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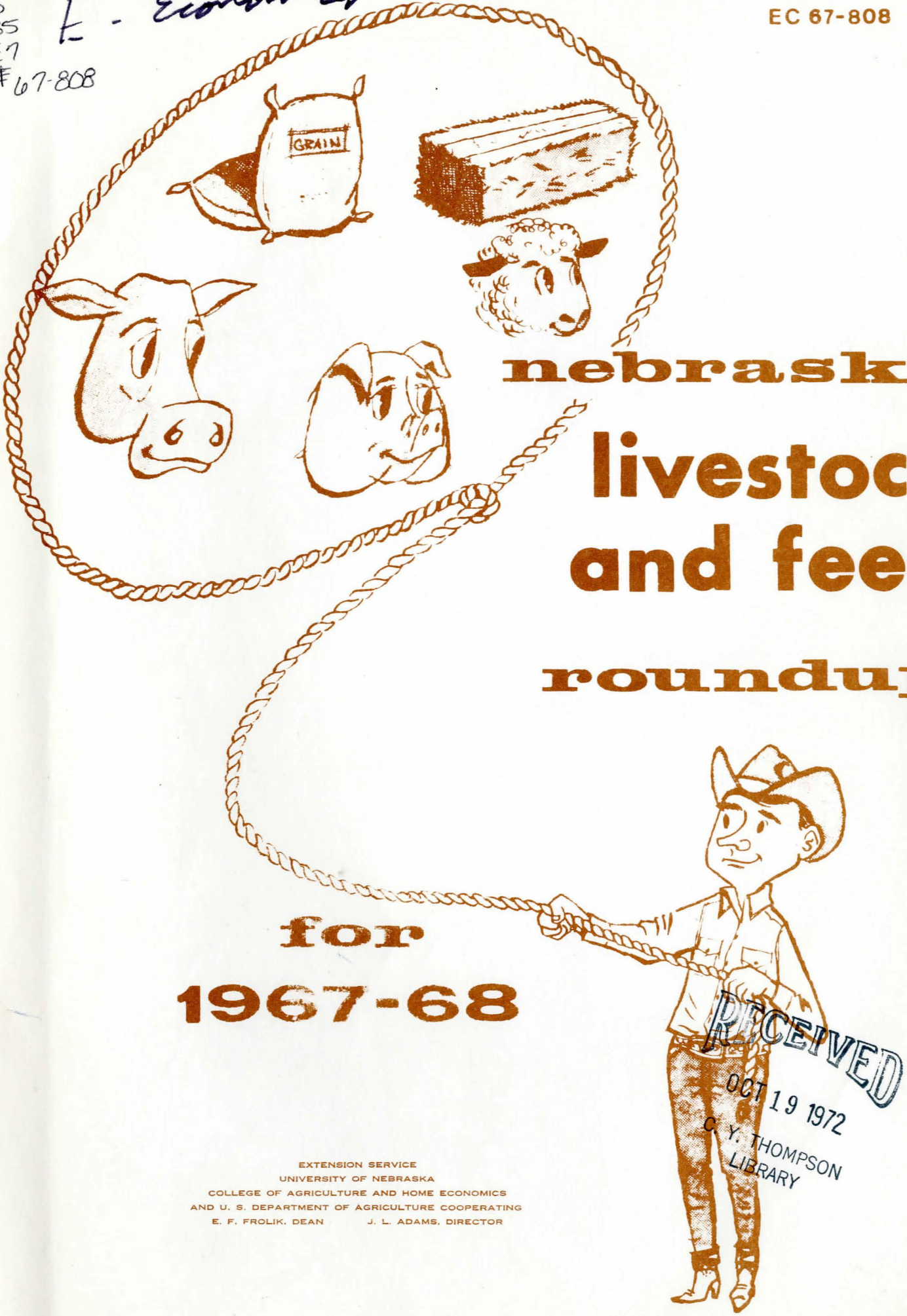

nebraska livestock and feed roundup for 1967-68

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Errata

Page 2, Table 1

Total percent change for all steers and heifers (last column) should be -2 instead of +2.

Page 3, next to last line

12% should be changed to 2%.

Page 2 of Appendix, 2nd paragraph, 2nd sentence should read: "The steers must either weigh between 1000 and 1150 lbs. and have an estimated yield of 61% or between 1151 and 1300 lbs. with an estimated yield of 62%."

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NEBRASKA LIVESTOCK AND FEED ROUNDUP

FOR 1967-68[1]

DEMAND

The demand for food will continue to increase in 1967-68. But, although more money will be spent for food at the retail level, all of the increase will not go to farmers and ranchers. Services related to food will claim a still larger portion of the consumer's food dollar.

Population in U.S. was estimated at 198.9 million in June of 1967, 1.2% more than a year earlier. The rate of population growth may be higher during the next few years as new families are established by the "war babies" of World War II. Employment was 1.8% higher in June than it was a year earlier and wage rates were nearly 5% higher. Disposable personal income during the second quarter of 1967 was 7% higher than in 1966. Expenditures for food, however, were only about 3% higher.

Marketing analysts are forecasting more improvement in employment, consumer incomes, and domestic demand during 1967-68 than was experienced in 1966-67. Continued increases in government expenditures at all levels an increased number of housing starts, and some anticipated increase in capital layouts on the part of business will be important fundamental features of business activity during the year ahead. With unemployment already at a comparatively low level, increased business activity means more pressure on the labor force, higher wage rates, higher family incomes, and perhaps more automation. Increases in taxes will tend to reduce consumer spending and hold down prices but they are not expected to offset the underlying strengths entirely.

Expenditures for food will increase but not as much as disposable personal income. People who are already fully employed at reasonably good rates of pay do not usually increase their expenditures for food in proportion to increases in income. In fact, the proportion spent for food may actually go down even though the actual dollars may increase. Moreover, as incomes of these families rise, they tend to spend more of their food dollar for services,--prepared foods, especially.

