this type of financial arrangement. As a result, this method is not used frequently.

Investments from Non-members

Non-members who may or may not be patrons of the cooperative will at times invest part of their savings to help finance a

cooperative. Non-producers of farm products, such as local bankers, businessmen, professional men, retired farmers, and other public-spirited individuals often subscribe to the capital stock of a cooperative to help get it started in a community. They consider the association an asset and wish to assist it financially if the members cannot provide sufficient capital.

Non-members usually invest or loan money to a cooperative in two ways: preferred stock and certificates of indebtedness. Certificates of indebtedness are widely used. Certificates of indebtedness have the same advantages whether they are sold to members or non-members. Usually a guaranteed rate of return is put on both preferred stock and certificates of indebtedness not to exceed 8 per cent in South Dakota.

Loans from Other Agencies

Local Banks

Local banks can probably play a more important role in the financing of a cooperative feedyard than any other agency. Many local bankers are keenly interested in serving a prospering community and are willing to extend credit to a sound cooperative business venture. Local banks will be most useful in providing short-term operating loans and assisting in the negotiating of facility loans. Banks generally act as loan correspondents for life insurance companies and other investment organizations.

Bank for Cooperatives

The Omaha Bank for Cooperatives is in business to make loans to local cooperatives. Although their policies vary from one type of business to another, loans can be made up to 60 per cent of the appraised value of the property for which the loan is to be made. This bank makes basically two types of loans: (1) physical facility loans for financing buildings and other physical property, and (2) working capital loans to finance current operations.

Joint Account Dealings²⁷

The financing problems of a local association can be lessened to some extent by conducting joint account dealings. Such an arrangement often can be worked out with a sister cooperative for such items as feed supplies and building materials. Although this method has considerable potential, it also has limitations since local cooperatives are in business to serve their members, not other cooperatives.

²⁷Bakken and Schaars, op. cit., p. 405.

CHAPTER VIII

ALTERNATIVE MARKETING SYSTEMS AVAILABLE TO A
LARGE-SCALE COOPERATIVE FEEDYARD

The movement of beef from the producer to the consumer involves numerous physical operations and services before the final product is in the form, time, and place that the consumer wants it. Oftentimes it involves a transfer of ownership several times during the marketing process. The number of times the beef is bought and sold has a direct bearing on marketing costs. The modern trend in marketing is to use the shortest possible marketing channel in moving food to the consumer. The problem here is to determine how to get the beef from the feedyard to the consumers at the lowest cost and in such a way that the benefits will accrue to the members.

Many of the efficiencies of large-scale feeding have been pointed out in this study; unfortunately, the marketing phase of many integrated programs is often neglected in favor of production. The problem here is to determine whether or not a larger input of resources in marketing will result in more net return to the members, or whether the group can do better by putting their resources in production and using the regular market channels.

The advantages of the feedyard being organized on a pooled basis are particularly evident in the marketing phase. Such advantages as being able to sort all of the cattle according to weight and grade and leveling out seasonal price fluctuation by continuous

marketing are the most important. Marketing on an individual basis would mean the handling of many small loads of cattle which may create problems associated with selling and transportation. However, pooling probably might not be possible for a new association during the first few years of operation because of limited capital and experience. Therefore, the marketing phase of this study will be directed toward the individual ownership arrangement.

Alternative Market Channels

This study considers five market channels that are available to the members of the feedyard: (1) owning their own processing plant, (2) the auction market, (3) selling direct, (4) the terminal market, and (5) contracts. The diagram of these marketing channels is shown in Figure 2.

The movement of cattle through the various channels presents many problems. The most serious problem would be adequate volume, especially for certain channels. Yearly totals can be calculated by figuring the annual output of the feedyard at 10,000 head and estimating the balance from two additional sources. These two sources shown in Figure 2 are: (1) receipts from independent members of the association who feed on their own farms, but use the cooperative for marketing purposes, and (2) direct public purchases when necessary to satisfy slaughter plant and market order requirements.