Farmers and ranchers benefit more from increases in the incomes of families with low incomes and inadequate diets. An increase in income for these people may make it possible to upgrade their diets through the use of more high protein foods like beef and other meats. Hence, the distribution of income among consumers is important to farmers and ranchers.

In summary, it would appear that we can expect about a 3 to 4% increase in the demand for beef and pork during the coming year.

THE SLAUGHTER CATTLE SITUATION

The most important factor affecting the price of fat cattle during the months ahead will be the marketings of fed cattle. On July 1, there were 8.7 million head on feed in the 32 cattle feeding states. This was 2% less than on July 1 a year ago and 17% less than on April 1 of this year. The decrease from April 1 compares to a 13% drop in 1966.

1/ Prepared by Philip A. Henderson, Extension Economist, University of Nebraska

The number on feed July 1 was about the same in the North Central states as it was a year ago; the eleven Western states had 6% fewer on feed; and the other feeding states had 3% more.

As of July 1, cattle feeders indicated that they intended to market 2% more cattle during the months of July, August, and September than they did a year ago. Marketings would apparently be quite evenly distributed throughout the three months, according to intentions.

Examination of the numbers of cattle on feed by weight groups on July 1 suggests that marketings of cattle may become smaller this fall. The number of steers weighing 500 to 899 pounds was 6% lower than on July 1 a year ago. Heifers were down 5 to 10% as indicated in Table 1.

Table 1. Cattle on Feed July 1 by Weight and Sex

	Steers		Heifers		Steers and heifers	
Lbs.	No.	% change from '66	No.	% change from '66	No.	% change from '66
Under 500	220	+25	180	+11	400	+18
500-699	1033	- 6	867	-10	1900	- 8
700-899	2442	- 6	1250	- 5	3697	- 6
900-1099	2051	+ 8	243	- 1	2313	+ 7
1100 & over	413	+13	---		414	+12
Total	6159		2540		8724	+ 2

Marketings this fall will be affected by placements on feed during the summer months, of course. Information is not available on placements except in 6 of the 32 feeding states,--Nebraska, Iowa, California, Texas, Colorado, and Arizona. These 6 states had about 60 percent of the cattle on feed as of July 1. During July, placements on feed in these 6 states were 11 percent higher than they were in July of 1966. Nothing is known about the weights of these cattle but it is reasonable to assmme that some of these cattle will be coming to market during the fall quarter. However, generally good pasture and range conditions suggest the likelihood that feeder cattle may not move into feedlots as rapidly as usual this fall. Therefore, it is anticipated that total placements of feeder cattle during the summer months may not be as large as they were a year ago and that marketings of slaughter cattle will be down this fall, but less than the 6 or 7% which might be indicated by the 500 to 900 pound cattle in Table 1.

Marketings of cows have been running below the number marketed in 1966. Good range conditions (see Figure 1) and the prospects for higher prices for feeder cattle probably mean that marketings will continue to run below those of 1966 during the rest of 1967. Smaller supplies of cow beef would give added strength to the fat cattle market this fall and winter.

Likewise, smaller anticipated marketings of hogs this fall in relation to those of 1966 lend added support to the prospect for higher fat cattle prices.

It now appears that slaughter cattle prices in the fall of 1967 may run 10 to 12% higher thna they did last fall. This would put prices in the range of $26.75 to $27.50 at Omaha.

In view of the numbers of cattle available to put in feedlots, the supply of fed steers and heifers going to market in the first part of 1968 might be smaller than during the first part of 1967. However, good prices for slaughter cattle this fall and a plentiful supply of feed at lower prices may increase the number of cattle placed on feed to nearly the same as we had in 1967.

If cattle are marketed in an orderly fashion and with no increased weight per head, prices should hold steady through the winter and could even work a little higher.

What happens to prices during the latter part of 1968 will depend on the number of cattle placed on feed between now and then. Unless cheap feed causes an unusally large proportion of available cattle to be fed out, prices during the latter part of 1968 should continue to hold at higher levels than those experienced during the last part of 1967. Widespread drought would have a depressing effect on the market if excessive numbers of cattle are sent to market because of it. Marketing cattle at heavier weights would also tend to force prices down.

FEED SITUATION

Feed grain supplies for 1967-68 are expected to be nearly 211 million tons according to August 1 crop estimates,-more than 5% larger than they were at the beginning of the current feeding year. Corn production was up sharply from 1966 levels, partly as a result of increased acres; but a new all-time-high average yield (75.9 bu) also contributed to the huge crop. Grain sorghum production was estimated to be 14% higher in 1967. Increases in these two principal feed grains more than offset slight decreases in production of oats and barley.

Table 2. Feed Grain Supply in U.S.

Supply	Ave. 1961-65	1966-67	1967-68
	(Millions of Tons)		
Carry over	69.1	42.1	36.0
Production	145.4	157.2	174.5 a/
Imports	.4	.3	.3
Total Supply	214.9	199.6	210.8

a/ Based on August 1 estimates

Nebraska's supply of feed grain is expected to be at least 10% smaller than it was in the fall of 1966. South Dakota, Kansas, and Colorado are expected to have larger supplies of feed grains than this year while Iowa is expected to have slightly less. Total feed grain supplies in the five states are about 12% less than they were at the beginning of 1966-67.

Table 3. Supplies of Feed Grains in Nebraska and Adjacent States

	In Storage Mil. Tons		Production, Mil. Tons		Total Supply Mil. Tons	
	July 1, 1966	July 1, 1967	1966	Aug. 1, 1967	1966	1967
Nebr.	10.51	9.32	13.30	11.86	23.81	21.18
S.Dak.	2.82	2.73	4.90	5.97	7.72	8.70
Iowa	16.02	14.42	26.95	27.71	42.97	42.13
Kansas	2.74	2.29	5.78	6.56	8.52	8.85
Colo.	0.24	0.38	1.05	1.20	1.29	1.58
Total	32.33	29.14	51.98	53.30	84.31	82.44

Prices of feed grains are largely determined by the total supply in the U.S. Five percent larger supplies and some reduction in the number of grain-consuming animal units indicate that feed grain prices might average 10 to 15% lower during the new feeding year starting October 1. The slightly smaller total supplies in Nebraska and its surrounding states probably means that prices will not be down quite as much locally. Corn prices may average close to the $1.10 level during the feeding year beginning October 1 and probably will be below a dollar at harvest time.

There appears to be a good chance that some corn and grain sorghum in Nebraska will get caught by a killing freeze before maturity, resulting in some soft corn and a greater than usual supply of silage. This would emphasize the relative shortage of good, mature corn in the area and would tend to raise the price of feed grains within the area.

Larger supplies of high protein feeds will be offset to some extent by higher rates of feeding. But with a record supply of soybeans in prospect, prices of soybean meal are expected to be lower, -perhaps as much as $10 a ton, -than they were in 1966-67, especially during the first part of the new feeding year.

With the exception of Iowa, hay supplies are larger this year than they were a year ago (Table 4). Nebraska's hay supplies are essentially the same with the exception that production this year was less spotted than it was in 1966. The quality of first cutting alfalfa is low in parts of the state because of heavy June rains.

Little change is expected in the price of hay if we have somewhere near "normal" winter weather. Heavy snows which would necessitate more hay feeding would cause the price of hay to go up.

Last winter was an unusually mild winter, requiring comparatively little hay feeding. This was offset to some extent, however, by the dry spring and slow starting grass which required hay feeding later in the spring than usual.

Table 4. Supplies of Hay in Nebraska and Adjacent States

	Carry Over (1000 Tons)		Production (1000 Tons)		Total Supply (1000 Tons)	
	May 1, 1966	May 1, 1967	1966	1967	1966	1967
Nebr.	1,342	1,270	6,352	6,525	7,694	7,795
S.Dak.	1,188	1,144	4,574	5,211	5,762	6,355
Iowa	1,925	2,261	7,797	6,980	9,722	9,241
Kansas	1,215	652	4,077	5,277	5,292	5,929
Colo.	601	487	2,862	3,059	3,463	3,546
Wyom.	339	243	1,432	1,746	1,771	1,989
Total	6,610	6,057	27,094	28,798	33,704	34,855

As of the first of August, pasture and range conditions were generally good to excellent throughout the country (Figure 1). Drought conditions were serious, however, at the extreme ends of the Great Plains. North Dakota and part of Montana were extremely dry in midsummer; so was the southern 1/3 of Texas. But for the most part, ranchers have good grass and are under no pressure to sell cattle.

FEEDER CATTLE SITUATION

Feeder cattle prices tend to go up or down with the price of slaughter cattle. During periods of rising prices, they tend to rise faster than prices of slaughter cattle; during periods of falling prices, they tend to fall faster.

Without effective control over the supply of cattle going to slaughter, prices paid for feeders tend to be a residual based on what consumers are willing to pay for beef at retail. Other factors such as the prospective supply of feeds and the supply of cattle available for feeding are important in the final determination of prices paid for feeders.

This year, the total number of cattle available for feeding but not yet in feedyards is less than it was a year ago. The number of steers over 1 year old apparently is down 4 to 5% while the number of heifers over 1 year old may be up slightly. Any tendency to hold back heifers for herd replacement of expansion would further reduce the numbers of heifers available. The 1967 calf crop was down 1% but all of the decrease was in dairy calves. The number of beef calves born in 1967 was larger than it was in 1966.

Higher prices for slaughter cattle, an abundant supply of feed grains at lower prices, reduced imports of feeder cattle, and good range and hay conditions on ranches indicate stronger prices for feeder cattle this fall. At the time this is being written, it is too early to appraise the demand for calves to go on wheat pastures, but if wheat pastures make a good growth, this is an important factor in the total demand for calves during the fall of the year.

Sales or contracts for sales reported during August ranged from about $32 to $36 for choice steer calves.

Usually, prices for feeder cattle decline seasonally as the fall runs begin. This year, however, the strong position of ranchers, rising slaughter cattle prices and cheaper feed may reduce the seasonal decline to near zero.