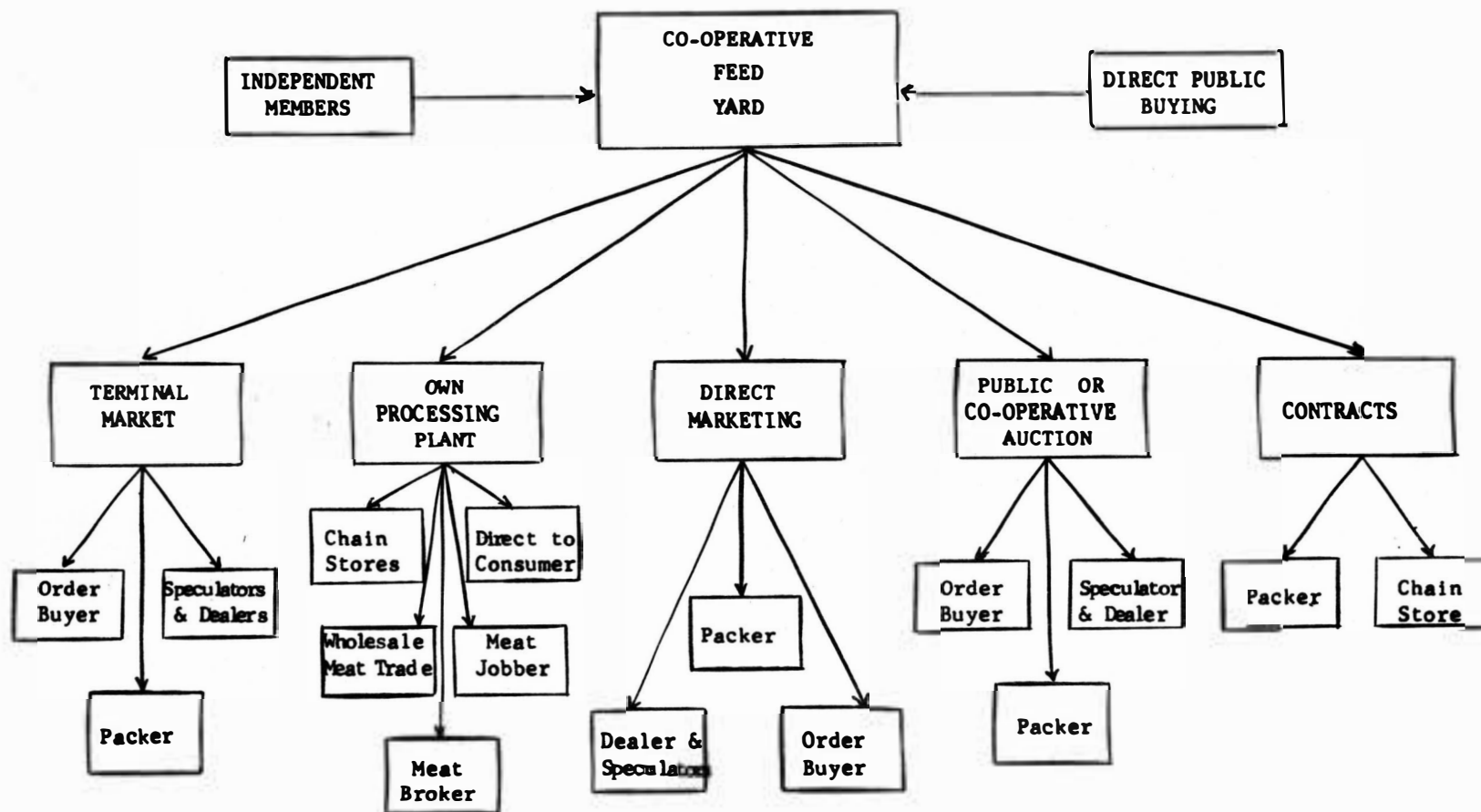


Figure 2. Alternate Marketing Channels Available to a Large Scale Feed Yard

Processing Plant

One market outlet open to the cooperative is operating its own processing plant. Although this system has definite limitations, at the same time it presents a great challenge to a local association. Recent trends in decentralization of the meat-packing industry point with favor to this system of marketing. The important economic considerations of this system are that production, procurement, processing, and distribution would be under the same ownership. Complete or total integration is possible under this marketing arrangement.

The processing plant would probably offer the greatest advantage to its members if some type of product differentiation were possible. Since this group produces a homogeneous product, it appears that considerable opportunity exists in this area. An example of this might be the development of a meat-type cattle or featuring a brand-name product.

Analysis of Processing Plant Alternative

To provide a basis for evaluating this alternative, the manager of a small processing plant was interviewed.²⁸ This manager was of the opinion that the two limiting factors of a cooperative processing plant would be volume and management. He pointed out that in order for a beef processing plant to be successful, it is almost imperative

²⁸Del Greenley, Plant Manager of the Greenley Packing Company, Sioux Falls, South Dakota, Personal Interview, April 16, 1960.

that the operation be large enough to operate under federal inspection. In the manager's opinion, for a processing plant to operate efficiently under federal inspection it requires a minimum of 40,000 head annually. The manager also pointed out that a plant could be operated on a much smaller scale under state inspection. Under state inspection a plant can be operated efficiently with as few as 15,000 head annually, but he maintained that this would still not be practical since the outlet for the beef would be far too limited.

His view on management was that it would be extremely difficult for a local association to secure a manager capable of operating the plant. It was indicated that merchandising the dressed beef would be the greatest problem. He pointed out that it takes a high degree of ability, considerable time, and perseverance to get dressed beef sold at the right price.

A general assumption in the packing industry is that the by-products from processing will more than offset the cost of slaughtering and distribution. Under this assumption, the advantages or savings from this alternative would appear to be reduced costs associated with the marketing of live animals, plus or minus the profit or loss from slaughtering. Indications are that a processing plant would be feasible if: (1) enough additional cattle could be obtained from independent members to provide adequate volume to operate under federal inspection, (2) enough capital could be obtained to provide adequate facilities, and (3) the level of management capable of operating the plant could be obtained.

In summary, it would appear that the input of resources required for this alternative would be too great for an operation of this size. Also, attempting to tie a processing plant to a feedyard where individual ownership is maintained would present many problems. Then, too, organization under state inspection alone does not seem to be the answer.

Selling by Auction

Another marketing alternative available to the cooperative is to develop an auction market outlet. Auction markets are fast becoming an important market channel for cattle in South Dakota. Feeder cattle sales still dominate the auction markets; however, some increase has been shown in slaughter cattle sales in recent years. Marketing of fat cattle through auctions has more than doubled since 1940, but for all practical purposes still is of minor importance.²⁹

Brunk and Darrah explain that the present livestock marketing systems are changing and they point out that auctions as a means of selling livestock have grown rapidly since the 1930's as farmers, ranchers, and feeders began selling nearer the point of production to reduce marketing costs. According to these authors, buyers also find

²⁹Richard R. Newberg, Livestock Marketing in the North Central Region, Regional Publication 104, p. 25, Ohio Agricultural Experiment Station, Wooster, Ohio, December, 1959.

auctions an efficient way of assembling livestock that would otherwise be sold by individual farmers and feeders.³⁰

Developing an Auction Market Outlet

The best way to organize or develop an auction outlet will depend to a large extent on local conditions. There appear to be two alternative auction methods available: (1) the use of the facilities of an existing auction, or (2) the construction of the association's own auction facilities.

The decision as to which of the two alternatives to use will depend to a great extent on the location of existing facilities. Attempting to utilize an auction market many miles from the yard would tend to defeat the purpose of the program, since marketing close to where the cattle are fed is most economical.

An argument in favor of the association's building its own auction is that the physical plant would be built to the precise needs of the feedyard. Adjoining alleys and holding pens would minimize the physical movement of livestock. If a local association should decide to build its own auction, it would seem advisable to set it up as a separate department even though it is considered a part of the cooperative. This would not only provide a neutral marketing agency, but it would give greater flexibility to the marketing program. This

³⁰M. E. Brunk and L. B. Darrah, Marketing Agricultural Products, p. 27, Ronald Press Company, New York, 1955.

flexibility would be especially important if the auction were built to serve more than just the members of the feedyard.

In certain communities where adequate marketing facilities are lacking, the construction of a cooperative auction market would have considerable potential. The auction market in this case would be constructed to serve the general public as well as the feedyard. C. G. Randell states that during the past three years new auction facilities have been started by cooperatives in Wisconsin, Indiana, Ohio, Missouri, and California. In the areas where those facilities were built, farmers and feeders had indicated an interest in this type of marketing outlet and were willing to finance it. Randell indicates that in the decade ahead more new auctions will be built by the farmers themselves.³¹

C. T. Sanders pointed out that an auction company at Dodge City, Kansas, has inaugurated a fat cattle sale day once a week to serve the commercial and private feedlots in that area. According to Hunter, they have built buyer confidence by having a large supply of fat cattle on hand each sale.³²

Analysis of the Auction System

It appears that the main obstacle of the association's owning its own auction would be adequate volume. If regular fat cattle

³¹C. G. Randell, loc. cit., p. 10

³²C. T. Hunter, Executive Secretary of the National Association of Livestock Auction Markets, Kansas City, Missouri. Information obtained in a letter relative to the McKennely-Winter Commission Company at Dodge City, Kansas.

sales are to be held weekly, sufficient volume is needed to attract and maintain buyer confidence. A feedlot of this size probably would not be large enough to maintain and operate a public auction market, registered and bonded under the Packers and Stockyards Act.