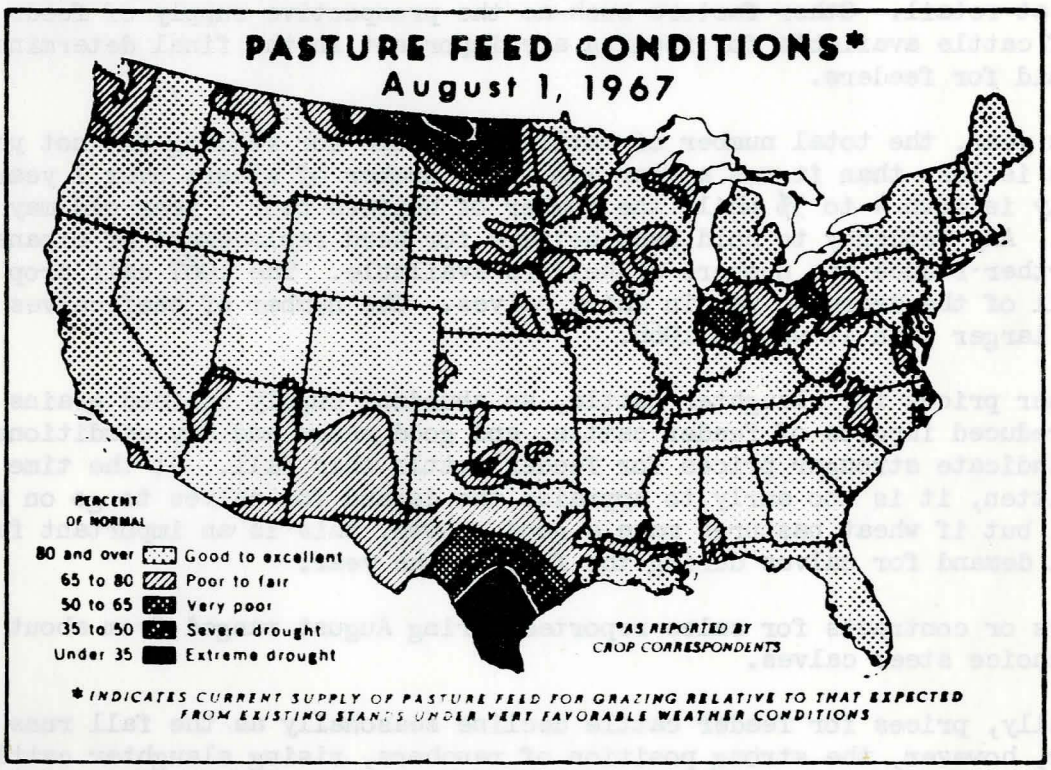
Unless bad weather sets in, ranchers are not expected to move their cattle as early as usual this fall.

Prices of yearling steers and heifers are expected to be relatively high compared to calf prices. Continued strength in the price of slaughter cattle will add support for higher feeder cattle prices as we move through the new feeding year.

Prices of feeder cattle are expected to run $2 to $4 higher this fall, compared to a year ago. The bulk of choice steer calves are expected to sell for $31 to $34 and yearlings, for $26 to $29.

HOG SITUATION

On the basis of the June pig crop report, farrowings of pigs in March, April and May of 1967 were down 2% from the same months of 1966. These are the hogs which will be coming to market during the fourth quarter, October through December.


PASTURE FEED CONDITIONS*
August 1, 1967
PERCENT OF NORMAL
80 and over Good to excellent
65 to 80 Poor to fair
50 to 65 Very poor
35 to 50 Severe drought
Under 35 Extreme drought
*AS REPORTED BY CROP CORRESPONDENTS
* INDICATES CURRENT SUPPLY OF PASTURE FEED FOR GRAZING RELATIVE TO THAT EXPECTED FROM EXISTING STANDS UNDER VERY FAVORABLE WEATHER CONDITIONS

During the first part of 1967, marketings have been larger than statistics on farrowings would indicate. But the June 1 inventory of hogs on farms suggests the same general pattern of marketings this fall as indicated by the data on farrowings.

Prices of hogs will show a seasonal decline this fall but the decline is expected to be much less than it was a year ago. If hog producers carry out their intentions to reduce farrowings during the June to November period of 1967, supplies of pork will be less during the first half of 1968. This would mean higher prices of hogs during the first 6 months of 1968. A low of around $19 is expected late this year and prices during the first part of 1968 are expected to average $1.50 to $2.00 higher than they did in early 1967.

What happens during the last part of 1968 depends on the number of pigs farrowed between December 1 and June 1. Should the prospect for higher prices for hogs and lower prices for feed encourage an expansion in the number of sows farrowed, prices of hogs can be expected to ease off during the latter part of 1968.

LAMB SITUATION

The 1967 lamb crop was down 6% from a year earlier. Consequently, lamb slaughter during the winter of 1967-68 is expected to be smaller. Good range conditions may permit some ranchers to sell lambs for slaughter directly off the range. This, of course, would further reduce the kill during the winter and spring. Last year's heavy discounts for heavy slaughter lambs will no doubt cause many lamb feeders to shorten their feeding period and market lambs at lighter weights. With the possible exception of a period this fall when lambs might move directly from the range to slaughter, prices for lambs are expected to be higher during the coming feeding season than they were during 1966-67.

SUMMARY

Demand for beef is expected to be 3 to 4% higher during the feeding year starting October 1. Population growth and higher per capita disposable incomes are expected to be the key factors.

Supplies of slaughter cattle during the fall of 1967 will be smaller and prices are expected to range around $27. Orderly marketing of cattle at usual weights should result in sustained strength in slaughter cattle prices during the winter and early summer.

Reduced cow slaughter and smaller supplies of pork will also lend strength to the price of slaughter cattle. Any increase in marketing weights will have a depressing effect.

Feed costs are expected to be lower during the coming year. Feed grain prices are expected to be 10 to 15% lower than they were in 1966-67 although feeders in Nebraska may not experience as much lower prices as the average for the United States. Feed grain supplies in Nebraska and surrounding states are smaller than last year, contrary to the national situation.

A record crop of soybeans should provide ample supplies of high protein feeds. As a consequence, prices of high protein feeds are expected to average less than they did last fall and winter.

Little change is expected in hay prices unless severe winter weather develops.

Range conditions as of August 1 were good to excellent throughout most of the nation. Seasonal rains will put ranchers in a strong position and movements off the range are expected to be later than usual.

Prices of feeder cattle are expected to run $2 to $4 higher this fall than they did a year ago. Less seasonal decline in prices is anticipated. Strong prices for slaughter cattle, cheaper feeds, and a reduced supply of feeder cattle are expected to be important factors determining feeder cattle prices.

Reduced marketings of hogs from October through December compared to a year ago will result in a smaller seasonal decline in the price of hogs this fall. The low is expected to be near $19. Producers' intentions to farrow fewer sows between June 1 and December 1 of 1967 should mean smaller marketings and stronger prices for hogs during the first half of 1968. Hog prices during the last half of 1968 will depend on the number of pigs farrowed next winter and spring.