Another obstacle to the auction system is changing the buyer's attitude toward the auction method of buying fat cattle. One fat cattle buyer was interviewed relative to this problem. He pointed out that it would take time to train buyers in this method of buying. His main argument was that it does not allow the buyer sufficient time to appraise, sort, and handle the cattle; therefore, there may be a tendency to underbid the true value of the cattle.³³

The main advantages of the auction alternative if constructed in conjunction with the feedyard are: (1) greater convenience in marketing, (2) reduced transportation costs, (3) reduced shipping risks, (4) facilitate sales of any size lots, (5) producer could protect himself by rejecting bids, (6) the possibility of reduced shrinkage, (7) prompt cash payments, and (8) provide for competitive bidding among the buyers.

It would appear that the auction market outlet would be possible if the following conditions could be met: (1) if enough cattle could be obtained from independent members to provide an adequate and uniform volume, (2) if the auction were built to serve the general public as

³³Hollis Williams, Cattle Buyer, Greenley Packing Company, Sioux Falls, South Dakota, Personal Interview, April 16, 1960.

well as the feedyard, or (3) if the facilities of an existing auction were available and suitable.

Selling Direct

A large feedyard such as this would, of course, attract many buyers. In states where large commercial feedyards are located, studies show that packer buyers visit the yards daily and weekly in an effort to buy cattle. Such large feedyards actually become markets in themselves and develop packer contacts which are advantageous. The yard manager attempts to keep each owner posted as to packer bids and market trends to assist owners with their marketing decisions. As a result, direct marketing has become a major outlet for large feedyards.

Many authorities feel that the increase in direct marketing has come about mainly because of improved communications. Shepherd points out that an argument which assumes that competition exists only where several buyers are physically present is misleading, because competition is not restricted to those who are physically present. He maintains that radio, telephone and news reports make the presence of other buyers felt even though they are not physically present when the producer is dealing with one buyer on his farm.³⁴

Most packers give sellers the option of a live bid or selling by carcass weight and grade. Although this system has merit, it is

³⁴Geoffrey S. Shepherd, Marketing Farm Products, Third Edition, 1955, p. 19, Iowa State College Press, Ames, Iowa.

seldom used. Cattle of inferior quality and low dressing percentage would, of course, be expected to fare less well than if sold as live animals. In buying on live-weight basis, buyers have a tendency to upgrade inferior cattle and downgrade exceptional quality.³⁵

Analysis of Direct Marketing

Selling cattle direct would offer many advantages to the members of the cooperative. Some of the advantages of selling direct, which would actually mean a saving when compared to shipping to market, are: (1) less cash marketing expense, (2) greater convenience, (3) the possibility of reduced shrinkage, (4) reduced shipping risks, and (5) the possibility of reducing the hazard of price change while en-route to market.

Although it is not possible to determine the exact net returns, it would appear that this alternative offers the greatest potential as a market outlet. There are basically two reasons for this assumption: (1) the input of resources in marketing would be small, and (2) since there is a large concentration of cattle, the feedyard would tend to serve as its own market.

The Terminal Market

The terminal market is by far the most important single outlet for fat cattle in South Dakota. In 1957, 73 per cent of the fat cattle

³⁵Scott, op. cit., p. 62.

were marketed through the terminal markets.³⁶ This same marketing pattern is consistent throughout the corn belt states. According to a regional study conducted in 13 north central states, 70 per cent of the cattle fed were sold through the terminal markets.³⁷

This is in direct contrast to seven western states where the trend has been toward large-scale feeding. In this area the majority of the cattle are sold direct. In California, for example, 92 per cent of the cattle move directly to the packer. This figure includes cattle in feedyards owned by the packer as well as cattle that are being fed under contract.³⁸

Analysis of the Terminal Marketing System

The terminal market has long been a dependable outlet for fat cattle. The terminal is a market made up of buyers of all types; consequently, the competition for livestock is keen. Federal-state livestock market news makes this market a valuable asset whether the seller uses it or not. Commission companies and stockyards people maintain that sellers lose their competitive position when they sell direct.

Some of the disadvantages of using the terminal market are: (1) additional marketing charges, (2) the possibility of additional

³⁶South Dakota Crop and Livestock Reporting Service, Sioux Falls, South Dakota, information obtained in a letter February 24, 1960.

³⁷Newberg, op. cit., p. 24.

³⁸Scott, op. cit., p. 63.

shrinkage, (3) risk of loss in transit, (4) inconvenience of marketing, and (5) once the cattle are on the market, it is very difficult to reject a bid.