Lamb prices are expected to average higher during the winter of 1967-68 than they did the preceding year.

FEEDING CATTLE?

HOW MUCH CAN YOU AFFORD TO PAY

The cattle feeder is a businessman, and like every other businessman, he hopes to get a reasonally good return for the use of his capital and for his labor and management. In planning his business, he needs to know as accurately as possible what he can get for his finished product and what it will cost him to produce such a product. Armed with this information, he is in a position to determine the maximum price he can afford to pay for the "raw material," the feeder animal.

ESTIMATING INCOME

The sixty-four dollar question for most feeders is: "What will fat cattle bring when mine are ready to go?" Unfortunately, there is no one who can give an exact answer to this question. Forecasting prices is not that exact a procedure and factors affecting prices in the months ahead keep changing. Consequently, the cattle feeder can only estimate what the price of cattle will be when he is ready to sell.

Estimates of what cattle will bring in the weeks or months ahead are based on information concerning factors affecting prices. Broadly speaking, these factors could be grouped into supply factors and demand factors. Supply factors would include numbers of cattle on feed, numbers of cows being slaughtered, supplies of competing meats, imports of meats, weights of cattle going to market, etc. Demand factors would include population trends, employment, wage rates, per capita incomes, tax policies, income distribution, trends in consumer perferences, government purchases, exports, and several others.

Under reasonably stable economic conditions such as we have experienced during the last 10 to 15 years, changes in the price of fat cattle are largely a function of changes in supply factors. The demand for beef has been generally good throughout this period. The general feeling among most economists is that it will continue to be good in the foreseeable future.

But how does a feeder interpret all of this information? How important is the number of cattle on feed compared to an increase (or decrease) in the number of hogs headed for market? Or how do imports affect prices of fed cattle? The answers are not readily apparent to the lay reader. Proper interpretation calls for a knowledge of how changes in supply or demand factors have affected prices in the past. Since the factors affecting prices are numerous, a statistical analysis is useful in interpreting market developments. This is a job for specialists. We sometimes call these people market analysts.

You may not agree with all that a particular market analyst says or thinks. If you don't, check it against what other analysts are saying and then throw in a liberal amount of your own thinking. Compare with what people in the trade think. This is the only way that you can arrive at a considered estimate of what prices are likely to be when your cattle are ready to go. The only alternatives are to play it blind, rely on hunches, or hedge your cattle feeding operations.

(over)

So there's a considerable amount of speculation in cattle feeding because of the uncertainty of prices in the future. People with small amounts of capital and credit may not be able to stand the large losses which sometimes result from unexpected drops in the price of cattle. But there's a way to get some protection against price variations. It's called hedging.

Hedging a cattle feeding operation involves selling one or more contracts for delivery of 25,000 lbs. of live steers grading choice or better at either Chicago or Omaha. The steers must eigher weigh between 1000 and 1150 lbs. and have an estimated yield of 62%. Exceptions to grade, weight, and yield are few and of limited extent. Prices at Omaha are discounted 75¢ a hundred from the quoted futures prices which are based on the Chicago market. The futures contract is usually sold at the same time live feeder cattle are purchased. In actual practice, delivery of live cattle to fulfill a contract is seldom made: instead, the cattle feeder simply buys an offsetting contract which has the same maturity date, thus cancelling the contract which he had previously sold. (This is done when the live cattle are sold and must be done before the close of the last permisside business day specified by the futures contract. Contracts are terminated in February, April, June, August, October, and December. They can be purchased through brokers who are members of the Chicago Mercantile Exchange at a cost of $25. This amount covers both the sale of a contract and the purchase of an offsetting contract. In addition a person must put up $300 as "margin" when he sells the futures contract. If the market moves against him more than 40¢ per cwt., he must put up additional margin,- enough to bring his equity back up to the $300 level. Margin money is returned or applied toward losses on the futures transaction at the close of the future trading.

An example of how the hedging operation might have worked in 1966-67 follows: A cattle feeder who normally buys 100 yearling steers in October and sells them the following April contemplated his feeding operation for the year ahead. He looked up the price of April ('67) futures as quoted in the paper and found them to be $27.00. This would mean $26.25 at Omaha. He can buy 700 lb. steers for $24.60 a cwt. and past experience tells him that it costs about $107 to feed a steer out with the current and prospective feed prices. A little pencil pushing then indicated that he could probably make about $950 if he were assured a selling price of $26.25, so he decides to buy the cattle and hedge his feeding operation. Here's how it worked out.

	Actual feeding operation
Sale of cattle, 99 choice steers, average 1120 lbs. @ $23.65	$26223
Costs, including cost of steers, feed, all other out-of-pocket costs, & labor	27953
Return to management, and fixed resources	$-1730 (loss)

Obviously, 1966-67 was one of those years when prices went the wrong way for the feeder who did not hedge.

Had he hedged, the transactions on the futures market would have been:

Sale of futures contracts (4 contracts for 25,000 lbs. each at $27.000		$27,000
Less: Repurchase of contracts in April @$25.27	$25,270	
Brokerage fee (4 @ $25)	100	

Interest on broker's fee and margin @ 7%	46
Total deductions	25,416
Net gain on futures transaction	1,584
Less loss on actual feeding operation	1,730
Net gain on actual feeding and futures	$ -146

The gain on the futures transaction did not completely offset the loss on the actual feeding operation but a loss of $146 is considerably different than one of $1730.

It is important to note, however, that hedging is a means of assuring the cattle feeder a price for his cattle very close to the price in the futures contract which he sold. The hedging operation protects him from price drops but it also prevents him from realizing the speculative gain if the price of slaughter cattle happens to go up. You can't have one without the other. In other words, the cattle feeder who hedges must be willing to settle for the price indicated in the futures contract which he sells whether the price of cattle actually goes above or below this.

TWO KINDS OF COSTS

Costs of production can be divided into fixed costs and variable costs.

Fixed costs (depreciation, interest, taxes, and insurance on the improvements and equipment) do not vary with the number of cattle fed in any particular year. They are largely determined by the size and kind of lots and equipment used for cattle feeding. The annual costs of maintaining these facilities tend to be about the same whether facilities are used to full capacity or not. In fact, these costs would occur even if lots were left empty.

Variable costs are those which vary in proportion to the number of cattle fed. These costs include the cost of the feeder animal, feed, taxes on the animal itself veterinary and medicine, death loss, interest on the money invested in animals, and other operating expense such as buying and selling costs. If labor is hired specifically for cattle feeding or if the operator has alternative job opportunities, labor should also be considered as a variable cost.

In the long run, all costs of production must be met if the cattle feeder is to stay in business. Fences, bunks, water systems, etc., must be replaced as they wear out. But in the short run (any one bunch of cattle or in any one year), cattle prices may be such that it would be impossible to cover all costs.

There is no justification, however, for putting salable feed into an animal or for spending money for protein, medicine, or anything else unless it is fairly certain that the income will be more than enough to cover such costs. A "break even" price (as used here) would be the amount a feeder could pay for feeder cattle and still pay interest on the investment in the animals as well as other variable costs.

If a cattle feeder thinks the income from the sale of his cattle will be enough to pay for all variable costs (including the cost of the animal) plus a little more

(but not enough to cover all fixed costs), he is financially better off to make use of lots, bunks, and other facilities than to let them stand idle. It may be, of course, that there are other ways of using these facilities that would be more profitable than feeding the particular kind of cattle to which he is accustomed or which he originally had in mind. If so, the use that would return the most money for the facilities and for his labor and management would be the logical choice.

If prices of feeder cattle appear high, does it seem likely that they could be bought at a lower price later on? Will delayed marketings mean a higher or a lower sale price? What effect would a delay in buying have on the time of marketing and expected income in relation to costs? Would savings which might be made from a delayed purchase be offset by inability (either because of time or weather) to make use of cornstalks or other low cost roughages to cheapen gains?

ESTIMATING VARIABLE COSTS

Feed costs make up a large proportion of the total costs of feeding cattle (65-75 percent). The following table indicates the approximate amount of feed equivalents required per animal for eight different kinds of cattle feeding enterprises.

Guides a/ for Estimating Comparative Feed Costs for Eight Different Kinds of Cattle Feeding Enterprises.

	Corn (equiv.) (bu.)	Alfalfa Hay (tons)	Corn Silage (or equiv.) (tons)	Protein (lbs.)	Pasture-Days	Average Daily Gain (lbs.)
425# steer calves fed grain 285 days	63	.6	--	180	40	2.1
425# steer calves fed liberal roughage 330 days	40	.5	2.5	285	40	1.8
425# steer calves fed liberal roughage plus pasture 365 days	36	.5	2.1	150	120	1.7
400# heifer calves fed grain 225 days	45	.6	--	150	--	2.0
650# yearling heifers fed grain 150 days	38	.5	--	60	--	2.1
650# yearling steers fed maximum roughage 180 days	15	--	4.0	300	--	2.2
700# yearling steers fed grain 165 days	46	.9	--	90	--	2.4
700# yearling steers fed liberal roughage 195 days	36	--	3.8	315	--	2.3

a/ Provided by Paul Guyer, Extension Animal Husbandman.

Approximate relative labor requirements for these same kinds of feeding enterprises are shown in the following table.

Kind of feeding enterprise	Number of head in lot		
	40 1/	120 1/	1000 2/
		Hours per Animal	
425# steer calves fed grain 285 days	8 3/4	6	2 1/2
425# steer calves fed liberal roughage 330 days	10 3/4	7	2 3/4
425# steer calves fed liberal roughage plus pasture 365 days	11	7	3
400# heifer calves fed grain 225 days	6	4 1/2	2
650# yearling heifers fed grain 150 days	4 1/2	3 1/4	1 1/4
650# yearling steers fed maximum roughage 180 days	4 1/4	4	1 1/2
700# yearling steers fed grain 165 days	5	3 1/2	1 1/2
700# yearling steers fed liberal roughage 195 days	6 1/4	4 1/4	1 3/4

1/ These labor requirements are based on "Labor Used in Cattle Feeding," Station Bulletin 451, March 1960, by R. G. Johnson and T. R. Nodland, University of Minnesota. Include are:

1. Hay feeding of bales stored nearby.
2. Grain feeding with a wagon and shovel.
3. Silage feeding from an upright silo.
4. Bedding.
5. Watering and observing.
6. Care and treatment of sick animals.
7. Pasturing.
8. Feed grinding.
9. Manure disposal.
10. Miscellaneous.

2/ These labor requirements are based on "Improved Methods and Facilities for Commercial Cattle Feedlots," MRR No. 517, Transportation and Facilities Research Division, AMS, USDA, Washington 25, D. C. The 1000-head lot used a self-mixing, self-unloading truck method of feeding.

The amounts of labor required to handle 250 or 500 head under each of these specific kinds of cattle feeding operations are not available. Preliminary data obtained in a survey of cattle feeders in eastern Nebraska indicate that labor requirements per head may be almost as small for operations feeding 500 head as they are for operations feeding 1000 head (see following figures and those in preceding table). Apparently most of the advantage to be gained in labor efficiency is realized by cattle feeders feeding around 4 to 5 hundred head.

Number of head	Average amount of labor used per head (hours)
100-174	5.9
175-274	4.1
400-549	2.2

An illustration of a method for determining the maximum price that could be paid for feeder cattle if all variable costs are to be covered is shown in the example budget which follows. The costs used in this example are not intended to fit a particular feeding operation and must be adjusted to reflect your situation. Space is provided for this purpose.