Commission companies maintain that the additional marketing costs are more than offset in the form of higher prices and fill. The only fair way to evaluate the terminal market is to compare the bids in the feedyard against the price at the terminal minus transportation, shrink, and commission charges. Even then it is impossible to know what the exact net returns will be from the various alternatives.

Selling by Contract

Selling by contract offers some advantage to sellers especially in times of falling prices. On the other hand, in times of rising prices packers attempt to increase the amount of contracting of fed cattle in advance to insure a uniform supply. A regional study made in nine western states showed that 12 per cent of the cattle on feed were contracted for by the packer in advance of sale. Effective ownership of cattle in feedlots by packers included 28 per cent in packer-owned or commercial feedlots plus 12 per cent contracted for in advance, making a total of 40 per cent.³⁹ According to this study, advance sales were on the increase in that area, although they were still relatively unimportant.

³⁹Ibid., p. 60.

Recently one of the leading mail order houses announced that it would be selling frozen meat at a year-around guaranteed price. This means that if the retail price is going to be held constant at a competitive level, then the price for live animals will also have to be known in advance. Should this system of selling beef become more widely used, then contracts for fed beef are likely to increase.

There are many different kinds of contracts available. Each packer has the type of contract that suits his own particular needs. The highest percentage of the cattle is contracted for two weeks or more in advance of marketing. Scott commented that contracts were used by west coast packers to regulate the flow of cattle to market and to help stabilize their operations.⁴⁰

Analysis of the Contract Method

Very little contracting of fed cattle is done in South Dakota; however, it appears that contracts may become more important in the future. This may in part be due to integration and the desire on the part of the packers to stabilize their operations and level out seasonal price changes. Scott feels that more study is needed on contract buying and selling of cattle in regard to its effect on price movement.⁴¹

The advantages of contract selling appear to be: (1) a hedge against lower future prices, and (2) improved credit rating. These

⁴⁰Ibid., p. 62.

⁴¹Ibid., p. 63.

advantages may be offset to some extent by the fact that the packer may have superior knowledge as to future trends in livestock prices.

CHAPTER IX

SUMMARY AND CONCLUSIONS

During the next ten to twenty years more integrated activities in livestock production can be expected. This appears to be the result of technical progress and scientific advancement in agriculture. More such technical developments are likely to come in livestock feeding and automation. Larger feeding operations will be in a more favorable position to take advantage of this advancement as new technology becomes available. The optimum combination of feed stuffs, equipment, and labor will be necessary for South Dakota feeders to compete with other livestock feeding areas.

Seldom do economic advantages come without some costs. Along with the possible advantages of large-scale feeding, some problems may arise. Where the traditional managerial functions of the farmer are transferred to another party, the decisions made may result in conflicts of interest. If a cooperative feedyard is to be successful, its membership must be made up of persons who are willing to cooperate.

The results of this study showed that a large-scale cooperative feedyard has a definite cost advantage over a small farm feedlot. This cost advantage was due primarily to greater utilization of facilities, equipment, and labor. The relationship between scale and cost was evident in each phase of the feeding operation. Daily non-feed costs were found to vary inversely with the number of head fed. The

cost differentials in this study appeared to be of adequate magnitude to justify feeding cattle in a large-scale cooperative feedyard. It is important that the yard be of sufficient size to produce the returns to scale that is normally associated with large-scale feeding. There is less risk of becoming too large than too small; however, it is important that the building plans do not exceed the capabilities of the membership. The success of a cooperative feedyard rests on the full utilization of the yard facilities by the membership.

There are several potential marketing outlets available to large-scale feeding operations. The advantages and disadvantages of several alternatives were discussed in this study. Each of the alternatives has certain merits and at the same time each has certain limitations. In attempting to make a decision as to which alternative to use on the basis of economic principle, the following factors must be considered: (1) input of resources in marketing, (2) level of management required, (3) convenience of marketing, and (4) net return to the members.

There seems to be considerable advantage in marketing if the yard is organized on a pooled rather than individual ownership basis. Continuous ownership creates many problems and eliminates some of the advantages of a large-scale feeding operation. Being able to sort all of the cattle according to grade, weight, quality, and year-around marketing to eliminate seasonal price variations seem to be the most important advantages.

The movement of beef from the producer to the consumer involves numerous physical operations calling for diverse skills. In some instances the skills required for these operations exceed the ability of the producers. Certain outlets are limited to the extent of the managerial ability that can be obtained by the cooperative. Under these circumstances, it may be advisable for the members of the cooperative to use the present marketing channels rather than to attempt their own.

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