Income and Credits				Your Figures
Sale of finished animal				
1,100 #	@	$27.00 =	$297.00	
Value of Manure recovered				
2.5 tons	@	2.40	6.00	
	Total		$303.00	
Variable Costs				
Feed costs				
46 bu. corn @ 1.10[1/]		= 50.60		
90# protein @ 4.50		= 4.05		
0.9 T. alfalfa @ $20		- 18.00		
			$ 72.65	
Marketing costs				
1100 # @ 60¢/cwt.			6.60	
Cost of buying feeder				
Commission		2.00		
Vaccination		.50		
Trucking		1.00		
			3.50	
Labor				
3.5 hours @ $1.50			5.25	
Taxes			2.75	
Interest on feed				
$72.65 / 2 X 165 days / 365 days	@ 7%			

[1/] For purchased feed use the price delivered to the farm. For home produced feed use the cash value at the farm.

Miscellaneous variable costs

	Per Day
Veterinary	$.002
Salt and Min.	.002
Rep. and Misc.	.006
	$.010 X 165 days = $1.65

Total variable non-feeder costs other than death loss and interest on animal $93.48

Amount left to cover (1) death loss, (2) interest on investment in animal, and (3) cost of animal ($303 minus $93.48) $209.52

Amount available for purchase of animal 1/ $209.52

Maximum (break-even) price per cwt., that can be paid if all variable costs (including death loss and interest on animal investment) are to be met

$$\frac{201.07}{700} \text{ (purchase wt.)} \quad \$28.72$$

Fixed Costs
$1-4/cwt. original wt.
Profit margin..70-1.50/cwt. original wt.

Break even price, fixed costs and profit margin considered $23-27

1/ The 209.52 must be divided between the three items as follows:
Interest for 165 days = $\frac{165}{365}$ X 7% = 3.2%

Death loss	1.0
Cost of feeder	100.0
Total	104.2

$\frac{\$209.52}{104.2}$ = $201.07

In the tables which follow, the maximum prices that could be paid for feeder cattle have been calculated by the method illustrated using the quantities of feed and labor indicated in the preceding tables. Too illustrate how the tables can be used, let's assume that your feeding operation is similar to the first (Chart 1) and you expect to get $28.00 a hundred for your finished cattle. Your feed costs are estimated at $20.00 per hundred pounds of gain and you will be feeding approximately 120 head. On the basis of these anticipated costs and returns, the maximum price which you could pay for 425 lb. steer calves of good to choice grade would be $32.10 (Chart 1, $28 slaughter price column, 5th line down). This would permit you to pay variable costs comparable to those shown in the example budget but it would not allow for anything to cover fixed costs.

Annual charges for fixed costs may amount to as much as $1 to $4 per cwt. of gain. They vary considerably from one situation to another, depending on the kind of feeding facilities and the number of cattle fed. The higher the investment in lots and equipment per steer, the higher the annual fixed costs will be. Highly mechanized operations have higher fixed costs, but smaller labor requirements; in order to keep these fixed costs at a minimum (per hundred pounds of beef produced), it is important that such facilities be fully used.

Chart 1 425# GOOD TO CHOICE CALVES FED LIBERAL GRAIN 285 DAYS, SOLD AT 1025# AND CHOICE GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Gain, and Numbers of Head Per Lot When All Variable Costs (Including 2% Death Loss, Interest at 7% Per Year and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Prices Per Cwt.			
		$24.00	$26.00	$28.00	$30.00
		Break-Even Feeder Price Per Cwt.			
40	$12.00	$33.00	$37.50	$42.00	$46.50
	16.00	27.60	32.10	36.60	41.10
	20.00	22.20	26.70	31.20	35.70
120	$12.00	$33.90	$38.40	$42.90	$47.40
	16.00	28.50	33.00	37.50	42.00
	20.00	23.10	27.60	32.10	36.60
1000	$12.00	$35.00	$39.50	$44.00	$48.50
	16.00	29.70	34.10	38.60	43.10
	20.00	24.30	28.70	33.20	37.70

Chart 2 425# GOOD TO CHOICE CALVES FED LIBERAL ROUGHAGE 330 DAYS, SOLD AT 1025# AND CHOICE GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Grain, and Numbers of Head Per Lot When All Variable Costs (Including 2% Death Loss, Interest at 7% Per Year, and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Price Per Cwt. $24.00	$26.00	$28.00	$30.00
		Break-Even Feeder Price Per Cwt.			
40	$12.00	$31.90	$36.40	$40.80	$45.30
	16.00	26.60	31.00	35.50	39.90
	20.00	21.20	25.60	30.10	34.50
120	$12.00	33.20	37.60	42.10	46.50
	16.00	27.80	32.20	36.70	41.10
	20.00	22.40	26.90	31.30	35.80
1000	$12.00	34.50	39.00	43.50	47.90
	16.00	29.20	33.60	38.10	42.50
	20.00	23.80	28.20	32.70	37.10

Chart 3 425# GOOD TO CHOICE CALVES FED LIBERAL ROUGHAGE PLUS PASTURE 365 DAYS, SOLD AT 1025# AND CHOICE GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Gain, and Number of Head Per Lot When All Variable Costs (Including 2% Death Loss, Interest at 7% per year, and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Price Per Cwt.			
		$24.00	$26.00	$28.00	$30.00
		Break-Even Price Per Cwt.			
40	$12.00	$31.50	$36.00	$40.40	$44.80
	16.00	26.20	30.60	35.00	39.40
	20.00	20.80	25.20	29.60	34.00
120	$12.00	$32.80	$37.20	$41.70	$46.10
	16.00	27.50	31.90	36.30	40.70
	20.00	22.10	26.50	30.90	35.30
1000	$12.00	$34.10	$38.50	$43.00	$47.40
	16.00	28.80	33.20	37.70	42.10
	20.00	23.40	27.80	32.30	36.70

Chart 4 400# GOOD TO CHOICE HEIFER CALVES FED LIBERAL GRAIN 225 DAYS, SOLD AT 850# AND CHOICE GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Gain, and Number of Head Per Lot When All Variable Costs (Including 2% Death Loss, Interest at 7% Per Year, and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Prices Per Cwt.			
		$24.00	$26.00	$28.00	$30.00
		Break-Even Feeder Price Per Cwt.			
40	$12.00	$31.40	$35.40	$39.40	$43.40
	16.00	27.00	31.00	35.00	39.00
	20.00	22.70	26.70	30.70	34.70
120	$12.00	$31.90	$35.90	$39.90	$43.90
	16.00	27.60	31.60	35.60	39.60
	20.00	23.30	27.30	31.30	35.30
1000	$12.00	$32.80	$36.80	$40.80	$44.80
	16.00	28.30	32.30	36.30	40.30
	20.00	24.00	28.00	32.00	36.00

Chart 5 650# GOOD TO CHOICE YEARLING HEIFERS FED GRAIN INTENSIVELY 150 DAYS, SOLD AT 950# AND CHOICE GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Gain, and Numbers of Head Per Lot When All Variable Costs (Including 1% Death Loss, Interest at 7% Per Year, and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Prices Per Cwt.			
		$24.00	$26.00	$28.00	$30.00
		Break-Even Feeder Price Per Cwt.			
40	$12.00	$26.30	$29.20	$32.00	$34.80
	16.00	24.50	27.40	30.20	33.00
	20.00	22.70	25.50	28.40	31.20
	24.00	20.90	23.80	26.60	29.40
120	$12.00	$26.60	$29.40	$32.20	$35.00
	16.00	24.80	27.60	30.40	33.20
	20.00	23.00	25.80	28.60	31.40
	24.00	21.20	24.00	26.80	29.60
1000	$12.00	$27.00	$29.80	$32.70	$35.50
	16.00	25.20	28.00	30.90	33.70
	20.00	23.40	26.20	29.10	31.90
	24.00	21.60	24.40	27.30	30.10

Chart 6 650# MEDIUM AND COMMON FEEDER STEERS FED MAXIMUM ROUGHAGE 180 DAYS, SOLD AT 1050# AND STANDARD AND GOOD GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Gain, and Numbers of Head Per Lot When All Variable Costs (Including 1% Death Loss, Interest at 7% Per Year and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Price Per Cwt.			
		$24.00	$26.00	$28.00	$30.00
		Bteak-Even Feeder Price Per Cwt.			
40	$12.00	$27.80	$30.90	$34.00	$37.10
	16.00	25.40	28.50	31.60	34.70
	20.00	23.00	26.10	29.20	32.30
	24.00	20.60	23.70	26.80	29.90
120	$12.00	$27.90	$31.00	$34.10	$37.10
	16.00	25.50	28.60	31.70	34.70
	20.00	23.10	26.20	29.30	32.40
	24.00	20.70	23.80	26.90	29.90
1000	$12.00	$28.40	$31.50	$34.60	$37.70
	16.00	26.00	29.10	32.20	35.30
	20.00	23.60	26.70	29.80	32.90
	24.00	21.20	24.30	27.40	30.50

Chart 7 700# GOOD TO CHOICE YEARLING STEERS FED GRAIN INTENSIVELY 165 DAYS, SOLD AT 1100# AND CHOICE GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Gain, and Numbers of Head Per Lot When All Variable Costs (Including 1% Death Loss, Interest at 7% Per Year and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Price Per Cwt.			
		$24.00	$26.00	$28.00	$30.00
		Break-Even Feeder Price Per Cwt.			
40	$12.00	$27.30	$30.40	$33.40	$36.40
	16.00	25.10	28.10	31.20	34.20
	20.00	22.90	25.90	28.90	31.90
	24.00	20.70	23.70	26.70	29.70
120	$12.00	$27.70	$30.70	$33.70	$36.70
	16.00	25.40	28.40	31.50	34.50
	20.00	23.20	26.20	29.20	32.20
	24.00	21.00	24.00	27.00	30.00
1000	$12.00	$28.10	$31.10	$34.10	$37.10
	16.00	25.80	28.90	31.90	34.90
	20.00	23.60	26.60	29.60	32.70
	24.00	21.40	24.40	27.40	30.40

Chart 8 700# GOOD TO CHOICE FEEDER STEERS FED LIBERAL ROUGHAGE 195 DAYS, SOLD AT 1150# AND CHOICE GRADE

Approximate Break-Even Feeder Prices for Various Slaughter Prices, Feed Costs Per Hundredweight of Gain, and Numbers of Head Per Lot When All Variable Costs (Including 1% Death Loss, Interest at 7% Per Year and Wages at $1.50 Per Hour) are Covered

Number of Head Per Lot	Feed Cost/Cwt. of Gain	Slaughter Pricer Per Cwt.			
		$24.00	$26.00	$28.00	$30.00
		Break-Even Feeder Price Per Cwt.			
40	$12.00	$28.10	$31.20	$34.40	$37.50
	16.00	25.20	28.30	31.40	34.60
	20.00	22.70	25.80	28.90	32.10
	24.00	20.20	23.30	26.40	29.60
120	$12.00	$28.50	$31.60	$34.80	$37.90
	16.00	25.60	28.70	31.90	35.00
	20.00	23.10	26.20	29.30	32.50
	24.00	20.60	23.70	26.80	30.00
1000	$12.00	$29.00	$32.10	$35.30	$38.40
	16.00	26.10	29.20	32.40	35.50
	20.00	23.60	26.70	29.90	33.00
	24.00	21.10	24.20	27.40	30.50